



PennState
Dickinson Law

Local Law for Solar Project Development in Pennsylvania

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PRACTICE GREATNESS

Penn State Research Project

- Hosted at Penn State Dickinson Law in collaboration with Penn State Extension School and with support of Center for Energy Law and Policy
- Collect and review all 2500+ municipal/township zoning ordinances to identify regulation of solar energy systems, with a particular focus on:
 - Authorization of such facilities as a “right” or a “conditional use”
 - Requirements for such facilities, either through application of existing zoning requirements or special requirements
 - Definition of solar systems, both in terms of type of installation, scale of installation and purpose of installation
- Identify common practices within the commonwealth and across the U.S., with the aim of eventually preparing a library of information, including an updated model ordinance, for use by municipal/township officials

Motivation

- Significant increase in requests from local governments, through the extension program, to advise on best practices in regulating renewable energy projects.
- In nearly every state, local governments have enacted laws and regulations to block or restrict renewable energy facilities, and/or local opposition has resulted in the delay or cancellation of particular projects. In this edition, the authors found at least 228 local restrictions across 35 states, in addition to 9 state-level restrictions, that are so burdensome that they could have the effect of blocking a project. The authors also found 293 renewable energy projects that have encountered significant opposition in 45 states.

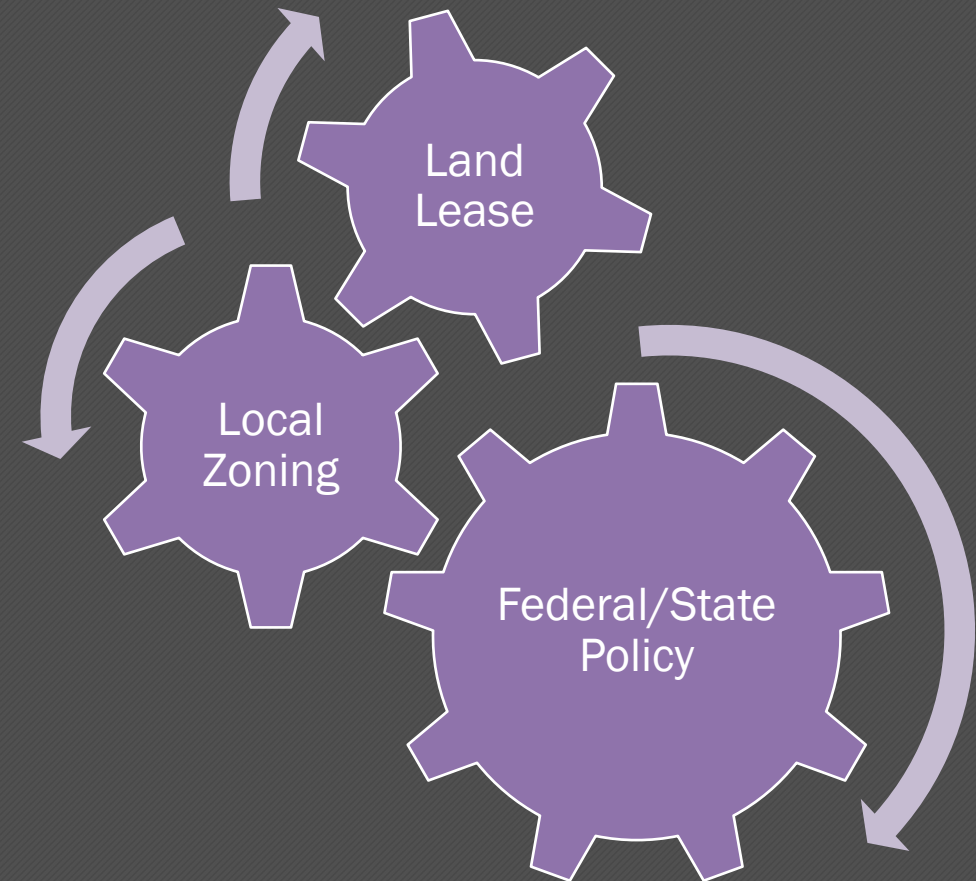
- Opposition to Renewable Energy Facilities in the United States: May 2023 Edition - Sabin Center for Climate Change Law - <https://climate.law.columbia.edu/content/opposition-renewable-energy-facilities-united-states-may-2023-edition>

Preliminary Results

Principal Use Solar Allowed	Accessory Use Solar Allowed	No Solar Guidance
5%	8%	87%
The zoning ordinance clearly allows for solar energy to be the principal use of the land for given districts, generally subject to approval (as a conditional use).	Accessory solar energy is permitted, often subject to various requirements. Principal use solar is either implicitly or explicitly prohibited.	These ordinances either fail to mention solar energy at all or only mention solar without specifying where or under what circumstances it is permitted.

The Regulatory Dynamic

- Federal/State Policy
 - Significant movement towards mandating decarbonization of the energy system
- Land Lease
 - Profit incentive for landowners to lease land for solar projects
 - Significant increase in financial capital driving scale and profit margins on solar projects
- Local Zoning
 - Inconsistent & Volatile
 - In many communities, backlash against solar is greater than prior opposition to fracking

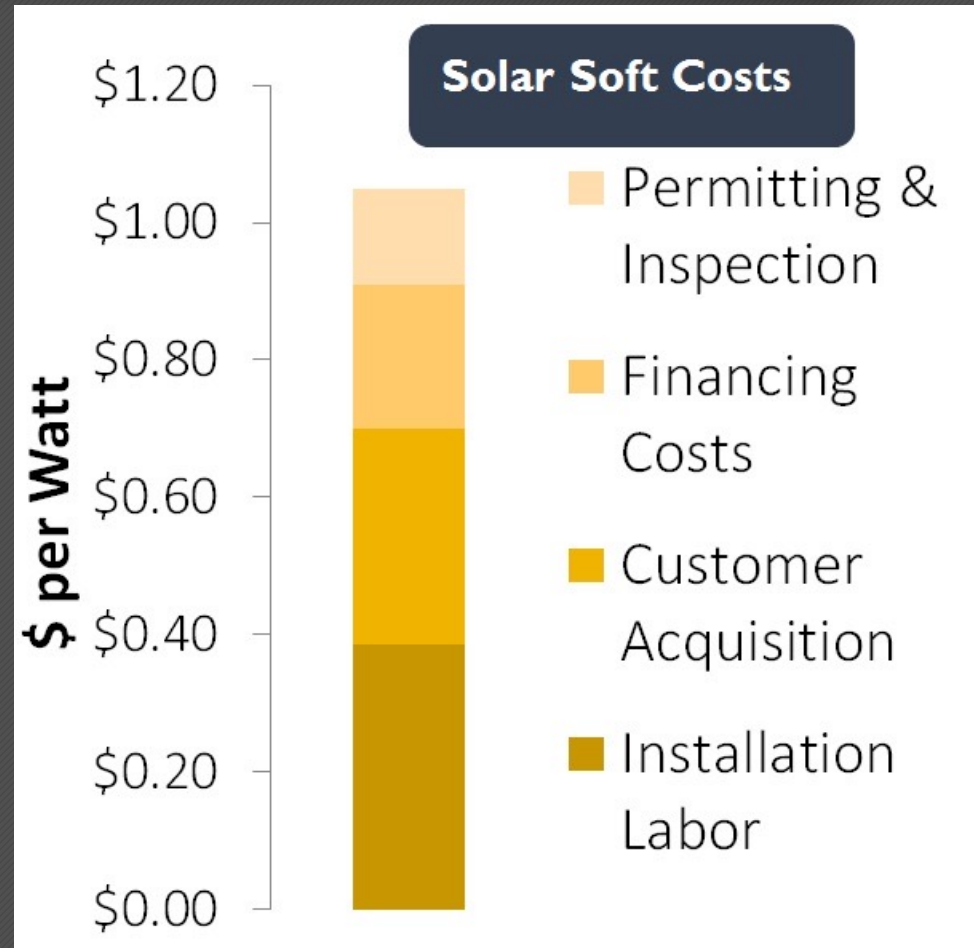


Impact on Utility Scale Unknown

Based on regression analysis, we find that variations among and improvements in local regulatory processes can meaningfully affect residential PV installation prices. ... [W]hen considering variations not only in permitting practices, but also in other local regulatory procedures, price differences grow to \$0.64-0.93/W between the most-onerous and most favorable jurisdictions. For a typical 5-kW residential PV installation, these results correspond to a price impact of at least \$2500 (8%) between jurisdictions with scores in the middle 90 percent of the range. These results highlight the magnitude of cost reduction that might be expected from streamlining local regulatory regimes.



Burkhardt, J.; Wiser, R.; et al., How Much Do Local Regulations Matter? Exploring the Impact of Permitting and Local Regulatory Processes on PV Prices in the United States (Berkeley, CA: LBNL, September, 2014), <https://emp.lbl.gov/publications/how-much-do-local-regulations-matter>.



Common Elements of Solar Ordinances

- Accessory vs Non-Accessory/Principal Systems
- Setbacks & Height Limitations
- Lot/Parcel Size
- Glare/Reflection Mitigation
- Buffers/Screening
- Decommissioning

Accessory vs Non-Accessory/Principal Systems

ACCESSORY SOLAR ENERGY SYSTEM: An area of land or other area used for a solar collection system used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for on-site use. An accessory solar energy system consists of one (1) or more free-standing ground, or roof mounted solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels.

SOLAR ENERGY SYSTEM (MAJOR):

A commercially operated solar energy system that is principally used to convert solar radiation to electricity to supply electricity to off-site customer(s,) including but not limited to a Solar Farm.

“Solar Energy Farms” are systems which exist solely to generate energy for sale back into the energy grid system, rather than being consumed on site.

Example: DFA Solar Project



Lot/Parcel Size

GROUND MOUNTED PRINCIPAL SOLAR ENERGY SYSTEMS:

1. Minimum lot size: The minimum lot size for every lot on which a SEF, or a component of a SEF, is proposed shall be one hundred (100) acres.

Principal Use. A Solar Energy System shall be permitted as a principal use subject to conditional use approval in the T- Township and A/C Agricultural/ Cluster Residential Districts only, subject to the following and as otherwise provided herein:

(a) The maximum area occupied by a principal Solar Energy System on any lot shall be ten (10) acres;

Example: Recent Litigation

Local Solar Ordinance:

- The property cannot have an agricultural conservation easement.
- “Any lot” used as a solar farm must be at least 50 acres.
- Equipment has to be set back at least 50 feet from property lines.
- Fencing or a “permanent evergreen vegetative buffer” has to be installed on the perimeter of the property.
- No more than 50% of the lot can be covered by equipment.
- The operator has to have at least \$1,000,000 of liability insurance per person and \$2,000,000 per incident.
- The operator has to post a bond to cover the township’s costs if the solar farm goes out of business.
- The operator must have an approved stormwater runoff plan.

Action: Of the 12 parcels leased to host the project, there are “lots” that do not meet the 8 requirements

Lawsuit: Allegation that township supervisors were biased against the project, violated the law, and “capriciously” disregarded valid evidence by ruling that each and every one of the 12 separate but adjacent lots must independently meet all eight criteria. Instead, it maintains that the 12 lots, when considered as one larger lot, meet all eight requirements.



Decommissioning

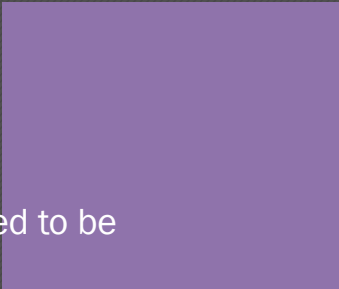
At the time of issuance of the permit for the construction of the PSES, the owner shall provide financial security in the form and amount acceptable to the Borough/Township to secure the expense of dismantling and removing said PSES and restoration of the land to its original condition, including forestry plantings of the same type/variety and density as the original.

Decommissioning Requirements

Pursuant to 402(II)(10)(k) of the Ordinance, the Applicant estimates the cost of decommissioning the Solar Energy Facility will be approximately \$1,665,466 based on the current available information at the time of application. The Applicant will provide the required performance security at the time of application for a building permit or 30 days prior to site development, whichever occurs first. These dates may vary and are dependent on several factors including the review of the transmission line interconnection study. The interconnection agreement will be provided to the Township when it is completed and available to the Applicant.



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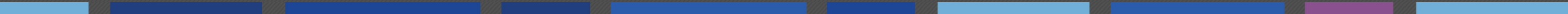
(a) The SEF owner is required to notify the County immediately upon cessation or abandonment of the operation. The SEF shall be presumed to be discontinued or abandoned if no electricity is generated by such system for a period of twelve (12) continuous months.

...
(c) To the extent possible the materials shall be re-sold or salvaged. Materials that cannot be re-sold or salvaged shall be disposed of at facility authorized to dispose of such materials by federal or state law.

...
The developer shall, at the time of zoning application, provide the County or municipality with an estimate of the cost of performing the decommissioning activities required herein. The solar project Owner shall provide financial security of 110% of the estimated cost of decommissioning, which will be reviewed by *** County's consulting engineer. The estimate may include an estimated salvage and re-sale value, discounted by a factor of 10%. The decommissioning cost estimate formula shall be:

$$\begin{aligned} & \text{Gross Cost of Decommissioning Activities} \\ & - 90\% \text{ credit of salvage and re-sale value} \\ & = \text{the Decommissioning Cost Estimate} \end{aligned}$$

On every 5th anniversary of the date providing the decommissioning financial security, the SEF Owner shall provide an updated decommissioning cost estimate, utilizing the formula set forth above with adjustments for inflation and cost & value changes. If the decommissioning security amount decreases by greater than 10%, the County or Municipality shall release from security any amounts held in excess of 110% of the updated decommission cost estimate. The decommissioning security may be in the form of cash deposit, surety bond, irrevocable letter of credit, cashier's check, or escrow account from a federal or Commonwealth chartered lending institution in the amount of 110% of the total proposed decommission cost estimate and in a form satisfactory to the County's or Municipality's Zoning administrator and Solicitor.



Future-Proofing Your Ordinance

- Given the rapid change in Solar technology, project design and project models, including forward looking language in ordinances allows local governments to be leaders rather than followers
- Example:

SOLAR COLLECTION SYSTEM

A panel or other solar energy device, the primary purpose of which is to provide for the collection, inversion, storage, and distribution of solar energy for electricity generation, space heating, space cooling or water heating.



Working on a Solar Ordinance? Have any additional questions? Please do not hesitate to reach out:

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