Rippon Energy Facility, LLC

Jefferson County, West Virginia

Presented to the Planning Commission

November 15, 2022





Rippon Energy Facility

Torch Clean Energy Overview

Founded in 2008, Torch Clean Energy is an experienced renewable energy developer with extensive experience developing, permitting, designing and building solar and wind projects.

- Over 500MW of Torch development projects are now in operation.
- Nine projects representing under development in Virginia and West Virginia, including:
 - Bartonsville Solar (Frederick County, VA)
 - Bedington Energy Facility (Berkeley County, WV)
 - Chester Solar Technology Park (Chesterfield County, VA)





- Offices in Boulder, CO and Charlottesville, VA
- Manage projects from start (site identification and landowner outreach) through construction and operation.
- Since 2013, we have maintained ownership in operating projects (excluding select projects with small electric cooperatives).



Core Expertise & Development Philosophy



With a focus on cost-effective, smart and responsible renewable energy development, Torch matches optimal site selection and project design with efficient permitting and low-cost financing to produce the highest-quality, lowest-cost projects for its partners and community stakeholders.



Community Outreach



In addition to meeting with project neighbors, Torch has been partnering with organizations in Jefferson County and the Eastern Panhandle for the last three years.



Presentation to JC Boys & Girls Club



Solar Project Components



Fencing and Panels

Inverter/Transformer Unit



Solar Operations and Maintenance

- Remote monitoring used to check production
- Interconnection Equipment allows for remote shutdown of Project if necessary
- Fencing and cameras used to provide security
- Mowing and vegetation control







Sheep grazing at Torch's Red Horse Solar Project <u>Click here</u> on PBS



Rippon Energy Facility Location





Concept Plan (Sheet C3.0)



Rippon Energy Facility Summary

- 99 Mwac Solar Generation Facility
- Will connect to the existing Potomac Edison 138 kV overhead transmission line
- Comprised of land both within and outside of the Urban Growth Boundary (UGB)
- There will be four noncontiguous panel arrays (three of which subject to CUP) with underground utility lines connecting them to the point-of-interconnection.

WITHIN URBAN GROWTH BOUNDARY	LAND USE APPROVAL	PARCELS	PARCEL ACREAGE	FACILITY AREA	SETBACK AREA	PROJECT AREA
Yes	Principal Permitted Use	2	140.93	91.67	22.90	114.57
No	Requires Conditional Use Permit (Approved by BZA 10/27/2022)	7	1,206.70	633.42	102.96	736.38
		9				850.95



Compliance with County Ordinances

- Applicable Zoning: Rural District in and outside the Urban Growth Boundary
- Complies with and exceeds setback requirements
- Complies with other specific requirements and recommendations
 - Ground Cover and potential habitat for grassland birds, continuing agricultural operations
 - Anti-reflective panels, fencing
 - Interconnection studies and agreement with Transmission Owner
- Complies with Section 22.504 Protection of Resources, A. Hillside Development of the Subdivision and Land Development Ordinance



Project Exceeds County's Standards

The Project exceeds the County's landscaping requirements and offers additional conditions based on best practices and discussions with project neighbors

- Significant landscaping along 100-foot setbacks;
- Maintenance of existing vegetation
- Additional setbacks for inverters
- Best practices to control invasive species
- Limited construction hours

All construction that produces noise beyond the surroundings of the Facility shall be limited to between the hours of 7:00am and 6:00pm Monday through Friday and between 8:00am and 2:00pm* on Saturday. The driving of piles shall only occur between 7:00am and 5:00pm Monday through Friday and 8:00am to 1:00pm on Saturday.

* BZA reduced the construction hours on Saturdays as a condition of their approval.



Operating & Decommissioning Outline

Construction of Facility will begin within 18 months of issuance of Conditional Use Permit and its Operating lifespan is 30-40 years.

Decommissioning: The Project will adhere to the decommissioning requirements of the West Virginia Wind and Solar Energy Facility Reclamation Act establishes, in Article 32 of Chapter 22 of the Code of West Virginia (§22-32-1 through (§22-32-8).

- Decommissioning activities include:
 - Equipment Dismantling & Removal (of PV Arrays, Substation, Access Roads, all underground wiring and racking, etc.)
 - Site Restoration
 - Managing Excess Materials & Waste (anticipated methods per material below)

MATERIALS	METHODS		
Concrete Foundations	Crush and recycle		
Solar Panels	Reuse or recycle		
Metal racks and mounts	Salvage/recycle		
Steel piles and rack foundations	Salvage/recycle		
Wiring and cabling	Recycle/salvage		
Inverters, transformers, and breakers	Salvage/recycle/reuse		
Granular material	Reuse/dispose		
Fence steel	Salvage/recycle		
Project Substation Controls	Dispose/reuse		



Additional Requirements (Section 8.20.C.4)

- Following Conditional Use and Concept Plan Approval, the Project will process Stormwater Management through Jefferson County and West Virginia...
- The Project will meet all General Requirements listed in Section 8.20.F, including but not limited to:
 - Design, construction and installation shall conform to applicable industry standards (ANSI, UL, ASTM or equivalent) and shall conform to WV Fire & Building Codes, including the Jefferson County Code;
 - Providing documentation of interconnection agreement or equivalent in advance of transmission of electricity;
 - Internal wiring, excluding that which is on or between the Solar Arrays, connected to substations, shall be located underground, except where necessary to mitigate impact to environmental or terrain features
 - ✓ Use of panels with **anti-reflective glass**
 - Natural vegetation groundcover, including native, pollinator-friendly species where possible*
 - Repair, replacement, or removal of damaged and unusable panels within 60 days from discovery of damage, unless exception approved by County*

*Supplemental conditions exceed these requirements.



Landscape Buffers (Sheet C4.0)



Landscaping & Buffering (Section 8.20.C.3)

- Though not required with 100-ft setbacks, the Project's application proffers supplemental vegetative buffers along many rights-of-way (Kabletown, Myerstown, Dutch Hill) and residential property lines.
- Pollinator-friendly native grasses will be seeded in these vegetative buffers that will encompass much of the Project.





Visual Simulation (Dutch Hill)





Visual Simulation (Dutch Hill)





Visual Simulation (Kabletown Road)



Visual Simulation (Kabletown Road)



Landscaping & Buffering – Pending Neighbor Modifications

• As noted in our BZA hearing, some Project neighbors are requesting modifications to the landscaping and buffering proposed near their homes.





Groundcover Planting

- The entirety of the Project area will be seeded with a native low-grow grass mix that is both pollinator-friendly and resilient.
- The ground clearance of the PV panel models and spacing between rows provides ample conditions for growth of these species.
- We will use a mix like what has been used on our project in nearby Frederick County, Virginia – shown below:

NATIVE LOW-GROW GRASS MIX							
Common Name	Scientific Name	Average Height (Inches)	# PLS/acre	PLS/sq ft	% of Mix		
Creeping Red Fescue Festuca rubra		18	1.7	20	25%		
Sideoats Grama	Bouteloua curtipendula	18	1.8	8	10%		
Prairie Junegrass	Koeleria macrantha	12	0.3	16	20%		
Virginia Wildrye	Elmymus virginicus	24	6.5	12	15%		
Upland Bentgrass	Argostis perennas	18	0.04	8	10%		
Ladino Clover	Trifolium repens	10	0.4	8	10%		
Partridge Pea	Chamaecrista fasciculata	12	5.6	8	10%		
Total			16.5	80	100%		



Project Benefits

Boost to Local Economy

$\overline{\times}-$	X
	(%)

- Project will require up to 300 construction jobs, and local vendors and service providers are preferred when feasible.
- Applicant will hold Local Job Fair prior to meet local workers, vendors, and suppliers.



Revenues to County

 Project will contribute significant revenues to the County over the life of the Project



Temporary / Complementary Land Use

- Solar Sites are large meadows that can grow pollinator-friendly vegetation or be used for sheep grazing.
- Additionally, the projects are not permanent uses of the land, and the site can be returned to farming after decommissioning.



Site Studies & Permitting

Permits

- Jefferson County CUP
- Jefferson County Concept Plan
- Jefferson County Stormwater Management
- Jefferson County Zoning Certificate
- West Virginia Public Service
 Commission Solar Siting Certificate

Studies

- Environmental / T&E Species
- Historical / Cultural Resources
- Wetlands
- Interconnection Studies



Rippon Energy Facility Location



