

Noise Impact Analysis - Proposed Community Solar Arrays for Bloomingdale

Noise generating activities anticipated during operation of the project will come almost entirely from the following three components:

1. (63 ea) Chint Power Systems CPS 125KTL Inverters, featuring a sound level of 65 dBA@1m according to the enclosed product specification sheet.
2. (4 ea) 2500 kVA Transformers like the attached datasheet from Square D/Schneider Electric, featuring a sound level of 62 dBA (page 10).
3. (30 ea) SEW Tracker motors DRN 90L4, featuring a sound level range of 54-66 dBA according to the enclosed datasheets (page 4)

The inverters and transformers will be disbursed in 4 locations for the Projects (two equipment pads per Project), as shown in the submitted site plan. The Tracker motors will be dispersed evenly across all the rows of solar panels, with 15 dispersed in the solar field in the rear of the property, and the remaining 15 dispersed in the solar field near the front of the property. In assessing the sound impact of these devices on the surrounding area, 2 documents were reviewed:

1. [“Assessing and Mitigating Noise Impacts,”](#) produced by the New York State Department of Environmental Conservation (DEC) on October 6, 200 (revised February 2, 2001)
2. [“Study of Acoustic and EMF Levels from Solar Photovoltaic Projects,”](#) prepared by Tech Environmental Incorporated for the Massachusetts Clean Energy Center on December 12, 2012

Both above studies cite the formula for calculating noise levels at certain distances as a 6 dB reduction in sound for every doubling of distances beyond 50 feet. Applying this formula to the Bloomingdale site and measuring from the proposed locations of this equipment shown on the site plan, the equipment would produce audible noise levels below 60 dB at any of the adjacent properties along State Route 3. Considering the nature of the uses of these properties, which include a commercial landscaping company and school bus yard, the noise levels generated by this equipment will be lower than the noise generating activities at these properties.

The equipment will also be situated approximately 2,000 feet from the nearest residential neighbor to the South, producing noise levels below 30 dB. Both aforementioned documents would classify these sound levels as quiet, like any rural nighttime area. Additionally, the study of Acoustic and EMF levels conducted at the site in Massachusetts found that for similar equipment with similar noise levels, at 150 feet from the solar array boundary, the sounds were inaudible above other normal levels of background noise. The solar projects will also incorporate landscape buffering to reduce the visibility of the arrays from those driving along State Route 3, which will also act a noise muffler.

The equipment will also produce audible noise during the day only. The motors associated with the sun tracking panels operate for 20 seconds every 15 minutes during the workday. At nighttime, when the system is not operating, there will be no noise emitted.

