

**Orchard Road Solar Project
Middletown Springs, Vermont**

Aesthetics Assessment Report for Alternative Site

Prepared by:



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Part I: Project Background

Section A: Scope of Work

Pursuant to Title 30 Section 248 governing the review of energy generation facilities and transmission projects, SE Group has prepared an analysis of potential aesthetic impacts of the Orchard Road Solar Project (“Project”) if located on the alternative site identified in this proceeding to the east of Orchard Road. The scope of this assessment addresses the requirements under section 248(b)(5). Section 248(b)(5) of Title 30 of the Vermont Statutes Annotated requires that the Vermont Public Utility Commission find a proposed project will not have an “undue adverse effect” on a proposed project site’s aesthetics, which the Vermont Public Utility Commission assesses utilizing the following two-part test (“the Quechee Test” or Quechee Analysis):

In order to find that it will have an adverse impact, a project must be out of character with its surroundings. Specific factors used in making this evaluation include the nature of the project’s surroundings, the compatibility of the project’s design with those surroundings, the suitability of the project’s colors and materials with the immediate environment, the visibility of the project, and the impact of the project on open space. The next step in the two-part test, once a conclusion as to the adverse effect of the project has been reached, is to determine whether the adverse effect of the project is “undue.” The adverse effect is considered undue when a positive finding is reached regarding any one of the following factors:

- 1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?*
- 2. Have the applicants failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the project with its surroundings?*
- 3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?*

Our analysis, however, does not end with the results of the Quechee test. Instead, our assessment of whether a particular project will have an “undue” adverse effect on aesthetics and scenic or natural beauty is “significantly informed by overall societal benefits of the project.”¹

¹ *In re Vermont Elec. Power Co., Inc.*, Docket No. 6860, Order of 1/28/05 at 79 (footnotes omitted).

Section B: Project Description and Visual Context

General Description

The Project is an approximately 500-kilowatt (kW AC) net-metered solar electric generation facility located off of Orchard Road in Middletown Springs, Vermont. Although initially proposed to the west of Orchard Road, the Project has been revised to be sited on 3.05 (+/-) acres of leased land that is part of a larger meadow (part of the same 127-acre parcel as the original site) off of the east side of Orchard Road. This site (hereafter "project site") is approximately 100 feet lower in elevation than the namesake orchard to the west. This change in elevation is notable as it reflects the shift of the Project's original location (as proposed in 2016).

The project site currently consists of open meadow and grassland with some volunteer deciduous scrub growth on the Orchard Road frontage. The openness of the site will limit the extent of any clearing needed. The remainder of the project parcel, including areas between the Project and surrounding roads and neighboring parcels will remain vegetated. Extensive mature woodlands exist to the west of the project site.

The Project will use a fixed tilt solar racking system anchored to driven posts and set at an angle of approximately 25 degrees. The racking will run east-west and the panels will face due south, away from Route 140. The sides of the panels will face Orchard Road to the west of the Project. The bottom of the panels are approximately three feet above grade to clear winter snow pack and approximately nine feet from the ground at the top. The entire Project will be surrounded by a 7' to 8' tall fixed-knot fence with 6-inch spacing attached to wood posts.

Power from the Project will run underground from a new ground-mounted transformer to the interconnection point at an upgraded riser pole at the intersection of Wescott Road and Orchard Road. Existing roadside power poles along Orchard Road will be upgraded to provide an overhead connection for the Project. The equipment and panels will be accessed via a new 12' wide gravel access drive extending from Orchard Road. Grading and soil disturbance are limited to the area of the new access drive and required trenching for the electrical conduit from the panels/inverters to the equipment pad and transformers.

Visual Context

The Project sits below a broad hillside south of Route 140, approximately 1.3 miles west of the village of Middletown Springs. The site is elevated approximately 115'-140' feet above Route 140 and the Poultney River, which lie in the valley at the base of the hill. A taller mountain range/hillside running north-south sits to the west and serves as a backdrop to the project site. The Project site slopes about 25' in elevation from the northeast to southwest towards Route 140. The land along Route 140 is characterized by open agricultural fields and farmland, with clusters of farm buildings and residential properties. Vegetation along

Route 140 and the Poultney River is primarily deciduous. Larger blocks of evergreen vegetation surround major drainages coming down from the hillsides to the river. The ranges and hillsides feature dense deciduous vegetation. The open field of the project site stands out from the heavily wooded hillside.

Due to the topography and existing vegetation, the Project is generally screened from the majority of public vantage points and residences. The hillside topography and existing vegetation helps screen the Project from travelers along much of Route 140 and Orchard Road as it intersects Route 140 at the base of the hill.

Even from more distant vantage points, the Project site remains largely screened owing to its lower elevation, the presence of mature forestlands to the east and the general tilting of the site away from Orchard Road. It is only along a narrow cone extending to the north and beyond Route 140 where some potential visibility of the project remains. Such visibility would be limited to private properties and open fields on the opposing hillside to the north, and project visibility would continue to vary based on the effects of local topography and vegetation proximate to the viewer. The nearest homes with partial visibility of the project located on the hillside north of Route 140 are approximately 2,600' away and located south of Photo Point K and at Photo Point J on Sundog Lane.

The aesthetic character of the landscape and the built environment in the area surrounding the project site reflects the rural and agricultural nature of Middletown Springs. The existing hedgerows, farms, fields, and agricultural structures are extensive throughout the surrounding landscape. These features are set against the backdrop of taller ridges and hillsides surrounding the valley.

The site plan showing the location of the arrays, its position relative to the original location, and other important details is provided as Figure 3.

Section C: Evaluation Methods and Approach

To complete our assessment, we have thoroughly reviewed the Applicant's engineering and design materials and documents to understand the project scope and scale, its location, characteristics, and setting. We have also sought additional information on the Project and its setting from published sources including Town and Regional Plans, atlases and statistical records.

Second, we reviewed the potential viewshed of the Project initially using Geographic Information Systems (GIS), AutoCAD, and Google Earth tools. After defining the likely extent of the viewshed, we performed a field visit to analyze the project visibility and identified several key viewpoints from which the proposed solar field might be seen. We collected photographs and catalogued landscape and visual resource characteristics from these viewpoints. A more detailed discussion of how we determined the viewshed can be found in Part II–Section A.

We evaluated these technical factors (where can it be seen, what would it look like, etc.) against the qualities and sensitivities of the visual environment. We have employed several techniques for this process that blend the quantitative and qualitative aspects of visual analysis. These have all been combined into a final analysis of visual impacts resulting from the Project using the Quechee Analysis. This process is described in detail in Part II of this report.

Part II: Quechee Analysis

Section A: Viewshed Determination

At approximately nine feet, the relatively low heights of the panels that comprise the array greatly limit potential visibility. Because of this low height, small changes in micro-topography, areas of mature woodlands, and other structures can have a significant influence on the extent of the viewshed.

Rather than relying solely on a GIS-based viewshed analysis, our work also involved reviewing the project site plan and conducting a photographic reconnaissance of the area. During this reconnaissance we noted the qualities of the setting, the position of the Project relative to public observation points, and how structures, vegetation, and micro-topographic changes influence potential visibility.

Views from Public Vantage Points:

As stated earlier, the project site lies between roughly 115'-140' feet above Route 140, the main east-west travel way heading into Middletown Springs (Site Section-A, Figure 11). The moderate elevation of the project site with respect to the surrounding topography and hillsides greatly diminishes the visibility of the Project. The pattern of roads, forest and meadows is depicted on the Context Plan (Figure 1). This figure

also documents the fourteen (14) viewpoint locations documented during our field work. Many of these locations are the same from our 2016 analysis of the original site, but several additional locations have been added to reflect the new position of the Project.

The Viewshed Plan (Figure 2) of the assessment identifies locations within the immediate vicinity that have either clear project visibility (Red Locations), limited/intermittent project visibility (Yellow Locations), or no project visibility (Green Locations). Based on this combination of GIS and site reconnaissance, our analysis suggests no potential visibility from Route 140 heading west out of the village. It is only along a short stretch of Orchard Road within about 700 feet of the project site; a short segment of Wescott Road and a more distant segment (2,500 feet +/-) of the private-road Sundog Lane where either high (unobstructed) or low-intermittent visibility is likely. Any visibility from public roads beyond Orchard Road in direct proximity to the project site will be low-intermittent, and influenced greatly by local terrain or vegetation.

Views from Nearby Residential Areas:

The closest residences to the Project are 895' north on Orchard Road, 1260' west on Wescott Road, and 1,005' southwest off Orchard Road. Visibility of the project from these residences is considerably less than the prior site due to increased distance, lower elevation of the project, and additional intermediate vegetation (orchard trees and roadside vegetation. Although significantly less visible from proximate residences, visibility of the project will be more obvious to users of both Orchard Road and Wescott Road while on these roads as the project sits closer to Orchard Road than previously, and the view from Wescott Road looking east is elevated and directed at the project access drive and equipment. As noted above, there are several residential properties at some considerable distance from the Project that may have views of the Project, predominantly from the opposite hillside north of Route 140 and within the narrow view cone depicted on Figure 2. The nearest residence across the valley with visibility is approximately 2,600' away. Residential structures along Route 140 are minimally 1,800' away and screened from the project by topography, vegetation, and the existing barn structure on Orchard Road. These homes are at significant distances with respect to aesthetic impact and have only intermittent views of the Project as the topography and existing vegetation both near the project site and near the residences will interrupt clear views of the Project. In addition, the residences will be looking predominantly at either the rear of the panels from the northern and northeastern vantage points, which further reduces the visual impact. The new location for the Project places it 100' lower in elevation and, from distant views from the north, positions it near to the large, natural woodlands to the east. As a result, the visual impact of the alternative project site on these residences across the valley and other surrounding residences on Orchard Road is significantly reduced as compared to the original project site. Additionally, the alternative project site visually impacts fewer residences overall with views of the project than the prior project site by either eliminating visibility or greatly reducing visibility. The number of residences that still have a clear or partial view of the project represent a very small percentage of the total residences in the area.

Existing conditions from viewpoints in the area are documented on Figures 4 to 10. A cross-section from Route 140 south to the Project site is provided as Figure 11 and serves to illustrate the grade relationship

between the public road and the Project. A cross-section running east-west serves to show the relationship between the project and Orchard Road as well as the influence of the existing woods and forestlands on potential offsite visibility.

Section B: Assessment of Potential Visual Impacts

Having identified the extent of the views and completed an analysis of representative views from the Project, the next step is to prepare an assessment of potential impacts using the Quechee Analysis. This process first tests whether the proposed Project's impacts are adverse. Second, assuming a conclusion that the Project would have an adverse aesthetic impact, the process continues to determine whether or not that impact would be undue.

Test for Adverse Impact:

The Quechee Analysis asks five basic questions, which are then used to determine whether the Project would result in an adverse impact with respect to the visual resource. These questions are:

- 1. What is the nature of the project's surroundings? Is the project located in an urban, suburban, rural or recreational resort area? What land uses presently exist? What is the topography like? What structures exist in the area? What vegetation is prevalent? Does the area have particular scenic value?**

The site sits within an open meadow approximately 115'-140' above Route 140 and set within a rural area with farms and residential uses interspersed throughout. The center of Middletown Springs is located 1.5 miles to the east of Orchard Road with limited commercial and civic uses including St. Anne's Parish, the Public Library, Elementary School, Community Church, and Village Store. Farming and agricultural uses tend to border Route 140 in the valley, while the higher elevations on the hillsides have some fields but are predominantly forested. The Project site is not wooded, and clearing is not required. The vegetation throughout the area consists of deciduous trees and hedgerows, both surrounding the roads and rivers as well as on the upper hillsides, with larger blocks of evergreen forest including spruce and eastern white pine bordering some of the drainages and mid-elevations of the hillsides. The project site sits about 100 feet lower in elevation relative to the nearby remnant orchard and hillside.

2. Is the project's design compatible with its surroundings? Is the architectural style of the buildings compatible with other buildings in the area? Is the scale of the project appropriate to its surroundings? Is the mass of the structures proposed for the site consistent with land use and density patterns in the vicinity?

The Project is compatible with the agricultural use of the site, and the surrounding rural residential uses.² The low height of the Project components do not extend beyond typical building heights in the area, avoids the high points of land and does not disrupt long range views in the area. The Project has been sited on the lowest portion of the field which helps minimize the long-range views of the Project.

3. Are the colors and materials selected for the project suitable for the context in which the project will be located?

The materials and colors of the Project are consistent with materials and forms used in many similar solar projects. The galvanized metal/gray color of the frames and racks that support the photovoltaic panels are less visible during winter. The photovoltaic surfaces are non-reflective and a dull, dark blue color that has a similar albedo (or surface reflectivity) to natural grasses, meadows and fields. The face of the panels will face south, away from observers on Wescott Road and Route 140. The sides of the arrays will be facing potential observers along Orchard Road.

The proposed transformer and equipment pad will be located within the project fence line, set approximately 90' from the property line.

The supporting elements of the Project include the 7' to 8' foot high, fixed-knot fence that surrounds the solar field. Wooden posts will be used to support the fence. The fence is of a form typical for enclosure of utility projects and other large areas. The mesh itself is not visible from any location outside of the project site; its color helps it visually retreat. The use of wooden posts is an appropriate option in this context.

4. Where can the project be seen from? Will the project be in the viewer's foreground, middleground or background? Is the viewer likely to be stationary so that the view is of long duration or will the viewer be moving quickly by the site so that the length of view is short?

As described above, it is only along areas in closest proximity to the Project including Orchard Road and Wescott Road where intimate views of the Project are likely. Photographs from viewpoints F, G, H and I and N document the existing conditions in this area (See Figures 6-8 and 10). Longer-range

² The Public Utility Commission has recognized that commercial scale solar projects are compatible with all of these land uses. See Docket No. 7645, Order of 7/8/11 at 5.

views (over 2,600 feet) from across the valley are limited only to a few private properties and/or an intermittent view from Sundog Lane (See Viewpoint J, K, and L, Figure 9)

5. What is the project's impact on open space in the area? Will it maintain existing open space or will it contribute to the loss of open space?

The Project requires the use of approximately 3 acres out of an approximately 127 acre tract of open meadow land. The Project requires no clearing of existing vegetation. After construction is complete, the ground will be seeded and maintained as meadow, being mowed once or twice annually. The Project will not result in a long-term loss of open space in the region. The Project site is not identified for conservation in the Town or Regional Plans. The components of the Project (panels, fencing, and transformers) can be easily removed and the land restored swiftly.

Conclusion of Adversity:

The Project does alter the existing conditions and use of the site and this must be addressed in our analysis. As noted above, there are areas of both higher and lower visibility of the Project. The Project is not visible from Route 140 while traveling west, and represents a very small portion of a much broader scenic view of the hillside and range. When compared to the original project site, the new project location avoids impacts to the orchard and reduces the elevation of the Project substantially, helping to disassociate the array from the hillside. Existing vegetation both on the project site, in particularly to the east and more proximate to the documented vantage points, greatly reduce offsite views and screen the Project.

The visual impact of the Project on Orchard Road and the surrounding properties is greater due to the proximity, but the Project is generally set well back from public views and existing vegetation is being maintained between the Project and the surrounding roads and properties. The Project meets and exceeds the minimum required setbacks from public roads and property lines. The panels are a minimum 100' from Orchard Road, and over 50' from all other property lines to the north, east, west, and south.

Given the above, and without regard to mitigation, we conclude that the Project on the alternative site location **does not** create an adverse aesthetic impact on aesthetics and the scenic and natural beauty of the area. This determination, while recognizing the potential localized impacts along Orchard Road, reflects the important contribution to reducing offsite visibility generated by the change in project location. These changes to the Project's position, orientation and layout have reduced its offsite visibility and improved its sense of harmony with respect to the surrounding landscape.

While having made this determination, in keeping with best practices for applying the Quechee Analysis test, we will continue to evaluate the Project using the second prong which considers if impacts rise in severity so as to be unduly adverse.

Test of Undue Adverse Impact:

The Quechee Analysis process continues by evaluating whether the impact of the Project would be unduly adverse. This is done by addressing three fundamental questions:

1. Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic beauty of the area?

No. Although Section 248 does not require local permitting of projects seeking a Certificate of Public Good, local plans and regulations are reviewed under the second prong of the Quechee analysis where it has been determined that a Project may have a potential adverse visual impact. The Public Utility Commission has noted that “[i]n order for a provision to be considered a clear, written community standard, it must be “intended to preserve the aesthetics or scenic beauty of the area” where the proposed project is located and must apply to specific resources in the proposed project area.” Petition of Georgia Mountain Community Wind, LLC, Docket No. 7508, Order of Vt. Pub. Util. Comm’n (Jun. 11. 2010) at 52. The Board clarified that generalized statements and general scenic resource policies that are not focused on a particular scenic resource or that fail to offer specific guidance or measures to protect the resource cannot be considered “clear written community standards.” Id. at 53. Finally, this analysis is significantly informed by the overall societal benefits of the project.

We have, as part of our analysis, reviewed the local and regional plans relative to this criterion. This review is based on the local and regional plans as they existed at the time of the original filing.

Middletown Springs Town Plan (2012): The plan under effect for the Project is the Middletown Springs Town Plan (“Town Plan”) as adopted on March 6, 2012. This plan covers a wide variety of factors influencing development within the community. Below are some key elements of the Town Plan that are relevant to consider for the Project.

The future land use designation for the Project site is Rural as identified in the Town Plan. These rural lands make up most of the Town and are “defined as the lands around the village, extending to slopes too steep for agriculture. (See “Future Land Use” map). It includes all farmland, residential lots outside the village, and forestland.” The rural area is characterized by extensive parcels of croplands and farmsteads, open spaces with some small sections of woodlots, and scattered low density residences along the roads of the area. The goal for this area as defined in the Town Plan is to “maintain attractive countryside with large tracts of open land in diversified agricultural uses.” Additionally, the lands on which the Project is proposed are NOT identified as “Highland Conservation Area” or “Lowland Conservation Area” on any of its existing and/or future land use plans.

The Town Plan states an interest in preserving scenic qualities of the Town in the introduction to the Land Use Chapter by stating "The preservation of agriculture, the protection of scenic ridgelines, and a compact village hub are integral to the character of the Town," but the Town Plan does not provide any specific guidance or mechanism for protection of scenic resources. The Land Use Strategies for the Rural District recognizes the importance of scenic lands by suggesting the Town "foster awareness of private or foundation funding to purchase conservation easements and development rights of prime agricultural and scenic lands," but again does not provide a clear, written community standard "intended to preserve the aesthetics or scenic beauty of the area."

The Town Plan also briefly addresses energy in Chapter III Section J of the Town Plan, "Energy." The Town Plan does not directly reference solar development in the Town, but does indicate general support for solar energy production with the following statement: "Sources [of energy production] that have the least environmental impact and which are renewable are most desirable, but can be more costly." The Town Plan also highlights the importance of solar power by referencing the SolarFest Event with the following statements: "Middletown Springs community members form the core planning and implementing team of SolarFest (www.solarfest.org), one of the largest festivals in the U.S. devoted to renewable energy education. The energy education festival is held each July in Tinmouth. Many Middletown Springs community members either volunteer at or attend the three-day festival each year. The event features energy education workshops, renewable energy vendors and demonstrations, and solar powered entertainment." Relevant energy strategies include: "2. Provide practical information about available alternative energy technologies;" and "3. Continue strong community support for SolarFest, an important annual energy education event."

Overall, the Town Plan does not provide any clearly written community standard on which the potential aesthetic impacts of the Project could be applied. The proposed use is of a scale and form that is visually compatible with the area and represents a land use form that does not preclude long-term reuse of the property following the decommission of the facility. Please note that the relevant excerpts from the Town Plan were previously provided with our initial report, Exh. ORS-MK-2.

Rutland Regional Plan (2015): The 2015 Rutland Regional Plan ("Regional Plan") is the guidance document prepared by the Rutland Regional Planning Commission (Rutland RPC) which provides an overarching policy framework for land use and development within the region. However, as a regional document, it affords considerable deference to local land use policy. It does provide insight in addressing changes in land use pattern of development in light of regional objectives.

The project area is located within the "Low Density Development" zone on the Regional Future Land Use Map, which comprises much of the region. As noted in the Plan, "Areas shown as "low density" on the map are Rutland County's working landscapes. They include areas with small, historic hamlets as well as actively farmed or logged terrain." Looking to the future, the Regional Plan suggests that "agricultural and silvicultural activities should continue to dominate the Region's

low-density areas. Development in low density areas should be unobtrusive and maintain the rural character and scale of the locale.” As detailed throughout this report, with mitigation, the Project is not expected to disrupt the rural character of the area.

The Regional Plan has several sections which are relevant in consideration of the Project. Chapter 14 identifies the scenic resources of the region noting the “rugged mountain ranges, clear streams, and fertile valleys” that comprise the region and explaining that “these scenic resources have not only attracted numerous residents over time, they also are a major draw for visitors and a vital part of the Region’s economic well-being.” The Current Conditions also note that “wind and solar energy generation facilities can also lead to habitat fragmentation.” In Chapter 14 the Rutland RPC discusses goals for new development with respect to the scenic resource: “No land development should be promoted where the effect of the proposed use unnecessarily impacts highly scenic landscapes, ecologically sensitive lands, or irreplaceable natural resources. To do so would be incompatible with land use policies contained in the Regional Plan.” The current project is not expected to unnecessarily impact an identified “highly scenic landscape.”

The Rutland RPC Goals in Chapter 14 also state: “Since new development has the potential to fragment natural habitat, all developments must: ... ‘Be of a design that is compatible with surrounding land uses...’” The Public Utility Commission has recognized that commercial scale solar projects are compatible with all of the land uses surrounding this Project. See Docket No. 7645, Order of 7/8/11 at 5.

Finally, the Rutland RPC Goals in Chapter 14 also have a small note under the heading “Energy Development” as follows: “Assist municipalities in identifying areas for renewable energy development so as to not adversely impact wildlife and natural habitats.” This general goal has not yet been implemented.

Chapter 16: Energy also contains several sections which are relevant in consideration of the Project. In the “Current Conditions” discussion under the heading “Renewables” the Regional Plan notes, “Vermont is promoting the development of renewable energy sources to address climate change and reduce reliance on fossil fuels, and increase energy options available locally. However, new energy generation also must avoid undue adverse impacts on local communities and the environment.” As demonstrated throughout this report an undue adverse impact is not expected as a result of this Project.

A relevant comment about solar project siting is also provided in the “Current Conditions” discussion under the heading “Solar”: “However, siting issues over solar generators have arisen in the Rutland Region because of the proliferation of solar, particularly 150 kW and greater utility-scale and commercial PV systems. There is concern that these systems in particular could be responsible for an undue loss of prime agricultural land, forests, wetlands and property values of neighbors. Questions over the regulatory process for solar generating facilities also arose with many municipalities feeling like they are lacking a voice.” This report has found that an undue adverse impact to the scenic resource is not expected as a result of this Project. Additionally, the

Petitioner has worked to develop appropriate and context sensitive mitigation strategies to address potential visual impacts of the Project, which include working with neighbors to facilitate moving the project to the alternative site.

The Regional Plan also provides two helpful sidebar discussions relevant to the proposed Project also found in Chapter 16: Energy. The first is entitled “What Municipalities May Not, May and Shall Do in Regulating Energy Development (24 V.S.A. Chapter 117).” This sidebar correctly identifies what municipalities in Vermont may not do and are required to do with respect to regulating energy development. It also suggests a series of actions municipalities may take using local land use regulations and the municipal plan (the Town of Middletown Springs does not have local land use regulations). The relevant actions suggested are as follows:

- ***Provide clear written standard to preserve the aesthetics or scenic beauty of an area and identifies conservation needs, orderly development, and is based on “Quechee Analysis” legal precedent.*** As noted above, the Middletown Springs Town Plan has not provided a clearly written community standard intended to preserve the scenic beauty of the area in which the Project is located.
- ***Grant waivers to reduce dimensional requirements for energy conservation and renewable energy structures.*** The Town Plan has not granted any such waivers.
- ***Provide for and protect access to renewable energy resources (e.g., under site plan and subdivision review).*** The Town Plan has not provided or protected any such access.

The second helpful sidebar discussion in the Regional Plan is entitled “Proposed Regional and Community Standards for Energy Facility Siting & Development (for Regional and Municipal Plans and Act 250/ Section 248 Proceedings).” This sidebar discussion sections lay out specific standards for particular types of energy transmission and generation facilities (including solar projects). The discussion states, “Where a new generation facility requires a new transmission facility, including electrical substations, both the generation and transmission standards shall apply.”

It is important to recognize several factors in addressing these “standards.” Firstly, as the plan document states “the standards below are not the exclusive standards and are intended to apply along with policies elsewhere in the Rutland Regional Plan.” Secondly, these are “proposed” standards that have not been adopted (in part or in whole) by the locality. From this perspective, while not formally adopted, the project has considered the relevant items as part of this review:

Photovoltaic and other solar electricity facilities shall be designed, constructed, and operated such that:

1. The facility is located to make use of a developed or existing structure or brownfield site, including parcels contaminated or perceived to be contaminated that otherwise hinders redevelopment, so as to avoid primary agricultural soils and silvicultural areas. The Project largely avoids prime agricultural soils, soils of statewide importance and soils of local importance

with only about .05(+/-) acres of permanent disturbance to prime ag soils on the Project site. The Project is not located on a brownfield or contaminated site. The amount of clearing is relatively small and essentially involves removal of second growth and scrub species. Despite being located outside of a brownfield or contaminated site, SE Group finds that the Project has given substantial deference to the regional plan guidance by avoiding primary agricultural soils, providing reasonable mitigation, and working with the Town and local neighbors. Additionally, the components of the Project (panels, fencing, and transformers) can be easily removed and the land restored swiftly, if redevelopment is desired.

2. The facility is designed to locate inverters and support structures away from existing residences, wetlands, special flood areas, and slopes. Inverters and support structures have been located away from existing residences (over 850' to nearest residence), wetlands, special flood areas, and slopes.

11. Any proposed facility shall consider the cumulative impact of land use aesthetics, property values, and landowner compensation for multiple energy generation and transmission facilities. SE Group, as appropriate under the Quechee Test, considered the context of the project as part of its review. In this review, SE Group did not identify any nearby commercial-scale energy generation or transmission facilities that would contribute to the existing scenic context for the viewshed, although residential scale roof and ground mounted solar modules were noted on Sundog Lane.

In this case, the Regional Plan provides clear regional objectives for scenic resource protection, but Town objectives are less clear from the Town Plan. The Regional Plan provides “standards” to which the Project should conform, but does not identify the Project setting as a scenic resource. Having reviewed these “standards,” we conclude that the Project addresses and satisfies them. Please note that relevant sections of the Regional Plan were provided with our initial report in Exh. ORS-MK-2.

While the Project will undoubtedly introduce an element that is different from what exists today, the intention of these “standards” are not necessarily to prevent new forms of development but rather minimize the impact of such development. The viewshed for the Project is limited and, unlike other types of land uses that might exist on the site, the development of a solar project minimizes many direct impacts (significant terrain modification, soil disturbances, tall buildings or structures, and major roads) and secondary impacts (nighttime lighting, noises, and traffic). Additionally, the alternative site location significantly reduces the overall visibility of the project in the surrounding area.

Overall, SE Group finds the Project **would not violate any clearly written community standard** in the Town Plan or Regional Plan on which the potential aesthetic impacts of the Project could be applied. The proposed use is of a scale and form that is visually compatible with the area and

represents a land use form that does not preclude long-term reuse of the property following the decommissioning of the facility.

2. Has the Applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings?

First and foremost, the relocation of the Project from the original site to the currently proposed alternative site is in itself a mitigation measure that Applicant took following confirmation that the alternative site was a viable option for the Project. In addition, Applicant has taken steps, integral to the site selection and design of the facility on the alternative site, which help minimize its visual impact and improve its harmony with the visual context:

- a. The proposed site is over 1,800' from a major public roadway and sited 100' from the nearest lower volume minor public roads. Topography of the surrounding landscape and existing vegetation helps diminish the visual impact of the Project. The nature of this Project allows the property to be restored to its current condition relatively easily.
- b. Petitioner has placed the panels comprising the solar field on slim mounting brackets, neutral gray in color, that follow the natural terrain of the land to minimize its profile.
- c. All of the electrical collection lines for the Project will be buried. Only one new pole will be needed to connect the Project to the grid, while three additional poles and overhead power will also be upgraded.
- d. The photovoltaic surfaces of the panels are non-reflective and do not create glare. Additionally, the panels face south, away from public roads.
- e. Petitioner has chosen fixed-knot fence with minimal visual impact profile to secure the site. The mesh of the fence is very difficult to discern even at very close distances.

SE Group does not recommend landscape mitigation measures be taken to improve the harmony of the Project with respect to its surroundings. The limited views from Orchard Road are already ameliorated to a reasonable extent by existing shrubs and growth along the road frontage and any attempt to introduce new plant materials into this setting would have a limited value and utility. A plan to allow the frontage to grow naturally and encourage/maintain successional growth at heights that do not compromise the function of the array, would provide some continued local screening benefit and, over time further improve the harmony of the project into the landscape.

3. Does the project offend the sensibilities of the average person? Is it offensive or shocking because it is out of character with its surroundings or significantly diminishes the scenic qualities of the area?

No. We **do not** believe that the Project would offend an average person. Its scale, mass and form are not so out of character that they are offensive, nor do they diminish or distract from the scenic qualities of the area. Within the broader landscape, the Project does not alter the existing scenic qualities. The Project is set on a site that does not permanently degrade or diminish long-range views, which are noted for having high scenic qualities. The Project does not impede or degrade regional landscape forms visible in the surrounding areas.

Further, the primary viewshed of the Project from Orchard Road is limited, of short duration and partially screened by natural growth including grasses and small shrubs (see Viewpoint F and G, Figures 6 and 7).

The Project does not introduce secondary factors which often can contribute to how a project “fits” into its setting. These factors include such things as traffic, noise, exterior lighting, dust, odors, glare or other nuisances which often are at the root of public objections.

Part III: Overall Conclusion

SE Group believes that the Project has addressed its setting in a very balanced way. It has chosen a setting that provides significant visual isolation for the Project (being over 1800 feet from any major public roadway) and limits impact to the extent practical. Based on our assessment, it is our conclusion that the Project **does not create an undue adverse impact** to the aesthetics or scenic beauty of the area.

Part IV: Orderly Development of the Region - Section 248(b)(1)

SE Group has also reviewed the Project relative to Section 248(b)(1), Orderly Development of the Region. As noted above, the land on which the Project is proposed has not been identified for any land conservation purposes, Middletown Springs has identified two areas (Highland Conservation Areas and Lowland Conservation Areas) which respectively include important ridgelines and elevations above 1200 feet and areas adjacent to rivers and streams and within flood hazard areas. The Project site is not within either of these areas as depicted on the Future Land Use Plan within the Town Plan.

Additionally, the Rutland Regional Plan addresses land conservation from a broad perspective. The Future Land Use Plan for the region identifies “Development-Constrained Areas” which are described as having

“significant limitations upon current or future development because of conservation easements, public ownership, or severe natural limitations. These include lands owned or overseen by the National Forest Service, the State of Vermont, or land trusts, as well as large tracts of land that are on slopes over 25% grade or are wetlands.” This perspective on where land conservation measures should be focused is highly similar to the approach taken in the Middletown Springs Town Plan. The Project site does not fall into this land use designation.

While both the local and regional plans have identified broad areas and generalized statements on land conservation measures, neither specifically identifies the project site nor the area within which it is located as part of a formalized conservation strategy or process. The form of the project, its scale and the potential continued use of remaining lands within the project parcel to retain agricultural function, all limit the impact the Project will have on the orderly development of the region. SE Group concludes the Project will not create an undue adverse impact on the orderly development of the region.

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Application of Orchard Road Solar I, LLC for a)
certificate of public good, pursuant to 30 V.S.A.)
§§ 219a and 248, to install and operate a 500 kW) CPG #16-0042-NMP
group net metered solar electric generation facility)
located on Orchard Road in Middletown Springs,)
Vermont, to be known as the “Orchard Road)
Solar Project”)

Affidavit of Mark Kane

1. My name is Mark Kane. I am a land use planner and the Director of Community Planning and Design at SE Group. My business address is 131 Church Street, Burlington, Vermont 05401.
2. I previously provided prefiled testimony and exhibits in support of Orchard Road Solar I, LLC’s application for a Certificate of Public Good for the Orchard Road Solar Project.
3. Specifically, I provided the following testimony and exhibits, including an aesthetics analysis report for the original Project site that was submitted with the original application for the Project, dated July 15, 2016.
 - a. ***Exhibit ORS-MK-1*** – Resume
 - b. ***Exhibit ORS-MK-2*** - SE Group Aesthetics Report and Affidavit
 - c. ***Rebuttal Prefiled Direct Testimony*** (July 28, 2017)
 - d. ***Exhibit ORS-MK-3*** – Project Simulations
 - e. ***Exhibit ORS-MK-4*** – Revised Planting Plan
4. I also provided live testimony during the evidentiary hearing held for the Project on August 28 and 29, 2017.
5. Following a wetlands delineation of an alternative site identified for the Project on an adjacent portion of the Project parcel, located to the East of the original project site and across Orchard

Road, I was asked by EDF to conduct an aesthetics analysis of this area for purposes of determining if the Project could be relocated to this alternative site.

6. On September 14, 2018 and under my direction, several SE Group employees visited the alternative project site and surrounding areas in Middletown Springs, Vermont in order to inventory the visual resources in the area, the proposed Project's viewshed, and to take photographs of the Project site and the area.
7. Based on this field visit and our previous experience in the area, and under my direction, SE Group employees prepared graphics (map products, cross-sections, etc.) to document the location of these photographs, the position of the Project with respect to its surroundings, the shape of the underlying terrain and vegetated condition.
8. I also reviewed the applicable Town and Regional Plans for the Town of Middletown Springs and Rutland Regional Planning Commission to determine whether the proposed Project would conform to those plans if it were relocated to the alternative site.
9. Based on my review of the above work products, it is my conclusion that the Project, if located on the alternative site, would not have an adverse aesthetic impact on visual resources in the area.
10. Relocation of the Project to the alternative site is a mitigation measure that would significantly reduce the visibility of the Project compared to the original project site.
11. It is my conclusion that the Project on the alternative site meets the Section 248 criteria for aesthetics (§ 248(b)(5)) and orderly development of the region (§ 248(b)(1)).

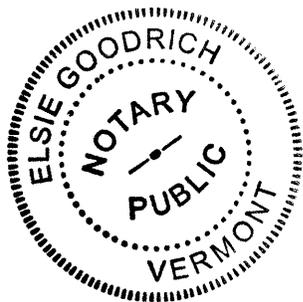
12. My full findings and conclusions regarding these criteria are documented in a report, with several figures, that I wrote and directed the preparation of. This supplemental report is submitted in this proceeding as *Exhibit ORS-MK-5*.

I, Mark Kane, do hereby swear and affirm under the penalty of law that the information provided in my affidavit is accurate to the best of my knowledge and that I have personal knowledge of, and am able to testify as to the validity of the information contained in my testimony and attached exhibits.



State of Vermont
County of Chittenden

The foregoing instrument was signed and acknowledged before me this 6 day of November, 2018 at Burlington, Vermont by Mark Kane who acknowledged the act to be his free act and deed.





Notary Public
Name of Notary: Elsie Goodrich

Commission Expires: February 10, 2019

