

April 5, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: Case No. 20-1605-EL-BGN

In the Matter of the Application of Birch Solar 1, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Solar-Powered Electric Generation Facility in Allen and Auglaize Counties, Ohio.

Third Supplement to Application – Additional Sound Impact Study

Dear Ms. Troupe:

On February 12, 2021, as supplemented on March 25 and 31, 2021, Birch Solar 1, LLC (“Applicant”), filed an application with the Ohio Power Siting Board (“Board”) for a certificate of environmental compatibility and public need to construct a solar-powered electric generation facility in Allen and Auglaize Counties, Ohio (“Application”).

As stated on page 45 of the Application Narrative, Stantec Consulting Services, Inc. (“Stantec”) conducted a sound assessment analysis that documents existing sound levels within the Project Area using monitoring equipment that meets Type 1 American National Standards Institute (ANSI) S1.4-1983(R2006) standards for sound meters and was calibrated and certified accurate to standards set by the National Institute of Standards and Technology within the previous 12 months of the sound study. The predicted operational sound generated by the Project was modeled using International Organization for Standardization (“ISO”) 9613-2 standard sound propagation modeling methods. This initial sound level assessment report was filed as Application Exhibit X on February 12, 2021 (“February 2021 Sound Assessment”). The February 2021 Sound Assessment utilized conservative methodologies and followed established standards for determining the sound levels associated with a solar facility.

The Applicant has had numerous consultations and communications with the community members in and surrounding the Project Area. Taking those discussions into consideration the Applicant is committed to providing an even more conservative methodology to determine the sound level for the facility than the one proposed in the February 2021 Sound Assessment. To accomplish this commitment, the Applicant engaged Stantec to review the ambient data further to filter out weather events (rain, high wind, etc.) that may increase the previously reported ambient sound levels (L_{eq}) in the Project area. Filtering out the weather events with higher sound levels will result in a lower Project Area L_{eq} than was presented in the February 2021 Sound Assessment. As the Project’s operational sound compliance will be measured relative to ambient sound levels, the L_{eq} calculated using the filtered data will lower the allowable operational Project sound level,

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further reducing any impact on neighboring residences. The resulting sound level assessment, dated April 5, 2021, is attached hereto (“April 2021 Sound Assessment”).

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ Christine M.T. Pirik

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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 these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 5th day of April, 2021.

/s/ Christine M.T. Pirik

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File: BIRCH SOLAR PROJECT - PRE-CONSTRUCTION SOUND REPORT
Addendum No: 1
Date: April 5, 2021
Owner: Birch Solar 1, LLC

Addendum 1 to Birch Solar Project Pre-Construction Sound Report dated February 12, 2021

Stantec Consulting Services Inc. (Stantec) completed a pre-construction sound report (Birch Sound Report) for Birch Solar 1, LLC's Birch Solar Project in Allen and Auglaize Counties, Ohio (the "Project"). The Birch Sound Report, dated February 12, 2021, provides information regarding the ambient sound measurements acquired November 13 to 20, 2020 at the proposed Project site. Information includes a description of the site and sound meter locations, data acquisition dates, methods, and sound measurement results. This addendum has been prepared to provide additional information regarding the existing, ambient noise measurements acquired November 13 to 20, 2020.

A Larson Davis SoundAdvisor 831C Sound Level Meter (SLM) equipped with a PCB Piezotronics Type 1 preamplifier, microphone, and environmental protection kit was used to measure the octave band and broadband ambient sound pressure levels in the selected locations. The meter meets Type 1 American National Standards Institute (ANSI) S1.4-1983(R2006) standards for sound meters and was calibrated and certified accurate to standards set by the National Institute of Standards and Technology within the previous 12 months of the sound study. Equipment was calibrated in the field before and after the survey with the manufacturer's calibrator which meets the standards of IES 942 Class 1L and ANSI/Acoustical Society of America S1.40-2006 (R2016). Sound results were calculated using the Decibel Module of WindPro Modelling software by EMD International, which utilizes conservative ISO 9613-2 algorithms to estimate sound propagation and atmospheric absorption.

Stantec has reviewed the onsite sound measurements and summary statistics provided in the Birch Sound Report and have completed additional analyses to identify data as acquired during high winds and rainstorms that moved through the area during the measurement period. Anomalous sounds recorded during high wind gusts and/or rain accumulation within the following time periods were removed from the analysis:

- 11/13/2021 – evening hours
- 11/14/2021 – evening and nighttime hours
- 11/15/2021 – predawn and morning hours; intermittent during day and nighttime
- 11/16/2021 – predawn hours
- 11/17/2021 – none
- 11/18/2021 – evening into nighttime hours
- 11/19/2021 – predawn into morning hours

– 11/20/2021 – none

Table A.1 represents the results of the updated analysis and provides a more conservative estimate of the ambient sound levels than what was included in Table 5.1 from the Birch Sound Report. While there are no sound regulations for solar projects, wind energy projects in Ohio are required to comply with Chapter 4906-4-09 of the Ohio Administrative Code which states that the facility be operated so that the facility noise contribution does not result in noise levels at any non-participating sensitive receptor within one mile of the Project boundary to exceed the project area ambient nighttime average sound level (L_{eq}) by five 5 A-weighted decibels (dBA). During daytime operation only (seven a.m. to ten p.m.), the facility may be operated at the greater of: the project area ambient nighttime L_{eq} plus five dBA; or the validly measured ambient L_{eq} plus five dBA at the location of the sensitive receptor. Therefore, by filtering out high winds and rainstorms, although not uncommon in the area, the average ambient sound levels (L_{eq}) are reduced, thereby also reducing the operational sound levels that are allowed from Project operation.

TABLE A.1 FILTERED AVERAGED AMBIENT SOUND LEVEL MEASUREMENTS

Location	L_{eq} (dBA)	L_{eq} (dBA, daytime)	L_{eq} (dBA, nighttime)	Total Measurement Periods	Total Valid Measurement Periods
ML-C	51.1	51.6	49.7	860	659
ML-NW	44.5	45.4	43.2	995	829
ML-SW	47.4	49.1	45.2	1,089	835
ML-SE	42.5	43.0	41.5	942	772
ML-STATION	46.7	47.5	45.8	1,085	968

Ambient sound data measured at the proposed Project site and summarized in Table A.1 was utilized, along with the predicted operational sound, to determine the total sound expected at the previously identified sensitive receptors. The average ambient nighttime sound level recorded at the Project site during the November 2020 measurement period, using the updated data filtered for weather events, was 45.1 dBA. To demonstrate compliance to the Ohio Administrative Code for wind projects, 5 dBA was added to the average ambient nighttime sound level, equaling 50.1 dBA as a conservative limit of total sound at nearby residences.

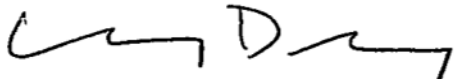
Table A.2 is an update of Table 8.1 of the Birch Sound Report with the average nighttime ambient sound level and revised expected total sound at the two nearest residences which have the highest predicted sound levels, one of which is a participating property and the other non-participating. This comparison is a conservative measure of predicted sound to be expected within the Project area during operation, as it considers the background sound to be based on nighttime ambient readings, rather than daytime when the Project will be generating sound from the inverters. The Project site is located within active agricultural operations, and nearby residential developments where daytime sound levels are higher than nighttime sound levels; therefore, the actual average ambient sound in the area during the daytime when the Project would be operating and generating sound is higher than the nighttime average utilized to calculate the acceptable limit.

TABLE A.2 EXPECTED SOUND LEVELS AT NEARBY RESIDENCES USING UPDATED AMBIENT SOUND LEVELS

Receptor	Operational Expected Sound (dBA)	Average Ambient Nighttime L_{eq} Sound (dBA)	Total Expected Sound (dBA)
R-0144 (participating)	45.9	45.1	48.5
R-0110	44.0	45.1	47.6

Results demonstrate that the maximum expected daytime sound from Project operation and ambient sound is 48.5 dBA at nearby residences. Nighttime noise from the Project will be substantially less, as all equipment will be operating in stand-by mode, as the sun is not shining and power is not being produced.

Stantec Consulting Services



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Summary: Application Third Supplement Sound Assessment April 5, 2021 electronically filed by Christine M.T. Pirik on behalf of Birch Solar 1, LLC