Exhibit CS-RH-2

Project Noise Analysis

MEMO

TO: Brad Wilson (Ecos Energy, LLC)

FROM: T. Ryan Haac, M.S. (RSG, Inc.)

DATE: November 16, 2017

SUBJECT: Noise Modeling Study for the Chelsea Solar Project

Ecos Energy, LLC ("Ecos Energy") is proposing the construction of a 2-MW ground-mounted solar photovoltaic array (the "Project") in North Bennington, Vermont. In preparation for Section 248 proceedings, Ecos Energy retained RSG to conduct sound propagation modeling of the proposed facility to predict sound levels generated by the Project and to compare these results to local ordinances, WHO guidelines, and Vermont precedents for solar projects. This document provides a:

- Description of the project area;
- Overview of the proposed site design;
- Review of pertinent community and environmental noise standards, guidelines, and precedents;
- Overview of the sound propagation procedures and methods used in this study;
- Sound level results for daytime and nighttime operating conditions;
- Summary of the results and implications.

A Primer explaining the basics of sound pertinent to the content of this memorandum is included as Appendix A.

PROJECT AREA

The Chelsea Solar Project site is located on the hillside directly north-northeast of the US Route 7 and US Route 279 interchange. The hillside is commonly referred to as Apple Hill. The Project parcel is 3.5 km (2.2 mi) southeast of North Bennington and 2.5 km (1.5 mi) north-northeast of the Bennington Battle Monument. A map of the project footprint and the surrounding area is provided in Figure 1.

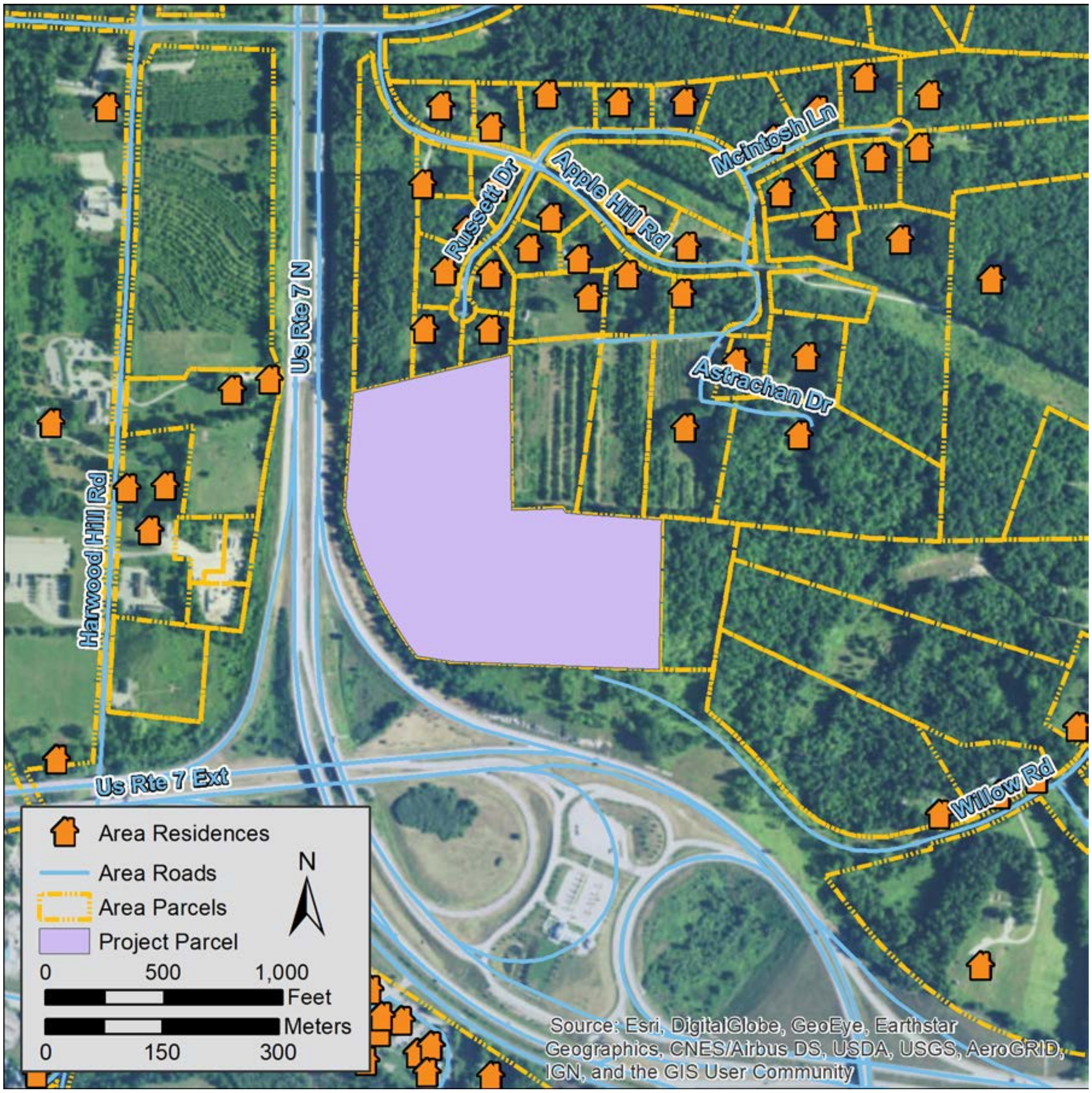

FIGURE 1. MAP OF THE SURROUNDING NORTH BENNINGTON AREA

SITE DESIGN AND LAYOUT

The proposed site design consists of partial site grading, road building, and the installation of a 2-MW array of fixed ground-mounted photovoltaic ("PV") solar panels, two 1000-kW central inverters, and a 2000-kVA transformer. Site access would primarily occur via a southern-access road extension of Willow Road. Project. Project components and surrounding features are shown in Figure 2. The distances from the concrete pad-mounted power conversion equipment and solar panel array edges to the nearest residences (abutters directly to the north of the project parcel) are listed in Table 1.

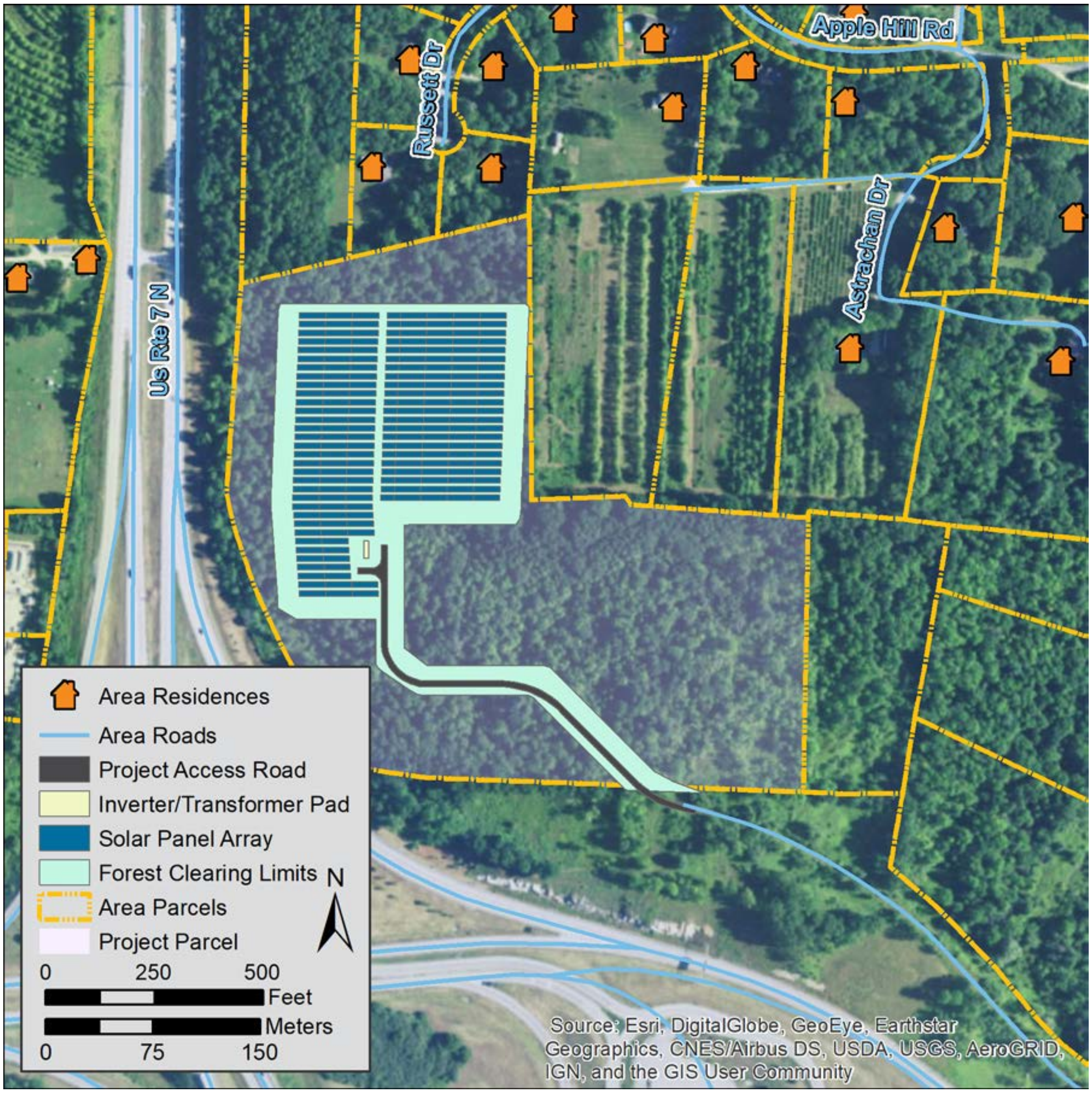

FIGURE 2. SITE LAYOUT OF THE PROPOSED SOLAR FACILITY

TABLE 1. PROJECT COMPONENTS APPROXIMATE DISTANCE TO CLOSEST RESIDENCES AND PROPERTY LINES

Project Equipment	133 Russet Road		140 Russet Road	
	Property Line	Residence	*Property Line*	Residence
Inverter/Transformer Pad	200 m (655 ft)	264 m (865 ft)	220 m (720 ft)	277 m (910 ft)
Northern Array Edge	39 m (130 ft)	103 m (340 ft)	53 m (175 ft)	102 m (335 ft)

APPLICABLE NOISE ORDINANCES AND STANDARDS

Bennington, VT

The Town of Bennington regulates noise using a property line standard set out in Article 24 – Noise Control. The General Property Line Standard (24-2, Section G) states:

> […] a numerical standard for determining whether the sound from a particular source is a violation of this article. The sound pressure level is measured at or within the property lines of a receiving property. When a sound exceeds the dBA sound level specified in Table A, it is a violation of this article.

TABLE 2. REPRODUCTION OF "TABLE A," FROM THE TOWN OF BENNINGTON ORDINANCE ARTICLE 24: NOISE CONTROL

Receiving Property	Time of Day	
	6:00 AM to 10:00 PM	10:00 PM to 6:00 AM
	(dBA)	(dBA)
Residential	60	45
Commercial/Industrial	70	55

WHO Noise Guidelines

The WHO guidelines suggest daytime and nighttime protective noise levels measured outside the bedroom window. During a 16-hour day (7:00 AM to 11:00 PM), the equivalent continuous sound level threshold to protect against serious annoyance is 55 dBA $L_{EQ(16)}$, and 50 dBA $L_{EQ\ (16)}$ to protect against moderate annoyance. During an 8-hour night (11:00 PM to 7:00 AM), the averaged equivalent continuous sound level threshold is 45 dBA $L_{EQ\ (8)}$, and the maximum sound level threshold is 60 dBA L_{Fmax} (Fast response, maximum).

These guidelines are based on the assumption that a typical residential structure would reduce sound by 15 dBA from outdoors to indoors, even with windows open. The sound level inside the bedroom that is considered to be protective of sleep is 30 dBA $L_{EQ\ (8)}$.

In October 2009, WHO Europe conducted an updated literature review and developed guidelines for nighttime noise in Europe. They expanded on the 1999 WHO guidelines by adding an annual average nighttime guideline level to protect against adverse effects on sleep disturbance. This guideline is 40 dBA $L_{eq\ (annual\ night,\ outside)}$, outside, assuming windows are partially open all year.

State of Vermont

The Public Utilities Commission (PUC) does not have a set noise policy for solar developments. Several examples of projects previously approved by the PUC and their predicted sound levels are provided in Appendix B. While these PSB Dockets serve as examples of predicted sound levels from approved solar projects, the PSB has only set limits or noise conditions on solar farms in the associated Certificates of Public Good (CPG) in a limited number of cases (e.g., Docket No. 7618).

SOUND PROPAGATION MODELING PROCEDURES

Modeling for the project was performed in accordance with the standard ISO 9613-2, "Acoustics – Attenuation of sound during propagation outdoors, Part 2: General Method of Calculation. The standard is commonly used to model outdoor sound propagation, which is applicable to a wide variety of sources and environments. The ISO standard states:

> This part of ISO 9613 specifies an engineering method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at a distance from a variety of sources. The method predicts the equivalent continuous A-weighted sound pressure level … under meteorological conditions favorable to propagation from sources of known sound emissions. These conditions are for downwind propagation … or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs at night.

The acoustical modeling software used here was CadnaA®, from Datakustik GmbH. CadnaA® is a widely accepted acoustical propagation modeling tool. Standard modeling methodology per ISO 9613-2 takes into account source sound power levels, surface reflections and absorption, atmospheric absorption, geometric divergence, meteorological conditions, walls, barriers, berms, terrain, and moderate downwind conditions. The purpose of sound propagation modeling is to estimate sound levels due to the proposed project at surrounding sensitive locations.

Model Input Parameters

Terrain in the model follows digital elevations obtained from the US Geological Survey and the proposed site grading modification on a small portion of the project site. The roadways of Route 7, the Route 7/Route 279 interchange, the visitor center area, the proposed project access road, and proposed inverter/transformer pad were all input as hard ground (G=0). The remaining area, primarily consisting of forested areas, mixed meadows, and rural residential properties were modeled as soft and mixed ground (G=0.7). Forests with sufficient depth (20 meters or greater) were included in the model at 15 meters height. Atmospheric absorption was based on an atmosphere of 10˚C (50˚F) and 70% relative humidity.

For the residences closest to the noise sources of the project, single discrete receivers were modeled at a height of 4.0 m (13.1 ft). The receiver height of 4 m (13.1 ft) represents the average upstairs bedroom window height for a two-story home. To assess the property line limits, receivers were placed at a 1.5 m (5 ft) along the property lines.

For an overall view of the sound emissions associated with the project, a 5 x 5 meter grid was spread over the surrounding area of approximately 150 hectares (360 acres) and sound level iso-contours were generated. Representations of the nearby residential buildings were placed in the model according to their locations indicated on ortho-imagery and one order of reflection was assumed.

Potential acoustical attenuation and scattering from the solar panels was not included in the model. The introduction of ground-mounted solar panels to the propagation path of audible sound waves would likely increase the attenuation of a sound traveling near the ground but quantitative sound absorption of solar panel arrays in unknown and would vary by propagation direction.

Noise Sources

The noise producing equipment associated with the Project includes a pair of 1-MW central inverters and a 2000 kVA transformer. Inverters and transformers were modeled as omnidirectional point sources at a height 1.5 meters. They are located on the Inverter and Transformer Pad shown in Figure 2.

The proposed central inverters are HEC-US Plus 480 V Utility Scale Solar Inverters, rated at 1000 kW maximum power output (HEC-FS1112CU). Two units are specified for the Chelsea Solar project. The overall sound pressure level measured at one meter from the unit is 79 dBA under maximum load, as specified by the manufacturer. Spectral data was not available for the proposed inverter.

The proposed project transformer is a Cooper Power Series three-phase pad-mounted compartmental type transformer rated at 2000 kVA (CA202003EN). The transformer does not have cooling fans. The NEMA TR-1 voluntary sound pressure level rating for the transformer is 61 dBA. The manufacturer's specification guarantees compliance with the reported NEMA TR-1 rating but no spectra were available for this model.

Noise Source Spectra

In order to model the noise sources using spectral data, octave-band spectra from similarly-sized units were scaled to represent the overall maximum sound level emissions of the proposed equipment. The computed equivalent sound power levels for Project equipment are listed in Table 3. Transformer sound power levels were calculated using the method specified in standard IEEE C57.12.90-2010.

TABLE 3: SOUND POWER LEVELS OF PROJECT EQUIPMENT

Noise Source	1/1 Octave Band Sound Power (dBZ)									Overall (dB)	Overall (dBA)
	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		
1000 kW Inverter	75	81	87	92	85	83	83	80	67	95	90
2000 kVA transformer	61	74	81	64	64	70	67	61	54	82	74

SOUND PROPAGATION MODELING RESULTS

Two operational conditions were modeled. The first was "daytime", when the inverters and the transformers would all be active. It was assumed that they would all be operating at full output capacity. The second was "nighttime", when the inverters would be quiescent but the transformers still energized at full capacity.

Results at the nearest residential property lines and residences are presented in Table 4. All residential property lines and residences have lower modeled sound levels than reported in Table 4. The loudest daytime property line location is located on southwestern corner of the Project, where the Project parcel meets the US Route 7 North on-ramp. The highest modeled level on at this roadside property line, calculated at 1.5 m (5 feet) was 41 dBA; the modeled nighttime sound level was 20 dBA. For reference, note that eliminating all foliage attenuation in the model resulted in a 2-3 dB increase in reported levels at the property line.

TABLE 4. MODELED SOUND LEVELS AT NEAREST RESIDENCES AND RESIDENTIAL PROPERTY LINES

	133 Russet Road		140 Russet Road	
	Property Line	Residence	*Property Line*	Residence
Daytime	32 dBA	28 dBA	29 dBA	25 dBA
Nighttime	14 dBA	10 dBA	11 dBA	07 dBA

Sound propagation modeling results are shown in Figure 3 and Figure 4 using sound level contours to denote maximum sound emissions from the Project for the daytime and nighttime conditions, respectively. Results are presented as contour lines representing 5-dB increments of calculated maximum A-weighted sound pressure levels; 1-dB increments are shown in lighter colors. A comparison of the maps shows that nighttime levels do not exceed 25 dBA at any property line, which is at least 15 dB quieter than daytime sound levels.

SUMMARY

Sound propagation modeling for all project noise emissions scenarios associated with the operation of the Project was performed. The maximum modeled sound level at a residential property line was 32 dBA during the day and 14 dBA at night. The highest sound level modeled at a residence was 28 dBA during the day and 10 dBA at night. Sound levels outside of the project parcel were modeled to be at least 10 dB below any applicable standard. Thus, the project as designed will not create an undue adverse impact on aesthetics with regard to noise.

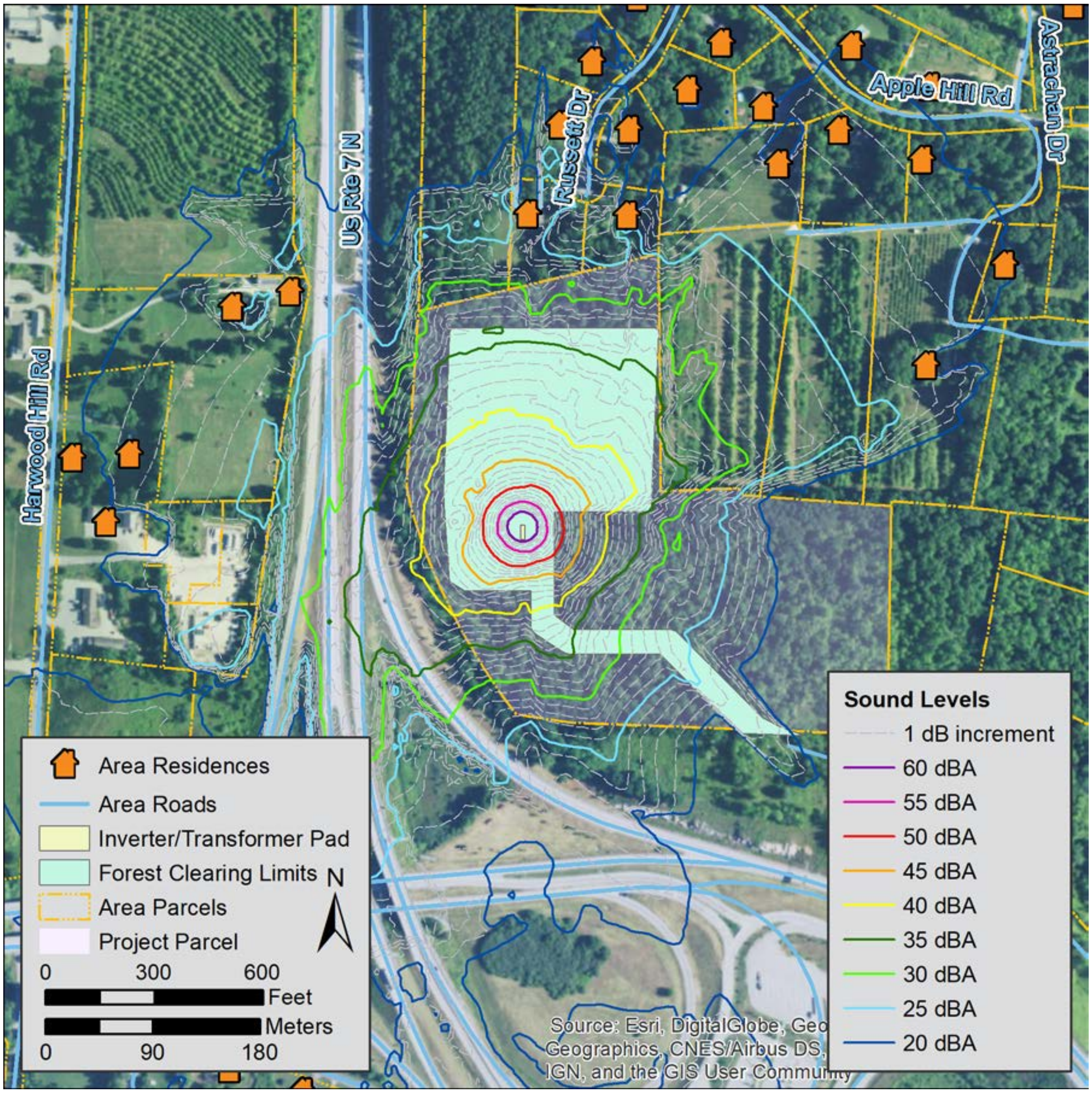

FIGURE 3. DAYTIME SOUND EMISSIONS FROM THE PROPOSED PROJECT

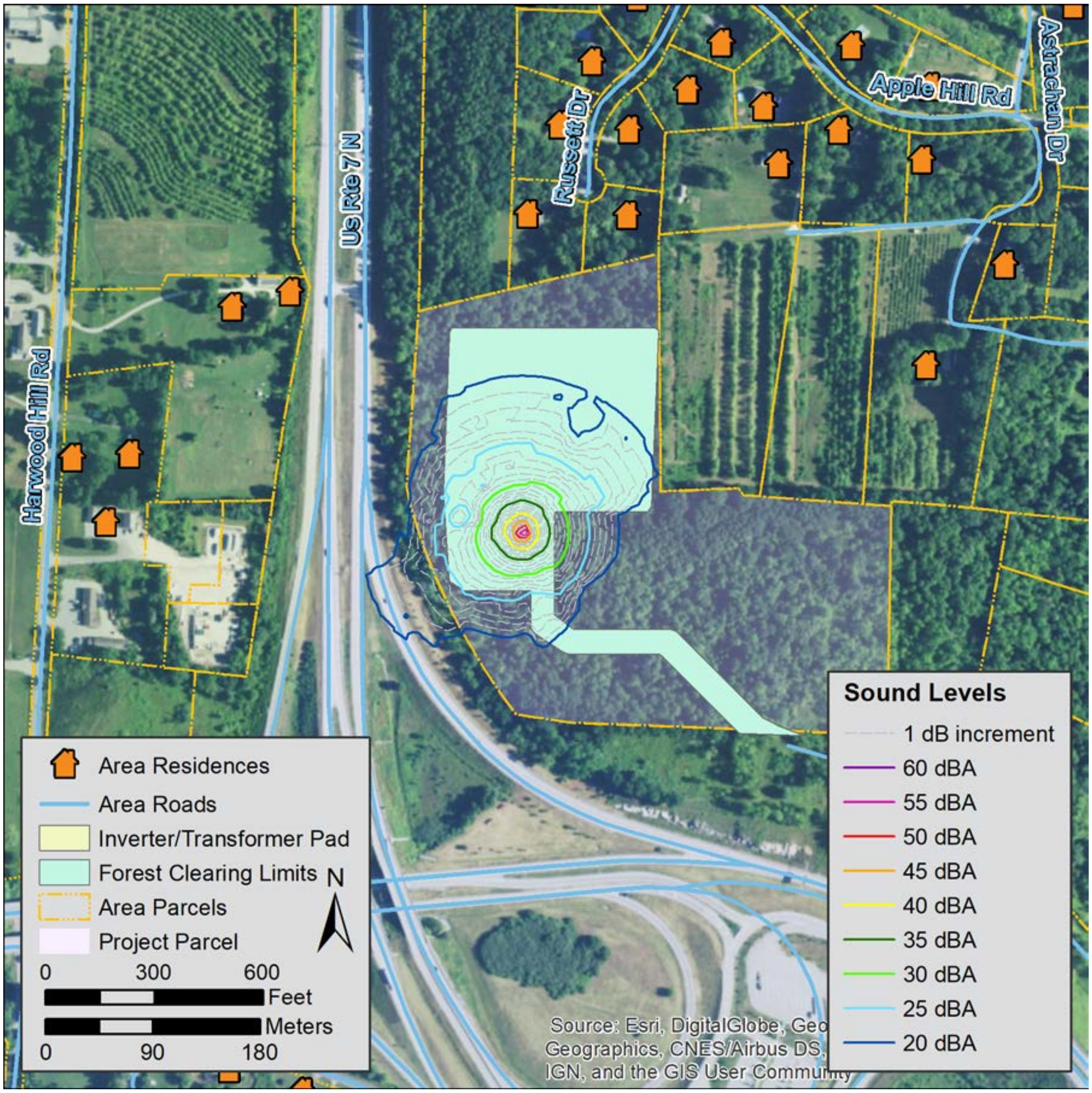

FIGURE 4 .NIGHTTIME SOUND EMISSIONS FROM THE PROPOSED PROJECT

APPENDIX A: PRIMER ON SOUND AND NOISE

Sound consists of tiny, repeating fluctuations in ambient air pressure. The strength, or amplitude, of these fluctuations determines the sound pressure level (SPL). "Noise" can be defined as "a sound of any kind, especially when loud, confused, indistinct, or disagreeable."

Expressing Sound in Decibel Levels

The varying air pressure that constitutes sound can be characterized in many different ways. The human ear is the basis for the metrics that are used in acoustics. Normal human hearing is sensitive to sound fluctuations over an enormous range of pressures, from about 20 micropascals (the "threshold of audibility") to about 20 pascals (the "threshold of pain").[1] This factor of one million in sound pressure difference is challenging to convey in engineering units. Instead, sound pressure is converted to sound "levels" in units of "decibels" (dB, named after Alexander Graham Bell). Once a measured sound is converted to dB, it is denoted as a level with the letter "L".

The conversion from sound pressure in pascals to sound level in dB is a four-step process. First, the sound wave's measured amplitude is squared and the mean is taken. Second, a ratio is taken between the mean square sound pressure and the square of the threshold of audibility (20 micropascals). Third, using the logarithm function, the ratio is converted to factors of 10. The final result is multiplied by 10 to give the decibel level. By this decibel scale, sound levels range from 0 dB at the threshold of audibility to 120 dB at the threshold of pain.

Typical sources of noise, and their sound pressure levels, are listed on the scale in Figure 5.

Human Response to Sound Levels: Apparent Loudness

For every 20 dB increase in sound level, the sound pressure increases by a *factor* of 10; the sound *level* range from 0 dB to 120 dB covers 6 factors of 10, or one million, in sound *pressure*. However, for an increase of 10 dB in sound *level* as measured by a meter, humans perceive an approximate doubling of apparent loudness: to the human ear, a sound level of 70 dB sounds about "twice as loud" as a sound level of 60 dB. Smaller changes in sound level, less than 3 dB up or down, are generally not perceptible.

[1] The pascal is a measure of pressure in the metric system. In Imperial units, they are themselves very small: one pascal is only 145 millionths of a pound per square inch (psi). The sound pressure at the threshold of audibility is only 3 one-billionths of one psi: at the threshold of pain, it is about 3 one-thousandths of one psi.

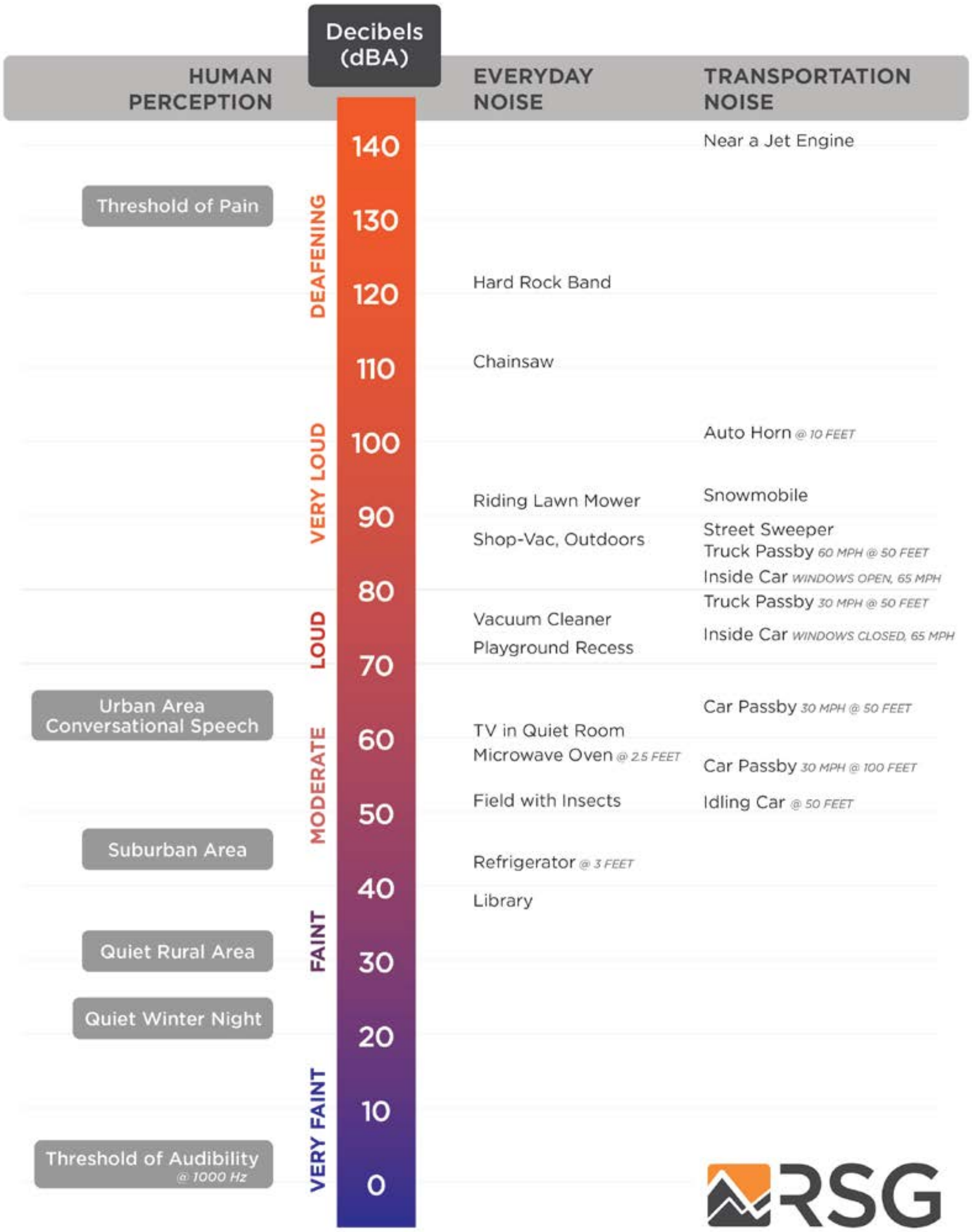

FIGURE 5: A SCALE OF SOUND PRESSURE LEVELS FOR TYPICAL NOISE SOURCES

Frequency Spectrum of Sound

The "frequency" of a sound is the rate at which it fluctuates in time, expressed in Hertz (Hz), or cycles per second. Very few sounds occur at only one frequency: most sound contains energy at many different frequencies, and it can be broken down into different frequency divisions, or bands. These bands are similar to musical pitches, from low tones to high tones. The most common division is the standard octave band. An octave is the range of frequencies whose upper frequency limit is twice its lower frequency limit, exactly like an octave in music. An octave band is identified by its center frequency: each successive band's center frequency is twice as high (one octave) as the previous band. For example, the 500 Hz octave band includes all sound whose frequencies range between 354 Hz (Hertz, or cycles per second) and 707 Hz. The next band is centered at 1,000 Hz with a range between 707 Hz and 1,414 Hz. The range of human hearing is divided into 10 standard octave bands: 31.5 Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1,000 Hz, 2,000 Hz, 4,000 Hz, 8,000 Hz, and 16,000 Hz. For analyses that require finer frequency detail, each octave-band can be subdivided. A commonly-used subdivision creates three smaller bands within each octave band, or so-called 1/3-octave bands.

Human Response to Frequency: Weighting of Sound Levels

The human ear is not equally sensitive to sounds of all frequencies. Sounds at some frequencies seem louder than others, despite having the same decibel level as measured by a sound level meter. In particular, human hearing is much more sensitive to medium pitches (from about 500 Hz to about 4,000 Hz) than to very low or very high pitches. For example, a tone measuring 80 dB at 500 Hz (a medium pitch) sounds quite a bit louder than a tone measuring 80 dB at 60 Hz (a very low pitch). The frequency response of normal human hearing ranges from 20 Hz to 20,000 Hz. Below 20 Hz, sound pressure fluctuations are not "heard", but sometimes can be "felt". This is known as "infrasound". Likewise, above 20,000 Hz, sound can no longer be heard by humans; this is known as "ultrasound". As humans age, they tend to lose the ability to hear higher frequencies first; many adults do not hear very well above about 16,000 Hz. Most natural and man-made sound occurs in the range from about 40 Hz to about 4,000 Hz. Some insects and birdsongs reach to about 8,000 Hz.

To adjust measured sound pressure levels so that they mimic human hearing response, sound level meters apply filters, known as "frequency weightings", to the signals. There are several defined weighting scales, including "A", "B", "C", "D", "G", and "Z". The most common weighting scale used in environmental noise analysis and regulation is A-weighting. This weighting represents the sensitivity of the human ear to sounds of low to moderate level. It attenuates sounds with frequencies below 1000 Hz and above 4000 Hz; it amplifies very slightly sounds between 1000 Hz and 4000 Hz, where the human ear is particularly sensitive. The C-weighting scale is sometimes used to describe louder sounds. The B- and D- scales are seldom used. All of these frequency weighting scales are normalized to the average human hearing response at 1000 Hz: at this frequency, the filters neither attenuate nor amplify. When a reported sound level has been filtered using a frequency weighting, the letter is appended to "dB". For example, sound with A-weighting is usually denoted "dBA". When no filtering is applied, the level is denoted "dB" or "dBZ". The letter is also appended as a subscript to the level indicator "L", for example "L_A" for A-weighted levels.

Time Response of Sound Level Meters

Because sound levels can vary greatly from one moment to the next, the time over which sound is measured can influence the value of the levels reported. Often, sound is measured in real time, as it fluctuates. In this case, acousticians apply a so-called "time response" to the sound level meter, and this time response is often part of regulations for measuring noise. If the sound level is varying slowly, over a few seconds, "Slow" time response is applied, with a time constant of one second. If the sound level is varying quickly (for example, if brief events are mixed into the overall sound), "Fast" time response can be applied, with a time constant of one-eighth of a second.[2] The time response setting for a sound level measurement is indicated with the subscript "S" for Slow and "F" for Fast: L_S or L_F. A sound level meter set to Fast time response will indicate higher sound levels than one set to Slow time response when brief events are mixed into the overall sound, because it can respond more quickly.

In some cases, the maximum sound level that can be generated by a source is of concern. Likewise, the minimum sound level occurring during a monitoring period may be required. To measure these, the sound level meter can be set to capture and hold the highest and lowest levels measured during a given monitoring period. This is represented by the subscript "max", denoted as "L_{max}". One can define a "max" level with Fast response L_{Fmax} (1/8-second time constant), Slow time response L_{Smax} (1-second time constant), or Continuous Equivalent level over a specified time period L_{EQmax}.

Accounting for Changes in Sound over Time

A sound level meter's time response settings are useful for continuous monitoring. However, they are less useful in summarizing sound levels over longer periods. To do so, acousticians apply simple statistics to the measured sound levels, resulting in a set of defined types of sound level related to averages over time. An example is shown in Figure 6. The sound level at each instant of time is the grey trace going from left to right. Over the total time it was measured, the sound energy spends certain fractions of time near various levels, ranging from the minimum (about 28 dB in the figure) to the maximum (about 65 dB in the figure). The simplest descriptor is the average sound level, known as the Equivalent Continuous Sound Level. Statistical levels are used to determine for what percentage of time the sound is louder than any given level. These levels are described in the following sections.

Equivalent Continuous Sound Level - Leq

One straightforward, common way of describing sound levels is in terms of the Continuous Equivalent Sound Level, or L_{eq}. The L_{eq} is the average sound pressure level over a defined period of time, such as one hour or one day. L_{eq} is the most commonly used descriptor in noise standards and regulations. L_{eq} is representative of the overall sound to which a person is exposed. Because of the logarithmic calculation of decibels, L_{eq} tends to favor higher sound levels: loud and infrequent sources have a larger impact on the resulting average sound level than quieter but more frequent noises. For example, in Figure 6, even though the sound levels spends most of the time near about 34 dBA, the L_{eq} is 41 dBA, having been "inflated" by the maximum level of 65 dBA.

[2] There is a third time response defined by standards, the "Impulse" response. This response was defined to enable use of older, analog meters when measuring very brief noises; it is no longer in common use.

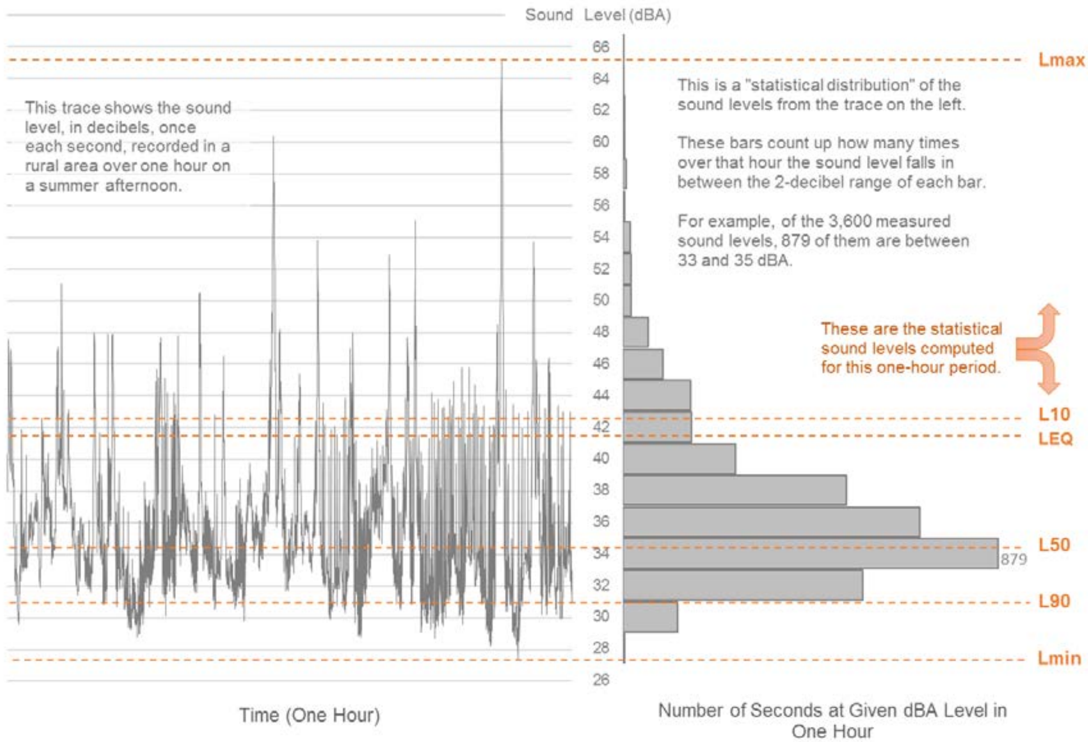

FIGURE 6: EXAMPLE OF DESCRIPTIVE TERMS OF SOUND MEASUREMENT OVER TIME

Percentile Sound Levels – Ln

Percentile sound levels describe the statistical distribution of sound levels over time. “L_N” is the level above which the sound spends “N” percent of the time. For example, L_{90} (sometimes called the “residual base level”) is the sound level exceeded 90% of the time: the sound is louder than L_{90} most of the time. L_{10} is the sound level that is exceeded only 10% of the time. L_{50} (the “median level”) is exceeded 50% of the time: half of the time the sound is louder than L_{50}, and half the time it is quieter than L_{50}. Note that L_{50} (median) and L_{eq} (mean) are not always the same, for reasons described in the previous section.

L_{90} is often a good representation of the “ambient sound” in an area. This is the sound that persists for longer periods, and below which the overall sound level seldom falls. It tends to filter out other short-term environmental sounds that aren’t part of the source being investigated. L_{10} represents the higher, but less frequent, sound levels. These could include such events as barking dogs, vehicles driving by and aircraft flying overhead, gusts of wind, and work operations. L_{90} represents the background sound that is present when these event noises are excluded.

Note that if one sound source is very constant and dominates the noise in an area, all of the descriptive sound levels mentioned here tend toward the same value. It is when the sound is varying widely from one moment to the next that the statistical descriptors are useful.

Sound Levels from Multiple Sources: Adding Decibels

Because of the way that sound levels in decibels are calculated, the sounds from more than one source do not add arithmetically. Instead, two sound sources that are the same decibel level increase the total sound level by 3 dB. For example, suppose the sound from an industrial blower registers 80 dB at a distance of 2 meters (6.6 feet). If a second industrial blower is operated next to the first one, the sound level from both machines will be 83 dB, not 160 dB. Adding two more blowers (a total of four) raises the sound level another 3 dB to 86 dB. Finally, adding four more blowers (a total of eight) raises the sound level to 89 dB. It would take eight total blowers, running together, for a person to judge the sound as having "doubled in loudness".

Recall from the explanation of sound levels that a difference of 10 decibels is a factor of 20 in sound pressure and a factor of 10 in sound power. (The difference between sound pressure and sound power is described in the next Section.) If two sources of sound differ individually by 10 decibels, the louder of the two is generating *ten times* more sound. This means that the loudest source(s) in any situation always dominates the total sound level. Looking again at the industrial blower running at 80 decibels, if a small ventilator fan whose level alone is 70 decibels were operated next to the industrial blower, the total sound level increases by only 0.4 decibels, to 80.4 decibels. The small fan is only 10% as loud as the industrial blower, so the larger blower completely dominates the total sound level.

The Difference between Sound Pressure and Sound Power

The human ear and microphones respond to variations in sound *pressure*. However, in characterizing the sound emitted by a specific source, it is proper to refer to sound *power*. While sound pressure induced by a source can vary with distance and conditions, the power is the same for the source under all conditions, regardless of the surroundings or the distance to the nearest listener. In this way, sound power levels are used to characterize noise sources because they act like a "fingerprint" of the source. An analogy can be made to light bulbs. The bulb emits a constant amount of light under all conditions, but its perceived brightness diminishes as one moves away from it.

Both sound power and sound pressure levels are described in terms of decibels, but they are not the same thing. Decibels of sound pressure are related to 20 micropascals, as explained at the beginning of this primer. Sound power is a measure of the acoustic power emitted or radiated by a source; its decibels are relative to one picowatt.

Sound Propagation Outdoors

As a listener moves away from a source of sound, the sound level decreases due to "geometrical divergence": the sound waves spread outward like ripples in a pond and lose energy. For a sound source that is compact in size, the received sound level diminishes or attenuates by 6 dB for every doubling of distance: a sound whose level is measured as 70 dBA at 100 feet from a source will have a measured level of 64 dBA at 200 feet from the source and 58 dBA at 400 feet. Other factors, such as walls, berms, buildings, terrain, atmospheric absorption, and intervening vegetation will also further reduce the sound level reaching the listener.

The type of ground over which sound is propagating can have a strong influence on sound levels. Harder ground, pavement, and open water are very reflective, while soft ground, snow cover, or grass is more absorptive. In general, sounds of higher frequency will attenuate more over a given distance than sounds of lower frequency: the "boom" of thunder can heard much further away than the initial "crack".

Atmospheric and meteorological conditions can enhance or attenuate sound from a source in the direction of the listener. Wind blowing from the source toward the listener tends to enhance sound levels; wind blowing away from the listener toward the source tends to attenuate sound levels. Normal temperature profiles (typical of a sunny day, where the air is warmer near the ground and gets colder with increasing altitude) tend to attenuate sound levels; inverted profiles (typical of nighttime and some overcast conditions) tend to enhance sound levels.

APPENDIX B: SOUND LEVELS FROM PREVIOUS SOLAR PROJECTS IN VERMONT

No noise limit imposed, unless otherwise noted.

- Addison Solar Farm (Docket No. 7594) – Property line (72 feet); predicted level: 24 dBA
  - This level is from inverters and the transformer.
- Chittenden County Solar Partners (Docket No. 7611) – Closest residential area predicted level: 28 dBA
  - This level is from both inverters and transformers.
  - No noise limit was imposed, except the City of South Burlington's Standard.[3]
- EOS Ventures (Docket No. 7618) – Closest residence (500 feet): inaudibility claimed by EOS Ventures
  - The Final Order states that the Project's noise levels "… will not be audible at the closest residential property…," which in that case was approximately 500 feet from the nearest inverter enclosure.
- Triland Partners (Docket No. 7632) – Closest residence (300 feet); predicted level: 48 to 54 dBA
  - This level is from inverters only without an inverter enclosure.
  - An inverter enclosure was planned for the project, but attenuation values for the enclosure were not provided.
  - Transformer sound levels were not provided.
- Charlotte Solar (Docket No. 7844) – Closest residence (850 feet); predicted level: 28.7 dBA
  - This level is from inverters only.
  - Transformer sound levels were not provided.
- Coventry Solar Farm (Docket No. 7948) – Closest Residence (1,033 feet); predicted level:18 dBA, Property line: 35 dBA
  - This level is from inverters and the transformers.
- Springfield Solar Alliance (Docket No. 8034) (previous design) – Closest Residence (33 feet); predicted level: 34 dBA
  - This level is from the inverters and the transformers.
- Sudbury Solar (Docket No. 8225) – Closest Residence (1,300 feet); predicted level: 50 dBA at 10 feet from the inverters and 60 dBA at 10 feet from the transformer. 25 dBA at the property line.
- Bondville Solar (Docket No. 8443) – 22 dBA at the nearest residence during the day and 20 dBA at night.
  - This level is from inverters and transformers.
- Barton Solar, LLC (Docket No. 8372) – Closest residence (540 feet from the nearest power station); predicted level: 32 dBA at the nearest residence.
  - This level is from inverters or transformers.
  - In the discussion for the CPG, it is noted, "Barton Solar's Noise estimates for the nearest residences are well below the sound-level standard of 45 dBA (exterior)(Leq)(1 hr) or 30 dBA (interior)(Leq)(1 hr) which the Board has applied in previous cases based on World Health Organization Guidelines." This refers to precedents established in wind turbine dockets such as Kingdom Community Wind and Georgia Mountain Community Wind.

[3] South Burlington's noise regulations are 45 dBA 1-hour average between midnight and 8 am at any residential property boundary and 60 dBA 1-hour average at any commercial property line.