



## City of Auburn, Maine

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To: Auburn Planning Board  
From: Megan Norwood, City Planner II  
Re: Solar Energy Generating Systems: Review Draft Ordinance  
Date: November 12, 2019

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**I. ORDINANCE OVERVIEW** – As the Planning Board is aware, Staff has been receiving inquiries from potential Developers interested in exploring opportunities for solar installation projects in the City. With the current ordinance language, the only Zoning District that would allow these installations would be the Industrial District using the “Electric Generating Plants” permitted use. However, there are no performance standards in place to regulate the use.

At the September meeting, the Planning Board was in favor of having Staff research potential performance standards for commercial solar developments in the Industrial District. Staff presented examples of performance standards at the October meeting and the Planning Board was in favor of moving forward with a draft ordinance for the Industrial District.

Included in the Planning Board packets for the November meeting is a draft ordinance for “Solar Energy Generating Systems” (SEGS). Where there are still a few outstanding questions/items Staff needs feedback on from the Planning Board, the purpose of the November meeting will be to provide feedback to Staff on the draft ordinance so that a more complete draft can be circulated at the December Planning Board meeting.

Below is a description of each section of the draft ordinance revisions/additions and questions Staff had for the Planning Board:

- First is the list of current Use Regulations for the Industrial District. Number 22 is where the ordinance currently permits “Electric Generating Plants.” Draft language was added to include “Ground-Mounted and Dual-Use SEGS less than one acre in total land area” as permitted in the Industrial District.
- Second are the Special Exception uses for the Industrial District. Number 37 is a new Special Exception to give the Planning Board the authority to review “Ground-Mounted and Dual-Use SEGS that occupy greater than one acre in total land area.”

The threshold that triggers Special Exception Review is the first question Staff had for the Planning Board. **At what point does the Planning Board feel public notification and Planning Board review should be required for SEGS? Is a one-acre threshold for ground-mounted and dual use installations reasonable, should it be more/less?**

- Article XVIII under Chapter 60 is a new article for the purpose of establishing standards for SEGS. Planning Staff used the Wireless Telecommunications ordinance as a template and created a separate article so that additional Zoning Districts may be incorporated in the future without tying the ordinance strictly to the Industrial District. However, the only district ground-mounted and dual use installations would be permissible with this current ordinance is the Industrial District (unless they are intended to provide power to a principal use – *see discussion below*).



Figure 1: Example of a Dual Use Solar Panel Installations

- There are three primary types of SEGs:
  - *Dual Use* – For example, solar panels cantilevered over a parking lot.
  - *Building Integrated/Roof-Mounted* – Solar panels that are essentially embedded in a building or building component or ones that are mounted to a roof.
  - *Ground-Mounted* – Solar panels that are mounted to the ground.



Figure 2: Building Integrated/Roof Mounted Solar Panels



Figure 3: Examples of Ground-Mounted Solar Panel Installations

- The *Applicability* section gets into where this ordinance would not be applicable. For example, SEGs for municipal uses. Planning Staff also felt that Building Integrated/Roof-Mounted SEGs should be permitted in all Zoning Districts as they would be currently with an electrical permit. **If a homeowner or business wanted to install solar panels on their roof or integrate them into their building would the City want to regulate that?**

In addition, Staff felt that ground-mounted SEGs intended to satisfy the electricity needs of the principal use of the lot should not be subject to review by the Planning Board as they would not be currently.

**Would the City want to regulate a homeowner or business who wants to install ground-mounted solar panels solely to serve their home/business?**

When writing this ordinance, City Staff originally had it titled “Commercial SEGS,” however, we learned with net metering, technically all solar power generated on a lot, no matter the mechanism, could all be construed as “commercial.” The power is generated, sold back to the grid, and the homeowner/business is given a credit on their electricity bill. By saying “commercial,” the City is almost in a way precluding a homeowner/business from selling electricity back to the grid. There was a court-case in Pennsylvania where this was challenged (Sunrise Energy).

- The *Administrative Procedures* section lists out when a solar installation is required to be reviewed by the Planning Board as a Special Exception (greater than one acre in size) and when it is permitted by right (when it is not listed as exempt or minor repairs/replacements to existing facilities).
- The *Application Requirements (A)* revert to the Special Exception/Site Plan Review requirements and have a few other application submission items specific to SEGS, for example:
  - The requirement to submit a narrative describing the project and details on its components;
  - A site plan showing items applicable to the SEGS such as the tallest finished height of the solar collectors which the City Site Plan Review requirements may not capture;
  - Grid connection information;
  - Documentation that the equipment complies with State and local codes.
- The *Application Requirements (B)* are for SEGS that are essentially permitted by right, for example, ground-mounted systems less than 1 acre in total land area in the Industrial District which are **NOT** intended to serve the electricity needs of the primary structure, or physical modifications to already approved solar installations that do not alter the land area or system location. **What types of standards would the Planning Board like to see for these types of projects? Safety/buffering/access?**
- The *Approval* section (A) is the bulk of the ordinance and covers the various Planning Board review standards that would apply to SEGS such as: Yard requirements, lot coverage, technical and safety, maintenance, glare, solar access, visual impact, lighting, maintaining ground permeability and the submission of an O&M plan.
  - *Yard Requirements:* If a SEGS is proposed to abut the side or rear lot line of a lot or use in a residential district, the buffer requirement is the same as the landscaping requirements for a new building in the Industrial District, 30 feet with an evergreen tree line planted in staggered rows. For a nonresidential use, it would be 15 feet. **Should the buffering requirements be less than the building requirements in the Industrial District? What would be a reasonable threshold?**
  - *Lot Coverage:* SEGS are exempt from lot coverage requirements. Other communities have done the same. The lot coverage restriction in the Industrial District is 40%. **Should SEGS be exempt from lot coverage requirements in the Industrial District?**
  - *Technical and Safety:* This requires a copy of the As-Built Site Plan to be provided to the Fire Department as well as all means of shutting down the SEGS in an emergency. At the November 20<sup>th</sup> Development Review meeting, Planning Staff expects to receive comments back from Staff, including the Fire Department on the ordinance and what items they would like to have included in the ordinance. This is one section where we expect to receive comments back from the Fire Department.

- *Maintenance*: This requires the Owner/Operator to maintain the facility in good condition. This is especially important when it comes to maintaining the access roads into the development. **Are there any other Maintenance items the Planning Board feels are important for a SEGS?**
  - *Glare*. This standard requires solar panels to be placed to minimize or negate glare impacting nearby properties or roadways. Planning Staff could not find any specific “standards” for glare. **Does the Planning Board feel this language is sufficient to address potential glare impacts of SEGS?**
  - *Solar Access*. This is an interesting standard from Portland that encourages applicants to obtain solar easements from abutting property owners to protect access to sunlight for the installation. **Is this something the Planning Board would like to include as a standard or is this something that should be left up to the Applicant without Planning Board involvement/requirements?**
  - *Visual Impact*: This requires the applicant to make efforts to minimize potential visual impacts of a solar installation by preserving vegetation, screening abutting properties, etc. **The buffering/landscaping requirement already covers a visual impact in a way, should there be a separate standard that allows the Planning Board to determine if a reasonable effort has been made to minimize visual impacts from the SEGS? Perhaps in lieu of a buffering requirement or vice versa?**
  - *Lighting*: The City already has a lighting ordinance, **should there be separate standards for lighting associated with SEGS as they may be different than traditional building/parking lot lighting or should it revert back to the City’s lighting ordinance?**
  - *Maintain Permeability of the Ground in Unbuilt areas*: This standard essentially requires the Owner/Operator of the SEGS to maintain a pervious surface in/around the SEGS rather than placing gravel or pavement underneath the panels in currently unbuilt areas. **Is the Planning Board in favor of a standard to regulate the type of material used underneath a SEGS proposed in an unbuilt area?**
  - *Operations and Maintenance Plan*: This standard requires the Owner/Operator to submit an O&M plan for the SEGS which include measures for maintaining safe access to the installation, stormwater controls and general procedures for operational maintenance of the installation. **Is there anything else the Planning Board would like to have included in an O&M Plan for a SEGS?**
- The *Approval* section (B) are the standards that would be applicable to SEGS that are essentially permitted by right, as discussed above, the ground-mounted systems less than 1 acre in total land area in the Industrial District which are NOT intended to serve the electricity needs of the primary structure, or physical modifications to already approved solar installations that do not alter the land area or system location. This section essentially requires the creation of a committee comprised of the Planning Department, Engineering, Fire Department and Lewiston-Auburn 911. This is the same review process required for Wireless Telecommunications Facilities. The types of proposals that would fall under this category are not likely to be that common. For example, how often would the City expect to see a SEGS on less than one acre where the power is not consumed on the site? **In those situations, does it make sense to have the SEGS reviewed by the various departments listed in this section of the ordinance?**
  - The *Abandonment* section describes the procedure should any ground-mounted or dual-use system be abandoned. **Does the Planning Board feel this section adequately addresses the removal of a SEGS should it be abandoned?**

- The last section is the *Appeals* section which is the same language from the Wireless Telecommunications Ordinance.

### III. STAFF RECOMMENDATIONS –

Staff recommends the Planning Board review the ordinance and discuss the various questions/feedback items at the November Planning Board meeting so that Staff can incorporate Planning Board and Staff comments to prepare a more complete draft for the December meeting. Questions discussed in the Staff Report:

- **At what point does the Planning Board feel public notification and Planning Board review should be required for SEGS? Is a one-acre threshold for ground-mounted and dual use installations reasonable, should it be more/less?**
- **If a homeowner or business wanted to install solar panels on their roof or integrate them into their building would the City want to regulate that?**
- **Would the City want to regulate a homeowner or business who wants to install ground-mounted solar panels solely to serve their home/business (not for sale)?**
- **What types of standards would the Planning Board like to see for the “by-right” types of projects? For example, SEGS on less than one acre where the power would not be used for the principal structure? Safety/buffering/access?**
- **Should the buffering requirements be less than the building requirements in the Industrial District? What would be a reasonable threshold?**
- **Should SEGS be exempt from lot coverage requirements in the Industrial District?**
- **Are there any other Maintenance items the Planning Board feels are important for a SEGS?**
- **Does the Planning Board feel the proposed language is sufficient enough to address potential glare impacts of SEGS?**
- **Is the Planning Board in favor of a standard to encourage Owners/Operators to obtain solar easements or is this something that should be left up to the Owner/Operator without Planning Board involvement/requirements?**
- **The buffering/landscaping requirement already covers a visual impact in a way, should there be a separate standard that allows the Planning Board to determine if a reasonable effort has been made to minimize visual impacts from the SEGS? Perhaps in lieu of a buffering requirement or vice versa?**
- **Should there be separate standards for lighting associated with SEGS as they may be different than traditional building/parking lot lighting or should the ordinance revert to the City’s lighting ordinance? Should the lighting ordinance be amended to include SEGS types of lighting?**
- **Is the Planning Board in favor of a standard to regulate the type of material used underneath a SEGS proposed in an unbuilt area to ensure it remains pervious?**
- **Is there anything else the Planning Board would like to have included in an O&M Plan for a SEGS?**
- **In the “by-right” situations, does it make sense to have the SEGS reviewed by the various departments listed in that section of the ordinance?**
- **Does the Planning Board feel the abandonment provisions adequately addresses the removal of a SEGS should it be abandoned?**

*Megan Norwood*

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