Vliet Farm Rd Solar Project

Bethlehem Township
August 2019

About Us

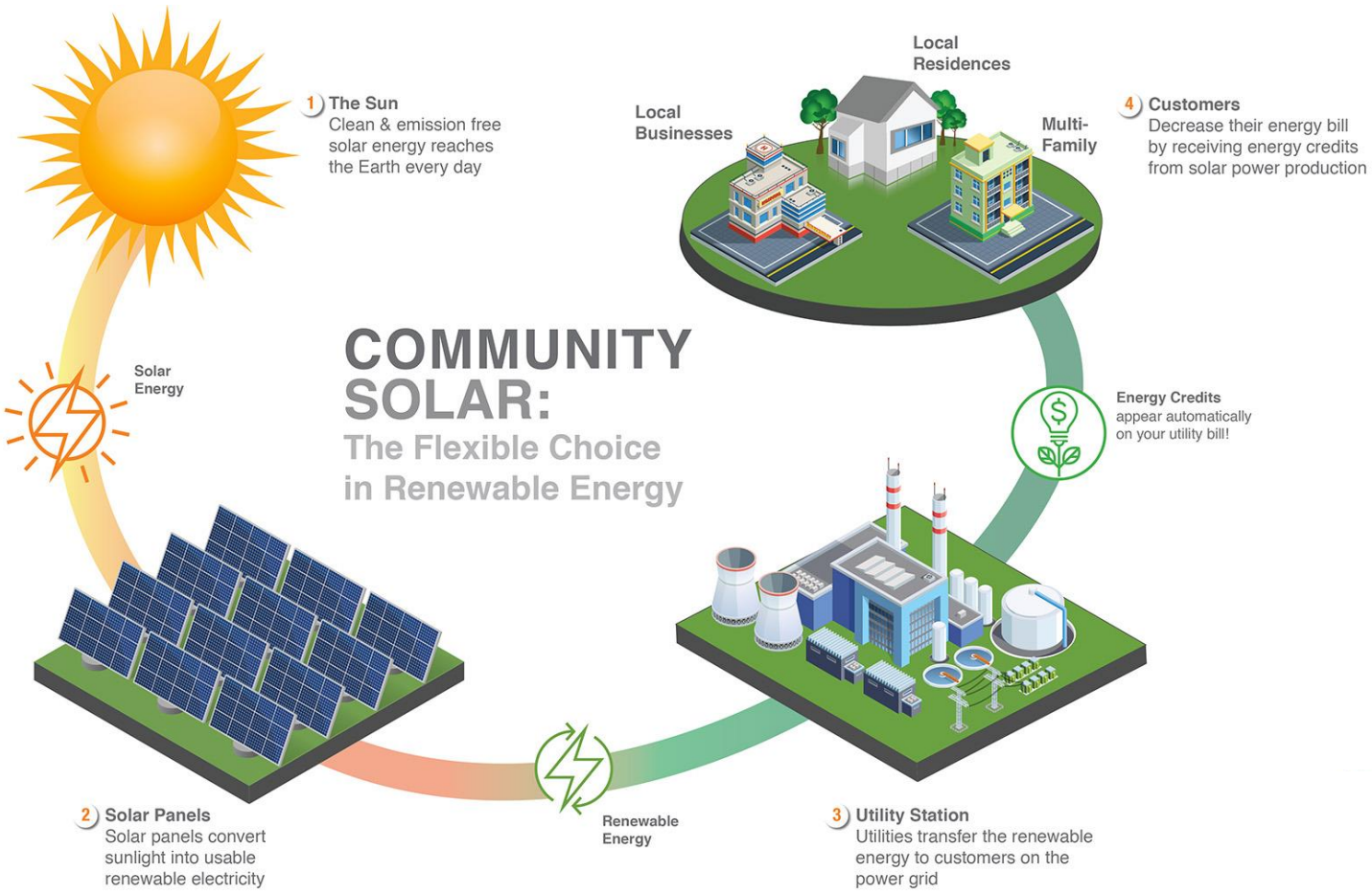
Solar energy is the gateway to our future for generating renewable energy. Every second, the sun produces enough energy to sustain Earth's needs for 500,000 years.

Summit Ridge ENERGY

Renewable Energy Through Responsible Development

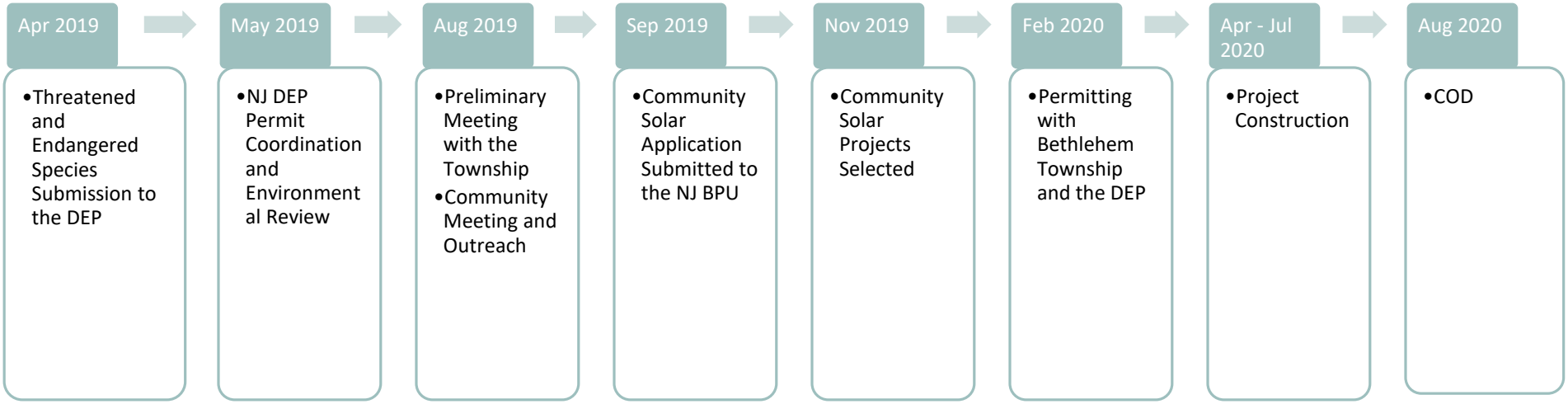
The Summit Ridge team is comprised of renewable energy veterans who have developed hundreds of megawatts of solar projects across the U.S.

Community Solar Projects



NJ Community Solar Program

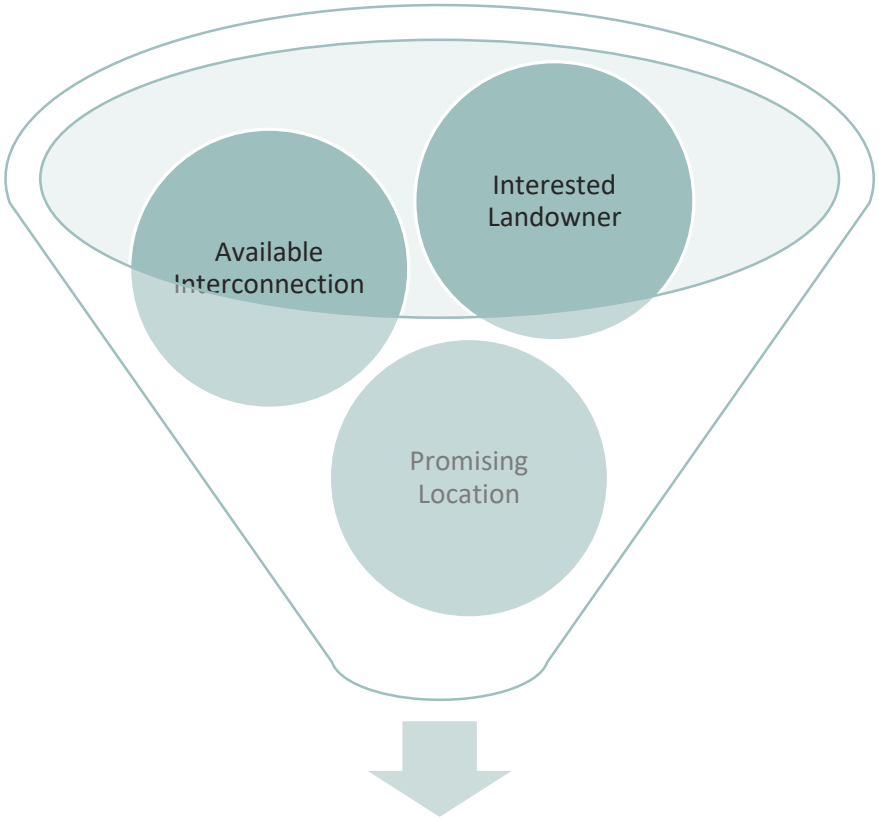
- 75 MW program for 3 years; 20.62 MW in Jersey Central Power & Light
- 40% low to moderate income offtake
- Criteria – Siting, Community and Environmental Justice Engagement, Subscriber Type, Geographic Limits



Benefits of Community Solar Projects

- Provides 400 local homes with low cost clean energy
- Harmonious with rural/agricultural character and existing infrastructure
- Land can be readily reused for agricultural purposes in the future
- Protection against soil erosion and sedimentation
- Quiet
- Low traffic impacts
- Creates local jobs

Step 1: Site Selection



Potential Site Location

Step 2: Potential Site Location

Site selection takes into account many factors including:

- Community character
- Zoning/local ordinances
- Site visibility/visual impact
- Glare/reflection
- Environmental constraints
  - Soil depth and character
  - Wetlands/waterbodies
  - Endangered/protected species
  - Flood plains
  - Archaeological resources

Step 3: Environmental Constraints

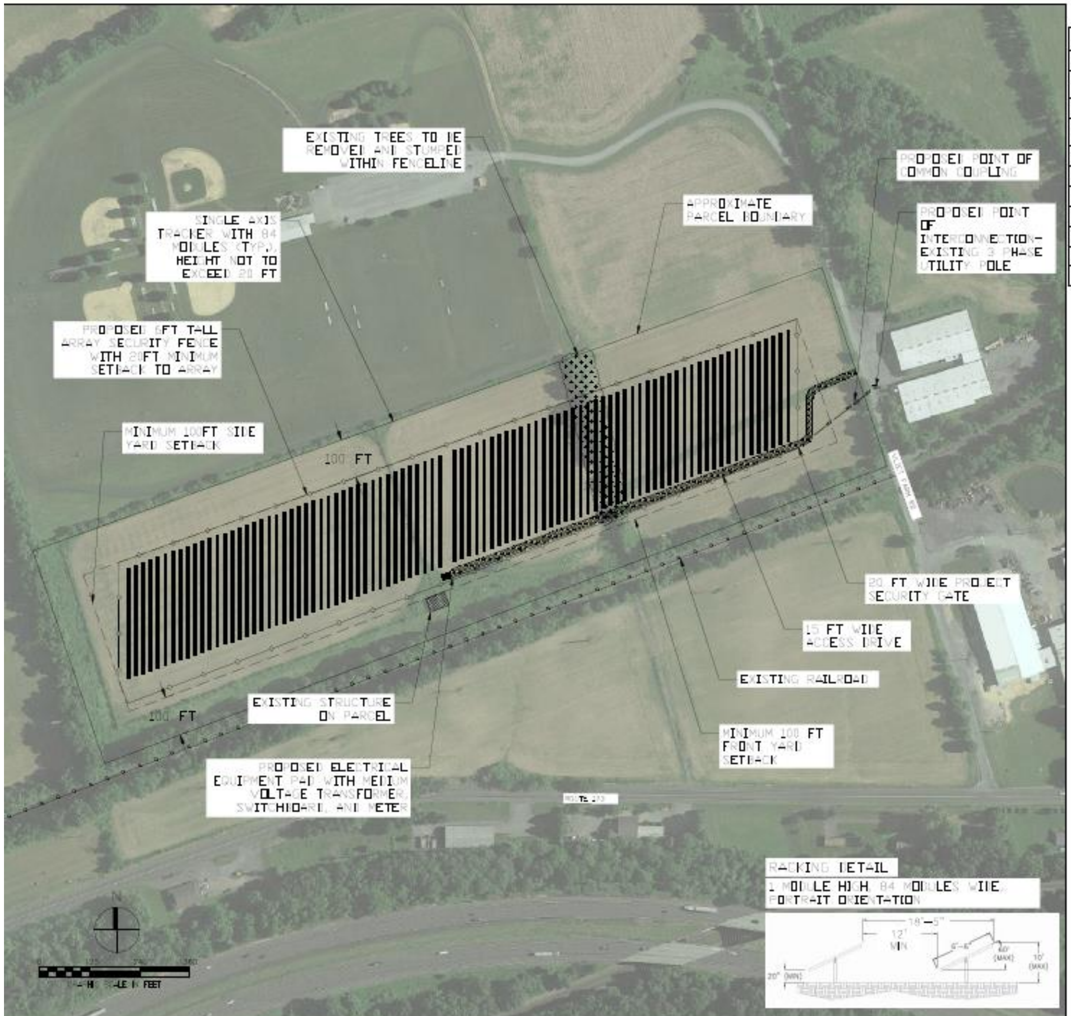
Summit Ridge ENERGY

State of New Jersey
Department of Environmental Protection

Methods Include:

- Site Suitability Assessment
- Constraints Mapping
- Site Survey & Topographic Mapping
- Phase I Environmental Site Assessment
- Consultations with County, State and Federal Agencies
- Glare Analyses

Vliet Farm Rd Proposed Solar Project (2 MWac)



SYSTEM SUMMARY		
MODULE POWER	375	WATTS
TOTAL QUANTITY OF MODULES	7476	MODULES
MODULES PER STRING	28	MODULES
TOTAL QUANTITY OF STRINGS	267	STRINGS
TOTAL INVERTER CAPACITY	2000	kWAC
TOTAL DC POWER RATING	2803	kWDC
GCR	34.8199	%
OCCUPIED ACRES	13.34	ACRES
LOT SIZE	26.00	ACRES
LOT COVERAGE	51.00	%
PROPOSED TREE CLEARING	0.02	ACRES

CONCEPTUAL DESIGN
NOT FOR CONSTRUCTION

No.	Revision/Issue	Date
B	UPDATED FOR TOWN MEETING	
A	CONCEPTUAL SITE PLAN	

VILAHOMAT SOLAR
7 VLIET FARM RD
ASBURY, NJ 08802

VILAHOMAT SOLAR
7/29/2019
1 IN = 125FT
C01
CONCEPTUAL SITE PLAN

Panels and Racking

Individual panels are typically 3.5 feet by 6.5 feet and joined together on single-axis tracking systems to provide optimal energy output.

Access and Utility Poles

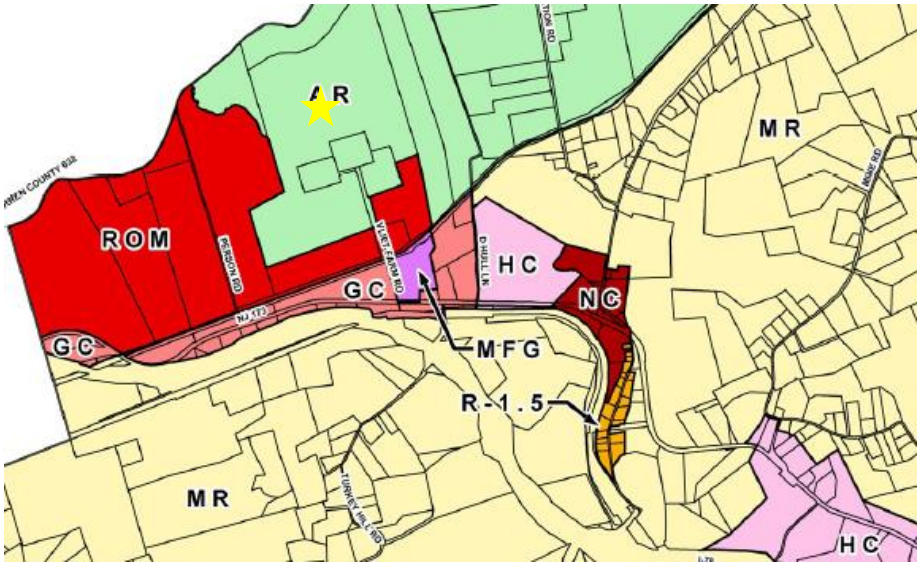
An approximately 15 foot wide compacted, gravel access road.

Responsible Solar Design

Compliance with Regulations	Land Value	Community Character	Public Convenience	Drainage and Utilities	Health and Safety

Zoning Regulations

- According to the Bethlehem Township zoning map, this parcel zoned Research, Office, Manufacturing.
- Conditional Use Permit and Highlands Exemption will be required



Land Value

National Renewable Energy Laboratory:
“the impacts on property values caused by solar farms are anticipated to be negligible”

Community Character: Landscaping and Design

- Clean, renewable solar energy (enough to power ~400 local homes)
- Low profile panels are typically lower than mature corn stalks
- Simple pile-driven post/rack design does not require cement
- Security fencing with gate
- Removable gravel access road
- String Inverters to reduce cement pads
- Planting of restorative, local vegetation is beneficial to the soils
- Pollinator or nutrient rich plant blends can be used to increase future farm production
- Utilizing local labor for construction and operations

Community Character

- Flat farmland
- Vliet Farm Rd and other industrial facilities to the east
- Railroad to the south
- Natural tree buffer provides screening to adjacent properties

Noise

- Solar panels themselves are quiet – no central inverter
- ~35 decibels at the fence line = soft whisper
- As reference:
  - Average ambient noise in residential areas is 45 decibels.
  - Average ambient noise in locations adjacent to highways is 80 decibels.

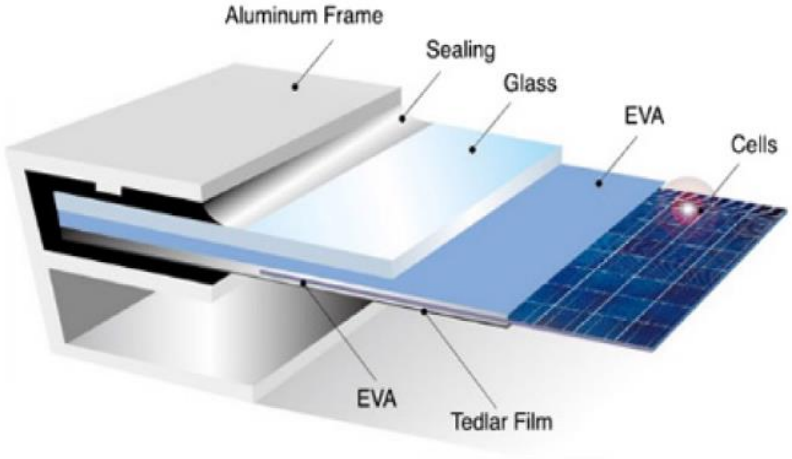
Drainage and Soil Erosion

- Year-round vegetation cover provides protection against soil erosion and flooding
- The Stormwater Pollution Prevention Plan (SWPPP) includes controls to account for 1-year, 10-year, and 100-year rainfall events
- Use of local perennial plants condition the soil to readily accept water from rainfall events - special pollinator blends will be used to create habitats

Year-round vegetative cover stabilizes the soil

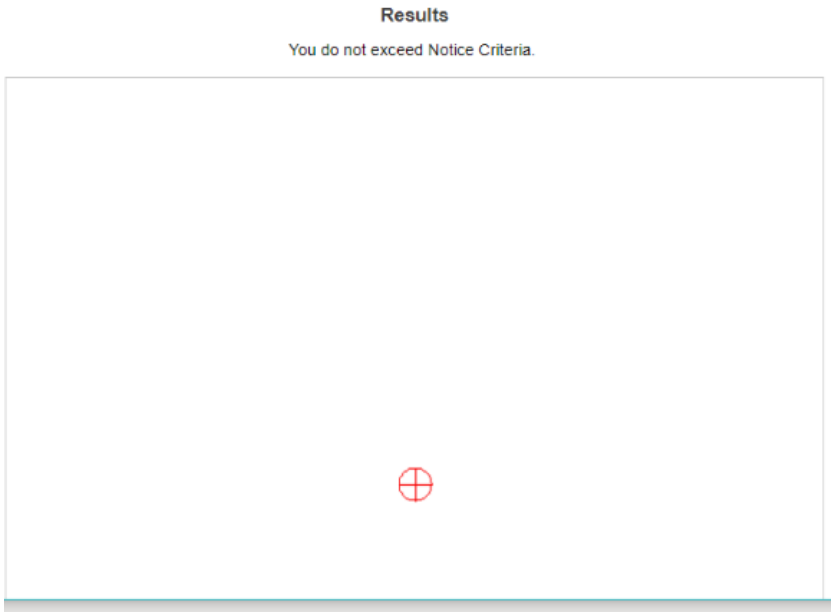
Health and Safety – Solar Panels

- PV panels are made of glass, glue, aluminum, copper, and wiring.
- PV cells are protected from air and water between two layers of plastic and tempered glass. Lead-free soldering is now used.
- The same tempered glass and plastic have been used for decades in car windshields.
- Materials will be recycled at the end of their life span
- Perimeter fencing and proper site security will be installed.



FAA Screening

- Solar panels are smooth glass surface material with an anti-reflection coating (ARC).
- FAA Screening showed that notice criteria was not exceeded, and therefore there are no nearby navigational systems affected by the project.



Natural Resource Protection

- Consultation with the United States Fish and Wildlife Service and New Jersey DEP – no anticipated impacts
- No significant impacts on T&E species – land is cleared
- No wetlands on site

How can I get involved?

- Sign up to receive electricity from our community solar project
- Write a letter of support for this project
- Post a sign-up sheet for your community group
- Questions/comments


Summit Ridge
ENERGY