Addison Solar Farm – 45 Day Notice Letter

Attachment C – Preliminary Aesthetics Assessment

Pursuant to Title 30 Section 248 for the review of energy generation facilities and transmission projects, a preliminary analysis of potential visual and aesthetic impacts of the proposed Addison Solar Farm (ASF) has been completed by SE Group of Burlington, Vermont. The purpose of their analysis was to evaluate the "fit" of the Project relative to its scenic context and relies, in part, on the Quechee Analysis as adopted by the Public Service Board.

The project site is on a 15.9 acre tract within the Town of Ferrisburgh south of the intersection of Route 7 and Monkton Road. This tract is largely open agricultural land with access from Monkton Road. Topographic grades on the property drop from around 200 feet at the northern edge along Monkton Road to about 168 feet at the southern edge. The property is shown in context on Figure 1. The site is largely open, with hedgerows of trees (mixed second growth including some cedars) along the perimeter. A historic barn on the property is to be maintained in its present form as part of this project. ASF representatives have discussed the Project with the Division of Historic Preservation, which has concurred that it is not expected to impact historic properties or sites.

The Project consists of a solar field comprised of 186 solar arrays, set on single pole mounts that place the bottom of the arrays at approximately 48" above existing grade. Setting this height allows the array to shed snow without creating buildup on the ground that might compromise energy production. The project integrator, Alteris Renewables, has designed the field so that each array is angled at 30 degrees. Each array is about 9 feet wide and 47 feet in length. The solar field is illustrated on the project site plan (**Attachment A**).

Individual modules comprising each array are mounted on a rack system two high by four wide. Given this mounting angle and with the bottom elevation at 48" above existing grade, the maximum height of a panel would be about 12 feet above ground surface. Each panel is separated from adjacent ones by a white aluminum frame. A photograph showing the general appearance of this type of panel is provided in **Attachment B**. The single pole rack system would require one pile-driven pole every 8 feet making for a relatively "light" frame. This single pole system is illustrated in **Attachment B**.

A separate inverter building is required for the Project. This structure is approximately 36 feet by 12 feet and nearly 10 feet high. The specifications of this inverter building are provided in **Attachment B.** The proposed location of the structure is screened by the existing and retained vegetation on the site as well as by the array itself (as viewed from the Route 7 corridor). All electrical and data monitoring lines from the array to the inverter will be buried in conduit.

The panels are organized as an array of 34 rows set approximately 19 feet apart to minimize shading. The overall configuration was designed to maintain separation from surrounding land uses, minimize clearing and maximize retention of existing vegetation, particularly along the perimeter of the property. This configuration also maintains

required isolation distances to wetlands found on the southern portion of the property. As set in the landscape, the array narrows considerably from north to south.

The project site will be accessed from Monkton Road. An existing historic barn on the property will be maintained and a new educational kiosk and several convenience parking spaces will be provided to allow the general public and educational groups an opportunity to learn about the Project along with the history of the area. As a demonstration of solar energy production, ASF intends to share information and data on the construction and operation of the facility with Vergennes Union High School.

Because the Project is set relatively low in the landscape, its profile and visibility is minimized with respect to its surroundings. Three potential viewshed "zones" have been determined based on the nature of the array, existing terrain and the pattern of vegetation. These viewshed zones are illustrated on the attached Figure 2.

The first viewshed zone extends westward from the property into the City of Vergennes. It largely encompasses the Vergennes Union High School property and surrounds. Within this area, visibility of the Project is low given the flat terrain and orientation of the array parallel to observers. An existing hedgerow of trees along the western property line will be maintained and will help to soften the "side" view of the Project from western vantage points. The Project has been set on the landscape to provide substantive buffers between the proposed panels and existing properties, structures and vegetation. Photos taken from this vantage point show the screen effect of the hedgerow.

A second viewshed zone extends south of the property and includes approximately 0.65 miles of Route 7 and some portions of New Haven Road and Church Road. As viewed heading northward on Route 7, the Project will become visible near the intersection with Plank Road in Waltham. From this vantage point the array would be viewed in the mid-ground in context to nearby residential development, the Vergennes Shopping Center and Vergennes Union High School. As seen in this context, the array would not be out of place as part of a commercially-oriented zone within the region. Furthermore, by orienting the solar panels towards the south to maximize production, the design also reduces the potential for glare to the Route 7 corridor. The dark blue color of the panels, coupled with their anti-glare coatings, further mitigate potential glare. A preliminary computer simulation of the view (viewpoint "A") from Route 7 is provided as Figure 3. A second preliminary simulation along Church Road (viewpoint "B"), south of the Project is provided as Figure 4.

The last viewshed zone includes areas to the north and northeast of the Project along Monkton Road. The view potential in this zone is low. A break in the grade occurs near the intersection of Route 7 and Monkton Road, at which point the terrain falls with relative consistency heading south. Over the length of the property, the grade drops about 30 feet. Because of this, as well as the presence of vegetation and existing structures on Monkton Road (including a large historic barn that will be maintained), views are limited from the north and east.

Overall, ASF has set the Project in a location that has a limited viewshed, and has prepared a design with a low profile that is respectful of the context. The chosen technologies minimize glare and reflectivity. In addition, ASF has committed to establishing

an educational component that will help communicate the intent of the Project and its context within a working Vermont landscape to the general public. The Project is considerate of local and regional planning objectives and does not violate any public standard. ASF will maintain the existing character along Monkton Road, including the historic barn, and will preserve the vast majority of the vegetation that exists along the property lines.

In due consideration of these facts and our analysis using visualization and computer-based modeling and field work, this aesthetic analysis has concluded that the proposed Addison Solar Farm Project will not result in an undue adverse impact to the visual resource or scenic beauty of the surrounding area.