

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

PETITION NO. 1598 – Windsor Solar One, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 3.0-megawatt AC solar photovoltaic electric generating facility located at 445 River Street, Windsor, Connecticut, and associated electrical interconnection.	Petition No. 1598
	February 1, 2024

Petitioner Windsor Solar One, LLC (“WSO” or “Petitioner”) hereby submits the following responses to the Interrogatories that were directed to Lee Hoffman on behalf of WSO by the Town of Windsor on January 25, 2024.

Notice

1. Describe outreach efforts to project abutters. Have any abutters requested further information? Were right-of-way (ROW) restoration measures described during public outreach?

Please refer to Question No. 1 of WSO’s responses to the Council’s Interrogatories issued on January 9, 2024 (“Interrogatory Responses”) for information regarding abutter communications. WSO objects to the question concerning ROW restoration measures on the grounds that it is void for vagueness. Notwithstanding the foregoing objection, WSO states that there are no anticipated impacts to ROWs and thus, no restoration measures are necessary.

Proposed Site

2. The proposed site is in the Agricultural “AG” Zone. Were alternative sites within the Town explored? If so, which alternative sites? Will the facility be aesthetically compatible with the surrounding area in the AG Zone and the residential zone?

There are numerous criteria used during the site selection process including, without limitation, leasing options, interconnection availability and proximity, and the ability to co-locate solar with existing agricultural uses in accordance with the State’s policy preference for agrivoltaics.

Yes, alternative sites within the town, as well as surrounding towns were explored. For example, WSO had a parking lot leased in a neighboring town that could have supported a 3-megawatt

carport canopy project. That project was ultimately unsuccessful due to an interconnection upgrade that would have been required at the local substation that made the project uneconomical. Prospective solar sites generally need the following features to have viability, interconnection capability at economic costs, environmental compatibility, a willing landowner to enter into a property lease or property sale, and compatibility with surrounding land use. The proposed Windsor Solar One project has all four features mentioned above.

As for the agricultural use question, the proposed project will continue to have an agricultural use given the sheep grazing that will take place. The site will be aesthetically compatible with the surrounding area.

3. What is the distance of the nearest 100-year flood zone from the facility?

The nearest 100-year flood hazard area is associated with the Farmington River, located west of the Project, and is over 500 feet from the nearest facility fence.

4. Where is the nearest publicly accessible recreational area from the proposed project site? Describe the visibility of the proposed project from this recreational area, if any.

Please refer to Section 6.5 of the Petition (pg. 18) for information regarding visual impacts to recreational areas.

Project Development

5. Referencing the Petition, the proposed project site is bounded to the west and south by River Street, which contains residential properties consisting of single-family homes and townhouse/condominium style buildings. The proposed project site is also bounded to the north by townhouse/condominium style buildings. Will any residences have year-round views of the solar array areas/fencing, electrical equipment, and new utility poles? Can landscaping be installed to mitigate views?

Please refer to Section 6.5 of the petition that states that the Facility will be visible from River Street and the parcels to the west. Please refer to Appendix A to the Petition, pg. L-1.1 *Planting Plan Notes and Details* for the Project's landscaping plan, which contains indigenous species that will be homogenous with the surrounding flora. The proposed landscaping plan is intended to be softer and more appealing than a "wall" of evergreens.

6. Has Windsor Solar One, LLC (WSO) considered building up a landscaped berm along the River Street frontage and/or along the northern portion of the site with vertical and horizontal undulations to provide immediate total screening from ground level view? If yes, explain. If not, why not?

A landscaped berm is neither feasible nor appropriate for this site. Such a berm would need to be approximately 2,000 linear feet long. Assuming a 3:1 slope and a top width of 5 feet, and a 10 foot height which would screen the array completely from ground level, this berm would be prohibitively massive. The berm would have an estimated total width of 65 feet, and would require approximately 26,000 cubic yards of soil to construct. Assuming the project could get 26 cubic yards of soil per truck, the construction of the berm would take approximately 1,000 trucks to construct that berm.

7. Has WSO considered putting a fence on the outside of the berm to allow sheep to graze on the berm grasses?

No. As stated in the response to Question No. 6 above, a berm is inappropriate for this site.

8. Has WSO considered a larger setback from the roadway and abutting properties? If yes, explain. If not, why not?

Please refer to the Response to Interrogatory Number 25 issued by the Siting Council.

9. Referencing Figure 5, what is the height of the four (4) proposed poles along River Street? Describe the aesthetics of the poles. Were alternate locations on the project site considered for the Poles? Can the poles be shorter? Were any traffic studies conducted to assess the potential impact of placing a pole at the corner of River Street? If yes, explain. If not, why not?

The height of the poles will be approximately 40-45 feet tall above ground level. The poles will be typical wooden poles with cross arms and equipment at the top. Alternate locations were considered but would have resulted in greater visual impact and the removal of existing trees. The selected location is not in the direct view path from the adjacent condominiums and will not result in the removal of existing trees. The poles cannot be shorter as the height is required by Eversource design standards. The location of the pole at the corner of River Street was determined by Eversource, and it is the understanding of WSO that no traffic study is required. If a traffic study was required to assess any potential impacts, Eversource would be responsible for completing any such study.

10. What equipment will be placed on the poles? If equipment is placed on the poles, will this equipment generate noise? Will the noise be within State and local regulatory parameters?

Please refer to the Response to Interrogatory No. 34 from the Connecticut Siting Council. The equipment that is being placed on the poles does not make noise.

11. Can the project be revised to include larger wetland buffers, including but not limited to relocation of array areas to other portions of the proposed project site or the use of higher wattage panels? Does relocation option conflict with desire for greater setbacks from homes?

Please refer to WSO's response to No. 8 above. The Project will only redevelop portions of the site that are actively being farmed but will not cut down additional flora. In addition, the sedimentation basin is temporary, thus, some land will be *added* to the undeveloped portion of the site.

12. Has WSO met with the DEEP Stormwater Division? If yes, when? Describe any recommendations, comments, or concerns about the project from the Stormwater Division.

Yes. Please refer to Sections 3.3, 5.0, 6.12 and Appendix E of the Petition.

13. Is the sediment trap that is being proposed temporary? Is there anything that would be permanent that will remain within this area?

Yes, the sediment trap is temporary. There are no permanent stormwater features. Please refer to the Petition for more information.

14. It appears that the temporary sediment basin size can be reduced by approximately 35% (63,990 cf to 39,798 cf), leaving more area for panel placement. Is that possible? Can some panels be relocated from the adjacent River Street to the area?

While it is technically possible to reduce the size of the temporary sediment trap and still meet the State's erosion control guidelines, the suggested sizing of the temporary sediment trap is a minimum volume and proposing it as slightly larger allows for construction tolerances. WSO also notes that the location of the temporary sediment trap was selected to protect the proposed solar layout during construction and that it is not feasible to fit more panels to the south of the array due to available racking equipment sizes.

15. Final grading for the area of the temporary sediment basin is not shown on the plans. Can panels be relocated from adjacent River Street to this area?

No. During the construction, the temporary sedimentation basin is required to be at the site. The basin can only be removed when panels are fully installed, and the site is fully stabilized. Thus, no panels can be placed where the temporary basin is located.

16. If a Declaratory Ruling is issued for the proposed facility, does WSO plan to construct, or partially construct, the facility and transfer it to another entity?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as provided for under the Public Utility Environmental Standards Act, Conn. Gen. Stat. § 16-50g, et seq (“PUESA”). Notwithstanding the foregoing objection, if the facility is transferred, it will be in accordance with the Council’s regulatory requirements and any requirements found in the approval of the Petition.

17. What factors would cause WSO to sell or transfer the project to another entity prior to decommissioning?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as provided for under the PUESA.

18. If WSO transfers the facility to another entity, would WSO provide the Town with a written agreement as to the entity responsible for any outstanding conditions of the Declaratory Ruling and quarterly assessment charges that may be associated with this facility, including contact information for the individual acting on behalf of the transferee?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as provided for under the PUESA. Notwithstanding the foregoing objection, if WSO transfers the Council will be notified in accordance with applicable regulations. If the Town remains on the service list for this Petition at the time of transfer, the Town will receive notice as well.

19. What inspections of the project site will be conducted pre-construction, during construction and post-construction? Who will be responsible for said inspections?

In accordance with the requirements of the CT DEEP Stormwater General Permit, the design engineer will perform plan implementation inspections throughout construction, on a least a monthly basis, until the site erosion controls have been established. Routine inspections will commence upon the start of construction and will be performed on a weekly basis by a qualified inspector who is approved by the CT DEEP. Upon substantial completion of the project, a post construction inspection will be performed, and then routine monthly inspections will continue to be performed by a qualified inspector for two (2) growing seasons until a final stabilization inspection is performed. Any inspections throughout construction performed by a State Conservation District will be at the discretion of the CT DEEP.

20. Identify any proposed new and/or replacement structures that are pending Federal Aviation Administration obstruction evaluation. Are any of the existing structures currently marked/lighted?

There are no new structures proposed. The existing structures are not marked/lighted.

21. Will a crane be required for construction? If yes, would notice to the Federal Aviation Administration be required for the temporary use of a crane?

Please refer to Appendix K to the Petition.

22. Has WSO conducted any noise studies? If so, what methodology was used for that study? If not, why not?

WSO has not conducted any noise studies. It should be noted that on page 17 of the Petition, WSO referenced a sound analysis that was previously completed for Petition No. 1572 and is dated August 31, 2023. This analysis was performed utilizing the same inverter manufacture/model, CPS SCH100/125KTL-DO/US-600, but had a larger quantity of inverters, a total of thirty (32) inverters in two banks of sixteen (16) inverters. The WSO facility only includes a total of twenty-four (24) in two banks of twelve (12) inverters.

23. How do the trackers work? What are the maintenance requirements for the trackers? Do the trackers emit any audible noise? How do the trackers adjust in inclement weather? Do they only move up and down or do they also move side to side? How is this monitored?

WSO objects to this question on the grounds that it is void for vagueness. Notwithstanding the foregoing objection, WSO states that a solar tracker is a device that orients solar panels toward the sun to maximize sunlight exposure. This enhances the overall efficiency of solar power generation compared to fixed solar arrays. The tracker motors emit an audible noise of 51dBA which is less than the DEEP limit of 61dBA during the daytime hours. The trackers will go into a stow position during inclement weather, meaning they stop moving. The trackers rotate along a horizontal axis that runs north-south. The trackers are monitored remotely through a monitoring system.

24. Referencing the Petition p. 7, the project, as currently designed, will consist of 7,280 First Solar Model FS-7520A-TR1, 520-Watt solar modules, 24 CPS 600V 125kW (SCH125KTL-DO/US-600) inverters, AC panel boards and/or switchgear, and two 1500 kVa transformers. Do the transformers and other equipment mentioned above emit noise? If yes, can noise study be conducted?

Please refer to the Responses to Interrogatories No. 39 and 40 from the Connecticut Siting Council. In addition, as indicated elsewhere in these Interrogatory Responses, if the Council wishes to make

a noise study a condition of approval, WSO will not object to conducting a noise study at the project site.

25. Referencing the Petition pp. 17-18, the noise attenuation figure provided predicts a sound level of 26 dB at 455 feet from the inverter equipment pad to the nearest residential zone. Inverse Square Law suggests an 85 dB measurement at one meter from the source would be 42 dB at 455 feet from the source, not 26 dB as stated. Can WSO explain this discrepancy?

WSO reviewed this information and agrees with the Interrogatory that an error was made in the original calculation for the distance to the nearest residential zone. At 1 meter, applying the Inverse Square Law the calculations show that 85 dBA would reduce to approximately 42 dBA at a distance of 455 feet. The sound analysis referenced was previously completed for Petition No. 1572 and is dated August 31, 2023. This analysis was performed utilizing the same inverter manufacture/model, CPS SCH100/125KTL-DO/US-600, but had a larger quantity of inverters, a total of thirty (32) inverters in two banks of sixteen (16) inverters. The WSO facility only includes a total of twenty-four (24) in two banks of twelve (12) inverters. As stated in response to Interrogatory No. 24, if the Council wishes to make a noise study a condition of approval, WSO will not object to conducting a noise study at the project site.

26. Is the noise emitted from the inverter equipment concentrated in a narrow and/or high frequency band that is more likely to be perceived as louder than ambient noise levels?

The source specific measurement data for the CPS inverter shows no prominent discrete tone present.

27. Has WSO contemplated using acoustic blankets to achieve a dampening of the decibels emitted from the project site? If yes, explain. If not, why not?

WSO has not contemplated using acoustic blankets as the decibel levels outside of the project site generated by the equipment will be well below permitted values.

28. Has WSO contemplated using sound barriers to decrease the noise emitted from the project? If yes, explain. If not, why not?

WSO has not contemplated using acoustic blankets as the decibel levels outside of the project site generated by the equipment will be well below permitted values.

29. Will WSO provide a noise specification on the tracking motors to reflect the decibel levels?

Please see attached noise study which is included as Exhibit A to these Responses.

30. Can WSO permit an independent study of noise on the project site? If not, why not?

WSO objects to this question on the grounds that it is void for vagueness. Notwithstanding the foregoing objection, WSO notes that the Council has routinely ordered petitioners to conduct noise studies which the Council evaluates. If the Council wishes to make this a condition of approval, WSO will not object to conducting a noise study at the project site.

31. Quantify the amounts of cut and fill that would be required to develop the proposed facility. If there is excess cut, will this material be removed from the site or deposited on the site?

It is anticipated that approximately 4,000 cubic yards of soil will need to be temporarily excavated to construct the temporary sediment trap, which will then be replaced in kind at the time when the erosion controls can be decommissioned. It is anticipated that approximately 250 cubic yards of soil will need to be relocated on the site to allow for imported gravel material road base to be installed. It is not proposed for any soil to be removed from the site.

32. Referencing Appendix F p. 25, the review of previously completed research in the vicinity of the proposed project site and the analysis of cultural resources recorded nearby, indicates that the larger project region contains precontact Native American Deposits. Archaeological sites occupied within the study region date from as early as the Late Archaic Period (ca., 4,500 years ago), suggesting that additional archaeological sites may be situated within the proposed project site. What steps will WSO take to ensure the preservation and safety of potential archaeological artifacts under the project site?

A phase 1B cultural study is currently being performed. The results of this study can be provided to the Council and will be provided to SHPO (State Historic Preservation Office). WSO will follow all guidance provided by the results of the study and follow any requirements dictated by SHPO.

33. Provide a side profile drawing to depict the solar panel angle with horizontal, and the maximum and minimum heights of the arrays above the ground.

The detail on Sheet C-5.0 of the site plans contained within Appendix A to the Petition has been revised to include this information attached hereto as Exhibit B.

34. Would the underside of any panels have the potential to function as shelters or nesting areas for wildlife? Would nests/droppings be periodically removed from under the panels?

Motor movement of the panels would likely deter wildlife from permanent sheltering. Thus, plans to remove nests or droppings are not anticipated to be necessary.

35. Has WSO conducted any studies to determine the economic impact the proposed project may have on abutting property values in the Town of Windsor? If yes, provide said study. If not, why not?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as explicitly provided for under the PUESA. Subject to the foregoing objections, WSO states that it has not done any studies specifically because it is beyond the scope of a Siting Council petition proceeding.

36. Will any of the energy generated at the project site be distributed to any residents or businesses in the Town of Windsor? If yes, explain. If not, why not?

No. The Project was selected and awarded a 20-year contract under Connecticut's Shared Clean Energy Fund ("SCEF") Program. Please refer to Sections 1.0 and 4.0 of the Petition for SCEF Program details and benefits.

37. What tax revenue will be generated on the project site for the benefit of the Town (i.e. taxes on land, solar array and associated equipment)?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as provided for under the PUESA. Notwithstanding the foregoing objection, WSO states that it will pay taxes in accordance with local regulations and values.

Interconnection

38. What is the line voltage of the proposed electrical interconnection?

23 kV.

Energy Output

39. What distribution system benefits (ex. resiliency of critical infrastructure, reliability of the electric system, etc.) would be provided by the facility? How does the facility meet the objectives of the state Energy Storage Solutions Program?

Please refer to Section 4.0 of the Petition. The facility is not required to meet the objectives of the Energy Storage Solutions Program as this is a solar facility, not an energy storage facility.

40. Is the facility required to reserve any battery storage capability for backup power? Where would the backup power be used?

This project is a solar facility, not an energy storage facility, therefore, this Interrogatory has no bearing on this Petition. The facility is not required to reserve any battery storage capability.

41. How many solar panels would be associated with a 1.00 MW AC array, and how many solar panels would be associated with a 2.00 MW AC array?

WSO objects to this interrogatory on the grounds that it is a hypothetical and irrelevant question to which no response is required. To the extent a response is deemed to be required, as noted in the Response to Interrogatory 36, the proposed Project is a SCEF facility, and as such, must meet its nameplate capacity obligations under the SCEF program. Therefore, hypotheticals of 1.00 MW and 2.00 MW nameplate capacities are irrelevant.

42. What time interval is anticipated to achieve stabilization of disturbed areas?

There are many factors that influence the time interval to achieve either temporary or permanent (vegetative) stabilization at any site including, but not limited to, soil conditions, contractor methods, and the time of year. Notwithstanding the variability of these factors, and the fact that construction personnel are typically not engaged until after land use permit acquisition, it is the Petitioner's estimate that the entire project will be constructed and stabilized within approximately 4-6 months. The Petitioner also commits to hiring the requisite inspection personnel to ensure that the CT DEEP Stormwater General Permit for the project will be upheld.

43. How long will it take for the facility to obtain full output from when it is completed and placed in service?

WSO objects to this interrogatory for vagueness. Subject to the foregoing objection, WSO states that once the Project begins operation, the amount of energy harvested will be dependent on the solar energy availability at that time. However, it is anticipated that the facility will be able to

fully output the amount of electricity generated by the sun striking the panels as soon as it is placed in service.

44. What is the anticipated capacity factor for the project? Would the capacity of the system decline over time? If so, estimate annual losses.

Please refer to Section 3.2.2 of the Petition (pg. 8). In addition, WSO states that the capacity of the system would decline over time. The industry standard is that systems degrade over time at a rate of approximately 0.5% per year.

45. Is it the intention that the entire output of the facility will be sold to the grid?

As noted in the Response to Interrogatory 36, the Facility has been selected for participation in the SCEF Program and as such, will adhere to that program's output requirements.

Environmental

46. Provide a copy of the wetland and vernal pool assessments specific to the site.

Please refer to Appendix G to the Petition.

47. What impact will the facility have on adjacent vernal pools and wetlands?

It is not anticipated that any impacts will be made to wetlands and vernal pools due to the project. Please refer to Appendix G to the Petition, *Wetlands Delineation Report and Vernal Pool Study*, for more details on the environmental analysis. In addition, the Petitioner will secure a CT DEEP Stormwater General Permit which generally outlines the recommended methods for protecting sensitive resources.

48. What is the distance from the limit of disturbance to the nearest wetland boundary for each solar array area and associated stormwater management features (excluding gravel access roads)? Will any work be conducted within 150 feet from the wetlands and watercourses? If so, please describe the work.

The closest proposed solar panel to an on-site wetland resource is approximately 225 feet. The nearest disturbance to any wetland is the temporary riprap outfall of the temporary sediment trap, which is approximately 110 feet in distance from the wetland resource.

49. Referencing the Connecticut Department of Agriculture’s ‘Requirements for Solar Grazing Properties’, describe the plan for water testing, for contaminants prior to livestock being brought to the site.

The requirement refers to grazing where the water source is from “surface or groundwater” at the project site. This is not applicable as the water source will be brought in from off-site and will be from the same water source from the source farm that houses the sheep when they are not at the project site. The company contracted to maintain the sheep grazing ensures that this water source is reliable and safe.

50. Referencing Appendix C, if the sheep grazing program ceases with Hillview Farm, what alternatives are in place to address the overgrown vegetation on the project site? What is the sheep grazing management plan for the site? How often are the sheep brought into the site and removed from the site? Will the sheep be located on site overnight, if so, where will they be sheltered on the site? Describe the shelter.

If the grazing program were to cease with Hillview Farm, WSO would secure a contract with a different sheep grazer. Please refer to the sheep management plan that is contained in the Department of Agriculture’s determination letter that is posted on the Council’s website for this Petition. A permanent shelter is not part of the Requirements for Solar Grazing Properties. However, WSO can state that it is observed that sheep typically will utilize the panels as shelter from the sun during the day and may do so for other weather conditions, whereas with traditional sheep grazing in open farm fields they animals are often devoid of any shelter.

51. Referencing Appendix C, has WSO conducted any tests regarding the potential harmful effects of noise on the sheep grazing near the inverters and equipment at the project site? If yes, explain. If not, why not? Has WSO determined if there are any potential harmful effects of the sheep grazing near the solar panels, inverters, and equipment at the project site in regard to the heat or glare the equipment emits?

There is no such testing anticipated for the sheep, as sheep have successfully grazed, without incident, at other solar sites.

52. What wildlife could potentially be displaced from the project site due to the solar array and equipment?

The project site is currently used as active farmland; thus, there is no anticipated wildlife displacement.

53. Were subsurface soils evaluated for hazardous contaminants? If yes, provide us with the results of the evaluation. Will excavated soils require disposal at a hazardous materials facility? Will disturbed soils be tested prior to being relocated on site or removed from site?

Subsurface soils have not been evaluated for hazardous contaminants. All excavated materials will remain on site and are not required to be tested in accordance with Department of Energy and Environmental Protection regulations.

54. Will the project require a U.S. Army Corps of Engineers permit/notification for work within wetlands/watercourses?

No.

55. How is the proposed facility consistent with the objectives of the state Conservation & Load Management Plan?

WSO objects to this interrogatory as it requests information that is not relevant to this Petition. Notwithstanding the foregoing objection, WSO states that the Conservation and Load Management Plan (“C&LM Plan”) is an energy efficiency and demand management investment plan that develops programs and initiatives to help Connecticut residents and businesses become more energy efficient. The activities outlined in this plan are directly related to residential, commercial, and industrial energy customers and users. The proposed project, by participating in wholesale energy markets, cannot directly participate in this program. However, the benefits provided by this project described in the Petition address the same needs and goals of the C&LM Plan, which include shifting energy demand periods and servicing system load.

56. Will any trees be cut down at the site, including but not limited to the north and northeast tree line adjacent to the Amazon facility? If so, how many acres? Identify the amount of tree clearing for each of the array areas. How would tree clearing affect the acreage? Provide an aerial photograph that depicts pre- and post-construction acreage.

As vegetation is constantly growing and changing, it is impossible to perfectly analyze exact tree clearing needs for any project. Notwithstanding the foregoing, it is estimated that approximately ¼ acres of trees will need to be cleared/trimmed generally around the northern and eastern edges of the project. Please refer to Figure 5 in the Petition for an aerial view.

57. Was an assessment conducted for the northern long-eared bat, a federally and state-listed endangered species? Explain. Was an assessment conducted for the eastern box turtle, a state-listed protected species? Explain.

The Petitioner is in active consultation with the CT DEEP Wildlife Division regarding the list of species that must be considered to secure their approval of the project, and a Final Determination from CT DEEP Wildlife Division must be secured in support of the CT DEEP Stormwater General Permit. As it is not anticipated that any federal permits are required to construct the project as currently designed, there are no requirements to consult with US Fish and Wildlife Service nor to investigate any species outside of those listed by the CT DEEP Wildlife Division.

58. What, if any, fertilizers, or pesticides are expected to be used during the of the solar project, and for what reason(s)?

No fertilizers or pesticides are expected to be used during the solar project, unlike what has been used during the project site's use as an agricultural operation.

59. Were more environmentally friendly alternatives explored for supporting the solar panels to be installed at the site? Explain how the choices were selected.

WSO objects to this question on the grounds that it is void for vagueness, particularly the term "more environmentally friendly alternatives." Notwithstanding the foregoing objection, WSO states that the project will utilize industry standard racking, which presents no known environmental harm.

60. What is the depth of the solar panels post into the ground? Is there dynamic compaction of soil on the driving of posts/poles, access drives, fencing and or equipment pad area?

Depth of solar panels into the ground varies based on geotechnical conditions that are still being investigated at this time, but typically is in the range of 8 to 10 feet. Dynamic compaction is not anticipated to be required for this project; only typical compaction methods of vibratory rollers are expected to be utilized.

61. Will topsoil, subsoil, and substratum soil material be stockpiled for reuse? Where will this be located and how will it be stabilized? What mechanisms are in place to ensure these materials will stay on site? Please provide an erosion and sediment control plan. What plan is in place for dust control on the site during and after construction?

It is anticipated that any excavated topsoil from the construction of the temporary sediment trap or gravel access roads will be stockpiled for reuse on site. The exact location of stockpiles cannot be determined until land use permits are acquired and construction personnel are engaged. The site plans leave dust control to the construction personnel, which will depend on soil conditions, contractor methods, weather, and the time of year. The Petitioner will ultimately secure a CT DEEP Stormwater General Permit which protects both air quality and water quality throughout construction, and both State and project inspectors will be conducting inspections to ensure that this permit is upheld.

62. Referencing the Connecticut Department of Agriculture's 'Requirements for Solar Grazing Properties', describe the plan for proper soil preparation, including preliminary soil testing. Additionally, provide a plan to repeat the testing every 2-3 years, including incorporation of soil amendments as needed.

The required plan for soil testing will be provided to the Department of Agriculture at the appropriate time for the Department's review and approval.

63. Were any samples taken and georeferenced to determine existing soil physical and chemical properties to use as a baseline? If yes, provide the results of the baseline study.

No.

64. Will there be a soil scientist on site during soil disturbance activities to assist in directing trenching and grading to correctly separate and replace soil horizons and stockpiling?

No. The plans that have been provided with respect to this issue can be followed by competent construction personnel.

65. The entire 47.1-acre parcel contains approximately 3.4 acres of prime farmland soil and 42.5 acres of statewide important farmland soil. Will there be an agreement to put aside an agricultural easement on other land so it can remain agriculture in perpetuity?

There is no such agreement. None is needed as the project will still be used for agriculture, namely sheep grazing. WSO would also note that it is not the property owner, thus, it has no ability to place easements on land.

66. Explain the proposed planting plans and provide a list of plantings (including size, number of plantings, and species)? Is there going to be a licensed landscape architect on site supervising the plantings? What is the care and treatment plan (i.e. management plan) for these plantings? What would happen if trees planted die within the first two to three years? Will they be replaced?

Outside of the grassing of the entire project area, the specific plantings are described, located, and quantified on Sheet L-1.1 of the site plans contained within Appendix A to the Petition. Industry standards for the installation, management, and warranty of plant materials are also described on Sheet L-1.1. It is not required that a licensed landscape architect be present for the installations. The Petitioner intends to maintain the landscaping plan and if any replacement becomes necessary, the Petitioner will adhere to the Council's requirements.

Public Safety

67. Has WSO explored using safer solar panels sourced from the United States? If yes, describe how the decision was made. If not, why not?

WSO objects to this question on the grounds that it is void for vagueness, particularly the phrase “safer solar panels,” assumes facts not in evidence (such as the notion that there are safer solar panels or that certain solar panels are unsafe) and is further outside of the scope of a petition for a declaratory ruling as provided for under the PUESA.

68. Has the manufacturer of the proposed solar panels conducted Toxicity Characteristic Leaching Procedure (TCLP) testing to determine if the panels would be characterized as hazardous waste at the time of disposal under current regulatory criteria? If so, submit information that indicates the proposed solar modules would not be characterized as hazardous waste. If not, would WSO agree to install solar panels that are not classified as hazardous waste through TCLP testing?

Please refer to Section 3.2.2 and Appendix B to the Petition.

69. Could the construction or operation of the proposed facility impact or interfere with any existing utilities or infrastructure within the surrounding area? If so, identify any measures that would be employed to protect existing utilities or infrastructure from impact or interference.

WSO does not anticipate any impacts to existing utilities or infrastructure.

70. What health concerns do transmission of electromagnetic waves pose to the surrounding residents of the project?

Please refer to the Responses to the Siting Council’s Interrogatories, specifically, the Response to Question No. 36. Further, according to the Council’s revised EMF Best Management Practices dated February 7, 2014, the Council recognized that a 2010 guideline established 2,000 mG as an acceptable exposure level to EMF. The Council also recognized that there is scientific consensus that there is no cause-and-effect link with EMF and any health effect, and that “scientific evidence to date does not warrant the establishment of MF exposure limits” surrounding transmission lines. In 2015, the Massachusetts Department of Energy Resources, Department of Environmental Protection, and Clean Energy Center released a solar guide that states that PV arrays generate EMF in the same extremely low frequency range as electrical appliances and wiring found in most homes and buildings and that the measurements at three commercial PV arrays in MA gave off less than 0.5 mG at the sites’ boundaries and typically PV arrays give off less than 1.0 mG within three inches of the panels, whereas a vacuum cleaner three feet away from a motor is approximately 2.0 mG. As such, WSO is not aware of any BMPs for EMF at solar facilities.

71. Has WSO conducted any studies to determine the potential impact on cell phone reception, Wi-fi, and internet connectivity in the immediate vicinity of the project site? If yes, provide said study. If not, why not? Would there be any impact to cell phone reception, Wi-Fi, and internet connectivity during the construction of the facility?

WSO objects to this interrogatory as it requests information outside of the scope of a petition for a declaratory ruling as provided for under the PUESA. Subject to the foregoing objection, WSO states that it has not conducted any such study as it is unaware of any evidence to indicate that this project would cause an adverse impact on cell phone reception, wi-fi or internet connectivity.

72. Referencing Appendix C, under what circumstances would the panels require treatment/maintaining with chemicals? If chemicals are used, what types of chemicals would be used and what potential environmental and safety risk do they have?

Chemicals would not be required for treatment or maintenance. Only water will be used on the panels.

73. Has a glare impact analysis been conducted from the variable angled panels? If yes, provide the results of said analysis. If not, why not? What direction will the panels be rotating? What degree to these panels rotate and tilt? What is the glare impact on the surrounding residences?

Yes a glare impact analysis has been conducted for the various angles of the panels and the results are attached hereto as Exhibit C. As previously stated, the panels will rotate from east to west to a maximum angle of 55 degrees from vertical in each direction.

74. Are there contamination concerns with water pooling and drainage contaminating nearby bodies of water, including but not limited to the Farmington River? What is WSO's stormwater runoff plan?

There are no such contamination concerns. Please refer to Sections 3.3, 5.0, 6.12 and Appendix E to the Petition for more information on stormwater. The General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("Stormwater Permit") will be obtained, and the stormwater plan will be submitted to the Council.

75. Would the proximity of any existing or proposed structures present a fire safety or other hazard (ex. Lightning strike)? Would the proximity of any existing or proposed structures present a hazard in relation to the electric generating equipment?

No. No.

76. What type of special equipment would be necessary to extinguish a battery storage/electrical component fire? Specifically, based on any history of fires at installed battery systems, is there specialized firefighting equipment necessary to extinguish a Lithium-ion battery fire? Is there a concern with runoff and cleanup caused by fire extinguishment?

As stated in the Responses to prior Interrogatories above, this is not a battery storage project. Please refer to the Responses to the Interrogatories issued by the Siting Council, specifically, the Response to Interrogatory No. 38 for fire mitigation procedures.

77. Referencing Appendix C, regarding emergency response:

- a. Is outreach and/or training necessary for local emergency responders in the event of a fire or other emergency at the site?

WSO will provide emergency responders with training for response to fire or other emergencies at the site.

- b. How would site access be ensured for emergency responders?

WSO will provide emergency responders with a key to the access gate or use of a “knox box”. Please refer to Section 6.1 of Appendix C of the Petition.

- c. In the event of a brush or electrical fire, how would WSO mitigate potential electric hazards that could be encountered by emergency response personnel?

As stated in Appendix C to the Petition, multiple means of disconnect exist to allow for safe disconnecting of the system to address safety concerns for emergency response.

- d. Could the entire facility be shut down and de-energized in the event of a fire? If so, how?

Yes. The site may be disconnected manually or remotely by either WSO or Eversource using disconnect switches both inside and outside of the facility.

- e. Would there be an emergency key box for first responders to access the site for shutdown purposes?

Yes. See Appendix C to the Petition.

- 78. Who is responsible for the costs associated with training local emergency responders?

No costs to the Town are anticipated for such training. However, if the local emergency responders incur reasonable costs associated with the training, WSO would reimburse the local emergency responders for such costs.

- 79. What layers of protection will be included to prevent “Thermal Runaway?” For example, please respond to the following:

As stated above, this is not a battery storage project. As such, WSO objects to this question and the subsequent questions (f.-h.) on the grounds that they are irrelevant and inapplicable to the instant proceeding.

- f. Would explosion vent panels be installed on the top of battery energy storage system?
- g. Would a fast-acting gaseous agent system be installed to potentially put any Class C fire out before it can turn into a Class B fire that involves battery cells?
- h. Would thermal imaging be employed?

- 80. Referencing Appendix L, how many gallons of fuel or oil in cumulative volume will the project store above ground?

Please refer to Appendix L Section 2, which states that “The Contractor shall not keep any above ground fuel or oil storage onsite greater than 1,320 gallons in cumulative volume.

81. Referencing the Petition, some hazardous substances are required to be used or stored on the project site during construction or operation for the project. While the Petition lists examples of these hazardous substances, explain what damage they could potentially cause to the project site if not handled and stored properly.

If not handled properly chemicals could spill onto the ground. If this were to occur, all applicable DEEP standards for spill containment and response would be followed. Please refer to Appendix L of the Petition for more information.

82. Referencing Appendix L, the project's location is proximate to sensitive environmental features. Provide more detail as to the sensitive environmental features referenced therein.

"Sensitive environmental features" is a general term referring to watercourses and wetlands located outside of the project area but on the subject property.

83. Referencing the Petition, the property owner does not intend on removing snow from panels. Would the current design cause snow/and or ice to accumulate and stay in place during prolonged incidents of cold weather? Is there a plan to remove snow/ice to prevent ice fall hazard? If yes, describe snow/ice removal methods and site access.

Due to the daily movement of the tracker panels, the accumulation of snow & ice is less likely. There is no plan to remove snow and ice. As the project is a secure facility, there is no danger to the public from the hazard of falling ice. Any personnel present on-site in the unlikely event of ice accumulation will take reasonable safety precautions.

84. Please provide an image of the agricultural fence that is being proposed as a reference. Please describe the gate for the Facility Maintenance/Decommissioning



Please refer to Appendix A to the Petition pg. L-1.1, which will look similar to the image above.

85. Are there any provisions within the lease with the property owner related to decommissioning and/or site restoration at the end of the project's useful life? If yes, describe and/or provide any such provisions.

Yes, the tenant (WSO) is required to provide financial assurance to the landlord to support the decommissioning and removal obligations of the proposed project at the end of the lease term. The relevant portions of the Lease are quoted below.

Section 12.1 - Condition of Premises. Upon expiration or other termination of this Lease, the Solar Arrays and any improvements constructed on, stored at, or brought onto the Leased Premises by Tenant, including any trade fixtures or signs, shall be removed by Tenant, and the Leased Premises shall be restored to substantially the same condition that existed upon the Commencement Date of the Lease, normal wear and tear excepted and also excluding any need for Tenant to remedy site work (including, for example and without limitation, tree removal and site grading, if applicable) that was performed by Tenant to prepare the Leased Premises for the installation of the Solar Array (collectively, the "Tenant Removal Obligation"). All trade fixtures and signs, whether by law deemed to be a part of the realty or not, installed by the Tenant at any time or anyone claiming under the Tenant, shall remain the property of the Tenant or persons claiming under the Tenant and may be removed by the Tenant or anyone claiming under the Tenant at any

time or times during the Lease Term. If Tenant does not complete the Tenant Removal Obligation within one hundred twenty (120) days after expiration or other termination of the Lease, or such additional time as may be granted by Landlord (the "Tenant Removal Period"), Landlord shall have the right, at its option and upon prior written notice to Tenant, (a) to remove the Solar Array from the Premises and store the Solar Array, or sell it for salvage value, and (b) restore the Premises to substantially the same condition that existed as of the Commencement Date of the Lease, reasonable wear and tear excepted, all at Tenant's sole cost and expense, including any warehousing costs but less any actual sales amount for salvage; in the event that the sales amount for salvage exceeds the cost and expenses Landlord incurs to remove the Solar Array, restore the Premises, and sell the equipment, then such excess proceeds shall be paid to Tenant. For the avoidance of doubt, Tenant shall continue to pay monthly Basic Rent during the Tenant Removal Period.

Section 12.2- Decommissioning Assurance. Tenant agrees to provide a means of financial assurance for the purpose of covering the costs of Tenant's removal obligations as detailed in Section 12.1 in an amount as reasonably determined by Tenant in its professional opinion, but in no event more than \$0.10 per Watt alternating current ("AC") of the Solar Array system capacity (the "Removal Security"). Tenant agrees to provide one of the following means of Removal Security (which security shall be determined by Tenant, in its reasonable discretion, provided that if Tenant chooses a guaranty, the guarantor's creditworthiness and the form of guaranty shall be to Landlord's reasonable satisfaction): (i) a letter of credit for the benefit of Landlord funded over five (5) years, such letter of credit being established after the sixteenth (16th) anniversary of the Commercial Operation Date with an initial amount of 20% of the aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.02 per Watt AC of Solar Array system capacity) and increasing by an additional 20% on each anniversary of the Commercial Operation Date thereafter until such time as the letter of credit has an aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.10 per Watt AC of Solar Array system capacity); or (ii) a corporate or other guaranty running to Landlord from an entity that, in Landlord's reasonable judgment, has the financial wherewithal to perform the removal obligations of Tenant set forth in this Lease; or (iii) a decommissioning bond funded over five (5) years, such decommissioning bond being established after the sixteenth (16th) anniversary of the Commercial Operation Date with an initial amount of 20% of the aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.02 per Watt AC of Solar Array system capacity) and increasing by an additional 20% on each anniversary of the Commercial Operation Date thereafter until such time as C-16 the decommissioning bond has an aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.10 per Watt AC of Solar Array system capacity); or (iv) Tenant may establish an restricted account that is pledged to Landlord (a "Reserve Account") funded over five (5) years, such account being established after the sixteenth (16th) anniversary of the Commercial Operation Date with an initial amount of 20% of the aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.02 per Watt AC of Solar Array system capacity) and increasing by an additional 20% on each anniversary of the Commercial Operation Date thereafter until such time as the Reserve Account has an aggregate amount necessary to cover Tenant's removal obligations (but in no event to exceed \$0.10 per Watt AC of Solar Array system capacity). If Tenant elects to provide a letter of credit, decommissioning bond, or Reserve Account pursuant to this Section 12.2, Tenant shall, no later than thirty (30) days following the date of the first required deposit and on each annual anniversary thereafter, deliver reasonable documentation evidencing the existence and funding of such letter of credit, decommissioning bond, or Reserve Account in a form that cannot be terminated without advance notice to Landlord. If Tenant performs its removal obligations, then the letter of credit, guaranty, decommissioning bond, or Reserve Account, as the case may be, shall be promptly returned to Tenant. If Tenant fails to perform its removal obligations, then upon ten (10) business days' prior written notice to Tenant, Landlord shall be entitled to draw on the letter of credit in accordance with the terms thereof, enforce the guaranty, call on the decommissioning bond, or utilize the Reserve Account to perform such removal of the Solar Array. After such removal by Landlord, any excess amounts from the letter of credit or remaining in the Reserve Account shall be returned to Tenant.

Section 12.3 - Holding Over. If the Tenant remains on the Leased Premises beyond the expiration of the Lease Term or any renewal or extension thereof, including the Tenant Removal Period, without the written consent of the Landlord, such holding over shall be deemed to create a month to month tenancy at a rate equal to one hundred and twenty-five percent (125%) of the monthly Basic Rent, subject to all other terms and conditions of this Lease in effect immediately prior to such expiration, except those relating to the term of this Lease.

86. Please provide details of the maintenance plan over the useful life of the facility.

Please refer to Appendix C of the Petition.

87. Would project decommissioning include stormwater management features? If yes, how would the stormwater management system be removed?

There are no permanent stormwater features proposed for this Project, and as such, no decommissioning of such features will be required.

88. Referencing the Petition, what is the status of the DEEP Natural Diversity Data Base request? If this is complete, please provide the results.

The DEEP NDDDB review is currently ongoing. WSO is currently reviewing the preliminary assessment it has received and is ascertaining what steps, if any, need to be taken. WSO will provide the final NDDDB assessment to the Council once it has received it.

89. Referencing Appendix D, provide a preliminary Health and Safety Plan associated with decommissioning the site to minimize and eliminate all risks and hazards. Include a Job Hazard Analysis that will analyze each step of construction for hazards, along with any hazardous materials that may be used on site.

WSO objects to this interrogatory on the grounds that it calls for speculation as to what hazards may arise up to thirty years in the future, which cannot be anticipated at this time. Subject to the foregoing objection, WSO states that it does not expect any significant construction hazards or any hazardous materials that will be used on site during decommissioning.

90. Will a construction and maintenance bond be obtained for the work to be performed? If yes, in what amount? If not, why not?

WSO objects to this interrogatory on the grounds that it is void for vagueness. Notwithstanding the foregoing objection, WSO would point out that such bonds are required for Certificate

proceedings, but not petitions. WSO notes, however, that it will provide the Department of Energy and Environmental Protection with a letter of credit as part of the stormwater permitting process, which will act as a financial surety to ensure that construction happens appropriately. In addition, as noted in the Response to Interrogatory 85, WSO is providing the landlord with financial assurance that decommissioning will be addressed properly.

91. Will a decommissioning performance bond be obtained for the decommissioning work? If yes, explain the details of the planned decommissioning bond. If not, why not?

Please refer to the response to Question No. 90 above. See also, Appendix D to the Petition.

92. What site testing/cleanup work are required in decommissioning the project?

No such work is anticipated to be needed.

93. Would replacement modules be stored on-site in the event solar panels are damaged or are not functioning properly? If so, where? How would damaged panels be detected?

Replacement modules would not be stored on-site. Damaged panels would be detected through remote monitoring in the event that they misfire.

EXHIBIT A



Cone Drive

BY TIMKEN

Test Name: Solar FlexRack Noise Study
Part Number: TD127SF-59956
Report Issued: February 4, 2021

	Name	Date
Product Development Engineer	Andrew Grossman	2-04-2021
Engineering Manager	Jim Gerds	2-04-2021
Engineering Director	Tim Puckett	2-04-2021

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Cone Drive
BY TIMKEN

Cone Drive Operations, Inc.
240 E. 12th Street
Traverse City, MI 49685
Ph: 231-946-8410

Test Purpose

Cone Drive was asked to evaluate the noise of the Solar FlexRack (SFR) Slewing Drive under normal operating conditions.

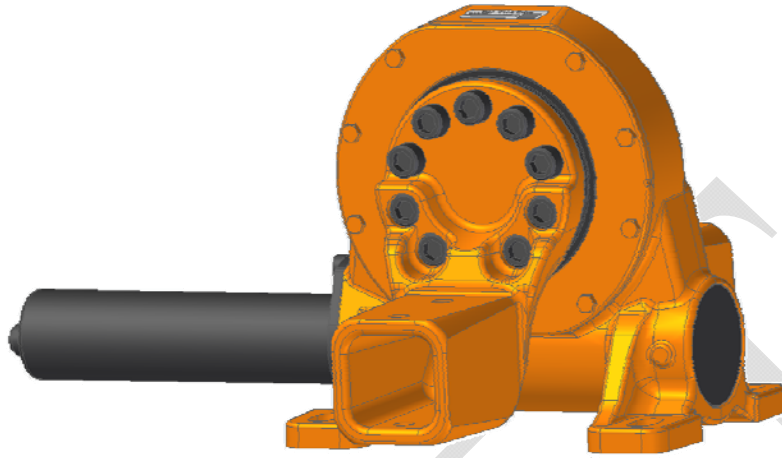


Figure 1. TD127SF-59956

Conclusions

The SFR Slew Drive, part number TD127SF-59956, was measured to have sound levels equivalent to Urban Residence, and less than a Conversation from 3 feet away.

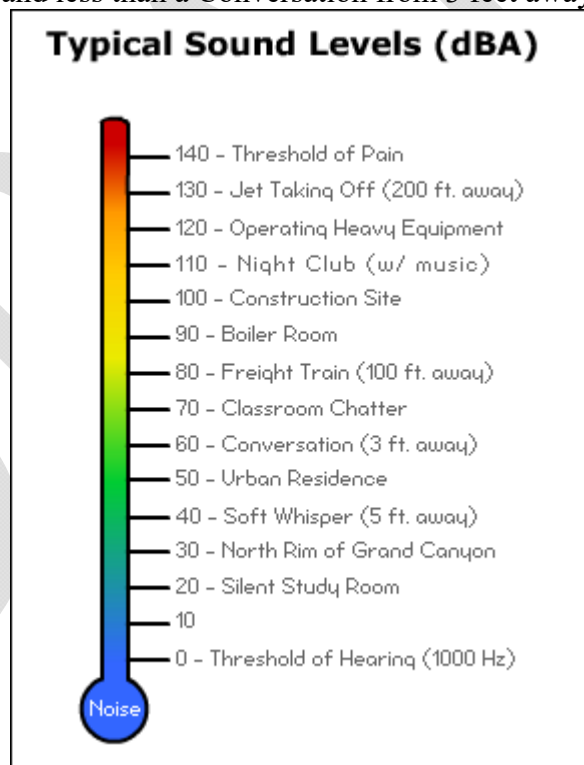


Figure 2. OSHA Sound Level Guide <https://www.osha.gov/noise>

Test Overview

The SFR Slew Drive was placed in 2 various setups in order to determine the noise levels. In each setup, the unit was tested at an output speed 0.067 RPM. The first test was performed in the Dyno Lab, in order to get a baseline. Note the first test did not involve the production gearmotor. The second

test was performed in the Dyno Control Room, in order to achieve better sound resolution. Note this test did use the production gearmotor.

Test Setups

The dynamic test was setup with the following features (images in Appendix A & B).

- Lab Setup
 - Servo motor
 - Reducer
 - Input torque meter
 - Test unit bolted to test fixture
 - Sound meter

- Control Room Setup
 - Gearmotor
 - Power supply
 - Test unit
 - Sound meter

In each setup, the sound meter was placed 1 meter away from the unit, on a 45° angle between the input and output, at the centerline of the gear mesh.

Test Results

The unit as-built, without production gearmotor, when tested in the lab produced the following sound levels

Sound Level (dBA)	Condition	Notes
44.5	Servo-drive disabled	Ambient sound level
45.5	Servo-drive enabled, but not running	Ambient sound level
50.4	Servo-drive enabled, running, but not connected to test unit	Servo sound level
50.2	Servo-drive enabled, running, connected to test unit	Operational sound level

Note, while listening to the operation during various setups, the meter was unable to discern any operational noise from the test unit versus ambient noise.

The unit as-built, with production gearmotor, when tested in the lab control room produced the following sound levels

Sound Level (dBA)	Condition	Notes
NA* (below 40dBA)	Gearmotor disabled	Ambient sound level
52.5	Gearmotor enabled, running, but not connected to test unit	Gearmotor sound level
51.4	Gearmotor enabled, running CW, connected to test unit	Operational sound level
50.4	Gearmotor enabled, running CCW, connected to test unit	Operational sound level

*Note, the meter cannot read sounds levels below 40 dBA.

Appendix A: Lab Setup

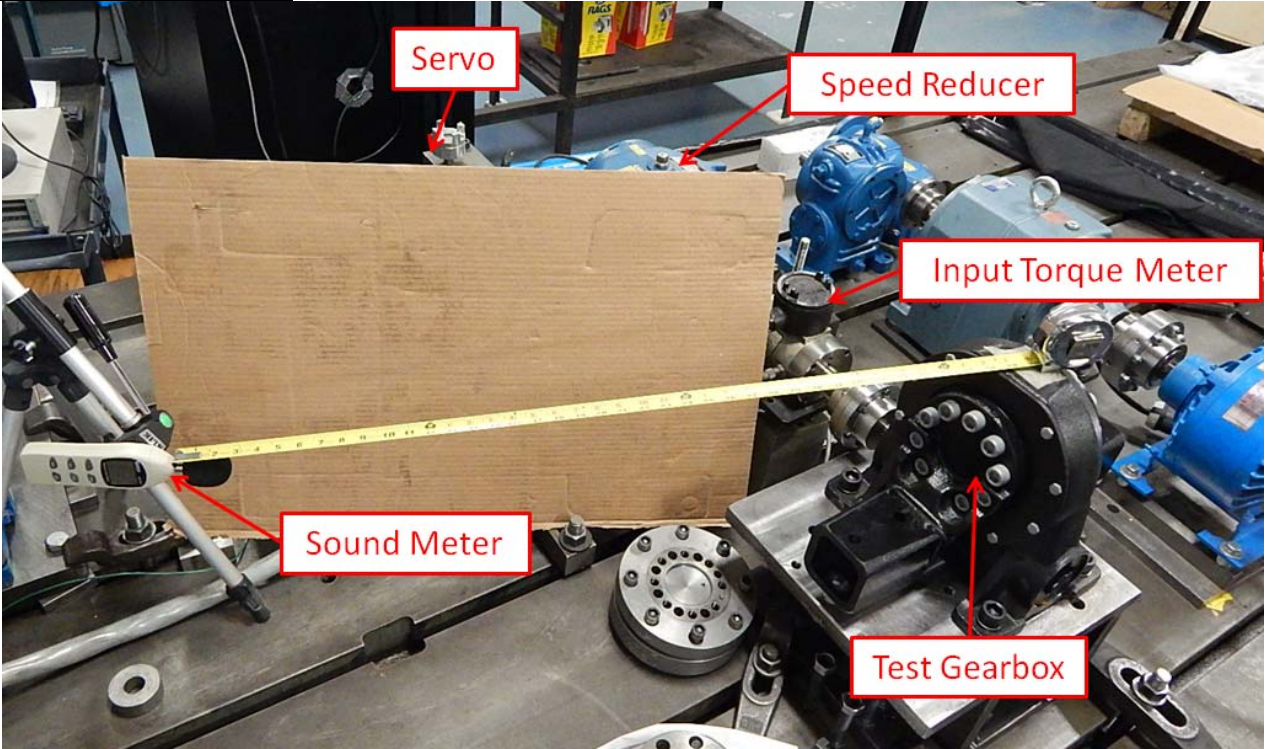


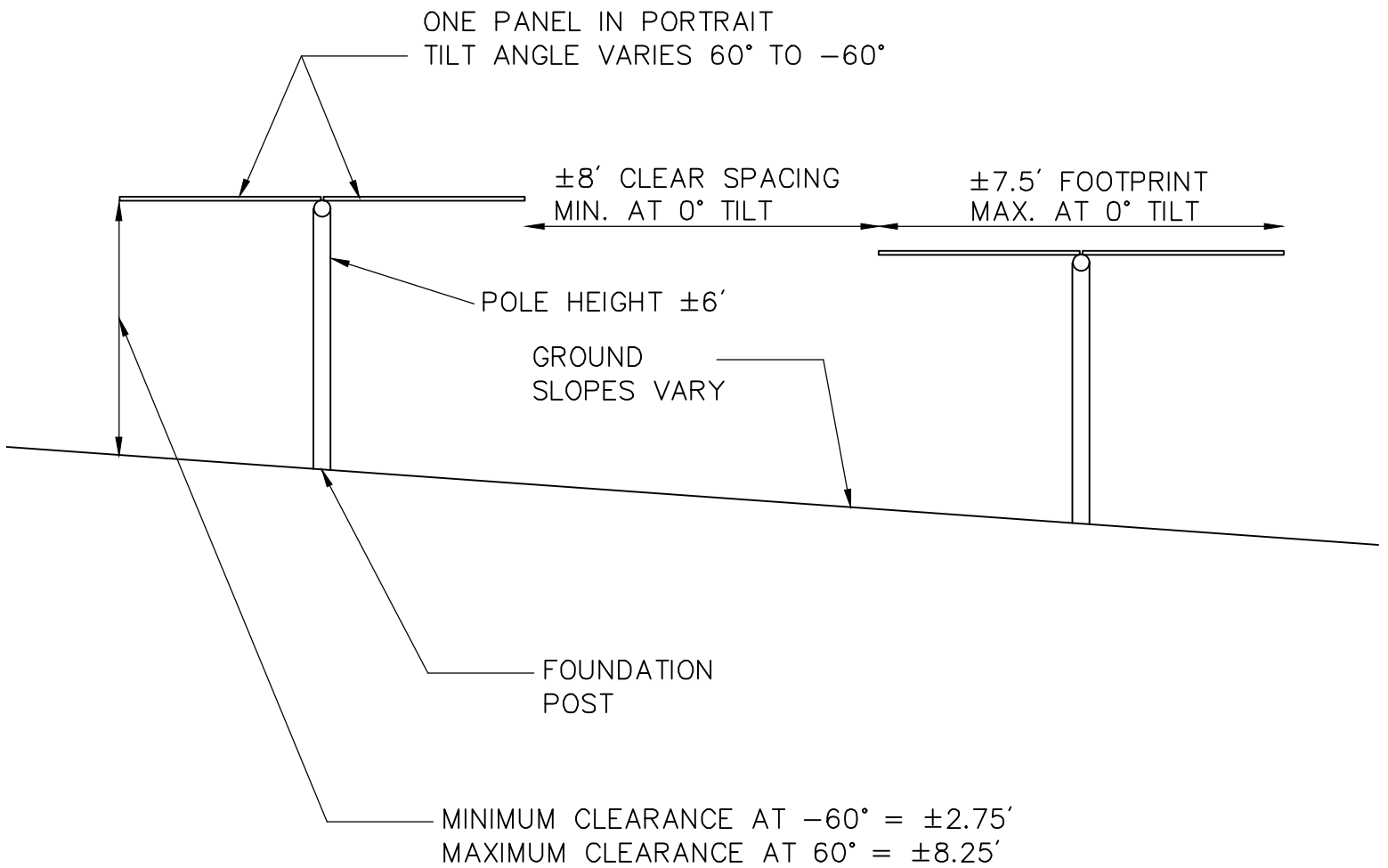
Figure 3. Dynamic Test Setup in Dyno Lab

Appendix B: Control Room Setup



Figure 4. Dynamic Test Setup in Control Room

EXHIBIT B



Notes:

1. FINAL DETERMINATION OF PANEL TYPE, RACKING SYSTEM, AND FOUNDATION POSTS TO BE DETERMINED PENDING BEST AVAILABLE TECHNOLOGY AT TIME OF CONSTRUCTION AND STRUCTURAL GROUND TESTING.

EXHIBIT C

Windsor Solar One Tracker

Created Jan 23, 2024
Updated Jan 23, 2024
Time-step 5 minute(s)
Timezone offset UTC-5
Minimum sun altitude 0.0 deg
Site ID 110298.19040

Project type Advanced
Project status: active
Category 1 MW to 5 MW



Misc. Analysis Settings

DNI: varies (1,000.0 W/m² peak)
Ocular transmission coefficient: 0.5
Pupil diameter: 0.002 m
Eye focal length: 0.017 m
Sun subtended angle: 9.3 mrad

PV Analysis Methodology: Version 2
Enhanced subtended angle calculation: On

Summary of Results No glare predicted!

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced
	deg	deg	min	min	kWh
PV Array - SAT	SA tracking	SA tracking	0	0	-

Component Data

PV Array(s)

Total PV footprint area: 12.9 acres

Name: PV Array - SAT
Footprint area: 12.9 acres
Axis tracking: Single-axis rotation
Backtracking: Shade-slope
Tracking axis orientation: 180.0 deg
Maximum tracking angle: 55.0 deg
Resting angle: 0.0 deg
Ground Coverage Ratio: 0.4784067061
Rated power: -
Panel material: Smooth glass with AR coating
Vary reflectivity with sun position? Yes
Correlate slope error with surface type? Yes
Slope error: 8.43 mrad



Vertex	Latitude deg	Longitude deg	Ground elevation ft	Height above ground ft	Total elevation ft
1	41.902468	-72.664751	83.16	5.06	88.22
2	41.902460	-72.663415	97.96	5.06	103.02
3	41.901538	-72.663405	93.00	5.06	98.06
4	41.901538	-72.663212	122.99	5.06	128.05
5	41.900635	-72.662622	93.19	5.06	98.25
6	41.900635	-72.661838	119.83	5.06	124.89
7	41.900008	-72.661055	93.96	5.06	99.02
8	41.899437	-72.661023	83.75	5.06	88.81
9	41.899449	-72.661629	80.18	5.06	85.24
10	41.899733	-72.661865	83.04	5.06	88.10
11	41.899741	-72.662316	80.38	5.06	85.44
12	41.900012	-72.662734	76.16	5.06	81.22
13	41.900013	-72.663822	72.71	0.00	72.71
14	41.900013	-72.663822	72.71	0.00	72.71
15	41.900006	-72.664909	72.52	5.06	77.58
16	41.900871	-72.664907	74.76	5.06	79.82

Route Receptor(s)

Name: River Street
Route type: Two-way
View angle: 50.0 deg



Vertex	Latitude deg	Longitude deg	Ground elevation ft	Height above ground ft	Total elevation ft
1	41.898587	-72.665405	60.00	0.00	60.00
2	41.900583	-72.665319	74.00	0.00	74.00
3	41.901733	-72.665040	77.00	0.00	77.00
4	41.902819	-72.665233	80.00	0.00	80.00
5	41.903602	-72.665877	78.00	0.00	78.00

Discrete Observation Receptors

Number	Latitude	Longitude	Ground elevation	Height above ground	Total Elevation
	deg	deg	ft	ft	ft
OP 1	41.898972	-72.665811	68.71	6.00	74.71
OP 2	41.899046	-72.666097	67.20	6.00	73.20
OP 3	41.899199	-72.666210	71.34	15.00	86.34
OP 4	41.901086	-72.665753	77.78	5.00	82.78
OP 5	41.901306	-72.665656	79.05	15.00	94.05
OP 6	41.902583	-72.665482	80.06	15.00	95.06
OP 7	41.901991	-72.665891	81.68	6.00	87.68
OP 8	41.902344	-72.665883	83.63	15.00	98.63
OP 9	41.902715	-72.665652	90.00	15.00	105.00
OP 10	41.902755	-72.664880	87.50	6.00	93.50
OP 11	41.902773	-72.664794	89.91	15.00	104.91
OP 12	41.902696	-72.665671	90.11	6.00	96.11
OP 13	41.899662	-72.666251	70.85	6.00	76.85
OP 14	41.899808	-72.666183	70.28	15.00	85.28
OP 15	41.900017	-72.666025	71.65	6.00	77.65
OP 16	41.900098	-72.665847	72.67	15.00	87.67
OP 17	41.900845	-72.665782	75.16	6.00	81.16
OP 18	41.900642	-72.665771	76.13	15.00	91.13

Obstruction Components

Name: Obstruction 1
Upper edge height: 80.0 ft



Vertex	Latitude deg	Longitude deg	Ground elevation ft
1	41.903488	-72.663715	147.97
2	41.902557	-72.663194	102.49
3	41.902378	-72.663028	142.46
4	41.902545	-72.662615	126.79
5	41.902498	-72.662481	156.88
6	41.902322	-72.662186	203.81
7	41.902198	-72.662122	203.45
8	41.902034	-72.662288	203.08
9	41.901895	-72.662379	197.72
10	41.901675	-72.662417	202.44

Name: Obstruction 10
Upper edge height: 30.0 ft



Vertex	Latitude deg	Longitude deg	Ground elevation ft
1	41.901139	-72.665395	79.23
2	41.901112	-72.665376	79.80
3	41.901080	-72.665383	80.07
4	41.901047	-72.665411	80.07
5	41.901013	-72.665444	79.99
6	41.901010	-72.665487	80.11

Name: Obstruction 2
Upper edge height: 80.0 ft



Vertex	Latitude deg	Longitude deg	Ground elevation ft
1	41.901685	-72.662396	200.11
2	41.901518	-72.662381	197.87
3	41.901302	-72.662323	197.85
4	41.901118	-72.662219	199.34
5	41.900917	-72.662026	181.08
6	41.900725	-72.661768	137.64
7	41.900510	-72.661440	108.58
8	41.900409	-72.661313	106.53
9	41.900249	-72.661139	105.15
10	41.900151	-72.661016	101.66

Name: Obstruction 3
Upper edge height: 80.0 ft



Vertex	Latitude deg	Longitude deg	Ground elevation ft
1	41.900367	-72.659927	125.02
2	41.900201	-72.660072	120.91
3	41.900053	-72.660161	119.40
4	41.899886	-72.660289	101.36
5	41.899796	-72.660394	97.26
6	41.899718	-72.660767	91.48
7	41.899506	-72.660745	88.99
8	41.899317	-72.660694	96.86
9	41.899131	-72.660785	101.65
10	41.899031	-72.661062	94.74

Name: Obstruction 6
Upper edge height: 40.0 ft



Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	41.900491	-72.665212	73.42
2	41.900187	-72.665250	72.68
3	41.899916	-72.665261	66.25
4	41.899632	-72.665282	70.11
5	41.899125	-72.665282	66.14
6	41.898862	-72.665271	69.69

Name: Obstruction 7
Upper edge height: 80.0 ft



Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	41.902392	-72.663194	119.51
2	41.901897	-72.663173	148.71
3	41.901690	-72.663103	152.04
4	41.901430	-72.662894	163.16
5	41.901135	-72.662711	145.27
6	41.900691	-72.662422	115.78

Name: Obstruction 8
Upper edge height: 15.0 ft



Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	41.900563	-72.665498	75.74
2	41.900547	-72.665471	75.17
3	41.900528	-72.665471	75.22
4	41.900509	-72.665502	75.84

Name: Obstruction 9
Upper edge height: 15.0 ft



Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	41.900662	-72.665613	74.60
2	41.900646	-72.665604	74.48
3	41.900631	-72.665607	74.66
4	41.900624	-72.665628	74.77

Name: Obstruction 9
Upper edge height: 30.0 ft



Vertex	Latitude	Longitude	Ground elevation
	deg	deg	ft
1	41.902496	-72.665327	81.95
2	41.902399	-72.665262	87.21
3	41.902277	-72.665289	88.52
4	41.902181	-72.665244	84.56
5	41.902113	-72.665217	82.42
6	41.901973	-72.665228	78.14
7	41.901971	-72.665295	78.46

Summary of PV Glare Analysis

PV configuration and total predicted glare

PV Name	Tilt	Orientation	"Green" Glare	"Yellow" Glare	Energy Produced	Data File
	deg	deg	min	min	kWh	
PV Array - SAT	SA tracking	SA tracking	0	0	-	-

PV & Receptor Analysis Results

Results for each PV array and receptor

PV Array - SAT no glare found

Component	Green glare (min)	Yellow glare (min)
OP: OP 1	0	0
OP: OP 2	0	0
OP: OP 3	0	0
OP: OP 4	0	0
OP: OP 5	0	0
OP: OP 6	0	0
OP: OP 7	0	0
OP: OP 8	0	0
OP: OP 9	0	0
OP: OP 10	0	0
OP: OP 11	0	0
OP: OP 12	0	0
OP: OP 13	0	0
OP: OP 14	0	0
OP: OP 15	0	0
OP: OP 16	0	0
OP: OP 17	0	0
OP: OP 18	0	0
Route: River Street	0	0

No glare found

Assumptions

- Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
- Glare analyses do not automatically account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographical obstructions.
- Detailed system geometry is not rigorously simulated.
- The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values and results may vary.
- The system output calculation is a DNI-based approximation that assumes clear, sunny skies year-round. It should not be used in place of more rigorous modeling methods.
- Several V1 calculations utilize the PV array centroid, rather than the actual glare spot location, due to algorithm limitations. This may affect results for large PV footprints. Additional analyses of array sub-sections can provide additional information on expected glare.
- The subtended source angle (glare spot size) is constrained by the PV array footprint size. Partitioning large arrays into smaller sections will reduce the maximum potential subtended angle, potentially impacting results if actual glare spots are larger than the sub-array size. Additional analyses of the combined area of adjacent sub-arrays can provide more information on potential glare hazards. (See previous point on related limitations.)
- Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.
- Glare locations displayed on receptor plots are approximate. Actual glare-spot locations may differ.
- Refer to the **Help page** for detailed assumptions and limitations not listed here.