ZONING REVIEW – West Windsor Township, NJ

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

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 Comments	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.	• No solar ordinance. Nothing in purpose of Zoning ordinance related to solar. • Solar PV facility or structure listed as inherently beneficial use by NJ MLUL 40:55D-4 o "Inherently beneficial use" means a use which is universally considered of value to the community because it fundamentally serves the public good and promotes the general welfare. Such a use includes, but is not limited	See P.7-8 of DVRPC Renewable Energy Ordinance Framework

		to, a hospital, school, child care center, group home, or a wind, solar or photovoltaic energy facility or structure.	
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	• No definitions for solar. Consider adding definitions for clarity.	Massachusetts model solar ordinance
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	• Explicitly permitted in RP-1 as of Dec 2018 on multistory buildings with flat roofs o https://ecode360.com/WE1666/laws/LF1060875.pdf • Allowed in Princeton Junction Redevelopment Area districts • NJ MLUL 40:55D-66.11 - Wind and solar facilities permitted in industrial zones	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.	• Section 200-36 Supplemental design criteria. o "Site planning should respect climate and wind orientation to ensure proper building siting enabling energy conservation (e.g., maximize southern building exposure for use of solar energy, consider proper wind orientation to reduce negative effects of cold winter winds and to take advantage of cooling summer breezes)." o Good • Section 200-257 2e o Solar pv systems on parking decks encouraged • Section 200-258 C23 o "Green roof planting on flat roofing of multistory buildings or provide light color for roof surface shall be implemented, and solar photovoltaic systems on roofs and parking decks shall be provided to the extent practicable."	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'	• Section 200-4 Definitions ○ Building height calculations exclude building service equipment (mechanical services, air-conditioning, and similar equipment). This most likely includes solar PV, which is best practice.	P. 7 Massachusetts model solar ordinance
Lot coverage	Exempt ground mount solar from lot coverage restrictions that apply to primary buildings	• N.J.S.A 40:55D-38.1 – Exempts solar panels from calculations of impervious surface or impervious cover	P. 9 Model Zoning for the Regulation of Solar Energy Systems
Accessory use maximum	• Exempt solar from the maximum allowable number of accessory uses	• I see no restrictions on number of accessory uses.	

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	• Section 200-226 Accessory structures and uses.
		  ○ "All accessory uses shall be such as do not alter the character of the premises on which they are located or impair the neighborhood. Such accessory uses shall not be located in any front, side or rear yard area, unless otherwise permitted in this Part 4. "
		  ▪ This could be very restrictive.
		  ○ "All accessory structures and uses in residential districts shall be set back a minimum of 20 feet from side and rear property lines, except as herein modified by this chapter."
		  ▪ This is a restrictive setback for ground mount systems.
			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 • Limit screening or aesthetic requirements to historic districts	• Section 200-229 F refers to proper screening for mechanical equipment. If solar panels are screened, it can severely limit their efficiency. ○ West Windsor noted that this screening provision would not apply to rooftop systems, but would apply to ground mounted systems.	P.19 DVRPC Renewable Energy Ordinance Framework Historic districts
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	• This is covered in the 2015 I-Codes.	San Francisco Solar PV System Safety and Fire Ground Procedures LA PV Fire Safety

	development regulations instead of the zoning code)		
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	• Section 200-25 Technical performance standards applicable to all uses. o "Glare. No use, operation or activity shall produce an illumination in excess of one footcandle in a residence district. In all other districts, light intensities of all illumination sources shall be kept as low as possible and shall not interfere, annoy, cause deformity or cause loss in visual performance to persons and animals of neighboring uses." • This could be very restrictive to solar. Best practice is to exempt solar from glare restrictions.	FAA guidance PV at airports
Ground mount solar	• Allow for small ground mount installations as accessory uses and large, primary use installations through a conditional or special use permit	• NJ MLUL 40:55D-66.11 - Wind and solar facilities permitted in industrial zones	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.	• Section 200-225 o No nonconforming vacant lot existing prior to August 15, 1975, shall be further reduced in size. In residential districts, such lots, as well as those which are consolidated into a single lot but still are nonconforming in area or dimension, may be improved for a single-family residence and its permitted accessory uses without appeal for variance relief, provided that the following provisions are met: • Good. This should include solar panels as long as they are permitted accessory 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.	• Is there a historic district? I do not see one listed under the various zones.	NREL's Implementing Solar PV Projects on Historic Buildings and in Historic Districts NC Clean Energy Technology Center: Installing Solar Panels on Historic Buildings

Solar access/solar rights	• Establish a mechanism to protect solar access and rights (e.g. solar easement for installations)
	• Include active and passive solar provisions (such as orientation) in development and subdivision regulations
		• N.J.S.A 45:22A-48.2 – "Solar Rights Law"
		  ○ HOAs cannot prohibit solar
		  ○ Any HOA regulations may not increase cost of installation by more than 10% of initial installation
			Wisconsin State Statute §66.0401.
			Perry, IA Subdivision Regulations

Regulate based on the area or impact	• Define and regulate solar installations based on the area (e.g. square feet) or impact of the installation rather than the capacity (kW) as efficiencies and technologies change over time • Do not regulate based on the use of the energy generated (e.g. requiring that accessory use solar electricity generation be consumed exclusively on-site), as this is often irrelevant to the impact	• Best practice is generally to regulate based on area of impact. In other words, it would be more permissive to control the size of systems with height and setback requirements rather than how much energy they produce. This allows for more future improvement in panel efficiency, when more power can be produced with the same panel size. • Additionally, to be eligible for net metering in NJ, the generating capacity of a system cannot exceed the customer's annual electric needs, so regulating by capacity is not necessary.	See p. 19 of Planning and Zoning for Solar in North Carolina Example: Fort Collins, CO

SAMUEL J. SCATES [Name] MANAGER, DIVISION OF LAND USE [Title] WEST WINDSOR [Community] NJ [State]

have read the review above and commit to discussing these gaps at the next community zoning review, scheduled for FALL 2019, with the goal of addressing them in the code.

Signature _____ Date 7.9.19