

**BEFORE THE OHIO POWER SITING BOARD**

<b>In the Matter of the Application of</b>	)	
<b>Hillcrest Solar I, LLC for a Certificate</b>	)	
<b>of Environmental Compatibility and</b>	)	<b>Case No. 17-1152-EL-BGN</b>
<b>Public Need Issued to Construct an</b>	)	
<b>Electric Generation Facility in Green</b>	)	
<b>Township, Brown County, Ohio</b>	)	

**DIRECT TESTIMONY OF BENJAMIN BRAZELL**

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

**A.1.** My name is Benjamin Brazell. I am Principal and Director of Environmental Services for Environmental Design & Research, Landscape Architecture, Engineering, & Environmental Services, D.P.C ("EDR"). My business address is 217 Montgomery Street, Suite 1000, Syracuse, New York 13202.

**Q.2. What are your duties as Director of Environmental Services?**

**A.2.** As Director of Environmental Services, I am responsible for overseeing EDR's environmental projects, which include those associated with environmental review and certification of solar electric generating and transmission facilities.

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

**A.3.** I earned my BS in Natural Resources from North Carolina State University in 2001. After graduating from North Carolina State, I was environmental scientist for EcoScience Corporation from 2001-2004. I joined EDR in February 2004. Since that time, I have worked in the capacity as Ecologist, Project Manager, Senior Project Manager, and Director of the Environmental Division before becoming Principal, Director of Environmental Services in 2014. I have over 15 years of experience performing and/or supervising projects involving wetlands delineations, state and

federal wetland permitting, habitat and ecosystem analysis, environmental impact assessments, and preparation of numerous state siting board applications and environmental impact statements.

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

**A.4.** I am testifying on behalf of the Applicant, Hillcrest Solar I, LLC.

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

**A.5.** The purpose of my testimony is to describe certain studies that support the Application and summarize the results of those studies.

**Q.6. What studies did you and your firm undertake and direct on behalf of the Applicant to support the Application identified as Company Exhibit 1?**

**A.6.** EDR is the lead environmental consultant on the Hillcrest Solar Farm, which includes the approximately 2,100-acre project site ("Project Area"), within which solar panels, pilings, racking, buried electrical lines, inverters, roads, meteorological stations, a project substation, and other ancillary facilities ("Project") will be located on approximately 1,100 acres. I have managed, been directly involved coordinating, and am familiar with the full range of environmental and cultural assessments completed for all aspects of the Project. Written studies and documentation prepared under my direction are attached to the Application for the Project as Exhibits I, and J. In addition to undertaking and directing studies prepared by EDR on behalf of the Applicant, EDR supported the preparation of the application, the supplemental information and modification, and the related studies. Through EDR's preparation of the application, I am familiar with all studies, including those not prepared by EDR.

**Q.7. Will the Project generate any significant noise during construction?**

**A.7.** Hessler Associates presented a study in the Application concluding that

construction of the Project will generate some of the intermittent types and levels of noise common at large construction sites, but the construction period will be substantially shorter than, and construction of the Project will not feature many of the most significant noise-generating activities common during construction of, a traditional fossil generation. The Project is expected to be constructed in months, not years. The Project also will not involve extensive excavation or other earth-moving work, construction of significant concrete foundations, or blasting. Although piles for racking will be driven or screwed in the ground surface, they are expected to be placed at a depth of only up to eight (8) feet, and this activity will be relatively brief at any particular location within the Project Area. Horizontal directional drilling is expected to be used for the Project, but only on a very limited number of occasions. Sound levels associated with typical construction equipment as high as 95 dBA (A-weighted decibel) could be temporarily produced within 50' of the activity in question. However, at the nearest house, Hessler Associates anticipated that sound from concrete pouring for the base of the Project Substation could produce sounds of around 56 dBA. This sound would occur intermittently during the day only and last for only one or two days. In general, Hessler concluded that construction-related noise would be modest and intermittent, and would result in only minimal, unavoidable impacts.

**Q.8. Will the Project generate any significant noise during operation?**

**A.8.** No, as indicated in the noise study prepared by Hessler Associates. In comparison to a fossil generation, a large-scale solar facility comes close to operating silently. The Project's operation will generate only very small amounts of noise because the generation equipment involves no fuel movement, no combustion, no

waste movement, and very few moving parts. The only components of the Project's generation equipment that will result in any discernable noise--even immediately at the source--are the Inverters and small electric motors. According to Hessler Associates, at only short distances from these sources, the noise generated rapidly dissipates to background levels. The Project will produce no sound at night.

**Q.9. Please describe and summarize the study of wetland, streams, and other waters within the project area as presented in the Application.**

**A.9.** EDR conducted preliminary desk top and preliminary reconnaissance-level field surveys on wetlands and wildlife habitat. Using that information to support background review of the project and guide field efforts, Cardno, Inc. subsequently conducted a detailed study to determine the boundaries of wetlands and other waters for the Project Area, which I have reviewed. The determination of boundaries (delineation) was performed in April 2017. Per the study report, wetland areas and other waters, including streams and agricultural ditches, were delineated on site by Cardno using methodology enumerated in the United States Army Corps of Engineers ("USACE") Wetland Delineation Manual (USACE 1987) and the applicable regional supplements; Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010), as well as the Ohio Rapid Assessment Method ("ORAM") for wetlands (Mack 2011).

Cardno reviewed secondary literature sources to identify known wetlands and other significant ecological resources and areas with high potential for wetlands in or near the Project Area. A field inspection was then conducted to identify major plant communities and potential wetlands and other waters. Wetlands and other waters were surveyed using a GPS unit as well as aerial photography and topographic

figures.

Although the Project will be located on approximately 1,100 acres, the study area included the entire approximately 2,100-acre Project Area. The study area contains active agricultural areas as well as forest, scrub/shrub, pasture, open field, and maintained lawn communities.

Within the Project Area, there are six small wetlands totaling 11.61 acres, the majority of which were identified as palustrine emergent (PEM), and scored as lower quality wetlands on the ORAM. All wetlands scored as Category 1 and current Project designs minimizes impacts to all wetland areas.

Portions of 42 waterbodies, including ditches, streams, and ponds, were also identified during field investigations within the Project Area, totaling 74,125 linear feet of waterway. The waterbodies observed were primarily ditches, which were 34 in number. Only four stream reaches and four ponds were identified within the Project Area. Only one stream scored high enough on the Headwater Habitat Evaluation Index (HHEI) to be considered a Class III waterbody. The vast majority of the waterbodies were considered modified and are considered to be of low to moderate quality. The current Project design avoids direct impacts to all stream reaches utilizing horizontal directional drilling to cross two streams.

The Project Area was also studied by Cardno for suitable habitat for state and federal listed species. Agency correspondence confirmed that there are no ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state natural preserves, state or national parks, state or national forest, national wildlife refuges or other protected natural areas within the Project Area. No listed species were observed and most of the Project Area habitat is not suitable for listed species. There

are approximately 182 potential acres of suitable bat habitat identified within the Project Area. According to Cardno's analysis, approximately 35.1 acres of windrows and 7.5 acres woodlot are anticipated to be cleared, for a total of 42.6 acres of tree clearing. According to Cardno, the windrows within the project area provide marginal habitat.

Also, on September 27, 2017, Cardno and the Applicant met with the U.S. Fish and Wildlife Service ("USFWS") in Columbus to discuss minimization of potential tree clearing. The Applicant has agreed to adhere to the USFWS's time-of-year restrictions on clearing.

In my opinion, based on my experience and the results of the studies I have reviewed, the ecological impact of the Project will be minimal.

**Q.10. Did you direct a visual resource assessment and, if so, what were the findings?**

**A.10.** A Visual Resource Assessment ("VRA") was prepared to satisfy those portions of the requirements of OAC Chapter 4906-04-08(D)(4) that relate to the identification of visually sensitive sites and potential visual impacts. Our firm conducted an analysis of the visibility of the Project to identify those locations within the visual study area where there is potential for the Project to be seen from ground-level vantage points. This analysis included identifying potentially visible areas on viewshed maps and verifying visibility in the field. This analysis incorporated the screening effect of structures and vegetation, as captured in the Ohio Statewide Imagery Program's 2007 LiDAR data for Brown, Highland, and Clermont Counties (see Figure 8 in the Application, Sheet 2). A digital surface model ("DSM") of the study area was created from these LiDAR data, which includes the elevations of buildings, trees, and other objects large enough to be resolved by LiDAR technology.

This analysis indicated that the proposed solar panels could potentially be visible from only 7.6% of the 5-mile visual study area (Figure 8 of the Application, Sheet 1 and 2). Visibility is concentrated within the Project Area and adjacent open fields. The viewshed analysis indicates that the Project will not be visible from areas located more than two miles away.

To provide appropriate distances between the Project and the general public, the solar fields will be designed to incorporate several minimum setbacks. These will include (1) a 25-foot setback between the perimeter fence of a solar field and the edge of pavement of any public road; (2) a 40-foot setback between any above-ground equipment within a solar field and the edge of pavement of any public road; (3) a 10-foot setback between the perimeter fence of a solar field and the property line of any parcel whose owner is not participating in the Project (“Non-participating Parcel”); (4) a 25-foot setback between any above-ground equipment within a solar field and any parcel line with a Non-participating Parcel; and (5) a 100-foot setback between any above-ground equipment within a solar field and any habitable residence located on a Non-participating Parcel.

Additionally, a landscape plan addressing visual impacts will be included as part of the final design for the Project and will be submitted to Staff prior to the start of construction. The Applicant will incorporate where appropriate pollinator-friendly grasses and wildflowers along selected roadsides and other fence lines to soften the appearance of the Project and better integrate the it into the landscape. The Applicant anticipates using a mix of native pollinator wildflowers and grasses that have been selected based on their aesthetic and environmental properties and their ability to grow in the conditions of the Project Area. These plantings would grow to 4 – 7’ high in the

summer and act to soften the horizontal lines of the security fence and reduce the visual impact of the Project.

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 necessarily result in plantings that 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.

**Q.11. Will the Project adversely impact cultural historic resources?**

**A.11.** EDR conducted a literature review and archaeological site file review of the area within two miles of the Project Area, referencing EDR's in-house resources in addition to resources available on file at the Ohio Historic Preservation Office ("OHPO") in Columbus, Ohio, and searchable databases including:

- National Register of Historic Places ("NRHP")
- NRHP Determination of Eligibility ("DOE")
- National Historic Landmarks ("NHL")
- Ohio Historic Inventory ("OHI")
- Ohio Department of Transportation ("ODOT") Historic Bridge Inventory



- Ohio Archaeological Inventory (“OAI”)
- Ohio Genealogical Society (“OGS”) cemetery files
- Mills Archaeological Atlas of Ohio (1914)
- OHPO previous Phase I, II, and III cultural resources surveys
- OHPO GIS files

This analysis identified one NRHP and OHI listed-property, six OAI archaeological sites, and 10 OGS cemeteries in the 2-mile area. None of these resources occur in the Project Area. We concluded that there will be no direct impacts to aboveground cultural resources (i.e., cemeteries or historic structures) from construction of the Project.

The Project Area has not been systematically surveyed for archaeological resources. After the final layout of the Project is determined, the Applicant plans to conduct a limited archaeological survey for those portions of the Project where substantial, direct ground disturbance is proposed.

On September 26, 2017 the Applicant and EDR met with OHPO in Columbus to discuss coordination regarding potential cultural resource impacts from the installation and operation of the Project. As a follow-up to that meeting, Applicant expects to conduct a limited Phase I Archeological Survey in addition to a field review to identify any potential architectural resources not identified in the Cultural Resources Report.

The Project will not directly (physically) impact any known cultural resources within the 2-mile Cultural Resource Study Area, and therefore no mitigation measures for direct impacts are proposed at this time.

**Q.12. Have you reviewed the November 15, 2017 Staff Report of Investigation issued in this proceeding?**

**A.12.** Yes.

**Q.13. Do you have observations or responses to any of the conditions listed in the Staff Report of Investigation?**

**A.13.** Not from an environmental or ecological perspective. The Project is well-sited, taking advantage of open, agricultural land to minimize the need for clearing, avoid and minimize wetland and stream impacts, avoid impacts to threatened or endangered species, and avoid impacts to significant cultural resources.

**Q.14. Does this conclude your testimony?**

**A.14.** Yes, but I reserve the right to present any additional testimony in support of any stipulation or rebuttal testimony.

## **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. Also, I certify that a copy of the foregoing document was served by electronic mail upon the following person this 5<sup>th</sup> day of December, 2017:

Chad A. Endsley  
Chief Legal Counsel  
Ohio Farm Bureau Federation  
280 North High Street  
P.O. Box 182383  
Columbus, OH 43218-2383  
[cendsley@ofbf.org](mailto:cendsley@ofbf.org)

/s/ Michael J. Settineri

Michael J. Settineri  
Stephen M. Howard

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**12/5/2017 4:15:10 PM**

**in**

**Case No(s). 17-1152-EL-BGN**

Summary: Testimony Direct Testimony of Benjamin Brazell electronically filed by Mr. Michael J. Settineri on behalf of Hillcrest Solar I, LLC