

# TCRPC

## Planning Toolkit Fact Sheet

# Solar Facilities



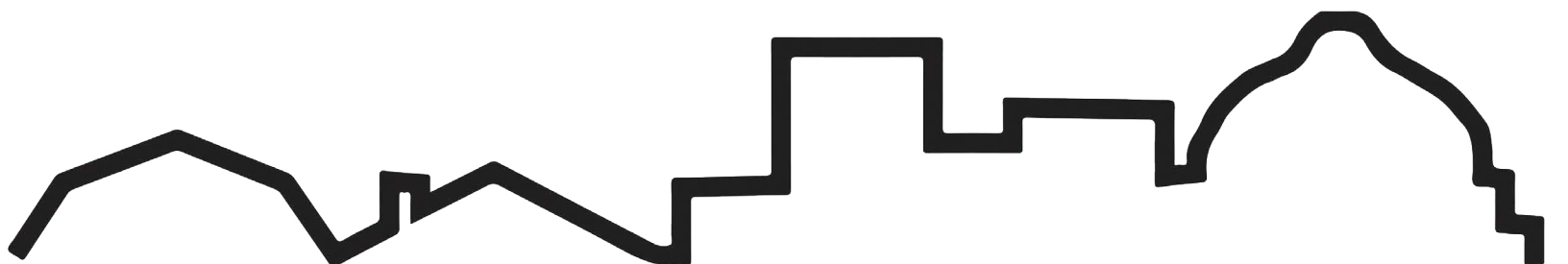
### INTRODUCTION

Pennsylvania has made strides towards promoting solar energy through policy initiatives, tax rebates and plans. The State's "**Solar Future Plan**" lays out a strategy for increasing Pennsylvania's in-state generation of solar energy—which is currently under 1%. While Pennsylvania cannot be compared to states with sunnier climates such as California, which currently generates 17% of its electricity via solar, there is still ample opportunity to develop this renewable energy resource in the northeast. According to an article published by NPR in 2020, more than 350 solar energy projects were up for consideration within Pennsylvania that year.

Zoning for residential and commercial solar installations is something municipalities should consider in the coming years. Development of solar facilities occurs generally in three scales or sizes. Each development type raises separate concerns: Distributed Generation, Community solar, and Utility Scale. A Distributed Generation system generates electricity at or near where it will be used and varies in scale from serving a single home or business to school campuses, a commercial office or a medical park or campus. This may be as small as small panels on a roof to a several acre field with hundreds of panels which provides power to several of the onsite building through a micro grid energy transmission system. A Community Solar System also varies in size. The main distinction of this type is that the created power is transmitted through existing energy distribution systems to other neighboring properties or entities. At this time, Community Solar Systems are not permitted within Pennsylvania, but members of the PA Senate have introduced legislation to allow such use.

The third type of solar facilities, and typically the largest type of facilities, are Utility Scale solar facilities. These facilities, often called "solar farms", are utility-scale developments that provide power to a wide community by selling the generated power directly into the electric grid. They typically consist of a large-scale array of solar panels that cover many acres. These facilities generate electricity on an industrial scale. Often they utilize land that was previously in agricultural use due to the relatively flat topography and lack of obstructions commonly found in these areas.

Local municipalities typically have two concerns with solar energy: individual homeowners putting up solar panels on roofs, and large solar farms. With the Distributed Generation systems, neighbor disputes may arise over nearby obstructions to natural sunlight. Clear access to sunlight is a necessary component of functional solar installations, and municipalities will need to consider this solar access (also called solar rights) as part of their ordinances. Therefore the ability of the homeowner or commercial entity to access natural light without interference from neighboring properties, whether the obstructions are buildings or vegetation should be provided within any ordinance. Another important concept is accessory solar energy systems—solar systems that produce power for a permitted use on the same property. These "mini" solar farms often pose challenges for municipal code enforcement. Utility Scale solar facilities can be associated with very different concerns, often relating to the loss of prime agricultural land and stormwater management.



## BENEFITS

- A source of sustainable and renewable energy
- Reduces overall dependence on fossil fuels
- Rooftop/private home installations can increase property values
- Financial returns from reduced utility bills
- Can be utilized as a component of green building design and LEED certification

## DRAWBACKS

- Can be expensive to install and take up a large amount of space
- Larger solar field installations may take up viable land—especially agricultural land
- Functionality/efficiency is highly dependent on site considerations such as weather
- Solar access may create conflicts between neighboring properties
- Communities may fight against larger commercial installations (solar fields) due to concerns about property values, aesthetics, access, or misinformation about public health drawbacks.

## PRACTICAL TIPS

- Municipalities should prepare for potential solar development by establishing clear solar goals in the planning process, adopting solar code language, and defining a reasonable permitting process. Utilize resources provided by renewable energy organizations such as the **Solar Energy Industries Association**
- Determine the conditions under which large-scale solar energy systems will be allowed either possibly through the land approval procedures established by the Municipalities Planning Code (i.e. Special Exception, Conditional Use or use by right with specific district requirements)
- Be aware of existing **programs** and **state incentives** for solar projects

## RESOURCES

- **American Planning Association: Planning and Zoning for Solar Energy**
- **Solar Permissive Model Zoning Ordinances: Rationale, Considerations and Examples**
- **Zoning and Permitting Solar in Your Municipality**
- **Delaware Valley Planning Commission – Renewable Energy Ordinance Framework**
- **Best Practices in Zoning for Solar**
- **Homeowner’s Guide to Going Solar**
- **Solsmart’s Toolkit for Local Governments**
- **Monroe County – On-site Usage of Solar Energy Systems**
- **York County – Solar Energy Systems Model Ordinance**
- **Falmouth, Massachusetts Solar Overlay District**
- **Model Ordinance for Large Scale Solar Electric Facilities in Pennsylvania**

## RELATED TOOLKIT FACT SHEETS

- **Brownfield Redevelopment**
- **Green Building Standards**
- **Traditional Zoning Ordinances**

