

BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Application of)
Angelina Solar I, LLC)
for a Certificate of Environmental) **Case No. 18-1579-EL-BGN**
Compatibility and Public Need)

DIRECT TESTIMONY OF MATTHEW ROBINSON

1 **Q.1. Please state your name, title and business address.**

2 **A.1.** My name is Matthew Robinson. I am a Visualization Project Manager at
3 Environmental Design & Research, Landscape Architecture, Engineering &
4 Environmental Services, D.P.C (“EDR”). My business address is 217 Montgomery
5 Street, Suite 1000, Syracuse, New York 13202.

6 **Q.2. What are your duties as a Visualization Project Manager?**

7 **A.2.** As Visualization Project Manager I am responsible for the oversight of all
8 technical analyses associated with visual impact assessments. This includes
9 identification of visually sensitive resources, field evaluation and documentation,
10 visibility analyses, development of detailed and accurate visual simulations,
11 determination of impacts, mitigation conceptual design and report production.

12 **Q.3. What is your educational and professional background?**

13 **A.3.** I graduated from the University of Vermont in 2005 with a Bachelor of Arts in
14 Political Science and from Cornell University in 2010 with a Master’s Degree in
15 Landscape Architecture. After the completion of each degree I worked at LandWorks in
16 Middlebury, Vermont as an Associate Landscape Architect and Project Manager.
17 During my six years at LandWorks I managed a variety of visual impact assessment,
18 landscape architecture, and planning projects. I have previously overseen visual

1 assessments, visual screening, and landscaping design for a number of solar projects,
2 including the Battle Creek I Solar Project, Ryegate GLC Solar, & Otter Creek I & II
3 Solar Projects.

4 **Q.4. On whose behalf are you offering testimony?**

5 **A.4.** I am testifying on behalf of the Applicant, Angelina Solar I, LLC, in support of its
6 application filed in Case No. 18-1579-EL-BGN.

7 **Q.5. What is the purpose of your testimony?**

8 **A.5.** The purpose of my testimony is to describe the Visual Resource Assessment
9 (“VRA”) my firm undertook on behalf of the Applicant, to summarize the results of that
10 assessment and to provide my overall assessment of the potential visual impact of the
11 Angelina Solar Project (“Project”). A copy of the VRA is included in the Application as
12 Exhibit I.

13 **Q.6. Please describe the study that you and your firm undertook on behalf of the**
14 **Applicant.**

15 **A.6.** A VRA was prepared to satisfy those portions of the requirements of OAC
16 Chapter 4906-04-08(D)(4) that relate to the identification of visually sensitive resources
17 and potential visual impacts associated with the installation of the proposed facility.
18 Visually sensitive resources are defined as any formally adopted area of historic,
19 recreational, cultural, natural, and scenic significance. Examples of visually sensitive
20 resources include properties on the National Register of Historic Places, State Parks, and
21 cemeteries, among others. EDR conducted background research of publicly available
22 documents to compile a database of any potential visually sensitive resources located
23 within the visual study area (a 5-mile radius area around the Project site). Next, a

1 viewshed analysis was performed in order to identify geographic areas and resources with
2 potential Project visibility. The viewshed analysis incorporated and considered the
3 screening effect of structures and vegetation, as captured in high resolution lidar data
4 from the Ohio Statewide Imagery Program's and Indiana Geographic Information Office.
5 The areas of visibility are displayed on a map along with the visually sensitive resources
6 to assist field crews in the site photography. The field visit served the following
7 purposes: 1) provide a basis for the description of the existing visual environment, 2)
8 verify the existence of visually sensitive resources, 3) identify additional resources, 4)
9 verify the results of the viewshed analysis, and 5) capture photographs and location data
10 for eventual use in the production of visual simulations. Visual simulations were
11 produced from a six viewpoints which each represent various distance zones, user groups,
12 and landscape similarity zones found throughout the visual study area. Once complete,
13 the simulations were evaluated by a visual expert and used to characterize the type and
14 extent of visibility and visual impact likely to result from the Project. The methodology
15 and results of the evaluation are then presented in the Visual Resource Assessment report.

16 **Q.7. What was your role in the VRA conducted for the Application?**

17 **A.7.** My role was to manage and provide oversight of the analyses contained in the
18 VRA, including 1) planning, scheduling, organization, and staff management, 2)
19 conducting field reviews, including photography for use in the development of visual
20 simulations, 3) production and/or oversight of the individual analyses and products
21 contained in the VRA (e.g., report, figures, tables, and visual simulations), and 4) providing
22 communication with the Applicant regarding the study's progress, results and Project
23 implications.

1 **Q.8. What were the results of the VRA you performed?**

2
3 **A.8.** The viewshed analysis indicated that the proposed solar panels could potentially
4 be visible from approximately 16.79% of the 5-mile radius visual study area, and the
5 proposed substation would potentially be visible from only 9.7% of the visual study area.
6 Visibility is concentrated within the area in which the Project will be built (“Project
7 Area”) and adjacent open fields. Additionally, the viewshed analyses indicates that the
8 Project will generally not be visible from areas located more than 2.5 miles away.
9 Field review suggested that the Project will be clearly visible from nearby roadways and
10 residences directly adjacent to the Project, particularly where the proposed panels are
11 situated in open fields directly adjacent to public roadways that are void of screening
12 vegetation. However, field review also confirmed and amplified the viewshed analysis
13 results. While the conservative assumptions associated with the desktop viewshed
14 analysis indicated that the Project would generally not be visible from areas more than
15 2.5 miles away, field review indicated minimal Project visibility beyond 0.5 mile from
16 the proposed panels.
17 Visual simulations from selected viewpoints where the Project is proposed in open
18 agricultural fields adjacent to the viewer, indicate a high degree visibility and appreciable
19 visual contrast with the existing landscape. The visual simulations from more distant
20 viewpoint locations demonstrated that existing vegetation in the Project Area will provide
21 effective screening of the Project. The simulations show that existing hedgerows and
22 farm structures compete for viewer attention and limit continuous Project visibility, thus
23 limiting the potential visual effect to these locations. The simulation of the Project at

1 distances of over one mile, demonstrates how the Project visibility and visual impact
2 diminishes with distance.

3 **Q.9. Are measures being proposed to mitigate potential Project visibility and visual**
4 **impact?**

5 **A.9.** Yes, approaches to visual mitigation for this Project include the following:

- 6 • configuration of solar panels less than 15 feet in height,
- 7 • siting the facility away from visually sensitive resources,
- 8 • complying with appropriate setback distances based on the sensitivity of the
9 adjacent use, and
- 10 • the proposed use of vegetative buffers to screen portions of the Project.

11 To provide appropriate distances between the Project and the general public, the solar
12 fields will be designed to incorporate several minimum setbacks. These setbacks were
13 designed to mimic the edges of the existing uses. For example, the fence edge falls
14 approximately in the same area as the agricultural field edge preserving the current scale
15 and spacing experienced while traveling the roadway. Setbacks include (1) a 25-foot
16 setback between the perimeter fence of a solar field and the edge of pavement of any
17 public road; (2) a 40-foot setback between any above-ground equipment within a solar
18 field and the edge of pavement of any public road; (3) a 10-foot setback between the
19 perimeter fence of a solar field and the property line of any parcel whose owner is not
20 participating in the Project (“Non-participating Parcel”); (4) a 25-foot setback between
21 any above-ground equipment within a solar field and any property line of a Non-
22 participating Parcel; and (5) a 100-foot setback between any above-ground equipment
23 within a solar field and any habitable residence located on a Non-participating Parcel.

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Additionally, a landscape plan will be included as part of the final design for the Project and will be submitted to OPSB Staff prior to the start of construction. The Applicant will incorporate where appropriate pollinator-friendly grasses and wildflowers along selected roadsides and fence lines. Additionally, the Applicant will incorporate, where appropriate, native shrubs and plantings in selected sensitive areas, such as along fence lines adjacent to residences. Use of native shrubs and plantings will not completely screen views of the Project, but instead would serve to soften the overall visual effect of the Project and help to better integrate the Project into the surrounding landscape. Plantings would be selected based on aesthetic properties, to match or complement the existing vegetation at a given location. In addition to helping to blend the Project into the surrounding landscape, use of native plant species would also provide environmental benefits to the local animal and insect communities. The Applicant anticipates that selecting locations for the potential placement and/or installation of plantings for visual mitigation will be determined based on review of public comments and/or concerns raised by individual landowners.

The Project substation has been co-located with the existing College Corner Substation located off of County Route 600 (Stateline Road). This avoids the introduction of electrical infrastructure in new areas where that infrastructure could contrast with existing landscape character.

Q.10. Is glare from solar panels as described in the Project Application a concern?

A.10. No. Solar panels are designed to maximize energy production by capturing as much light as possible, which means that they inherently have low levels of glare from

1 reflection of sunlight. In fact, the potential for reflectivity or glare from solar panels is
2 generally lower than the glare and reflectance generated by common surfaces in the
3 surrounding environment, including, grasslands, water and glass. Solar panels are
4 designed to absorb as much of the solar spectrum as possible to maximize electricity
5 generation, and there is an inverse correlation between light absorption by the solar
6 panels and reflection from them. For instance, virtually all solar panels installed in recent
7 years incorporate anti-reflective coatings to minimize reflection and maximize
8 absorption.

9 The reflectivity of a surface is often measured as albedo, which is the fraction of solar
10 energy reflected by that surface. For comparison, the albedo of solar panels (0.10 -0.30)
11 is generally similar to, or lower than many natural surfaces such as coniferous forests
12 (0.20), grasslands (0.25), dry sand (0.45), and snow cover (0.50). Furthermore, the glare
13 and reflectivity of solar panels have been found to be lower than the glare and reflectivity
14 generated by standard glass.

15 **Q.11. What is your overall assessment of the potential visual impact of the Angelina Solar**
16 **Project?**

17 **A.11.** The results of the viewshed analysis, field review, and visual simulations
18 performed by EDR indicate that the proposed solar panels should be screened from view
19 in over 83% of the 5-mile radius visual study area. The proposed substation will likely
20 be screened from view in over 90% of the visual study area. Where views of the Project
21 are available, its visibility and visual impact will be minimal at distances beyond 0.5
22 mile. Where visible, the Project will introduce a new contrasting use to the landscape.

1 However, as noted in my testimony above, the existing perimeter vegetation along with
2 the Applicant's use of setbacks and plantings will soften the visual effect of the Project.

3 **Q.12. Does this conclude your direct testimony?**

4 **A.12.** Yes, it does.

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to this case. In addition, the undersigned certifies that a courtesy copy of the foregoing document is also being served upon the persons below via electronic mail this 3rd day of May 2019.

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Case No(s). 18-1579-EL-BGN

Summary: Testimony Direct Testimony of Matthew Robinson electronically filed by Mr. MacDonald W Taylor on behalf of Angelina Solar I, LLC