



## **ME Washington HS CSG LLC 499 Kilowatt Solar Garden**

### **Introduction**

Community Solar Gardens are supported by the State of Maine as a renewable energy supply, governed by the Public Utilities Commission rules. Novel Energy Solutions (NES) has registered with the Maine Public Utilities Commission in order to be recognized as a legitimate developer and source of Community Solar. The purpose of constructing a community solar garden (solar array) is to generate offsite solar energy that will be connected directly to the electric grid for the on-going benefit of subscribers to the solar garden. Nationally, as many as 75% of homes and businesses are unable to install solar on their property due to site conditions, regulations and cost; making off-site solar energy production their only option.

This proposed site will be constructed to produce just less than a half megawatt (499 KW) of electric generation. The request will be for a period of up to 30 years. The electrical energy will be distributed directly to the existing electrical grid for subscribers to the energy produced by the system. The impact to the area is low from a construction, operation, and end of life perspective. Construction and setup are not invasive. Solar energy production is a passive activity, and the system does not alter the underlying nature of the land which can be returned to any other appropriate use. The system will reduce the carbon footprint and greenhouse gas emissions. Subscribers to the community solar garden will save on their electric bills over the 25-year life of the agreement with their utility company (hereinafter "Utility"), money which can be saved and spent in support of the local economy.

Community solar gardens offer numerous benefits to the community. Subscribers have an opportunity to keep electric dollars in the area to support the local economy. Landowners have a new option that brings value to their property without impacting the underlying nature of the land. Harvesting the sun entails far less risk than other commodities. Landowners and the community have an opportunity to be leaders in renewable energy that sets an example for others to follow and leaves a positive legacy. Distributed solar generation, energy produced at multiple locations across the grid helps prevent electric line loss and dependence on carbon-based fuel sources. Careful siting standards protect the integrity of the land, increases production which increases local revenues and savings, and ensures positive neighbor relations.

Solar panels and systems have been used in the United States for over forty years and have gained in popularity as the cost of solar energy becomes competitive with

traditional fossil fuels, and because of positive environmental benefits. Solar systems have been found to be good neighboring land uses due to their passive nature, lack of negative impact on neighboring property values, and benefits to the environment and local economy.

## **Description**

The parcel is owned by Wayne S. Bridgham & Sharon Russell

**PID#:** Map 53 Lot 4

**Project Location:** RTE 202, Auburn, ME 04210 (GPS 44.01678, -70.28275)

**Parcel Description:** Agriculture/undeveloped

**Site Access:** Washington Street

**Ownership:** Land will be leased from the landowner, and project ownership will be ME Washington HS CSG LLC

## **Project Team and Contractors**

The project will be designed, constructed, and operated by Novel Energy Solutions and their trusted vendors

### **Engineering:**

Novel Energy Solutions

Scott Geddes (Head of Engineering), P.E. (CO, IL, IN, ME, MI, MN, OR, WI)

612-322-3756

scott.geddes@novelenergy.biz

### **Surveying:**

Novel Energy Solutions

Tom Healy (Land Surveyor)

tom.healy@novelenergy.biz

License # PLS 2632

### **Construction:**

Novel Energy Solution

Jeremy Sargent (Director of Construction)

jeremy.sargent@novelenergy.biz

### **Wetland and Vernal Pools (field work):**

Haley Ward, Inc.

Johanna Szillery, LSS (Senior Project Scientist)

[jszillery@haleyward.com](mailto:jszillery@haleyward.com)

### **Stormwater Protection and Inspections:**

Novel Energy Solutions

Shane Sauer (O&M Project Manager)

shane.sauer@novelenergy.biz

## **Equipment**

The project will consist of 1,248 Tier-1, 540-Watt, bifacial multi-crystalline solar panels. Bloomberg New Energy Finance rates solar panels in tiers based on a variety of factors including financeability. All Tier-1 panels used have a 25-year warranty. Panels will feed inverters which ultimately connect to the electric grid at a point of interconnection

located at a point closest to the 3-phase power lines as engineered to meet industry, state and federal standards.

Transformers and related equipment will be placed on a pre-cast concrete slab on grade adjacent the 499KW array grouping. The Utility required poles will be standard electric utility poles with underground wires unless otherwise authorized or required, and the Utility will acquire the necessary permits for their poles. Additional poles may be required depending on the manner of interconnection. All non-Utility equipment, materials, supplies, concrete, etc. will be removed at the end of the useful life of the project. All equipment must meet Utility and national standards for safety and interconnection.

### **Site Appearance & Impact**

The parcel will consist of a 499KW Solar Garden with 1,248 solar panels. The array and equipment pad will be surrounded by a 6' high chain link fence with three strands of barbed wire on top of that. The fence will include a 5-inch gap at the bottom to allow wildlife passage. The panels will not exceed 14 feet in height at full tilt. The poles will be pounded straight into the ground and the depth they will have to be pounded will be determined by pull testing which will be completed prior to plan sets being completed to ensure that they are structurally sound. The installation will include 48 strings with 26 modules on each string with 20-foot row to row spacing on a single axis tracker. The proposed layout is subject to engineering and final Utility approval. The final layout will continue to meet all Town of Auburn requirements and performance standards.

Gated access will be provided with a key code or double lock for Utility and emergency response personnel. Signage will include 24-hour contact information. One light at the point of interconnection will be illuminated continually in the evening hours for safety of responding personnel.

Natural and existing screening will provide visual impact mitigation for the surrounding properties and roadways. Following construction of the arrays and any other project requirements, vegetation will be established to ensure soil stabilization, improve storm water quality, and for site beautification. Low Maintenance Turf seed mix or similar seed mix is utilized. Native grasses or specific pollinator plantings will be utilized. Once established, this site will filtrate surface waters and minimize erosion better than traditional croplands. Additional site visits and pro-active weed identification and control will occur in the earlier seasons of the vegetative growth to ensure proper site development. Regular site maintenance will occur throughout the life of the system.

### **Construction**

Construction activities will begin in summer of 2022. Installing posts at different depths and lengths can accommodate minimal sloping on sites, preventing the need for grade and fill activities. Grading and minor excavation may be needed for the switchgear pad to ensure level ground for the slab on grade. All necessary equipment and supplies will be delivered within a 2-4 week period at the start of construction. During the start of construction there will only be an average of two semi-trailers per day. Construction is

expected to take 5 weeks. Deliveries will come from Bar Harbor Road to the site access as depicted on the site plan. A temporary delivery direction sign may be installed at the start of construction upon approval from the road authority. Temporary parking and staging will be off-road at the site entrance as shown on the site plan. Disposal of waste materials will comply with all local, state and federal regulations and best practices.

## **Hydrological and Environmental Features**

A desktop review for protected natural resources survey has been completed and is attached herein. Field visits will be completed as soon as weather allows and the report will be submitted to the Maine Department of Environmental Protection (MDEP) and US Army Corp. Stormwater management will be carried out in compliance with the requirements and Best Management Practices (BMPs) detailed in the Maine Construction General Permit and a Stormwater Permit By Rule will be obtained. A Stormwater Management Plan (SWMP) will be submitted with this package and BMPs will be modified or updated as site conditions require. Additionally, a review of the Department of Inland Fisheries and Wildlife Beginning with Habitat digital data map was completed and did not identify any important habitat areas other than the wetlands which will be addressed with the protected natural resources survey provided. Soil information for the Project location can be found within the Environmental IFP Package included within this application submission.

## **Potential to Affect the Environment and Public Health**

This project is focused on bringing additional green energy to people in Minnesota unable to access solar on their property. It will reduce the utility's and the state's carbon emissions. The proposed solar array is passive and is designed to capture the sun's rays, not reflect them. Solar panels have an equivalent glare factor as a body of water. Research on potential environmental and public health issues will be through the State of Maine and the Federal government databases to ensure compliance. The many-decade history of solar panel use has not identified public health or environmental issues. The addition of year-round ground cover will provide improved storm water control over traditional row cropping providing improved soil retention and greater water infiltration.

## **Decommissioning, Restoration Plan and Insurance**

Within one hundred eighty (180) days of the end of the project useful life, decommissioning will include the removal of all of the solar arrays, cables, electrical components, accessory structures, fencing, roads and other ancillary facilities owned by the solar garden. Since this project includes the establishment of vegetation on site, the soil will be excellent for agricultural utilization upon decommissioning. Established vegetation can be maintained or tilled and re-planted to other vegetation upon the landowner's request. At year 26, there is almost equal salvage value in the panels and equipment than the costs associated with removing the system.

Detailed decommissioning includes:

- All cables and conduit will be removed

- PV modules will be removed from racking sold or transported to a recycling facility
- Racking equipment will be dismantled and removed, and either re-used or sold for scrap
- Inverters, transformers, switchgear, etc. will be re-sold or scrapped per industry best practices and regulations
- Concrete foundations, if utilized will be broken down and recycled or otherwise disposed.
- The security fence will be removed
- The site will be returned to its current state

State and National electrical codes must be met, inspected and approved prior to interconnection. A signed interconnection agreement with the Utility can be provided prior to construction activities.

## **Conclusion**

We are excited to complete this project in a strong partnership with Wayne S. Bridgham & Sharon Russell and the Town of Auburn. We are committed to following best practices and all State, Federal and local rules and regulations to develop a community solar garden providing the many benefits to the local community.



City of Auburn, Maine  
 Economic & Community Development  
 Michael Chammings, Director  
 60 Court Street | Auburn, Maine 04210  
 www.auburnmaine.gov | 207.333.6601

## Development Review Application

**PROJECT NAME:** ME Washington HS LLC

**PROPOSED DEVELOPMENT ADDRESS:** No E911 Address yet - RTE 202, Auburn, ME 04210 (GPS 44.01678, -70.28275)

**PARCEL ID #:** 053-004

**REVIEW TYPE:**      Site Plan                       Site Plan Amendment   
                                  Subdivision                                       Subdivision Amendment

**PROJECT DESCRIPTION:** 499 KW AC Solar Farm (see supporting documents for more information).  
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 \_\_\_\_\_  
 \_\_\_\_\_

**CONTACT INFORMATION:**

**Applicant** Novel Energy Solutions  
**Name:** Brittney Krebsbach  
**Address:** 2303 Wycliff Street #300  
**City / State** St. Paul, MN  
**Zip Code** 55114  
**Work #:** 651-363-2488  
**Cell #:** same  
**Fax #:** N/A  
**Home #:** N/A  
**Email:** Brittney.Krebsbach@NovelEnergy.biz

**Property Owner**  
**Name:** Wayne S. Bridgham & Sharon Russell  
**Address:**  
**City / State** Auburn, ME  
**Zip Code** 04210  
**Work #:**  
**Cell #:** 207-346-1891  
**Fax #:** N/A  
**Home #:** 207-346-1891  
**Email:**

**Project Representative** *Same as applicant*  
**Name:**  
**Address:**  
**City / State**  
**Zip Code**  
**Work #:**  
**Cell #:**  
**Fax #:**  
**Home #:**  
**Email:**

**Other professional representatives for the project**  
**(surveyors, engineers, etc.), See attached documentation**  
**Name:**  
**Address:**  
**City / State**  
**Zip Code**  
**Work #:**  
**Cell #:**  
**Fax #:**  
**Home #:**  
**Email:**

# PROJECT DATA

The following information is required where applicable, in order complete the application

## IMPERVIOUS SURFACE AREA/RATIO

Existing Total Impervious Area \_\_\_\_\_ 0 sq. ft.  
Proposed Total Paved Area (*access road and equipment pad*) \_\_\_\_\_ 14810.4 sq. ft.  
Proposed Total Impervious Area \_\_\_\_\_ 14810.4 sq. ft.  
Proposed Impervious Net Change \_\_\_\_\_ 14810.4 sq. ft.  
Impervious surface ratio existing \_\_\_\_\_ 0 % of lot area  
Impervious surface ratio proposed \_\_\_\_\_ 14,810.40/242,193.60 = 6.1 % of lot area

## BUILDING AREA/LOT COVERAGE

Existing Building Footprint \_\_\_\_\_ N/A - no buildings sq. ft.  
Proposed Building Footprint \_\_\_\_\_ sq. ft.  
Proposed Building Footprint Net change \_\_\_\_\_ sq. ft.  
Existing Total Building Floor Area \_\_\_\_\_ sq. ft.  
Proposed Total Building Floor Area \_\_\_\_\_ sq. ft.  
Proposed Building Floor Area Net Change \_\_\_\_\_ sq. ft.  
New Building \_\_\_\_\_ (yes or no)  
Building Area/Lot coverage existing \_\_\_\_\_ % of lot area  
Building Area/Lot coverage proposed \_\_\_\_\_ % of lot area

## ZONING

Existing \_\_\_\_\_ Agriculture & Resource Protection  
Proposed, if applicable \_\_\_\_\_ N/A

## LAND USE

Existing \_\_\_\_\_ Agriculture/Undeveloped  
Proposed \_\_\_\_\_ Solar Farm (499KW)

## RESIDENTIAL, IF APPLICABLE

Existing Number of Residential Units \_\_\_\_\_ N/A  
Proposed Number of Residential Units \_\_\_\_\_  
Subdivision, Proposed Number of Lots \_\_\_\_\_

## PARKING SPACES

Existing Number of Parking Spaces \_\_\_\_\_ N/A - only parking for  
Proposed Number of Parking Spaces \_\_\_\_\_ temporary construction period  
Number of Handicapped Parking Spaces \_\_\_\_\_  
Proposed Total Parking Spaces \_\_\_\_\_

**ESTIMATED COST OF PROJECT:** \$500,000

## DELEGATED REVIEW AUTHORITY CHECKLIST

### SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area \_\_\_\_\_ sq. ft.  
Proposed Disturbed Area \_\_\_\_\_ sq. ft.  
Proposed Impervious Area \_\_\_\_\_ sq. ft.

- 1. If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.*
- 2. If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.*
- 3. If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.*
- 4. If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.*

### TRAFFIC ESTIMATE

Total traffic estimated in the peak hour-existing \_\_\_\_\_ passenger car equivalents (PCE)  
(Since July 1, 1997)

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) \_\_\_\_\_ passenger car equivalents (PCE)  
If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

### Zoning Summary

1. Property is located in the \_\_\_\_\_ zoning district.

2. Parcel Area: \_\_\_\_\_ acres / \_\_\_\_\_ square feet(sf).

<b>Regulations</b>	<u>Required/Allowed</u>	<u>Provided</u>
Min Lot Area	_____ / _____	
Street Frontage	_____ / _____	
Min Front Yard	_____ / _____	
Min Rear Yard	_____ / _____	
Min Side Yard	_____ / _____	
Max. Building Height	_____ / _____	
Use Designation	_____ / _____	
Parking Requirement	1 space/ per _____ square feet of floor area	
Total Parking:	_____ / _____	
Overlay zoning districts (if any):	_____ / _____	_____ / _____
Urban impaired stream watershed?	YES/NO If yes, watershed name _____	

## DEVELOPMENT REVIEW APPLICATION SUBMISSION

### Submissions shall include fifteen (15) complete packets containing the following materials:

1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
2. Application form that is completed and signed by the property owner or designated representative.  
(NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
3. Cover letter stating the nature of the project.
4. All written submittals including evidence of right, title and interest.
5. Copy of the checklist completed for the proposal listing the material contained in the submitted application.

**Refer to the application checklist for a detailed list of submittal requirements.**

### To view the City of Auburn Zoning Ordinance, go to:

[www.auburnmaine.gov](http://www.auburnmaine.gov) under City Departments / Planning, Permitting & Code / Subdivisions / Land Use / [Zoning Ordinance](#)

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

**This application is for development review only; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.**

Signature of Applicant:

*Brittney Krebsbach*

Date:

April 8, 2022