



## Martha's Vineyard Commission

### Concurrence Review #1-2020 OB Landfill Solar Facility MVC Staff Report – Updated 2020-04-16

#### 1. DESCRIPTION

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- 1.1 **Applicant:** Greenskies Renewable Energy (Siva Thashnath); Bradley Parsons & Jin Tao (All-Points Technology Corp.); Liz Argo (Cape & Vineyard Electric Cooperative, Inc.)
- 1.2 **Project Location:** 16 Pennsylvania Avenue; 347 County Road; 0 Byron Ave; 61 Vespar Ave; 16 Vespar Ave; 48 Vespar Ave, Oak Bluffs. (Map 29, Lots 155; 156; 157; 161; 164 & 165, respectively). Approximately 58.6 acres.
- 1.3 **Proposal:** Construction of 3,536 ballast mounted solar panels and associated electrical equipment on the capped Oak Bluffs Landfill.
- 1.4 **Zoning:** R3 Residential; Wireless Communication District; Water Protection Overlay District
- 1.5 **Local Permits:** Site Plan Review; ZBA Special Permit and/or Variance; Building Permit
- 1.6 **Other Permits:** FAA approval; Mass DEP Post Closure Use Permit
- 1.7 **Surrounding Land Uses:** Oak Bluffs Transfer Station; Farm Neck Golf Club; R3 Residential; R1 Residential

#### Project Summary:

- Installation of approximately 5 acres of solar panels on capped landfill.
- Proposal is located over several parcels and two paper roads all owned by the Town, Town is considering them as one parcel.
- Project awarded to Greenskies through a Town RFP with Cape & Vineyard Electric Cooperative.
- Panels will generate approximately 1.32 megawatts of DC power; 1.0 mw AC.
- Panels oriented to maximize output of the site without modifying the topography or tree coverage.
- Will act as a virtual metering plant supplying the Town with green power credits quantified as \$180,000 per year in savings.
- Two Sungrow-Samsung self-contained inverters/batteries will be installed in the electrical equipment area on site south of the OB Transfer Station building.
- The eastern cluster of panels is proposed to be within the 50 ft setback required for solar infrastructure; applicants are seeking permission from the OB ZBA.
- No disturbance of landfill cap or existing vents; panels are mounted on above-ground cement block, cables are also above ground, laid in trays instead of buried. Applicant is applying for a Post-Closure Use Permit with MassDEP.
- No removal of existing trees proposed. Applicants propose to plant grass and maintain it by mowing twice per year.
- Applicants familiar with process: also developed Tisbury and West Tisbury's capped landfill solar arrays; proposal has the same type of racking style and PV array as the other projects.

#### 1.8 Staff Notes:

##### Drainage:

- Applicant has designed the PV arrays to not impact the existing drainage systems on site
- 2-3" of fill will be placed on geotextile fabric to establish road base for heavy equipment driving up slopes to prevent erosion.

- Porous stone will be placed around cement footings for leveling.

**Visual Impact:**

- The FAA determined that a glare study would not be necessary
- Applicants have not yet conducted a viewshed analysis, but are able to
- It is likely that at least some of the PV arrays will be visible from County Road, and possibly from Beach Road

**Battery/Electrical:**

- Applicants propose to install two Sungrow-Samsung inverters/batteries house the inverters and batteries together is a self-contained system
- Batteries will not be used to power the site, only to provide basic grid stability
- Compliant with UL 9540 and UL 9540A standards
- Equipped with waterless FM 200 fire prevention system
- Electrical equipment will be located off the landfill cap beside the transfer station and will be fenced
- Conduits will be above grade due to landfill requirements

**Height:**

- The height restriction for the R3 Residential District is 32 feet. The PV arrays will be an average of 10 feet above grade

**Landfill Cap:**

- Post-Closure Use Permit required from Mass DEP
- Applicants are experienced developing solar arrays on capped landfills
- Proposal does not disturb existing cap; infrastructure is all above ground

**Parcels:**

- Applicants taking Town's lead on how to handle the issue with the multiple parcels and abutting lot owned by Stephen Burke (29-162)