

**To:** Auburn Planning Board  
**From:** Megan Norwood, City Planner II  
**Re:** Proposed 18 acre, 4MW solar array at 1054 North River Road (PIDs: 325-030, 326-001 and 326-001-001), Auburn Solar, LLC on a parcel located in the Agriculture and Resource Protection Zoning District.  
**Date:** March 9, 2021

**PLEASE NOTE: THE ITEMS IN BROWN ITALICS WERE EMAILED TO THE APPLICANT ON 3/3/21. RESPONSES WILL BE DISTRIBUTED TO THE PLANNING BOARD.**



**I. PROPOSAL:** Hexagon Energy on behalf of Auburn Solar, LLC is seeking Site Plan/Special Exception pursuant to Sec. 60-45 of the Auburn Code of Ordinances to construct a 4MW solar array on approximately 18 acres on three parcels around 1054 North River Road. The parcel is located in the Agriculture and Resource Protection District.

The Planning Board offered a recommended ordinance on Solar Energy Generating Systems for the Agriculture and Resource Protection District, which was approved by the City Council on June 1, 2020.

Below are the standards the Planning Board created for Solar Energy Generating Systems in the Agriculture and Resource Protection District and the information the Applicant provided on each.

**Chapter 60, Article XVIII. – Solar Energy Generating Systems. Section 60-1430 (Approval):**

- I. *Yard Requirements.* The requirements in this section are not applicable to solar arrays in the Ag-Zone, they have their own set of requirements for setbacks (see below).
- II. *Lot Coverage.* The standards apply to the paved, mounting block, or otherwise impervious areas of the site. Photovoltaic cells, panels, arrays, and inverters are not considered impervious areas provided the soil underneath the collector is not compacted and remains vegetated in accordance with the permanent stabilization standards in Chapter 500 (**see below**) for the 30% lot coverage requirement specific to solar arrays in the Ag-Zone.
- III. *Height Regulations.* The total height of solar arrays including accessory structures cannot exceed 30 feet. **The maximum height of the proposed solar array is 8 feet.**
- IV. *Technical and Safety.* A copy of the as-built site plan for the solar array is required to be provided to the Fire Prevention Officer with all means of shutting down the solar array clearly marked. **This will happen after the solar array has been constructed, the Applicant has been in contact with the Fire Prevention Officer.**

- V. *Maintenance.* The facility is required to be maintained in good condition throughout the life of the project, this includes both infrastructure and access ways. **This is something the City will monitor after the solar array has been constructed, if there are issues, the City will cite this provision and request the issues be resolved. An Operation and Maintenance Plan has been provided.**
- VI. *Glare.* This section requires solar arrays to minimize or negate solar glare that could impact nearby properties or roadways, it also has specific requirements for solar arrays in the Airport Overlay. **This parcel is not located within a 2 nautical mile radius of the Auburn Lewiston Municipal Airport so a glare study is not required. *Email to Applicant: I didn't see any information provided about glare. Can you please include in a cover letter an explanation that there won't be any glare impacts associated with the project and how you made this determination?***
- VII. *Visual Impact.* This section requires the applicant to make a reasonable effort (determined by the Planning Board) to minimize any visual impacts associated with the solar project. In making this determination, the board shall consider the size, location and topography of the site, characteristics of the surrounding property and the amount of type of development on the properties in determining how much screening and buffering is appropriate. **The site is screened from public view by natural topography and will be at least 400 Feet away from North River Road. A tree line is also proposed on the corner of the property abutting the existing access road. *Email to Applicant: In terms of visual impact, I know you are proposing a tree-line on the corner of the abutting access road and the existing topography should mitigate any visual impacts but are you able to provide photos of the site from North River Road to show the topography and what the panels might look like as part of these mitigation efforts? The ordinance requirement states: This section requires the applicant to make a reasonable effort (determined by the Planning Board) to minimize any visual impacts associated with the solar project. In making this determination, the board shall consider the size, location and topography of the site, characteristics of the surrounding property and the amount of type of development on the properties in determining how much screening and buffering is appropriate.***
- VIII. *Lighting.* This section requires that lighting be limited to that required for safety and operation and that it be shielded from abutting properties and directed downward. ***Email to Applicant: Are you proposing any type of lighting for safety purposes, etc.?***
- IX. *Clearing.* When possible, in unbuilt areas, requires that Solar Energy Generating Systems maintain the permeability of the ground and that clearing of natural vegetation be limited to what is necessary for the construction, operation and maintenance of the Solar Energy Generating System. **The site is all cleared farmland and only a few trees on the northern end of the property will have to be removed for shading purposes.**
- X. *Operation and Maintenance Plan.* Requires the submission of an Operation and Maintenance Plan for the Solar Energy Generating System. **An Operations and Maintenance Plan has been provided on Page 21 of the submission materials. The plan has proper measures to ensure the facility will be maintained and kept in safe working order (see below for O&M Plan requirements specific to the Ag-Zone).**
- XI. *Fire & Electrical Codes.* Requires all Solar Energy Generating Systems to be installed in compliance with the photovoltaic systems standards of the National Fire Protection Association and National Electrical Code. **EMAILED APPLICANT**

**Sec. 60-1431. Abandonment or Decommissioning standards, including the requirement of a financial surety to cover the cost of facility removal in the future.**

The Applicant has provided a decommissioning estimate and plan that appropriately describes how the project will be removed and the site restored at the end of the project. It is important to note that the ordinance has requirements for decommissioning of solar arrays specific to projects in the Ag-Zone.

*Email to Applicant: As part of the decommissioning plan, are you able to propose a figure for future plantings/the means necessary to reestablish prime farmland (however that may look in the future)?*

**Chapter 60, Article IV, Division 2, Agriculture and Resource Protection District, Sec. 60-145. – Use Regulations.**

**(B) Special Exception Uses. Ground-Mounted and Dual-Use Solar Energy Generating Systems greater than one acre in total land area as defined in Sec. 60-1425, subject to the following conditions:**

- a) Must comply with all of the standards in the Solar Energy Generating Systems ordinance (see above).
- b) *Setback Requirements.* Solar arrays are required to comply with the same setback requirements for buildings in the Agriculture/Resource Protection District, which are Front/Rear: 25 Feet and Side 15 Feet. **The project meets the setback requirements with 25-feet provided for the front/rear and side setbacks.**
- c) *Lot Coverage* cannot exceed 30% as defined above (the standards apply to the paved, mounting block, or otherwise impervious areas of the site. Photovoltaic cells, panels, arrays, and inverters are not considered impervious areas provided the soil underneath the collector is not compacted and remains vegetated in accordance with the permanent stabilization standards in Chapter 500). **The area of the site considered impervious coverage is 22,398 square feet which includes an access road, concrete equipment pads, and piles to support the panels. The total parcel area is 55.39 acres making the impervious lot coverage about 0.93%.**

d) *Total Land Area.* This standard requires the Planning Board look at the total amount of land area in the Ag-Zone that is proposed and currently used for solar and make a recommendation that a new solar array will not materially alter the stability of the overall land use pattern of the Ag-Zone. In making this determination, the Planning Board will also consult with the Ag-Committee and Conservation Commission. **This provision will become applicable once 1% of the Ag-Zone is consumed by solar which would be about 200 acres. It does not apply to this project (see orange box for breakdown of previous projects).**

e) *Existing Grid Infrastructure.* This provision considers the location of existing grid infrastructure and limits the need to extend additional infrastructure in the Ag-Zone. **The Applicant chose this site because of its close proximity to the Deer Rips Road CMP Substation. Limiting the new amount of infrastructure that would be necessary in the Ag-Zone.**

f) *Clearing.* These standards allow clearing for solar arrays under certain conditions:

- 1. The presence of the Solar Energy Generating System will not result in unnecessary soil erosion or loss that could limit agricultural productivity on the subject property or abutting properties. **(SEE BELOW).**
- 2. At the time of decommissioning of any Solar Energy Generating System approved by the Planning Board, the current sitting Planning Board shall review the site and proposed decommissioning plan for the conversion of the parcel into prime farmland or

So far, the Board has reviewed 1040 Perkins Ridge (978 Solar Development LLC/Borrego Solar) which included 18.9 Acres of solar development and 1115 Riverside (Auburn Renewables/NexAmp) which included 35 Acres of solar development. This project proposes 18 acres of solar development.  
**TOTAL: 71.9/200 Acres**

forestland, as applicable under the current ordinance standards. **A decommissioning estimate has been provided in the packet (see discussion above).**

3. A survey of critical wildlife habitat is provided at the time of application, if a project is located in an area determined to be essential habitat, as defined by the Maine Department of Inland Fisheries and Wildlife, an IF&W recommendation shall be secured before a Planning Board ruling. **The Applicant reached out to the Maine Department of Inland Fisheries and Wildlife and included a letter in their submission materials stating that based on IF&W review of information provided about the site, current documentation and available information, there are no known adverse impacts expected to Maine-listed Endangered or Threatened species or habitats on the proposed project site or in the vicinity.**
  4. A Vegetative Cover Plan is provided that demonstrates, where feasible, the replanting of forested areas disturbed during construction and preservation of prime soils throughout the life of the project. **A Vegetative Cover Plan was not specifically provided; however, the Applicant has indicated the areas will be re-seeded with a pollinator friendly fescue grass mix of local native plants. *Email to Applicant: The ordinance requires a Vegetative Cover Plan. It does not describe what format this has to be presented in, for other projects, information has been included as part of a cover letter. The purpose of the plan is to demonstrate that prime farm soils will be preserved throughout the life of the project. Basically, what measures will be in place to ensure the prime farmland remains on the site for the next 20 years and isn't degraded?***
    - *As part of this discussion, can you also outline the process for how topsoil will be preserved/maintained? The ordinance requires a plan for topsoil maintenance. I think this is something that could be included as part of the O&M Plan or under a separate cover as a brief paragraph.*
- g) **Prime Soils.** These standards are considerations for prime soils and a soil analysis requirement. It stipulates that the least productive ag-soils be considered first for development unless there is non-prime farmland available on the site. **The Applicant has provided additional information on the soils at the site (included in the fenced in area proposed for the site). About 1.6 acres is considered prime farmland and 6.8 acres is considered farmland of Statewide Importance, the remaining 8.9 acres are non-prime farmland soils. The northwest corner of the solar array is located in a small portion of prime farmland because of the presence of wetlands, slopes, and forests that preclude solar development on the other non-prime areas (see Auburn Solar: Soils Fact Sheet FMI). The Applicant also provided an analysis from Moyse Environmental Services comparing the NRCS Soil Survey maps to field notes to the NRCS Prime Farmland criteria and guidance of the Maine Department of Agriculture.**

**Difference between Prime Farmland and Soils of Statewide Significance:**

**Prime Farmland:** 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 (the land could be in cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods.

**Soils of Statewide Significance:** Additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods.

- h) Additional requirements that ensure the following:

1. Siting of the overall facility and individual panels shall keep with the existing contours of the land, and
2. Only pile driven, or ballast block footing shall be used so as to minimize the disturbance of soils during installation, and
3. To the extent possible, infrastructure shall not be located on steep slopes, and

*Email to Applicant: I know in our conversations you mentioned that only a minimal amount of grading will be necessary, otherwise the panels will follow the existing topography of the land. Can you please include this information in a cover letter?*

4. A plan for topsoil maintenance shall be provided at the time of application to the Planning Board.

**A topsoil maintenance plan was not included in the materials provided. (SEE ABOVE).**

- i) Operations and Maintenance Plan. There are also two additional requirements to be included in the Operations and Maintenance Plan including:
  1. A plan prioritizing the ability to co-mingle agricultural and energy generation land uses including but not limited to: apiaries, grazing or handpicked crops. **As part of the Operations and Maintenance Plan they will be seeding the area under the panels with a pollinator-friendly fescue grass mix of local native plants that will foster bees, butterflies and other microfauna. With the landowners consent, they would entertain allowing beekeepers to maintain apiaries near the array.**
  2. A plan that provides habitat for native plants and animals and native pollinators. **See above as part of the Operations and Maintenance Plan.**

## II. DEPARTMENT REVIEW:

- a. *Police* – No comments received.
- b. *Auburn Water and Sewer* – No comments received.
- c. *Fire Department* – Comments were not provided specifically for this project, below are comments that were provided for previous solar projects listing the NFPA requirements for the Applicant to address.

**NFPA 1, Edition 2018, adopted by the city on 01/01/2018**

1. A vegetation Management Plan or noncombustible base needs to be added. Has a vegetation management plan been submitted? If not what will the surface be finished with? This is to prevent forest fires from damaging the system, or the system causing a forest fire. Damage from weeds and plants can also cause damage to the photovoltaic system, which in turn could create a fire.

**11.12.3.2\*** Vegetation Management Plan. A vegetation management plan or noncombustible base acceptable to the AHJ shall be approved and maintained under and around the installation where required by the AHJ (Authority having Jurisdiction).

2. Clearance around the installation shall be 10 ft.

**11.12.3.1\*** Clearances. A clear area of 10 ft (3048 mm) around ground-mounted photovoltaic installations shall be provided.

3. Road access is too narrow (12 ft), requires 20 ft. If there was a forest fire we would not be able to gain access to the site. Also the road would need to support vehicles.

**18.2.3.5.1.1\*** Fire department access roads shall have an unobstructed width of not less than 20 ft (6.1 m).

4. A turnaround or hammerhead would be required that meets the following:

**18.2.3.5.4 Dead Ends.** Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

- d. *Code Enforcement (Electrical)* – Comments were not provided specifically for this project, below are comments that were provided for previous solar projects addressing the electrical code.
  1. Large-Scale (PV) Power Production Facilities is covered under the National Electrical Code Article 691 and requires a engineered designed. Will the project have plans submitted by an electrical PE?
  2. Who is the PE/ firm providing the electrical drawings?
  3. All applicable sections of the NEC shall be followed including listing/marketing of all solar equipment Nationally Recognized Testing Laboratory (NRTL).
  4. Who is the installing electrical contractor?

The state will most likely adopt the 2020 NEC on Jan. 1, 2021. The city would require drawings and installation reflecting the 2020 NEC when Maine finally adopts the new code. I will send out a notice once the state has adopted the 2020 NEC. If permits are obtained prior to the state’s adoption I will allow the use of the 2017 NEC for this project.

- e. *Engineering* – Requires a performance bond for erosion controls and site access (see condition below).
- f. *Addressing* –Addressing Officer, Rosemary Mosher will need to create an E-911 plan with you for the solar project to differentiate that portion of the parcel from the residence and fruit barn. ***Email to Applicant: Please coordinate with Rosemary Mosher (Addressing Officer) for the City to create an E-911 plan that will differentiate the solar project portion of the parcel from the existing buildings.***

- II. PLANNING BOARD ACTION** – Sec. 60-1277. – Objective. In considering a site plan, the Planning Board shall make findings that the development has made provisions for:
- (1) Protection of adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against artificial and reflected light, sight, sound, dust and vibration; and preservation of light and air;
  - (2) Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas;
  - (3) Adequacy of the methods of disposal for wastes; and
  - (4) Protection of environment features on the site and in adjacent areas.

Sec. 60-1336. – As conditions prerequisite to the granting of any special exceptions, the board shall require evidence of the following:

- (1) That the special exception sought fulfills the specific requirements, if any, set forth in the zoning ordinance relative to such exception.
- (2) That the special exception sought will neither create nor aggravate a traffic hazard, a fire hazard or any other safety hazard.
- (3) That the special exception sought will not block or hamper the master development plan pattern of highway circulation or of planned major public or semipublic land acquisition.
- (4) That the exception sought will not alter the essential characteristics of the neighborhood and will not tend to depreciate the value of property adjoining and neighboring the property under application.

- (5) That reasonable provisions have been made for adequate land space, lot width, lot area, stormwater management in accordance with section 60-1301(14), green space, driveway layout, road access, off-street parking, landscaping, building separation, sewage disposal, water supply, fire safety, and where applicable, a plan or contract for perpetual maintenance of all the common green space and clustered off-street parking areas to ensure all such areas will be maintained in a satisfactory manner.
- (6) That the standards imposed are, in all cases, at least as stringent as those elsewhere imposed by the city building code and by the provisions of this chapter.
- (7) That essential city services which will be required for the project are presently available or can be made available without disrupting the city's master development plan.

**III. STAFF RECOMMENDATIONS** – The Staff Report discusses the standards required by both the Solar Energy Generating Systems ordinance and the Special Exception requirements for solar installations in the Ag-Zone. There are a few questions listed in the Staff Report for the Planning Board to consider as part of your review of this project. Staff recommends the Applicant answer the questions in *brown* before a decision is made.

If the questions have been answered to the satisfaction of the Planning Board, Planning Staff recommends the Planning Board find that the application meets the requirements of Article VI, District Regulations and that the application meets the requirements of Sec. 60-1277 (Site Plan Objectives) and Sec. 60-1336 (Special Exception Conditions) with the following conditions:

1. All bonding and inspection fees shall be paid and a notice to proceed issued by the Engineering Department before the start of construction.
2. An Addressing Plan shall be provided for the area of the property that will be used for the solar project.
3. The Site Plan shall be updated to show the fence height as 6-feet not 5-feet as shown on the plan.
4. Any other conditions that arise from the questions.

***Suggested Motion:*** I make a motion to approve the Site Plan/Special Exception by Auburn Solar, LLC to construct an 18 acre, 4MW solar array at 1054 North River Road (PIDs: 325-030, 326-001 and 326-001-001) on a parcel located in the Agriculture and Resource Protection Zoning District, with the following conditions:

1. All bonding and inspection fees shall be paid and a notice to proceed issued by the Engineering Department before the start of construction.
2. An Addressing Plan shall be provided for the area of the property that will be used for the solar project.
3. The Site Plan shall be updated to show the fence height as 6-feet, not 5-feet as shown on the plan.
4. Any other conditions that arise from the questions.

*Megan Norwood*

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City Planner