



TOBACCO VALLEY SOLAR

Operations and Maintenance Plan -
Updated

January 2019

DWW Solar II, LLC

Table of Contents

- 1. Introduction 3
 - 1.1. Project Contact Information 3
- 2. Project Description 3
- 3. Maintenance and Monitoring 3
 - 3.1. Site Access and Lighting 4
 - 3.2. Equipment and Grounds Maintenance 4
 - 3.3. Monitoring 4
 - 3.4. Environmental Compliance 5
- 4. Emergency Response 7

Tables

- Table 1. Project Contact Information
- Table 2. Scheduled Maintenance Activities
- Table 3. Town of Simsbury Emergency Contacts

Revision No.	Date	Comments
0	June 2017	
1	January 2019	Development & Management Plan Submission

1. Introduction

As the owner of the Tobacco Valley Solar Project (Project), DWW Solar II, LLC (DWW Solar) is responsible for maintaining and servicing the solar electric system and related ancillary facilities (roads, fence, etc.) during the operation and maintenance (O&M) phase of the Project. This O&M Plan describes the Project components, maintenance and monitoring procedures, and emergency response measures, requirements of the Project.

1.1. Project Contact Information

DWW Solar will engage qualified firms for the construction and operation of the Project. Table 1 provides Project contact information.

Table 1. Project Contact Information

Table 1. Project Contact Information	
Owner	DWW Solar II, LLC Attn: Chris Thuman 1166 Avenue of the Americas, 9 th Floor New York, NY 10036 212-478-0549 christopher.thuman@deshaw.com
O&M Service Provider	TBD

2. Project Description

Once constructed, the Project will consist of the ground-mounted solar panel array, inverters, transformers, switchgear, electrical cable collection system, and interconnection with the existing Eversource North Simsbury Substation at Dorset Crossing. The Project also includes access roads, security and aesthetic fencing, and stormwater management areas.

The area within the security fence is a Secure Facility, accessible by authorized personnel only. Access to these locations should be arranged by contacting the Owner or O&M Service Provider identified in Table 1.

3. Maintenance and Monitoring

DWW Solar will obtain the services of a dedicated O&M service provider for maintenance and monitoring of the Project. Operations at the site will be minimal.

3.1. Site Access and Lighting

The solar array, inverters, and transformers will be enclosed by a 7-foot fence with a gate at both entrances off of Hoskins Road, and the entrance gate accessed via a gravel road off of County Road. The gate will have a universal key lock (e.g. Knox lock) for emergency service providers. Additionally, a bar gate will limit vehicle access onto the entrance off County Road to discourage unauthorized individuals from driving in along this road. The permanent access road in the solar array and the row spacing will provide sufficient access throughout the site for emergency responders.

Signs along the perimeter chain link fence would be limited to a sign displaying the installation name, address and emergency contact information, and trespassing/warning/danger signs to ensure the safety of individuals who may come in contact with the installation. Any posted signs will not exceed four (4) square feet in area. The facility will conform to electrical safety and building codes.

3.2. Equipment and Grounds Maintenance

All Project equipment will be inspected and maintained as directed by the manufacturer's requirements and standard industry practices. Grounds maintenance activities will be scheduled to ensure site access and function of the stormwater management areas (see summary of scheduled maintenance activities in Table 2). Specific maintenance requirements for stormwater management areas are included in the Long Term Stormwater Management Plan in Section 3.5.

Table 2. Scheduled Maintenance Activities

Task	Frequency
On-site visual inspection	1 x per year or per manufacturer requirements
Mechanical and electrical inspection	1 x per year
Panel cleaning	1 x per year if needed
Grass cutting and weeding	Minimum of 1 x per year between April and October as needed
Snow removal	As needed between October and April
Perimeter fence inspection	1 x per year
Barn Inspection	Quarterly
Stormwater management area inspection	In accordance with Section 3.5

No harmful chemicals will be used during the cleaning of the solar panels. Cleaning will be done with water as needed. Note that the solar panel system does not need to be turned off during cleaning. Snow will be plowed off the access roads to the electrical equipment pads as needed to provide safe access to equipment.

3.3. Monitoring

The O&M service provider will provide continuous 24/7 remote monitoring of the system performance, including a live telephone support line for corrective action and a single point of contact for system maintenance and repair related issues.

3.4. Environmental Compliance

The O&M service provider will be contractually obligated to comply with this O&M Plan, as well as the conditions of all permits and regulatory approvals.

Long Term Stormwater Management Plan

The Project contains structural stormwater management facilities including sediment basins and traps, and swales. The permanent water quality basins shall be inspected after every major storm for the first 3 months following completion of construction activities. The basins shall have sediment removed once sediment depths reach 12 inches in the bottom, or once the infiltration capabilities of the basin have been compromised.

The O&M service provider shall inspect all on-site vegetated areas at least once per year, removing any accumulated sediment and debris. Although not a structural component of the drainage system, the maintenance of vegetated areas will affect the functioning of the long-term stormwater management. This includes the health/density of vegetative cover and activities such as the application and disposal of lawn and garden care products, disposal of leaves, and yard trimmings.

Any bare areas shall be re-seeded in a timely manner and appropriate erosion control measures shall be installed when native soil is exposed or when erosion channels are forming. Alternative mixtures of grass species shall be planted in the event of unsuccessful establishment. Vegetated areas shall be mowed at minimum once per year to prevent the establishment of woody species.

Agricultural Protection Plan

Maintaining the soil's nutrient status during the operation phase.

1. Fertilization needs will be low as little material will be taken from the fields and management in perennial grasses tightly cycles nutrients.
2. Once permanent cover is established, soil tests should be taken if plants show signs of nutrient stress.
3. Soil amendments should be applied according to the recommendations of the testing lab. The pH of the soil should be maintained between 5.5 to 8.0.

Pollinator Habitat Area

1. Once established, each year 1/3 of the Pollinator Habitat Area will be mowed each fall after asters and goldenrods go to seed.
2. Maintain 2/3's of the Pollinator Habitat Area uncut to provide cover and foraging habit for wildlife.
3. Examine the site each summer to determine if invasive species require control measures. All applications of herbicide must be made by a Connecticut licensed operator.

Vegetation Management During Operations & Maintenance

Mowing within the solar array area may be conducted by the owner's maintenance crew one or more times per year, depending on growing conditions. Due to the anticipated heavy weed seed bank present in agricultural soils, more frequent mowing may be required during the establishment of permanent grass cover so that weeds are cut before they flower and produce seed. Frequent mowing favors grasses which grow from the base of the leaf and store a greater portion of their biomass below ground. To prevent excessive soil compaction, mowing should only take place a day or more after a significant rainfall events.

Outside of the security fence brush mowers will be used infrequently to control regrowth. Trees in the forest and shrub zones that have exceeded their height limitations will be trimmed or cut by chain saw as necessary. The vegetation outside of the security fence will be inspected each year and mowing frequency or selective removals will be carried out when necessary. These operations will be carried out in the fall after the migratory bird breeding season.

Invasive Species Control

Future invasive plant species control will be carried out when species are detected during inspections of the vegetation outside of the arrays. It is anticipated that countermeasures to control invasive plant species may be required once every three to five years during the operation of the Project. Treatment Methods may include:

Chemical Controls: Herbicides – Applications of herbicide must be applied by a state-licensed professional. Treatment may include foliar applications with sprayers, cut and treat, and stem injection. The plan will include monitoring and reporting on the need to repeat treatment. Herbicides will be applied according to the label. All state and federal laws will be adhered to during the treatment process.

Manual Controls: Manual controls may include pulling small populations of invasive plants. Mowing may be an effective method of controlling invasive broadleaf weeds that are present in the seed bank of farmed soils. Stands of multiflora rose and honeysuckle may be cut and stems treated if thickets are too dense to penetrate with foliar applications. Care should be taken to dispose of cut materials so as not to spread propagules across the Project Site.

Barn Inspection and Maintenance

Inspect tobacco barns quarterly and document observations using the Inspection & Maintenance Checklist.

4. Emergency Response

DWW Solar and the O&M services provider will coordinate with the Town of Simsbury police and volunteer fire departments regarding access to the facility and emergency response procedures. Annual emergency response training will be conducted with the Town of Simsbury emergency service providers. Table 3 provides an emergency contact list for the Town of Simsbury.

Main entrance gates will have a universal key lock (e.g. Knox lock) for emergency responders. Emergency shut-off switches will also be locked with universal locks and will be clearly labeled and lit at night. Communication with emergency service providers is available in the area via cell phone coverage.

Table 3. Town of Simsbury Emergency Contacts

Table 3. Town of Simsbury Emergency Contacts	
Emergencies	Dial 911
Simsbury Police Department	Peter N. Ingvertsen, Chief of Police 933 Hopmeadow Street Lower Level Simsbury, CT 06070 Routine phone calls: (860) 658-3100 Emergency: 911
Simsbury Fire District	Kevin Kowalski, Fire Marshall Main Fire Station 871 Hopmeadow Street Simsbury, CT 06070 Business Phone: (860) 658-1971 Emergency: 911