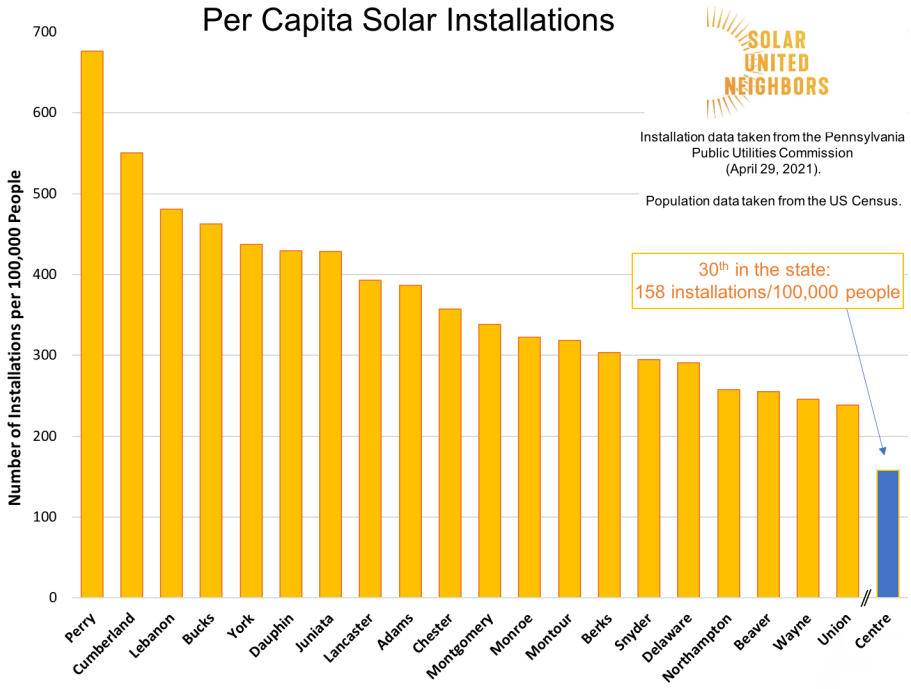
BEST PRACTICES FOR REGULATING ACCESSORY SOLAR

FACTSHEET FOR GOVERNMENT ENTITIES

Local planning and zoning regulations can help facilitate the rapid expansion of solar energy, while balancing other development priorities in the community. This guide is intended to provide best practices for the Centre Region municipalities to consider when updating their existing or considering adopting regulations related to solar energy.

Accessory use solar, i.e., rooftop and ground mounted installations in the Centre Region, is poised to increase rapidly as actions from the CAAP are implemented. As shown in the chart Centre County has significant opportunity to increase its number of solar installations.



The price for solar power has decreased 70% over the last decade primarily due to technology improvements and manufacturing scale.[1] As solar hardware costs continue to decline, lowering soft costs – including local regulatory processes – becomes an even more important part of lowering the total cost of a solar energy system.

Best practices were determined by stakeholder input as well as researching national policy. A major take-away was the importance of regulating solar installations to recognize the value of solar and provide clear and transparent regulations.

The role of local government should be to help reduce barriers and provide an efficient process to help reduce some of the soft costs. As such, this guide was developed to provide explanations and examples of how regulations can be less of a barrier to solar growth while still preserving the character of the community.

> **A conspicuous silence on the part of local policies, plans, and regulations on the topic of solar energy use constitutes a significant barrier to adoption and implementation of these technologies.**
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> *American Planning Association Solar Briefing Papers*

Renewable Energy

Climate Action & Adaptation Plan (CAAP) Goal:

Transition fossil sources to renewables for 10% homes' and 5% businesses' energy usage

ACCESSORY-USE SOLAR PLANNING AND ZONING BEST PRACTICES

Attribute	Explanation	Example
Definitions	Regardless of the scale or size, it is a good idea to include a comprehensive definition of solar energy systems in the code, in order to avoid any potential misinterpretations Include storage and solar hot water heating installations in the definition of "solar", differentiate by systems by size (not capacity) and rooftop versus ground-mounted	**Solar Energy System:** A device or structural design feature, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage, and distribution of solar energy for space heating or cooling, electricity generation, or water heating.
Height	Allow rooftop solar an exemption from or allowance above building height restrictions Ensure regulations addressed for flat roofs: Installations on flat roofs generally must be installed at a tilt to be most efficient. Allow additional height for these systems and avoid definitions that require installations on flat roofs be flush mounted	**Freeport,IL: 1477.03(d)(ii) – Height and Angle Restrictions:** (A) The highest edge of a PV Array mounted on a flat roof shall not exceed fifteen feet (15') beyond the existing roofline. The height of a PV Array shall not be included in the height of the building for purposes of computing the height of a flat roof building.
Aesthetic	Exempt solar from rooftop equipment screening requirements Allow PV installations to be seen from public roadways Limit screening or aesthetic requirements to historic districts	**Plano, TX Downtown Heritage Resource District Design Standards:** Place collectors to avoid obscuring significant features or adversely affecting the perception of the overall character of the property Size collector arrays to remain subordinate to the historic structure Minimize visual impacts by locating collectors back from the front facade Consider installing collectors on an addition or secondary structure where applicable

ACCESSORY-USE SOLAR PLANNING AND ZONING BEST PRACTICES

Attirbute	Explanation	Example
Ground-mounted	Include small ground-mounted systems as accessory structures Exempt ground-mounted systems from lot coverage/impervious surface calculations as long as the ground beneath the system is pervious (e.g., grass)	**Delaware Valley Regional Planning Commission Model:** For purposes of determining compliance with building coverage standards of the applicable zoning district, the total horizontal projection area of all ground-mounted and free-standing solar collectors, including solar photovoltaic cells, panels, arrays, inverters, shall be considered pervious coverage so long as pervious conditions are maintained underneath the solar photovoltaic cells, panels, and arrays.
Lot Coverage	Exempt ground-mounted solar from lot coverage restrictions that apply to buildings	
Setbacks	Avoid applying principal building setbacks Allow ground-mounted solar energy systems the ability to have a modest encroachment into the setback.	**Massachusetts Model Zoning for the Regulation of Solar Energy Systems:** (1) Small-and medium-scale ground-mounted solar energy systems accessory to principal use may be located no closer than 1/2 of the setback that would otherwise apply] from the front, side, or rear lot line. All ground-mounted solar energy systems in residential districts shall be installed either in the side yard or rear yard to the extent practicable.
Roof Coverage	Remove any language specifying roof coverage Beginning with the 2018 Interntional Residential Code (IRC), roof paths listed at 36' on 3 sides of the roof	Add language that roof coverage should follow the latest adopted version of the IRC rather than defining the size of the fire access pathway.
Glare	Glare studies not needed unless solar is on or adjacent to airport, in which case it will be regulated by FAA, not the local jurisdiction - Myth: Solar PV causes glare - Reality: Solar PV creates less glare than windows and water	

ACCESSORY-USE SOLAR PLANNING AND ZONING BEST PRACTICES

Attribute	Explanation
Additional Best Practices	Allow accessory-use solar as a use by right in all major zoning districts Exempt accessory-use PV panels towards the maximum number of accessory uses permitted on a parcel Require batteries to be in a secure container Regulate PV panels based on impact/ area as opposed to amount of energy generated [not capacity (kW) as efficiencies and technologies change over time and not where used (e.g., on-site) as it has no bearing on the impact] Adopting accessory-use solar regulations is better than not having requirements

Resources:

[1] https://www.seia.org/solar-industry-research-data
SolSmart's Toolkit for Local Governments
2018 International Fire Code
NREL Research and Analysis Demonstratethe Lack of Impacts of Glare from Photovoltaic Modules

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SUSTAINABLE CENTRE REGION

CRPA
Centre Regional Planning Agency