

July 20, 2015

Certified Mail: Return Receipt Requested

Town of Thetford Selectboard
and
Town of Thetford Planning Commission
Thetford Town Office
3910 Vermont Route 113
P.O. Box 126
Thetford Center, VT 05075

Town of Strafford Selectboard
and
Town of Strafford Planning Commission
227 Justin Morrill Highway
P.O. Box 27
Strafford, VT 05072

Two Rivers Ottauquechee Regional Planning Commission
128 King Farm Road
Woodstock, VT 05091

Re: Proposed Elizabeth Mine Solar project — Mine Road, Strafford and Thetford, Vermont
45-Day Notice of Petition to be Filed at the Vermont Public Service Board pursuant to 30
V.S.A. § 248

Dear Commissioners and Selectboard Members,

Pursuant to 30 V.S.A. § 248(f) and Public Service Board (“PSB” or “Board”) Rule 5.402(A), Elizabeth Mine Solar I, LLC (“EMS”) is pleased to submit the following pre-application notice concerning its proposed approximately 4.99 megawatt (“MW”) solar project, to be sited on land within the Elizabeth Mine Superfund site in Strafford and Thetford, Vermont. In addition to providing notice to the municipal and regional planning commissions and municipal legislative bodies, a courtesy copy is being mailed the Vermont Department of Public Service, the Vermont Agency of Natural Resources, and the U.S. Environmental Protection Agency. We anticipate filing the formal Section 248 petition with the PSB soon after the 45-day notice period expires, in early September of 2015, or earlier, if the Commissions and Selectboards waive the full 45-day period. The waiver process is explained in the final section of this letter.

Introduction

EMS is preparing to file a petition for a Certificate of Public Good (“CPG”) with the Board, requesting approval to install and operate a 4.99 MW alternating current (“AC”) solar electric generation facility in South Strafford and Thetford, Vermont, to be known as the Elizabeth Mine Solar Project (the “Project”). Power from the facility will be fed into the electric grid to supply an important component of Vermont’s renewable energy needs. This power will be generated on a site that has no other productive uses due to its history of contamination due to previous mining activities and its current status as a closed Superfund site.

The remainder of this letter briefly describes: (1) EMS’s plans for construction and operation of the Project, including how equipment and materials will be transported to the site; (2) the expected benefits of the Project; (3) the preliminary assessment of environmental and aesthetic impacts; (4) the consideration of alternative sites; (5) the expected date a Section 248 petition will be filed with the PSB; (6) the rights of the local and regional planning commissions to comment on the Project plans in accordance with Board Rule 5.402(A); and (7) the process by which the selectboards and commissions may waive the 45-day period.

Included with this letter are a location map (*Attachment A*), site plan (*Attachment B*), equipment specifications (*Attachment C*), a preliminary aesthetics assessment (*Attachment D*), and 45-Day waiver forms.

I. Project Site, Equipment, and Construction Plans

The proposed Project is a 4.99 MW (AC) solar electric generation facility located off of Mine Road in South Strafford and Thetford, Vermont. The Project is expected to generate approximately 8,844,000 kilowatt-hours (kWh) of electricity each year, which is the equivalent electric energy usage of 1280 Vermont homes.¹

The Elizabeth Mine is the site of a former copper mining operation that resulted in serious contamination of surrounding surface waters and soils. It was identified by the U.S. Environmental Protection Agency as a Superfund site under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”) in 2001. The full Superfund site is approximately 120.2 acres [EPA Land Use Restriction Plan 03-09-07]. EPA, in coordination with the Vermont Department of Environmental Conservation (“DEC”), has developed and implemented several stages of a site remediation plan on the majority of the Site, and is continuing to carry out

¹ Based on an average of 575 kwh per month, or 6,900 kWh per year. See VT PSD 2013 Utility Fact Sheet.

remediation actions on the smaller remaining contaminated areas. DEC is largely responsible for maintaining the remediation measures and monitoring the site and areas around the site for any evidence of contamination migration into groundwater, surface waters, or soil. EPA maintains a website providing extensive documentation of the history of the Elizabeth Mine studies, testing, and remediation work, which is available at http://yosemite.epa.gov/r1/npl_pad.nsf/f52fa5c31fa8f5c885256adc0050b631/2281487131782426852569E400719BBE?OpenDocument.

The proposed solar project would be sited within the closed and capped areas of the Elizabeth Mine site known as “Tailings Pile 1 and Pile 2,” which comprise approximately 28 acres of open land. Tailings Pile 1 and 2 are two sections of the Elizabeth Mine site that have been remediated, with contamination now contained beneath an engineered liner and a clean cap of soil, covered with established grass vegetation. The overall parcel is bordered by dense forest on all sides, with Copperas Road running along the western side of the property and Mine Road running from the northwest edge of the site, around the western boundary, to the southeastern edge of the site. See *Attachment D (Aesthetics) Figure 1*.

The attached site plan, *Attachment B*, represents the current preferred layout of the Project. A layout incorporating further site engineering will be included with EMS’s Section 248 petition.

Solar Panels and Racking System

EMS intends to use approximately 22,590 individual 310-watt solar panels. See *Attachment C*. The final panel selection will be made prior to the initiation of construction based upon market and engineering considerations, but in any case, the panels used will be materially similar to those depicted in *Attachment C* and other panels that are currently available.

The individual solar panels will be mounted on a racking system. Each panel is separated from adjacent ones by a metal frame. A total of 1,255 racks will be utilized, depending on the final panel selection. The racks will be set on ballasted foundations and position the solar panels at a fixed angle of 30-degrees, to maximize solar radiance collection. The use of ballasted foundations will prevent the Project from adversely impacting the existing cap as they will not require excavation and they will be below the allowable ground loading pressure of the engineered cap. The support structures are designed to hold the leading edge/bottom of the solar panels approximately 3.5-feet above the existing grade, which will allow snow to shed without creating buildup on the ground that might compromise energy production. The top of the solar panels will be fixed approximately 10’ feet above grade.

As shown on *Attachment B*, the arrays will be arranged in rows running east-west that will be set approximately 15.5 feet apart to minimize self-shading. The strings will be connected via

electrical wiring that will run above ground to combiner boxes. The wiring from combiner boxes will run in cable trays to the DC to AC inverters, which in turn will connect the low voltage AC to a 12.47 kV transformer. The 12.47 kV transformer will include a secondary oil containment structure to protect the environment in the event of a spill of the bio-based, non-petroleum transformer oil. None of the Project elements will require excavation, grading, or any other action that might disturb the cap or adversely affect the remediation work that has been completed.

Inverters and Transformers

The Project is expected to interconnect with the electric grid via an upgraded 3-phase power distribution line that will extend from Mine Road into the Elizabeth Mine site near the Northwestern entrance to the Mine; *see Attachment B*. To make this interconnection and provide for a stable distribution grid, pending the results of its System Impact Study for this Project, GMP will upgrade approximately two miles of existing single-phase power line that is pole-mounted and runs along Mine Road to an existing three-phase line, as well as approximately two miles of lines from the intersection of Route 132 to the Sharon Substation. Additionally, GMP will upgrade the transformer at the Sharon Substation with a transformer roughly twice the capacity (7.5 MVA) as the existing transformer. The costs associated with these interconnection requirements will be covered by the Project.

EMS currently anticipates using SMA Sunny Central inverters 1850-US or the equivalent. *See Attachment C*. These inverters will be electrically connected to 3 Cooper Electric transformers. *See Attachment C*. These inverter/transformer sets will be mounted on three concrete pads; each pad will contain one inverter and one transformer. In addition, space on the pads will be provided for controls, metering, and other related equipment. From the transformer, the electrical interconnection line will be routed off the cap, to a switchgear cabinet mounted near the interconnection point by Mine Road. From there, the medium voltage power line will be wired to a series of three poles which will house the overhead metering cluster, reclosure, disconnect, and utility interconnect, all shown on *Attachment B*.

The solar arrays and other equipment will most likely be surrounded by a wire mesh fence (at least 6' high) to meet National Electric Code (NEC) requirements. Consistent with the other Project elements, the proposed fence will be ballasted and not driven into the ground. If alternatives to the use of fencing can be identified that will ensure the Project meets the NEC and the National Electric Safety Code (NESC) requirements, these will be considered. The Project lighting will be limited to a motion-sensor lighting system. For nighttime system security, the Project anticipates installing a forward-looking infrared camera system.

Construction and Operation

The Project is planned so that construction and operation will ensure that the cap/cover system at the site will be protected during all construction activities:

- Solar array support structures will be ballasted, with no earth disturbance.
- The only structures that are being proposed to be mounted on the cap, in addition to the arrays, are a pad-mounted inverter/transformer structure and a perimeter fence for safety and security.
- The construction activities will be phased to minimize the number of vehicle trips over the cap system.
- For work on the cap, only approved low ground pressure (LGP) equipment will be used. Typical LGP equipment is track-mounted or mounted on large rubber tires to reduce point loads.
- A qualified geotechnical engineer will provide construction oversight and inspections as specified by DEC. The engineer providing oversight will evaluate the cap/cover system conditions prior to initiating construction activities. Construction will be suspended during periods of significant wet weather or any other conditions that would unreasonably increase the threat to the integrity of the cap system.
- The vegetative cover will be maintained in all areas, although the ballast blocks will require laying leveling stone on the ground surface and the possible stripping of the grass layer. Vegetation that is disturbed or harmed in other areas during construction will be restored as soon as feasible. No tree clearing is required at the site as part of this Project.
- Daily access to the array is not required. Therefore no on-site septic or water supply systems will be constructed.

Project construction is expected to take approximately 5 months. The general sequence of construction will be as follows: (i) reinforcement of existing access roads, if necessary; (ii) installation of ballasts and racking systems, followed by module installation; (iii) electrical work will be completed in parallel with racking and module installation; (iv) installation of inverters and transformers; (v) completion of the AC wiring; (vi) interconnection to the distribution system; and (vii) the final associated equipment testing.

Site Access and Equipment Delivery

Transportation routes for site access and equipment delivery will generally include: Interstate 89 and/or 91; State Routes 132 and 5; local roads Mine Road and Tyson Road; and existing Elizabeth Mine access roads. The Project will be accessed via an existing access road on the west side of the Elizabeth Mine site off of Mine Road, *see Attachment B*. EMS anticipates reinforcing portions of the on-site access roads, and may need to install small segments of additional gravel access roads on the site to complete construction and facilitate equipment delivery. No excavation will be required for Project site access.

The solar panels and components of the racks will be shipped on pallets, typically delivered by standard tractor-trailer truck. EMS expects approximately 36 truckloads of panels, 240 truckloads of other structures, and 150 truckloads of miscellaneous electrical materials. To protect the cap, the equipment will be off-loaded from tractor-trailers onto low ground pressure vehicles to be transported from the access roads onto the cap.

Construction equipment for installing the solar array will likely include a light duty crane or similar equipment to lift ballasts, racking systems, and panels into place. For work on the cap system, only low ground pressure equipment will be used. All equipment and material including wire, cable, conduit, etc., will be transported to the site with standard-width trucks. No oversized loads are anticipated.

II. Project Benefits

EMS will result in economic, environmental, and local community benefits.

In terms of economics, primarily the Project will convert unused and essentially untaxed land into a source of revenue for the State and the Towns. Pursuant to the Vermont Uniform Capacity Tax on operating solar plants with a plant capacity of 50 kW or more, a tax \$4.00 per kW of plant capacity will be levied on the site. With a current estimated nameplate capacity of 4.99 MW, the Elizabeth Mine Project is expected to generate annual property taxes of \$20,000 to the State of Vermont, or \$600,000 over the expected 30-year life of the Project. For the Towns, Vermont law requires that a solar plant be valued using the discounted cash flow method as described in 32 V.S.A. § 3481(1)(D) and designated by the Department's Division of Property Valuation and Review. Dependent on the outcome of the final property valuation, the Elizabeth Mine Project is expected to pay between \$10,000-\$30,000 per year in aggregate local property tax to the towns of Strafford and Thetford, or \$300,000-\$900,000 over the 30 year life of the Project.

As part of the project, Elizabeth Mine will assume obligation for the operation and maintenance ("O&M") of those portions of the Superfund cap that are within the solar project areas. This assumption of responsibility will result in annual savings for the State of Vermont, which otherwise would be responsible for O&M costs associated with maintaining the cap in these areas.

The Elizabeth Mine Site is located in a rural area with limited transmission capacity and connectivity. While there are nearby power lines suitable for residential needs, the Project will require substantial interconnection upgrades to allow the transmission of power from the site to the Sharon substation. These infrastructure upgrades will be paid for by the Developer, but will be available for use to address any future electric demand growth in the area, or may be used by other distributed generation projects proposed in the area in the future. The final decisions about the necessary upgrades can be made only after Green Mountain Power finishes its system impact study for this project, but these upgrades are currently expected to include replacing an existing 3.75 MVA transformer with a 7.5 MVA transformer and upgrading up to approximately 4 miles of distribution line along the existing corridors of utility lines on Mine Road and from the Sharon substation to the intersection of Route 232. These infrastructure investments will be available to the area when the Project is constructed and they will remain even after the Project's useful life.

EMS is also seeking to employ Vermont consultants for the development work and, where commercially feasible, purchase Project equipment from Vermont companies and employing Vermont businesses for construction and installation work.

The Project has unique benefits for a solar project as there are clear environmental values in siting solar arrays on an already disturbed brownfield site instead of non-impacted greenfield site. Vermont has considered policies to expressly incentivize development of solar on brownfields. Although no specific legislative policy exists at this time, development on a brownfield site (such as the Elizabeth Mine site) will reduce the potential loss of prime agricultural lands, productive forests, wetlands and/or other environmental resources. Additionally completion of the EMS Project will return unproductive land to economically valuable use. The construction of a solar array on the Elizabeth Mine Site repurposes a closed and capped contaminated site that would otherwise remain dormant.

The Project will also provide a new source of in-state distributed generation that will assist GMP in meeting obligations under Vermont's new Renewable Energy Standard (RES), which is a continuation of the state's long-standing commitment to the development of in-state renewables. In June 2015, H.B. 40 was enacted, requiring utilities to obtain 55% of their annual retail electricity sales from renewable resources by 2017 and 75% by 2032. Part of the new RES program also requires utilities to obtain a percentage of power from in-state distributed generation (DG), starting at 1% in 2017 and increasing to 10% by 2032. The Elizabeth Mine solar facility will meet the definition of in-state DG, as it is under 5 MW.

Given the high renewable energy standard set by the State, which will require utilities to increasingly source renewables as part of their energy portfolio, along with the pressure to building solar in previously developed areas, the Elizabeth Mine Solar Project will be an ideal, utility scale,

distributed energy source for Green Mountain Power that will meet all of the State's energy generation and siting initiatives.

The solar energy produced by this Project will result in less electricity needed in the New England region from plants that use fossil fuel or nuclear energy. It will produce no emissions in generating power and thus will help in a small but measureable way to reduce global warming, acid rain, ozone depletion, and the negative public health effects associated with fossil fuel and nuclear energy production. The Project is estimated to produce 8,844,000 kWh of energy in its first year. Using the "Greenhouse Gas Equivalencies Calculator" on EPA's website, this equates to CO₂ emissions offsets from 686,215 gallons of gas or 14,182 barrels of oil consumed. According to the DOE's National Renewable Energy Lab (NREL), the project will offset approximately 6,190 tons of carbon annually.

Finally, in terms of the local community, EMS will be working with the local historical societies and schools to implement new learning opportunities about the site's history and renewable energy.

III. Preliminary Impact Assessment

Based upon preliminary assessment of conditions at this site, as well as work on other solar projects, the Project has been designed so that it will not cause undue adverse impacts to environmental resources, public health and safety, or aesthetics. EMS is using a team of environmental and energy experts with substantial experience in projects of this type. This team is conducting a thorough review of the existing resources in the area, the Project's potential impacts, and any mitigation measures that may be needed to reduce those impacts. EMS will take steps to appropriately mitigate identified any impacts. At this stage of Project development, preliminary assessments of the site conditions relative to the Project plans show the following:

- The Project will not involve the clearing of existing trees.
- The Project will not require grading.
- Initial preliminary investigation into the area suggests that there are no outstanding resource waters, headwaters, floodways, stream, shorelines, rare/endangered plants, significant natural communities, or critical wildlife habitat have been identified in the footprint of the solar project – which will be constructed solely on the cap system at the Elizabeth Mine. Detailed investigations of natural resources within the site and the vicinity will be conducted prior to submission of a petition for a Certificate of Public Good, and EMS will take all appropriate measures to minimize any impacts to natural resources.

- The Project is designed to meet the safety standards of the National Electrical Code, National Electric Safety Code, and utility interconnection standards for safe and reliable operation of solar electric plants.
- The Project will require no new municipal services and will not pose undue burdens on town fire, police, or water/sewer services. The Project will not impact the ability of the town to provide educational services.
- Green Mountain Power will complete a System Impact Study. EMS anticipates that approximately two miles of existing single-phase electrical lines will be upgraded between South Strafford and the Project site, in order to provide three-phase power to the Project. The lines will remain in their current location along Mine Road, existing utility poles will be used to the extent possible, but there may be a small number of existing poles along Mine Road that will require replacement or relocation. It is currently anticipated that a new 7.5 MVA transformer will be installed to replace an existing 3.75 MVA transformer at the existing Sharon substation. The System Impact Study may also indicate that approximately two miles of distribution line between the Sharon substation and the Route 132 intersection will need to be replaced along the existing utility line corridor.
- No significant visual impacts have been identified and a full aesthetics analysis will be included with the Petition. The preliminary visual assessment conducted by SE Group is included as *Attachment D*.

IV. Assessment of Alternatives (as required by PSB Rules)

The Project has been specifically designed to make productive reuse of the Elizabeth Mine Site, which has previously been identified by the U.S. EPA's "Repowering America" initiative. The "Repowering America" initiative encourages renewable energy generation through the redevelopment of brownfields and contaminated sites. The Elizabeth Mine is currently listed as a target site because the EPA identified it as an ideal location to develop renewable energy. The Project aligns with the EPA's "Repowering America" initiative through the development of solar energy on a former mine and current Superfund site. The Project provides an ideal, safe, and sustainable reuse for the contaminated land. Due to the unique purpose of this Project and its alignment with the "Repowering America" initiative, no alternative off-mine sites were evaluated.

EMS has designed the facility to minimize and avoid environmental, aesthetic, or other impacts while maximizing energy output. The result is a proposed configuration that utilizes a low-impact mounting system and locates the solar array on the capped area of a brownfields site to limit impacts to other environmental resources.

V. Expected Petition Filing Date with Vermont Public Service Board

EMS intends to file a Section 248 Petition and supporting materials with the PSB soon after the 45-day notice period expires, which will be in early September 2015, or earlier if the appropriate governmental entities waive the 45-day period. Once the Petition is filed, EMS expects to request the Board to schedule any hearings and other necessary steps in the proceedings in time to render a decision by winter of 2015 or early spring of 2016. This schedule will allow for the Project to be constructed and operational by October 1, 2016.

VI. Local and Regional Planning Commissions' Comments to the Vermont Public Service Board

Under state statute—Section 248(f) of Title 30—the town and regional planning commissions “shall make recommendations, if any, to the Public Service Board and to the petitioner at least 7 days prior to filing of the petition with the Public Service Board.” In addition, the planning commissions are entitled to provide revised recommendations “within 45 days of the date on which petitioner has filed a petition with the Board if the petition contains new or more detailed information that was not previously included in the petitioner’s filing with the municipal and regional planning commissions pursuant to Section 248(f).” See Board Rule 5.402(A)(2).

For additional information regarding this process, including your planning commission’s right to participate in the Board proceeding, please refer to the “Citizens’ Guide to the Vermont Public Service Board’s Section 248 Process,” which can be found by navigating to <http://psb.vermont.gov/statutesrulesandguidelines/guidelines> and clicking on the Guide’s link under the heading, “Participation in a Section 248 Proceeding.”

VII. Waiver Process

EMS wishes to advise you that under Public Service Board Rule 5.402(A), you have the right to waive the 45-day notice period. Given the environmental and economic benefits associated with this Project, its minimal impacts, and the letters of support that the towns have already provided for the Project, EMS respectfully requests that the municipal and regional bodies waive the 45-day notice period. This would allow EMS to file its Petition with the PSB without needing to wait for the full 45 days, which would allow for an earlier date to install and operate the proposed solar project. Please be advised that even if you waive the 45-day notice period, the Selectboards and Planning Commissions would still have the right to participate in the proceedings before the PSB or to provide the PSB or EMS with recommendations on the Project. EMS is simply seeking to speed up the time to filing by eliminating the 45-day waiting period.

If you are willing to waive 45-day notice, please sign the waiver letter attached to this notice and mail or deliver the same to the PSB, with a copy to EMS, at the following addresses:

Ms. Susan Hudson
Vermont Public Service Board
112 State Street, Drawer 20
Montpelier, VT 05620-2701

Elizabeth Mine Solar Project
c/o Geoffrey H. Hand, Esq., Elizabeth H. Catlin, Esq.
Dunkiel Saunders Elliott Raubvogel & Hand, PLLC
91 College Street, P.O. Box 545
Burlington, VT 05402-0545

Thank you for your attention to this matter. We look forward to progressing through the Section 248 process and welcome your input and suggestions to make this a successful project. If you have any questions or wish to discuss the Project, please feel free to contact Ron Kelly at rkelly@brightfieldsllc.com or (781) 772-2869.

Sincerely,



Geoffrey H. Hand, Esq.
DUNKIEL SAUNDERS ELLIOTT RAUBVOGEL & HAND, PLLC

Attorneys for Elizabeth Mine Solar I, LLC

cc (by first class mail):
David Mears, Commissioner, Vermont Agency of Natural Resources, Department of
Environmental Conservation
Geoffrey Commons, Director of Public Advocacy, Vermont Department of Public Service
U.S. Environmental Protection Agency