

# **PUBLIC COMMENTS ON Model Zoning Bylaw: Allowing Use of Solar Photovoltaic Installations**

Comments submitted by  
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Shutesbury, MA  
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## **1.0 Purpose**

I would improve upon the purpose with the following:

- Core to zoning bylaws is the protection of a community's public health, safety and welfare. Yet the model bylaw only addresses public safety of these three. It seems all three must be indicated as the purpose for this bylaw.
- While this bylaw directly cites the Shutesbury solar bylaw which I co-authored, I would point out that the financial protections for a municipality include but are not limited to decommissioning; this part of the purpose should be broadened to protect against financial harms to the municipality over the life cycle of a solar installation
- There is statement about scenic, natural and historic resources but not cultural resources which would include a range of both western civilization and Indigenous cultural resources. Cultural should be added
- Additional possible purposes of a solar bylaw include the need to protect and preserve Town infrastructure (including roads), prevent against public nuisance, maintain existing residential property values, minimize and mitigate possible impacts on environmental resources, and enable development in a manner that is consistent with the zoning of the municipality.

## **2.0 Definitions**

The Note states that "*The primary use of a co-located facility should be determined by which facility has a greater electrical capacity*" but for solar and energy storage this is apples and oranges. Megawatts of generation are not equivalent to megawatts of storage. Equivalency is more apples to apples with solar generation compared to wind generation. Rather the primary and accessory use should be understood functionally. If the site is primarily generating electricity and secondarily storing it for later access to power – solar is primary, ESS is secondary. If the site is primarily for storing electricity but there are panels that generate behind the meter electricity to run the electronics, then ESS is primary and solar secondary.

Site Footprint. I agree mostly with this definition though I would expand the acreage to include any buffer zone along the perimeter of the equipment fenced area bounding the equipment. This land will be altered if combustible vegetation is removed.

Zoning Enforcement Authority: this seems to be the same basic definition as the Building Inspector:- ... "*person or board designated by local ordinance or bylaw charged with the enforcement of the zoning ordinance.*" A function should only have one definition so this should be clarified.

### **3.0 Applicability**

The note about Qualifying for a Green Communities should be checked against the Dover Amendment for accuracy or possibly reworded for clarity. The note states that “*a municipality may adopt by-right zoning for Solar Photovoltaic Installations in at least one Designated Location, which permits a Primary Use Solar Photovoltaic Installation with a name plate capacity of 250 kW (DC) or more.*” It is my understanding per the Tracer Land decision that such a zone/location, combined with allowed developable areas of the municipality must be greater than 2% of the community.

### **3.1 Solar Photovoltaic Installation Classes**

If the model bylaw is going to be inclusive of all types of solar installations – both size and placement/deployment type, then I would suggest it refer to the types allowed by SMART 3.0. For example, while floating solar seems to be getting phased out, this should be included. Similarly, are SMART’s “Raised racking” systems included in “building mounted” category? And is Green Communities assuming that solar on agricultural land will be dual-use and if so, it should be specified; currently this is just noted as being in an agricultural zone, not that production is necessarily occurring under the panels

My suggestion would be to have a Use Table that is based on capacity of the installation and then make provisions in the bylaw regarding deployment method. Some additional questions needing clarification:

- Why differentiates between Large I and Large II since with the exception of being located in an industrial zone they required the same approach for permitting. Rather I would suggest making Large II to be the current, usual size of solar installations – 1MW to 4.99 MW; since SMART subsidies will continue to have 5MW cap.
- Would there really be a landfill/brownfield in a residential zone?
- There does not seem to be any operational difference between a Medium installation that is a primary use or an accessory use – there are still the same concerns especially with an ESS included, so I question why these are separate categories.

### **4.1 Compliance with Laws, Ordinances and Regulations**

If you used the Shutesbury solar bylaw as a guide in listing the various local, state and federal guidance that is particularly important, thank you – we think this specificity is particularly important to make sure these external requirements are understood by the applicant and the permit granting authority and are not missed.

The following two additional items are in the Shutesbury solar bylaw under compliance and we think these are equally important.

1. Installations shall not go into construction until all local, state and federal requirements have been met and all required approvals issued.
2. Lots for Installations shall have the required frontage on a public way as defined in this zoning bylaw.

### **5.0 Pre-Filing Requirements**

Is it correct to say that a model bylaw would need to state something like “*The applicant shall comply with 225 CMR 29.08 that will include filing a Notice of Intent to File Application, meeting*

*Public Notice Requirements, and submitting a Pre-Filing Engagement Completion Checklist.”* Perhaps this bylaw should provide this wording otherwise municipalities may not include this and it is important for compliance.

## **5.2 Fees**

Solar installations, and clean energy facilities generally, are complex projects requiring a good deal of involvement from a permitting authority and municipal staff/volunteers. Especially if the project requires a special permit, but even under Site Plan Review, there is the potential for a lot of time and effort that municipalities do not have. Given DOER’s requirement that each municipality have a Lead Government Representative to coordinate the various permitting bodies and meet the filing deadlines, there is likely not going to be existing staff/volunteer capacity within most municipalities. So I would suggest that this section do two things:

1. State that municipalities may charge an application fee commensurate with the complexity of the project, rather than the estimated construction cost (which doesn’t make sense to me).
2. Here or elsewhere, state that a municipality may hire a consultant to serve as the Lead Government Representative, with all expenses for this function to be covered by the Applicant

## **6.0 Site Plan Review**

As noted above, since this is supposed to be a model bylaw, sample language should be provided so municipalities can copy and include it, such as “ *Any project that requires Site Plan Review shall also comply with the applicable provisions of 225 CMR 29.09: Consolidated Local Permit Application, DOER’s Guideline on Public Health, Safety, and Environmental Standards and Guideline on Common Conditions* ”

Since the Commonwealth has created a new permitting paradigm with the Clean Energy statute, it would be worthwhile noting that a project requiring only Site Plan Review by the permit granting authority will still need to comply with regulatory requirements set forth by other municipal regulators such as Conservation Commission and Board of Health. Simply passing Site Plan Review by the Permit Granting Authority is not sufficient based on the concept of a Consolidated permit.

## **6.2 Required Documents**

A. Site Plan – there is some information suggested here, while important, should be submitted separately and not included as part of a site plan documents. These include:

- Contact information and signature of the project operator and any agents
- Contact information and signature of all property owners and any agents
- Contact information for the person(s) responsible for public enquiries during construction and operation (it is unrealistic to assume this person will be the same “throughout the life of the Solar Photovoltaic Installation” as this model bylaw currently suggests. Rather, this information and the above information should be required to be provided either annually in a written report to the town or within 30 days of a change in contact information)
- Blueprints or drawings of the Solar Photovoltaic Installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system

Missing from the Site Plan Section that I would suggest should also be included:

- Locations of bodies of water including streams, rivers, lakes, ponds
- Locations of historic AND cultural resources, including those listed on the Massachusetts Register of Historic Places or those defined by the National Historic Preservation Act.
- Locations of trails and recreation areas, including access points
- Locations of proposed fencing
- Location of staging area(s) and offsite parking during construction
- Location of energy storage units

#### B. Proof of notification

Notification is an issue that should be further expanded to include Key Stakeholders and members of the Community, as identified in the Pre-Filing documents. Importantly, this should also include Indigenous Stakeholders that may have a historic connection to the proposed site even if they are no longer local to the area. Suggested language is “Project notifications shall be sent to the following parties: Massachusetts State Historical Commission; local Historical Commission; the Tribal Historic Preservation Officers (THPOs) for tribes in Massachusetts, Connecticut, Rhode Island, Vermont, New York, and New Hampshire listed by the U.S Department of the Interior and the National Conference of State Legislatures. If a tribal government or organization has no THPO, project notifications shall be sent to the appropriate tribal representative for that given tribal government. At a minimum, project notifications shall be sent to the following Tribal governments or their successors [list of tribes with historic ties to the site/region].”

Project notifications shall be written with a requirement to respond within 30 (or 45) days from date of receipt.

In the section on Notification, the content should be specified. Suggested language:  
*Notifications shall at a minimum include: the project name, a narrative description of the project; contact information for the applicant; most recent U.S. Geological Survey (USGS) map section (7.5 minute quadrangle) showing actual project location.*

#### D. Other Materials.

This should include request for a full materials list including but not limited to the use of cleaning products, paints or coatings, hydro-seeding, fertilizers, and soil additives. When necessary, Material Safety Data Sheets shall be provided. This should, most definitely, include any hazardous materials used onsite.

#### E. PILOT

I have commented to DOER about this as well. It demonstrates a misunderstanding of the PILOT process. For municipalities with a Select Board (and likely the Executive of any municipality), a PILOT agreement is negotiated AFTER the permit is approved and it is between the Executive and the Applicant; the Permit Granting Authority does not play a role in PILOT negotiations. So, this should not be included in any application submission materials. As part of the subsequent negotiation, the Applicant may propose a PILOT but this will likely be a self-interested proposal that the Select Board/Executive can consider or reject.

MISSING: Additional Suggested Documentation:

- Proof of financial surety
- Proof of compliance with all local, state and federal regulations and guidance.
- Documentation of the major system components to be used

#### **6.4 Operations and Maintenance Plan**

This should also include measures for vegetation controls. Plans for vegetative controls should include regular annual inspection and maintenance.

##### **6.6.1 Setbacks**

I would suggest that the setbacks, as written, are too small. Rather, Green Communities should prominently reiterate its point in the note and provide draft language that is consistent with the statement that “*The municipality should evaluate what is appropriate for its land use goals. Municipalities should generally apply the same setbacks to solar developments as they do to other similarly situated project types*”. Setbacks for solar should be consistent with other zoning within the municipality.

##### **6.7.1 Lighting**

I would add that whenever possible, Dark Sky compliant lighting should be followed whether a municipality has adopted a Dark Sky Lighting policy or not. Additionally, there needs to be language regarding lighting during construction. I would suggest that construction lighting should also be Dark Sky compliant, e.g. motion detection and downwards facing, shielded lights that do not extend beyond project boundaries.

##### **6.7.3 Screening**

Since the Commonwealth has stated an interest in preserving natural and working lands and maximizing carbon storage/sequestration, I would suggest adding the following

- The owner/operator shall not remove any naturally occurring vegetation such as trees and shrubs unless it adversely affects the performance and operation of the Installation.
- When possible, a diversity of plant species shall be used, with a preference for species native to New England.
- Use of exotic plants, as identified by the most recent copy of the “Massachusetts Prohibited Plant List” maintained by the Massachusetts Department of Agricultural Resources, is prohibited.
- Landscaping shall be maintained and replaced as necessary by the owner/ operator.

##### **6.7.4 Fencing**

The requirement for chain-link fence does not address the color of the fencing, which should be consistent with the values expressed in the Screening section.

##### **6.8.1 Emergency Services**

This should specify that this includes Fire, Police and Emergency Management.

It is essential that the emergency contact information be up to date. I would suggest that Shutesbury’s language be considered for the model bylaw “*Updated contact information shall be provided to the Town Administrator [or equivalent], Fire Chief, Police Chief, and the Emergency Management Director annually, no later than 30 days after the beginning of the fiscal year or*

*within 14 days of any contact personnel or information changes. Contact information shall include the contact's name, role in relation to the Installation, email and work phone number. At least one 24 hour/7 day phone number shall be provided for emergencies."*

### **6.8.2 Land Clearing and Soil Erosion**

I would expand this category to be *Land Clearing, Soil Erosion and Land Impacts*

To ensure the requirements of the bylaw be followed, I would suggest, as SMART and DOER's permitting and siting division allow, that an environmental monitor may be designated by the permit granting authority, at the applicant's or owner's expense, to inspect the site during construction and after significant weather events; the monitor shall provide reports to the operator and permit granting authority (as well as other regulatory bodies with interest) regarding erosion and stormwater impacts.

### **MISSING/ADD:**

#### **Habitat Impacts**

I would suggest adding the following:

Solar installations shall follow DOER's Small Clean Energy Regulations in regards to:

- Permanently protected land subject to MGL. Ch. 184, §s 31-33
- Land designated as Core Habitat and Critical Natural Landscapes (CNLs) by the Natural Heritage and Endangered Species BioMap program
- Habitat of Potential Regional and Statewide Importance located on Massachusetts Ecological Integrity Maps by the Dept. of Environmental Protection.
- Priority Habitat as codified by MA Endangered Species Act (MESA) that includes all state listed species of both plants and animals.

#### **Wetlands**

There must be a section on the protection of Wetlands. It should be stated that this shall be consistent with DOER's Small Clean Energy Regulations. [I have also included language under the Special Permit section]

#### **Statement on Mitigation Hierarchy**

It should be clearly noted that the Mitigation Hierarchy – avoid, minimize and mitigate is sequential and one step can only be taken after the prior step has been determined to be unachievable. For example, only minimize when avoidance is not possible; only mitigate when minimization is not possible. Steve Long at The Nature Conservancy is the "go to" for this language.

### **6.9.1 Solar Photovoltaic Installation Conditions**

Is this intended – Emergency Medical Services or is it a typo? I would suggest that Site Access needs to be maintained at a level acceptable to the local Fire Chief and Emergency Management Director.

### **ADD:**

There needs to be a requirement for annual reporting otherwise there is no mechanism for the municipal officials and the various regulators/permitting authorities to know whether compliance is continuing. Likewise, there would be no mechanism to understand about what is happening on the

site - requirement is the regular, ongoing monitoring. A written report should be provided to the municipality's Executive, permit granting authority, Fire Chief, Emergency Management Director, Building Commissioner, Board of Health and Conservation Commission

### **6.10.3 Decommissioning Fund**

DOER's Small Clean Energy regulations specify that the Decommissioning Fund should be based on an estimate that includes a breakdown of all major components of this process. I think this is a good thing since it provides greater understanding for the municipality in ascertaining whether the amounts proposed are accurate.

## **7.0 Special Permit**

Since the DOER model bylaw will provide an "umbrella of compliance" in regards to the Dover Amendment, I have been suggesting that DOER be expansive in considering aspects of clean energy siting that might not be included in the regulations or that are not specifically indicated in this model bylaw. I would suggest that various reports, requirements or activities that are legal and complementary that a municipality chooses to include in a local bylaw be mentioned in the Model Bylaw so that municipalities are not subsequently challenged about their legality under the Dover Amendment. The following are reports and requirements that may be optional for municipalities to include in their bylaw but which I would suggest Green Communities/DOER should proactively validate as being legal under the regulatory structure.

### **Optional Documents under a Special Permit**

#### Hydrogeology Report

A report by a qualified professional with demonstrated knowledge in hydrogeology that provides an estimate of how and to the extent construction and operation of the Installation may affect water volume, water storage, and drinking water well recharge within 400 feet of property lines for the installation

#### Noise Assessment.

The applicant and owner shall submit a noise assessment by a qualified professional of the noise levels projected to be generated during construction and operation of the facility, including for an ESS; a noise mitigation plan for construction and operation consistent with Massachusetts DEP Noise Control Regulation, 310 CMR 7.10; and a noise monitoring and mitigation plan as it relates to residents and wildlife consistent with state or national best practices.

#### Cultural Resource Management Plan or a Historic Properties Management Plan

If appropriate for the site, a Cultural Resource Management Plan (CRMP) or a Historic Properties Management Plan (HPMP) written by a professional with generally recognized credentials should be submitted to the special permit granting authority. The SPGA encourages good faith engagement with interested parties to resolve adverse effects including development and evaluation of alternatives or modifications that could avoid, minimize, or mitigate adverse effects. The landowner shall make all reasonable efforts to accommodate timely and necessary access to the site to develop this plan; lack of access may be deemed to result in this requirement not being fulfilled.

## **Optional Requirements under a Special Permit**

### **Wetlands Mitigation**

This activity will likely occur through a Consolidated Permitting process but stating this in the bylaw may be helpful for the Applicant and the special permit granting authority.

The applicant, if applicable, will prepare MA DEP WPA Form 4a. Abbreviated Notice of Resource Area Delineation (ANRAD) that includes a wetland evaluation and map of the site. The ANRAD shall also be submitted to the Conservation Commission with a copy submitted to the special permit granting authority.

### **Mitigation of Stormwater**

Stormwater runoff from the property during construction and during operation shall not significantly increase from the volume or frequency prior to development, nor shall the pattern of stormwater distribution be significantly altered from patterns prior to development to protect water recharge, existing wells and to prevent flooding or erosion. Stormwater management systems should use natural designs including Low Impact Design (LID) and Best Management Practices (BMPs) as outlined in the Massachusetts Stormwater Handbook, whenever possible. Stormwater management systems shall be designed to manage anticipated increased rain, extreme precipitation events, and changing ground conditions using estimates provided by the National Oceanic and Atmospheric Administration (NOAA). With the exception of precipitation estimates, any stormwater management design, including areas outside the buffer zone, shall meet the Massachusetts DEP Stormwater Standards

In order to provide an adequate intervening land area for the infiltration of stormwater runoff from a Installation, ground alterations, such as stump removal, excavation, filling, and grading, or the installation of drainage facilities, access driveways, or solar panels, are prohibited within 100 feet of any wetlands or hydrologic features subject to the jurisdiction of the local Conservation Commission and must be in compliance with any local wetlands regulations. The Special Permit Granting Authority may impose conditions to contain and control stormwater runoff that might negatively impact identified wetlands or other hydrologic features even if the proposed work area is outside the jurisdiction of the Conservation Commission.

### **Road Integrity Mitigation**

The special permit granting authority may require that construction access shall be from paved (bituminous or chip-sealed) Town roads. In the alternative, an applicant may propose, at their expense, to Town specifications, and based on the Town's cost estimate, to fund the paving and improvement of drainage facilities to those portions of the Town road required to meet the intent of this section as determined by the Special Permit Granting Authority. The applicant may also propose posting a bond sufficient to fund the maintenance, repair, and restoration to the satisfaction of the Highway Department and the Select Board, of an unpaved Town road and associated drainage facilities used for construction access. The Special Permit Granting Authority, after consultation with the local Highway Department [or equivalent] and only following written Select Board [or equivalent] approval of an alternative proposal, may accept or deny such alternative proposals.



#### Land Conservation/ No Net Loss Ratio

For purposes of habitat mitigation, carbon storage and sequestration mitigation, and to reduce forest block fragmentation, the Special Permit Granting Authority may require that up to a 1:1 ratio of acreage used by the project footprint be placed into conservation for the life of the project. Land placed in conservation will preferably be contiguous with the project site but shall be within the municipality in which the project is located. When necessary, this conservation may be augmented based on achieving a no net loss goal.

#### Mitigation of Noise

Use DOER Guidance language or the suggested below:

Noise generated by the Installation and/or associated equipment and machinery shall conform to applicable state and local noise regulations. Noise shall be minimized during construction and operation to protect public health and welfare and minimize disruptions to wildlife habitat. Noise, either episodic or continual, shall comply with Massachusetts DEP noise regulations, 310 CMR 7.10. Construction or maintenance activities shall be limited to Monday to Friday and shall not occur between the times of 5:00 p.m. and 7:00 a.m., with the exception of an emergency that would affect public safety or the integrity of the installation.

#### Mitigation for Degradation of Forest Health and Habitat Within the Installation

If forestland is proposed to be converted to a solar Installation, a plan shall be submitted to establish mitigation measures to preserve and support the health and ecological services: minimize erosion, promote the growth of native plants and prevent invasive species. The site shall be regularly reseeded and annually monitored until at least 80% of the land is vegetated by native plants (excluding invasive species). A planting maintenance plan shall be submitted with the special permit. An annual monitoring report shall be submitted for the first five years after construction and later if the at least 80% vegetation threshold is not met.

#### Mitigation for Disruption of Historic Resources and Properties

Historic resources and properties, such as cellar holes, past farmsteads, stone corrals, marked graves, water wells, or Indigenous cultural features, including those listed on the Massachusetts Register of Historic Places or those defined by the National Historic Preservation Act, shall be excluded from the areas proposed to be developed, including clearing for shade management. A suitable buffer area shall be established on all sides of each historic resource.