ZONING REVIEW
[Cheltenham Township, PA]

PZD-1: Review zoning requirements and remove restrictions that intentionally or unintentionally prohibit PV development. Compile findings in a memo, and commit to reducing barriers to PV during next zoning review.

This SolSmart prerequisite requires communities to (a) conduct a review of zoning requirements, (b) identify restrictions that prohibit PV development, and (c) commit to addressing these barriers during the next community zoning review. To assist your community, the national solar experts at SolSmart have conducted an initial review of your community's code to assess possible obstacles (i.e. height restrictions, set-back requirements, etc.) and gaps. Below, please find the outcome of their review. By reading the narrative, reviewing the example code language provided, and signing the statement at the bottom of the page, your community will satisfy PZD-1 and be one step closer to achieving SolSmart designation.

As there are no references to solar in the current code, the development of a solar ordinance may be advisable. Below are some considerations for the creation of such an ordinance. Solar may still be worth adding to the use tables for each district in the existing sections of the code, even solar's status as by-right is established in the solar ordinance.

Gaps in current code language

Element	Best Practice	Reviewer/Staff Comment/Proposed Language	Example(s) from other codes
Intent/purpose	• Many municipalities have inserted language explicitly encouraging solar in the section that lays out the intent and purpose of the solar ordinance.	Existing intent/purpose language does not explicitly encourage solar but is supportive of sustainability generally.	See P.7-8 of DVRPC Renewable Energy Ordinance Framework
Definitions	• Include in the definition of a solar energy system: solar collectors or solar energy devices used for space heating, space cooling, electric generation, and water heating • Define and distinguish between large-scale or primary use installations and secondary or accessory use installations • Define and regulate solar installations based on the area (e.g. square feet) or impact of the installation rather than the	• There is currently no solar-specific definition for small scale or utility scale solar. It is recommended that Cheltenham include a definition for both in the ordinance. • The existing "Height" definition exempts "alternative energy systems", which indicates that this could be reinforced through use regulations. ***(HEIGHT:** The height of a building shall be measured from the average ground level surrounding the building to a point midway between the highest and the lowest point of the*	See P.8-9 of DVRPC Renewable Energy Ordinance Framework Massachusetts model solar ordinance

	capacity (kW) as efficiencies and technologies change over time	*main roof. There shall be no structures or projections above the main roof, excepting chimneys, alternative energy structures,* *agricultural features, stormwater management structures, and the height of church spires, which are exempt from the height calculation. Housing for mechanical equipment may project beyond the maximum height permitted, but shall not exceed 12 feet in addition to the maximum permitted.)* ***Cheltenham will be changing this from "Alternative energy" to "roof-mounted solar energy systems"*** • Within the definition of "Impervious Surface," the ordinance does not does not explicitly exempt ground mounted solar. ***(IMPERVIOUS SURFACE:** Those surfaces which do not absorb rainwater. All buildings, parking areas, driveways, roads, sidewalks, and any area in concrete, asphalt, and packed stone, including, without limitation, swimming pools, shall be considered impervious surfaces. In addition, other areas determined by the Township Zoning Officer to be impervious within the meaning of this definition shall also be classified as impervious surface.)* **Recommended Language** **"Accessory Roof-Mounted Solar Energy System:** An energy system that consists of one or more solar collection devices, solar energy related "balance of system" equipment, and other associated infrastructure with the primary intention of generating electricity, storing electricity, or otherwise converting solar energy to a different form of energy. Solar energy systems may generate energy in excess of the energy requirements of a property if it is to be sold back to a public utility in accordance with the law." **"Solar Energy Facility**: An alternative energy facility that consists of one or more ground-mounted, free-standing, or building-integrated solar collection devices, solar energy related equipment and other associated infrastructure with the principal use intention of generating electricity or otherwise	

		converting solar energy to a different form of energy primarily for off-site use." **"Accessory Ground-Mounted Solar Energy System:** An Active Solar Energy System that is structurally mounted to the ground and is not roof-mounted. Accessory ground mounted solar energy systems shall occupy 1,750 square feet or less."	
Use-by-right	• Allow small rooftop and ground mount solar installations in all major zoning districts as a use-by-right (allowed without special review) • Many communities identify and allow for solar installations as accessory uses in every district	Solar is not listed as a "permitted Accessory Use" in the draft ordinance. **Staff recommends the following language:** • **"Accessory Roof Mounted Solar Energy Systems** are permitted by right in all districts except on pre-1930 historic resources in the MU3 District." • **"Solar Energy Facilities** are permitted by special exception in Industrial zones." • **"Accessory Ground Mounted Solar Energy Systems** are permitted by special exception in all districts subject to a separate set of criteria than roof mounted. No accessory ground-mounted systems are permitted in required viewshed areas."	See P. 10-11 of DVRPC Renewable Energy Ordinance Framework Use Tables P. 3 Massachusetts model solar ordinance
Encouraging solar-friendly design	• Many municipalities encourage subdivisions to be laid out in an orientation that would maximize either active solar or passive solar benefits. • Some possible ways to encourage solar include waiving permit fees, providing density bonuses, reducing minimum parking requirements, and mandating solar ready construction.	Starting on page 125. The ordinance offers several types of bonuses in the MU3 District: 1. Maximum impervious area may be increased to fifty (50%) percent of the total lot area. 2. Minimum green area may be reduced to fifty (50%) of the total lot area. 3. Maximum building height may be increased to sixty (60) feet. 4. A FAR bonus of 0.5. If applicants meet three of a list of seven requirements, one of which is: 1. On-site renewable energy production, composed of solar, wind, biomass, or combination thereof, with production capacity of at least twenty (20%) percent of the development's annual electrical energy costs.	See P. 12-13 of APA Essential Info Packet-30 ("Solar Orientation and Siting" and "Solar-Ready Homes") See P. 2 of APA Solar Briefing Papers ("Creating Incentives")
Height	• Provide rooftop solar an exemption from or allowance above building height restrictions • Identify a maximum allowed ground mount solar height of 10'-15'	The existing "Height" definition exempts "alternative energy systems", which indicates that this could be reinforced through use regulations. **Recommended Language for Roof Mounted systems**	See P. 16-17 of DVRPC Renewable Energy Ordinance Framework

		• When located on a flat roof: Solar Energy Systems are exempt from the district height requirements • When located on a sloped Roof: For a roof-mounted system installed on a sloped roof, the highest point of the system shall not exceed the highest point of the roof to which it is attached. **Recommended language for Ground Mounted** • Ground-mounted or freestanding solar energy systems shall not exceed 10'. **Recommended Language for Solar Energy Facilities** • Solar Energy Facilities shall not exceed 15'.	P. 7 Massachusetts model solar ordinance
Lot coverage	Exempt ground mount solar from lot coverage restrictions that apply to primary buildings	**Recommended language** 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 provided that pervious conditions are maintained underneath the solar photovoltaic cells, panels, and arrays.	See P. 18 of DVRPC Renewable Energy Ordinance Framework P. 9 Model Zoning for the Regulation of Solar Energy Systems
Accessory use maximum	• Exempt solar from the maximum allowable number of accessory uses	N/A	
Setbacks	• Require a setback applicable to fences to ground mount solar, rather than a setback required of buildings, or allow solar an exemption from setback requirements	**Recommended Language:** • All Accessory Use ground-mounted solar energy Systems shall be set back a distance of 10 feet from any property. • All Accessory Use Ground-Mounted Solar Energy Systems shall not be permitted in the space between a building and a street. • All Solar Energy Facilities shall meet district setback requirements. Note: The current proposed standard for **A-1. Residential Accessory Structures** is 4 feet from side/rear property lines, and 10 feet between structures.	See P. 1213of DVRPC Renewable Energy Ordinance Framework P. 7, 8 Model Zoning for the Regulation of Solar Energy Systems
Aesthetic requirements	• Exempt solar from rooftop equipment screening requirements • Allow PV installations to be seen from public roadways	BHAR's review will address aesthetics in historic districts.	P.19 DVRPC Renewable Energy Ordinance Framework

Rooftop fire safety access and setbacks	• Limit setback requirements from roof ridges to 3' and 1.5' from valleys and headwalls to allow access • Do not restrict rooftop solar based on a percentage of rooftop coverage (These restrictions may be amendments to the International Fire Code or part of the development regulations instead of the zoning code)	• A 3-foot setback from all roof ridges shall be provided for roof mounted solar panels to ensure that firefighters may access the roof in a quick and safe manner. • A 1.5-foot setback from all roof hips and valleys shall be provided for roof-mounted solar panels to ensure that firefighters may access the roof in a quick and safe manner if solar panels are installed on both sides of the roof hip or valley.	San Francisco Solar PV System Safety and Fire Ground Procedures LA PV Fire Safety P.13-15 DVRPC Renewable Energy Ordinance Framework
Glare	• Do not regulate glare from photovoltaic installations as PV modules use non-reflective glass and are designed to absorb rather than reflect sunlight. PV modules are generally less reflective than windows. • Municipalities can defer to the Federal Aviation Administration to regulate potential glare from solar installations on or near airports	**Recommended language:** • Installed solar modules shall be constructed with at least one anti-reflective layer to reduce reflectivity.	FAA guidance PV at airports P.19 DVRPC Renewable Energy Ordinance Framework
Ground mount solar	• Allow for small ground mount installations as accessory uses and large, primary use installations through a conditional or special use permit	??	P. 38 APA's Integrating Solar Energy into Local Development Regulations
Preexisting non-conforming uses	• Code should exempt rooftop solar or small ground-mounted solar from any special permits that may be required for alterations to a lot or structure that contains a preexisting non-conforming use.	Article XXV governs non-conforming uses.	P. 20-21 Massachusetts model solar ordinance
Historic district guidance	• Municipal code should clearly explain the review process for historic districts. • Historic commissions and review boards are encouraged to write design guidelines that support the development of solar energy systems and are sensitive to the historic preservation goals of the Commission.	BHAR's review will address aesthetics in historic districts. Township plans to work with BHAR to develop guidance specific to solar in historic districts.	NREL's Implementing Solar PV Projects on Historic Buildings and in Historic Districts NC Clean Energy Technology Center: Installing Solar Panels on Historic Buildings

I, _____ , as _____ of _____ , _____
[Name] [Title] [Community] [State]

have read the review above and commit to discussing these gaps at the next community zoning review, scheduled for _____, with the goal of addressing them in the code.

Signature _____ Date _____