City of Auburn, Maine
Economic & Community Development
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To: Auburn Planning Board
From: Megan Norwood, City Planner II
Re: Solar Energy Generating Systems in the Ag-Zone: Review Draft Ordinance
Date: March 10, 2020

I. **ORDINANCE OVERVIEW** – At the February meeting the Planning Board discussed the creation of an ordinance for Solar Energy Generating Systems in the Ag-Zone and posed several questions for Staff to research and incorporate into a draft.

Similar to what was provided for Solar in the Industrial Zone, Staff researched solar standards in other communities and provided various examples of standards for the Planning Board to consider that would be specific to the Ag-Zone.

The Planning Board also had some overarching recommendations for Solar Energy Generating Systems in the Ag-Zone:

- Standards that are in place for solar installations in the Ag-Zone should be careful not to violate the principals behind the Ag-Zone definition:

Purpose of the Ag-Zone: The purposes of this district are to allow for conservation of natural resources and open space land, and to encourage agricultural, forestry, and certain types of recreational uses. It is declared to be in the public interest that these areas should be protected and conserved because of their natural, aesthetic and scenic value, the need to retain and preserve open space lands, their economic contribution to the city, and primarily because these areas are so remote from existing centers of development that any added uncontrolled growth could result in an economic burden on the city and its inhabitants. This section shall be construed so as to effectuate the purposes outline here and to prevent any attempt to establish uses which are inconsistent with these purposes or any attempt to evade the provisions of this division.

- Ensure there is good community engagement with Ag-Zone Owners.
- Have the ordinance reviewed by the Ag-Committee (if established), the Conservation Commission and if possible a forester/Ag landowner.
- The Planning Board also asked for a tutorial from someone with a technical understanding/engagement in the industry about selling power back to the grid and how all of that works. Who is tied to "what?" How are credits "earned" etc.? Staff has arranged to have a representative from the solar industry speak at the March Planning Board meeting to help provide clarification on these questions.

Questions from the Planning Board at the February Meeting

1. **The Planning Board wanted there to be standards in place for clearing of land for solar installations. A lot of the Ag-Zone is forested. Some prime soil areas may be forested and the cost to clear them for pasture may be too much for landowners. If clearing is allowed for solar installations in currently forested areas with prime soils, with the end game of reopening locked up prime soils, it might provide for more farming opportunities in the future that would otherwise be cost prohibitive.**

The Planning Board also suggested the standard incorporate a sunset clause or continuation requirements for the solar installations. At some point, the land will not longer be used for solar and will be reverted back to agriculture. The standard should address how and when that will happen.

Most ordinances have standards in place that limit the amount of clearing of natural vegetation to what is necessary for the construction, operation and maintenance of a Solar Energy Generating System. The ordinance for the Industrial District has the following language:

"*Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*."

Tiverton, Rhode Island has similar language:
Land clearing, soil erosion and habitat impacts: Clearing of natural vegetation shall be limited to what is necessary for the construction, operation, and maintenance of the solar energy system or otherwise prescribed by applicable laws, regulations, and ordinances. The disturbance and removal of topsoil from the site shall be limited to those areas that are required for the installation of the proposed solar energy system. The applicant shall utilize existing cleared land or that which minimizes the impact on forest and habitat.

The Georgia Model Solar Zoning Ordinance guide recommends that Counties and Cities adhere to the following best management practices when it comes to solar development:

- Site solar energy systems to avoid clear cutting forests entirely.
- If a solar energy system is proposed on forestland, the footprint or design of the project should:
    - Avoid the healthiest sections of the forest and oldest trees
    - Adopt habitat corridors
- A policy of zero net loss should be followed, meaning both planting the same number of trees that were cut elsewhere and replanting the solar site after decommissioning with the same number and species of trees. Replanting with non-native trees or only planting with one type does not capture the same habitat and carbon sink gains that the site originally produced.

There were not any examples that Staff could find allowing the clearing of forested areas for solar with the goal of in the future using the cleared land as farmland. The argument is that solar, as a renewable energy resource, should not require the removal of forested areas.

Depending on the direction the Planning Board thinks is appropriate, there are a couple of suggestions of language that could be incorporated into the Ag-Zone Solar Ordinance:

Standards restricting clearing and/or requiring replanting of forests

[*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, a policy of zero net loss should be followed by replanting the solar site after decommissioning with the same number and species of trees.

OR
[*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, a policy of zero net loss should be followed by planting the same number of trees that were cut elsewhere in the Agriculture and Resource Protection District at the time of construction, avoiding prime farmland areas.

OR
[*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*.

OR
[*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, up to 30% of the subject parcel may be cleared.

Standard encouraging clearing with the intention of opening farmland

[*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, on a parcel adjacent to prime farmland or land currently used for farming, clearing of forestland may be permitted under the following conditions:

- The presence of solar installation shall not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property
- A decommissioning plan shall be provided at the time of application that includes a process and timeline for the conversion of the parcel into prime farmland.

2. **The Planning Board wanted there to be standards in place to protect prime soils – should these installations be allowed on soil used for vegetation/ground crop production? The Board will need to decide if it is reasonable to build on prime soils.**

The Planning Board also asked about soils of Statewide Significance and the USDA definition of prime soils.

The USDA defines prime farmland as: Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. **It has the soil quality, growing season, and moisture supply needed to produce economically sustained high yields of crops when treated and managed according to acceptable farming methods, including water management.** In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. **They are permeable to water and air. Prime farmlands**

are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

Soils of Statewide Significance are those identified by the USDA for the production of food, feed, fiber, forage and oilseed crops. The soils are identified for each county by Official Soil Series Descriptions and are mapped in the county soil survey.

The Oregon Land Conservation and Development Department has standards for Agricultural Land as they pertain to solar development. Below are some examples from their language:

- The proposed solar installation will not create unnecessary negative impacts on agricultural operations conducted on any portion of the subject property not occupied by project components. Negative impacts could include, but are not limited to, the unnecessary construction of roads dividing a field or multiple fields in such a way that creates small or isolated pieces of property that are more difficult to farm, and placing solar installation project components on lands in a manner that could disrupt common and accepted farming practices.
- The presence of solar installation will not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property. This provision may be satisfied by the submittal and approval of a soil and erosion control plan prepared by a qualified individual, showing how unnecessary soil erosion will be avoided or remedied. The approved plan shall be attached to the decision as a condition of approval.
- Construction or maintenance activities will not result in the unabated introduction or spread of noxious weeds or other undesirable weed specific. This provision may be satisfied by the submittal and approval of a weed control plan prepared by an adequately qualified individual that includes a long-term maintenance agreement. The approved plan shall be attached to the decision as a condition of approval.
- The project is not located on high-value farm soils unless it can be demonstrated that
    - Non high-value farmland soils are not available on the subject property;
    - Siting the project on non high-value farmland soils present on the subject parcel would significantly reduce the project's ability to operate successfully; or
    - The proposed site is better suited to allow continuation of an existing commercial farm or ranching operation on the subject tract than other possible sites also located on the subject tract, including those comprised of non high-value farmland soils.

Cranston, Rhode Island has the following standards for prime farmland:

- If soils need to be disturbed in areas of the site for installation purposes, the soils must be stored on site for future reclamation and areas under the panels are to be replanted with grass or low growth vegetation that is listed in the University of Rhode Island's native plant database;
- Siting of the facility overall and individual panels shall keep with the existing contours of the land, and only pile driven or ballast block footing are to be used, so as to minimize the disturbance of soils during installation; and
- Required vegetative buffers are to be composed of plant materials listed in the University of Rhode Island's native plant database (except as otherwise permitted in this ordinance), with a preference for pollinator-friendly materials to the maximum extent practicable

Similar to Oregon and Cranston's language, the solar guidelines for Prince George's County, Maryland require that the least productive agricultural soils should be considered first. For Subdivision/Site Plan proposals, the City requires a soils analysis that looks at the stability of

soils. However, a standard could also be incorporated that looks at soil quality in relation to water permeability and other factors discussed above to make the determination as to where solar installations could go. The standard could look something like this:

For Solar Energy Generating Systems sited in the Agriculture and Resource Protection Zone, a soil analysis shall be submitted at the time of application. Such analysis shall demonstrate whether the site proposed for development contains prime farmland as defined by the United States Department of Agriculture (USDA). The least productive agricultural soils shall be considered first unless it can be demonstrated to the Planning Board that:

- *Non prime farmland is not available on the subject property;*
- *Siting the project on non prime farmland present on the subject parcel would significantly reduce the project's ability to operate successfully; or*
- *The proposed site is better suited to allow continuation of an existing commercial farm on the subject tract than other possible sites also located on the subject tract, including those comprised of non high-value farmland soils.*

Additional Standards (that could go hand in hand with the above):

- *If soils need to be disturbed in areas of the site for installation purposes, the soils must be stored on site for future reclamation and areas under the panels are to be replanted with grass or low growth vegetation that is native to the State of Maine.*
- *Siting of the facility overall and individual panels shall keep with the existing contours of the land, and only pile driven or ballast block footing are to be used, so as to minimize the disturbance of soils during installations;*

OR

The proposed Site Plan shall include locations of land determined to be prime farmland as defined by the United States Department of Agriculture (USDA). The total land area of the installation shall not cover greater than 30% of prime farmland.

3. The Planning Board wanted there to be standards that address the potential environmental impact of solar panels on ecosystems and wildlife.

One of the reasons the Planning Board is reviewing solar in the Ag-Zone is because many of the City's landfills are located in this zoning district. The State of Rhode Island, Office of Energy Resources encourages renewable energy development to be sited in locations with environmental alterations such as closed landfills, brownfields, parking lots, commercial and residential rooftops, sand and gravel pits. The Planning Board could allow Solar Energy Generating Systems on closed landfills by right and have less of a permitting process for brownfields, parking lots and sand/gravel pits in the Agriculture and Resource Protection District.

The Georgia Model Solar Ordinance requires Developers to submit basic information about what species and habitat could potentially be impacted by development on the property. In the application materials for the BD Solar project, they have submitted information on wildlife, soils and archeological features on the subject parcel. The ordinance requires this under Site Plan/Special Exception standards. The Planning Board can make it more explicit by also requiring it as part of the Solar Energy Generating Systems ordinance specific to the Ag-Zone.

Standard specific to habitat and the environment

All applications for Solar Energy Generating Systems sited in the Agriculture and Resource Protection District shall include a summary of any potential impacts to wildlife and ecosystems.

AND/OR

For Solar Energy Generating Systems proposed in the Agriculture and Resource Protection District, any land disturbed during construction shall be replanted with native crop cover to provide pollinator habitat. A noxious weed control plan shall be submitted at the time of application.

4. **The Planning Board was asking whether or not there should be restrictions on the total land area within the Ag-Zone that could be dedicated to solar.**
   One interesting way they have done this in Oregon is by requiring there to be a study completed of all lands zoned for farm use within one mile measured from the center of the proposed project. If fewer than 48 acres of solar projects have been constructed or received land approvals, no further action is necessary. However, when 48 acres or more of solar projects have been constructed or received land approvals and obtained building permits, either as a single project or multiple, the City must find that the solar project proposed will not *materially alter the stability of the overall land use pattern of the area.*

   When they say "materially alter the stability of the land use pattern" they provide a definition that if the overall effect of existing and potential solar facilities will make it more difficult for existing farms in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area, then they cannot move forward with the project. **Is this something the Planning Board would want to have control over?** A standard would also have to make explicit that this applies only to "commercial" solar installers and not a farmer installing solar panels for their own electricity generation. A similar standard could look something like this:

   For Solar Energy Generating Systems in the Agriculture and Resource Protection District, a study shall be completed of all lands in the Agriculture and Resource Protection District within one mile, measured from the center of the proposed project. If fewer than 50 acres of Solar Energy Generating Systems have been constructed or received Planning Board approvals, no further action is necessary. However, if 50 acres or more of Solar Energy Generating Systems have been constructed or received Planning Board approvals, the Planning Board must find that the proposed Solar Energy Generating System will not materially alter the stability of the overall land use pattern of the Agriculture and Resource Protection District. In making this determination, the Planning Board shall consider the overall effect of existing and potential Solar Energy Generating Systems and if it will be more difficult for existing farms in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area.

5. **The Planning Board wanted standards that look at connections to the grid and land required for the infrastructure, ensuring there are no negative impacts.**

When drafting the Industrial District Ordinance, it was assumed that the Industrial Zoning District has the Industrial carrying capacity for grid connections, etc. That may not be the case in the Ag-Zone. What grid infrastructure exists/needs to exist and should that determine where projects can go?

Our research has shown that Developers will not site a solar development in an area where it becomes too cost prohibitive to connect to the grid and Developers likely will not install large amount of infrastructure to make the connections possible. Staff can work with CMP and Solar Developers to see what exists currently for grid infrastructure in the Ag-Zone and what types of new infrastructure would be necessary to connect projects to the grid. Based on our experience with the BD Solar application, it sounds as though a lot of the electrical components of the solar project will be sorted out before construction and not necessarily at the time of application to the Planning Board.

From the Natural Resources Council of Maine: Project sites less than a mile from an existing electricity connection point will be most competitive for solar projects. This has a positive side effect of keeping distributed solar generation closer to existing development, not sprawling into Maine's North Woods. Placing systems far from substations is cost prohibitive for distributed solar projects. The cost of connecting a solar project to the electricity grid quickly increase based on circuit size or distance from a substation. Upgrading connection lines can exceed $500,000 per mile. Natural limitations in options for grid connection also are likely to significantly limit the number of multi megawatt-scale projects in any given town.

Location of the Solar Energy Generating System shall consider the location of existing grid infrastructure and plan to limit the need to extend the amenities for optimal efficiency.

6. **The Planning Board wanted there to be standards that ensure solar installations do not have a negative impact on agriculture uses of land and ensure there is no prohibition on the comingling of pasturing animals and generating solar power.**

The Atkinson Center for a Sustainable Future at Cornell University researched three ways to maintain a solar site: sheep farmers grazing, landscapers and solar site managers. They found that sheep grazing as just as effective as traditional landscape management, less labor intensive than traditional landscaping services and less expensive.

Belfast, Maine, where examples were pulled for the Industrial District Ordinance requires a vegetation management plan be submitted as part of the submission materials:
The owner or operator of a Solar Energy Generating System shall prepare a vegetation management plan associated with the operation of the system, it shall identify measures it will use to effectively manage vegetation, including methods such as but not limited to vegetating the solar array area as a pollinator-friendly manner and allowing the area for the grazing of farm animals. A standard like the one used in Belfast coupled with the other standards discussed in this Staff Report that try to ensure solar installations do not have a negative impact on agriculture uses should achieve the Planning Boards objective.

The Owner or Operator of a Solar Energy Generating System shall prepare a vegetation management plan associated with the operation of the system, it shall identify measures it will use to effectively manage vegetation, including methods such as but not limited to vegetating the solar array area as a pollinator-friendly manner and allowing the area for the grazing of farm animals.

AND/OR

The Solar Energy Generating System design shall prioritize the ability to co-mingle agricultural and energy generation land uses including but not limited to apiaries, grazing or hand-picked crops.

7. **The Planning Board wanted to see standards for project impact fees to be able to use prime farm soils with a fee to help create cleared areas with important soils that are otherwise forested. For example, a forested area that is adjacent to a field that a famer has not otherwise been able to afford to clear.**

Language for a project impact fee can be included under #1 under: Clearing of forestland may be permitted under the following conditions…with a new condition being something like this:

- A project impact fee is provided for the use of prime farm soils for a Solar Energy Generating System with the purpose of converting forested areas to prime farmland.

8. **Similar to the Industrial District, the Planning Board wanted to see standards that address the density of panels and mitigation of shade from neighboring properties.**

Should Solar Energy Generating Systems follow the same setback requirements as the Ag-Zone?

One issue we encountered that we did not realize in the Industrial District is that setbacks apply to "buildings" and buildings are defined as means a structure having one or more stories and a roof, designed primarily for the shelter, support or enclosure of persons, animals or property of any kind.

Therefore, solar panels themselves would not fall under the definition of buildings. Staff feels its important to have setback requirements specific to solar panels in the Ag-Zone because otherwise, there would not be any requirements. **Does the Rear/Front: 25 Feet and Side: 15 Feet established for buildings also make sense for solar?**

The lot coverage restrictions in the Industrial District are 40%. The Ag-Zone does not have specific lot coverage standards. If you recall, our lot coverage standards only included the paved, mounting block, or otherwise impervious areas of sites on which ground mounted solar energy systems are installed. As you look through the BD Solar application materials, you will note they are only at about 2% of their lot coverage with over 36,000 panels. Does the Planning Board want to revise this standard for the Ag-Zone? If so, **what would be a reasonable lot coverage standard? 10% or 20% of the lot? Should the calculation exclude prime farmland and forested areas?**

9. **The Planning Board also wanted to see, included as part of the decommissioning standards developed for the Industrial District, a timeline for restoring prime soils as part of the process. For example, what is the expected lifespan of the solar installation and what does the soil look like at the "end of life?"**

Most solar installations are intended to last for 20 years. The language under #1 (clearing standards) requires that a decommissioning plan be provided that explains the process for restoring prime farmland (if the parcel was originally forested). The language could also require that the decommissioning plan include restoring prime farmland as part of the process.

10. **Similar to the Industrial District, the Planning Board agreed that power generated for the principal use of the property should be widely permitted. The ordinance would be triggered by the "commercial" selling of power. For example, if a farmer is working with a solar company for the company to use their land and sell the power to the grid, that would be a commercial project. On the contrary, a farmer generating power for their use would be power generated for the principal use. The standard should ensure that a farmer will not always be using all the power they generate all the time. Excess will be sent to the grid and they will receive credits (especially in the winter months) but those credits will be used when electricity demand increases.**

    The language that was adopted for the Industrial District has the following language under Applicability "This section shall apply to all Solar Energy Generating Systems except the following:

Ground-Mounted Solar Energy Generating Systems intended to satisfy the electricity needs of the principal use of the lot provided the Owner or Operator completes FAA requirements if within the Airport Overlay Zone.

This language would apply to both the Industrial District and the Ag-Zone and would ensure farmers installing solar panels to generate solar power for their own use would be exempt from the ordinance whether they propose 5 panels or 5 acres worth of panels.

II. **STAFF RECOMMENDATIONS** –

Staff will use the March meeting to get direction from the Planning Board on the suggested standards for solar in the Ag-Zone. For the April meeting, Staff will incorporate the standards and recommended language into the existing ordinance for the Industrial District and provide a first draft for the Planning Board to review. Questions/Standards discussed in this Staff Report:

Possible Ordinance Standards for Clearing of Land for Solar/Prime Soils

CLEARING –

- OPTION 1 [*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. **(ADD)** If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, a policy of zero net loss should be followed by replanting the solar site after decommissioning with the same number and species of trees.
- OPTION 2 [*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. **(ADD)** If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, a policy of zero net loss should be followed by planting the same number of trees that were cut elsewhere in the Agriculture and Resource Protection District at the time of construction, avoiding prime farmland areas.

- OPTION 3 [*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. **(ADD)** If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, up to 30% of the subject parcel may be cleared.
- OPTION 4 [*Industrial District Language*] *Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System or as otherwise prescribed by applicable laws, regulations and bylaws/ordinances*. **(ADD)** If a Solar Energy Generating System is proposed on forestland in the Agriculture and Resource Protection District, on a parcel adjacent to prime farmland or land currently used for farming, clearing of forestland may be permitted under the following conditions:
  - The presence of solar installation shall not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property.
  - A decommissioning plan shall be provided at the time of application that includes a process and timeline for the conversion of the parcel into prime farmland, the cost of conversion shall be included in the Financial Surety in accordance with Sec. 60-1431(3).
  - (*And possibly*) A project impact fee is provided for the use of prime farmland for a Solar Energy Generating System with the purpose of converting forested areas into prime farmland (*the standard will also have to define how this impact fee is determined*).

PRIME SOILS –

- OPTION 1 All applications for Solar Energy Generating Systems sited in the Agriculture and Resource Protection District shall include a soil analysis. Such analysis shall demonstrate if the site proposed for development contains prime farmland as defined by the United States Department of Agriculture (USDA). The least productive agricultural soils shall be considered first for development unless it can be demonstrated to the Planning Board that:
  - Non-prime farmland is not available on the subject property;
  - Siting the project on non-prime farmland present on the subject parcel would significantly reduce the project's ability to operate successfully;
  - The proposed site is better suited to allow continuation of an existing commercial farm on the subject tract than other possible sites also located on the subject tract, including those comprised of non-high-value farmland soils.
- OPTION 2 (IN ADDITION TO OPTION 1) If soils are disturbed in areas of the site for installation purposes, the soils must be stored on site for future reclamation and areas under the panels shall be replanted with grass or low growth vegetation that is native to the State of Maine.
  Siting of the facility overall and individual panels shall keep with the existing contours of the land, and only pile driven, or ballast block footing shall be used so as to minimize the disturbance of soils during installation.
- OPTION 3: The proposed Site Plan shall include locations of land determined to be prime farmland as defined by the United States Department of Agriculture (USDA). The total land area of the installation shall not cover greater than 30% of prime farmland.
- OPTION 4: All applications for Solar Energy Generating Systems sited in the Agriculture and Resource Protection District shall include a plan for topsoil maintenance.

Grading of land shall be minimized and to the extent possible Solar Energy Generating System infrastructure shall not be located on steep slopes.

Possible Ordinance Standards that Address Potential Impacts on Ecosystems/Wildlife

- OPTION 1: All applications for Solar Energy Generating Systems sited in the Agriculture and Resource Protection District shall include a summary of any potential impacts to wildlife and ecosystems.
- OPTION 2: For Solar Energy Generating Systems proposed in the Agriculture and Resource Protection District, any land disturbed during construction shall be replanted with native crop cover to provide pollinator habitat. A noxious weed control plan shall be submitted at the time of application.

Possible Ordinance Standards on the Total Land Area within the Ag-Zone Dedicated to Solar (This and a clearing/prime soil standard could all be incorporated into one)

- OPTION 1: For Solar Energy Generating Systems in the Agriculture and Resource Protection District, a study shall be completed of all lands in the Agriculture and Resource Protection District within one mile, measured from the center of the proposed project. If fewer than 50 acres of Solar Energy Generating Systems have been constructed or received Planning Board approvals in the study area, no further action is necessary. However, if 50 acres or more of Solar Energy Generating Systems have been constructed or received Planning Board approvals in the study area, the Planning Board must find that the proposed Solar Energy Generating System will not materially alter the stability of the overall land use pattern of the Agriculture and Resource Protection District. In making this determination, the Planning Board shall consider the overall effect of existing and potential Solar Energy Generating Systems and if it will be more difficult for existing farms in the area to continue operation due to diminished opportunities to expand, purchase or lease farmland, acquire water rights, or diminish the number of tracts or acreage in farm use in a manner that will destabilize the overall character of the study area.

Possible Ordinance Standards for Grid Connections & Required Infrastructure

- OPTION 1: Location of the Solar Energy Generating System shall consider the location of existing grid infrastructure and plan to limit the need to extend the amenities for optimal efficiency.

Possible Ordinance Standards for Ensuring Solar Installations do not have Negative Impacts on Agriculture (and no Prohibition on Pasturing Animals with Solar Installations)

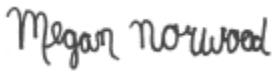
- OPTION 1: The Owner or Operator of a Solar Energy Generating System shall prepare a vegetation management plan associated with the operation of the system, it shall identify measures it will use to effectively manage vegetation, including methods such as but not limited to vegetating the solar array area as a pollinator-friendly manner and allowing the area for the grazing of farm animals.
- OPTION 2: The Solar Energy Generating System design shall prioritize the ability to co-mingle agricultural and energy generation land uses including but not limited to apiaries, grazing or hand-picked crops.

Possible Ordinance Standards for Density of Panels and Shade Mitigation

- Does the Rear/Front: 25 Feet and Side: 15 Feet established for buildings also make sense for solar?
- What would be a reasonable lot coverage standard? 10% or 20% of the lot? Should the calculation exclude prime farmland and forested areas?

Ordinance Standard Ensuring Property Owners Can Install Solar for their own Electricity Use

Ensure farmers can still install solar panels on their property and use the power for their own personal use. The language already approved for the Industrial District exempts: *Ground-Mounted Solar Energy Generating Systems intended to satisfy the electricity needs of the principal use of the lot provided the Owner or Operator completes FAA requirements if within the Airport Overlay Zone.* This exemption would also apply to solar projects in the Ag-Zone.



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City Planner II