

**PREFILED WRITTEN TESTIMONY OF
WARREN HORTON
HORTON ELECTRICAL SERVICES LLC**

A. INTRODUCTION

Q. Please state your name, title, and business address.

A. Warren A Horton, President 97 River Road, Canton Ct.

Q. Please describe your responsibilities and professional experiences.

A. We are the construction services for the Electrical, Civil and Solar Array installation. We have been in business since 1977 in Connecticut and performing Ground Mount solar array installations for 9 years.

Q. Do you have a resume demonstrating your skills and experience?

A. Yes, my resume is shown in Exhibit A.

Q. What has been your involvement with the project?

A. We have assisted the development team in best practice methods of installation of the proposed Ground Mount Array at this site.

Q. What is the purpose of your pre-filed written testimony?

A. I will discuss the following:

1. PROJECT CONSTRUCTION PROCESS
2. SAFETY AND SECURITY
3. CONSTRUCTION AND PROJECT OPERATION NOISE
4. SOLAR PANEL CLEANING
5. GROUNDWATER CONTAMINATION
6. PROJECT OPERATION AND MAINTENANCE PROCESS
7. PROJECT DECOMMISSIONING PROCESS

B. PROJECT SPECIFIC TESTIMONY

1. PROJECT CONSTRUCTION PROCESS

Q. Please describe the construction process for the proposed Project.

A. The general construction sequence will be as follows: First, there is Site Preparation, which involves installing erosion control measures that will improve the access road to the site from the road. Wooded areas will be cleared, necessary grading will be conducted, and temporary stormwater and erosion control measures will be installed. Second, there is Major Equipment Delivery, which means racking and panel deliveries will be made during site preparation. Third is Racking Installation, where racks will be installed starting at the northern portion of the array and working south. Fourth, there is Panel installation after the racking, also working north to south. Fifth, there is Balance of System (BOS), which involves trenching, wiring, and installing inverters, transformers, and fencing. Last is Interconnection, which begins after site preparation and will be completed parallel to the array construction.

Q. What is the construction timeline for the proposed Project?

A. Overall, the construction at the site will take 6-9 months, excluding winter downtime. The site preparation work will occur in the first 2-3 months primarily, and this will include any light grading and preparation of erosion and stormwater control features, improvements to the access road, and readying of pads for the inverters and transformers. The remainder of the construction time will be taken with the installation of the racks, panels, wiring, transformers, and inverters. The permanent security fence will be completed at the end of the construction phase.

Q. Will the proposed Project construction process adversely affect the surrounding area?

A. No.

Q. Please explain.

A. Project construction will be conducted about 213 feet away from the nearest residence and enclosed by existing wooded areas. The following measures will be implemented to minimize construction impacts: First, stormwater and erosion control measures will be implemented in accordance with State of Connecticut requirements to fully mitigate construction impacts on stormwater drainage and erosion around the site. These stormwater and erosion control measures will be maintained during the operation of the Facility. Second, noise impacts will be minimal due to the physical distance of the site from residential receptors. Third, the project will comply with standard work hours. Fourth, traffic will be minimized by grouping and consolidating major equipment deliveries (panels, racks, inverters). Fifth, measures will be taken to minimize mud tracking from construction vehicles onto Carter Street. Sixth, vehicle traffic will be minimized as much as possible for equipment and construction vehicles. Seventh, all personnel vehicles will be parked at the project site in areas not occupied by the solar facility. Eighth, all construction activities will be timed and sequenced to allow for the implementation of mitigative and protective measures required for sensitive environmental areas and protected species that are found or presumed to be potentially present. This mitigation could include seasonal restrictions on tree clearing and other site work, along with other actions during the work to avoid or mitigate impacts to certain species.

2. SAFETY AND SECURITY

Q. Please describe the safety and security measures to be deployed at the proposed Site.

A. The solar array will be surrounded by a 7-foot high chain link security fence, and there will be one locked gated entrance to the Facility. All electrical equipment is fully enclosed and locked. Upon completion of the proposed Project, we will work with the local fire department and introduce them to the proposed Project to address any contingencies at the proposed Site.

Q. Will the proposed Project pose any dangers to the surrounding area?

A. No.

Q. Please explain.

A. The proposed Project meets or exceeds all requirement of the National Electrical Code to keep the public safe from electricity. We are required to install a 7' fence and placards, warning the public of the hazard. No hazards exist outside of the fenced area.

Q. Will the proposed Project pose any hazard to local aviation?

A. No.

Q. Please explain.

A. Solli Engineering submitted information regarding the Project to the Federal Aviation Administration (FAA) for review. The FAA reviewed multiple sample points to determine whether a potential hazard exists for air navigation. Upon review, the FAA issued a Determination of No Hazard to Air Navigation for the Project.

3. CONSTRUCTION AND PROJECT OPERATION NOISE

Q. Will the proposed Project construction result in noise to surrounding residents?

A. Yes, but minimal.

Q. How will construction noise be minimized?

A. Hours of construction will be limited to Monday-Friday between 7am and 3:30pm.

Q. Will the proposed Project operation make noise?

A. Yes, but only minimal.

Q. Please explain.

A. The invertors proposed for this project produce the lowest level of noise available for this application.

Q. Was a noise study conducted?

A. No, because the anticipated noise levels are well below the industry standard and meet applicable CT DEEP Noise Standards. However, the proposed Project's civil engineers analyzed the noise impacts of the proposed Project and determined that the loudest noise levels during project operation will be approximately 61 decibels measured at one meter from the inverter and about 35.8 decibels, both during daylight operational hours.

Q. Will the noise impact any surrounding residences?

A. No.

Q. Please explain.

A. The estimated noise level during project operation at the nearest property boundary would be 35.8 decibels during operating, daytime hours and reduced to

zero during nighttime hours. This noise level meets applicable CT Noise Standards, and according to the National Hearing Conservation Association, is roughly equivalent to a quiet library.

4. SOLAR PANEL CLEANING

Q. Will the solar panels need cleaning?

A. No.

Q. Please explain.

A. The vast weather changes in New England do not warrant washing of solar panels.

5. GROUNDWATER CONTAMINATION

Q. Will water runoff from the solar panels contaminate groundwater at the site?

A. No.

Q. Please explain.

A. The equipment used in the construction of the solar array does not generate contaminants, the rain fall that comes in contact with any and all components of the solar array are only contaminated by the pollutants it has picked up as its fall to earth.

Q. Will the construction process, including the installation of equipment, contaminate groundwater at the site?

A. No.

Q. Please explain.

A. The construction process is monitored and regulated by the Connecticut Department of Energy and Environmental Protection (“DEEP”). There are protocols to be followed to ensure stormwater is handled on the construction site, and that the process of installation does not create any risk of contamination to ground water.

6. PROJECT OPERATION AND MAINTENANCE PROCESS

Q. Please describe the operation and maintenance process for the project.

A. Operation of the system requires minimal on-site assistance from staff because equipment is monitored through remote monitoring equipment. Maintenance is performed quarterly and does not require heavy equipment. Normal maintenance is mowing and weed control with mowers and weedwhackers. The solar array is inspected for optimal operation and corrective action is taken as needed.

Q. Will the operation and maintenance process pose any dangers or risks to the surrounding area?

A. No.

Q. Please explain.

A. The quarterly mowing is of no impact to the grounds or surrounding area. We do not use any chemical treatment in our process of maintenance.

7. PROJECT DECOMMISSIONING PROCESS

Q. Please describe the decommissioning process for the proposed Project.

A. The facility will be restored to a field, and all components of the solar array and supporting infrastructure will be removed and recycled. Any disturbance to the area will be graded and seeded.

Q. Will the decommissioning process pose any dangers or risks to the surrounding area?

A. No.

Q. Please explain.

A. The process of removing the array is contained to within the fence line, therefore there is no danger or risk to the surrounding area.

Q. Will Horton Electrical Services, LLC adhere to, and abide by, all relevant codes, standards, and requirements, including but not limited to the Connecticut State Building Code, National Electrical Code, and the Best Management Practices for Electric and Magnetic Fields, throughout the lifecycle of the project, from construction through decommissioning?

A. Yes. EMI (Electro-magnetic Interference) does not pose any risks from solar arrays, the AC equipment operates at 60hz which is an industry standard for electrical equipment even within a household. Solar panels do not emit EMI, and the associated equipment within operation of a solar array operate well below industry standards of monitoring and mitigating EMI.

C. INTERROGATORY SPECIFIC TESTIMONY

Q. As of the date of this submission, did you respond to any interrogatories for the proposed Project from any parties?

A. Yes, Petitioner received interrogatories from the Siting Council. These interrogatories and responses are attached Exhibit A.

D. PUBLIC COMMENT SPECIFIC TESTIMONY

Q. Are you aware of any public comments or comments from any parties for the proposed Project?

A. Yes. Twenty-seven residents, two state representatives, the Town of Bolton, and the Town of Manchester submitted comments. Only one of the 27 residents abuts the proposed Project Site.

Q. Did any of the public comments touch upon your analysis for the proposed Project?

A. Yes.

Q. Please summarize the nature of these public comments that touch upon your analysis.

A. The topics addressed in the public comments included the potential use of chemicals, herbicides, and/or pesticides.

Q. Do you have any comments regarding these public comments?

A. Yes.

Q. Please explain.

A. No chemicals or pesticides will be used in the construction, operation, or maintenance of the proposed Project. The panels were tested and deemed non-hazardous material. The transformers manufactured today use mineral oil, but mineral oil presents no danger to the environment and is biodegradable. Herbicides are listed in the Operations & Maintenance Plan Petitioner submitted to Council with its Petition as potentially being used where allowed by applicable laws and regulations to manage Site vegetation, but Petitioner can remove this from the Operations and Maintenance Plan. Please refer to the pre-filed written testimony of William Kenny Associates for additional information.

Q. Did you receive any comments from the Town of Manchester that touch upon your analysis?

A. Yes. The topics included:

1. Agricultural Activities – Questions regarding who taps the trees and who uses the sap.

2. Emergency Action Plan – Asked for an emergency action plan to mitigate run-off from the proposed Project for downslope properties. The Town also expressed concerns about mediation plans for any potential fires occurring on the proposed Project Site.

3. Operations & Maintenance Plan – Asked TRITEC to revise the Operations and Maintenance (O&M) Plan to reflect feedback from the Department of Energy and Environmental Protection (“DEEP”) regarding potential impacts to Box Turtles and the latest DEEP Guidelines. Also, the Town asked TRITEC to clearly post O&M information at the proposed Project Site for future maintenance contractors. The Town also asked TRITEC to review the parking and turnaround area to ensure there’s enough room for O&M contractors to prevent parking along Carter Street.

Q. Do you have any comments regarding these public comments?

A. Yes.

Q. Please explain.

A. 1. Agricultural Activities – Horton Electric has experience constructing and maintaining multiple agrivoltaic solar projects, including those with grazing animals, apiaries, and crop production. The proposed Project is a commercially operating maple syrup farm with tapped maple trees throughout the proposed Project Site and Host Parcel. Any maple tree taps impacted by the proposed construction will be relocated on the Host Parcel. These agricultural activities will continue throughout the proposed Project’s lifespan, and Horton Electric is aware that Petitioner is actively pursuing the potential addition of agricultural activities in the Project Site to fully utilize the space.

2. Emergency Action Plan – In the event of a fire or emergency, the proposed Project will be able to be shut down by emergency responders via a physical disconnect switch that will be appropriately labeled under the requirements of the National Electric Code. Upon completion of the proposed Project, Horton Electric will work with the local fire department and introduce them to the proposed Project to address any contingencies at the proposed Site.

Most fire departments are advised not to put water on a solar system fire. Water can be used to keep adjacent equipment cool if significant heat is generated and is of concern. If water happens to come in contact with the solar panels, there is no evidence that it becomes a hazardous material. The submitted TCLP report reflects that the solar panels are not hazardous materials.

Please see the pre-filed written testimony of Solli Engineering for information regarding stormwater run-off mitigation.

3. Operations & Maintenance Plan – The Operations and Maintenance Plan can be revised to reflect feedback from DEEP. Horton Electric will maintain the proposed Project, has significant experience maintaining solar projects like the proposed Project, and is fully aware of the necessary Operations & Maintenance requirements. Additionally, the proposed Site will have enough parking and turnaround area to ensure there's no need for operating and maintenance staff to park along Carter Street. Please see the pre-filed written testimony of William Kenny Associates for additional information.

E. CONCLUSION

Q. Based on your analyses and your pre-filed written testimony addressing Project Construction Process, Safety and Security, Construction and Project Operation Noise, Solar Panel Cleaning, Groundwater Contamination, Project Operation and Maintenance Process, and Project Decommissioning Process, is it your expert opinion that the proposed Project will not create any substantial adverse environmental effects and should be approved by the Siting Council?

A. Yes.

Contact

www.linkedin.com/in/warren-horton-b7b4611 (LinkedIn)

Top Skills

Manufacturing
Product Development
Strategic Planning

Certifications

Electrical Unlimited Contractor
OSHA-30
OSHA Subpart P 29 CFR Trenching & Excavations
Electrical Journeymens License

Warren Horton

President/Member at Horton Electrical Services, LLC
Canton, Connecticut, United States

Summary

My electrical carrier started in in February of 1994 as an electrical apprentice. In 1998 I graduated IEC of New England with High Honors, obtaining my Journeymens license two weeks after graduation.

From 1998-2002 i worked as leed foreman and project manger.in late 2002 i moved into the office full time and became the Vice President, In 2008 I became the President/ CEO until December of 2013.

In January of 2104 we established Horton Electrical Services and i am currently the President.

Experience

Horton Electrical Services, LLC

President/Member

January 2014 - Present (10 years 4 months)

97 River Canton, Ct 06019

Manage the day to day operations of the company, Strategic Planning, Estimating and Financial overseeing

Arthur A Horton Inc

President & CEO

February 1994 - December 2013 (19 years 11 months)

97 River Road Canton, CT. 06019

Manage the day to day operations of the Project Management, Service, Estimating and Finacial aspects of the company.

Strategic Consulting, including business plan & sales strategy development.

Education

IEC New England

Electrical Journeymens License, Electrical/Electronics Equipment Installation and Repair, General · (1995 - 1998)

Fryeburg academy

General Studies · (1986 - 1987)

Oliver Wolcott Regional Vocational Technical Sch

Electrician/Drafting · (1984 - 1985)