

Norman E. Dupuis, P.E.
4301 University Boulevard, Dallas, TX 75205
Registration No: ME 40921

RE: Removal Cost Estimate
For a Proposed 3.37 MW (AC) Solar Facility
Owned by the Clean Energy Collective, Inc
Located at Clemence Hill Rd, Southbridge, MA

18 Jan 2019

To Whom It May Concern:

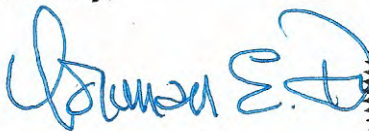
I have been requested by the management of the Clean Energy Collective, LLC, 146 West Boylston Drive, Worcester, MA 01606, to estimate, at today's dollar rates, the overall future cost of removing the proposed 3.37 MW (AC) Solar Facility that the Clean Energy Collective is planning to install at Clemence Hill Rd, Southbridge MA.

My qualifications for making such an estimate include twelve years of experience in the Solar Power Industry, beginning as a Project Manager in 2006, continuing as Regional Operations Manager, and, presently, as an Independent Solar Consultant. I have been a registered Professional Engineer (Mechanical) in California since 1975, and in Massachusetts since 1998.

I have reviewed the Solar Facility design, and the equipment to be provided by the Clean Energy Collective (CEC), and worked with CEC personnel to develop a coordinated plan for decommissioning and removing the Solar Facility from its site. Said decommissioning and removal are to be carried out in accordance with the Town of Southbridge Zoning Bylaws, Article 8.5, "Solar as of Right" (November 5, 2018), at the end of the Solar Facility's effective life, when its use will be discontinued, expected to be approximately 20-25 years after installation. This "Decommissioning Plan" is attached hereto.

Our estimate for removing the Solar Facility following the attached Plan, in 2019 dollars, is \$195,210, and we have included a proposed Surety Bond and a mechanism for accounting for removal cost increases due to inflation, per Bylaw §8.5.8(B). Tasks to be carried out are listed in the Plan.

Sincerely,



Norman E. Dupuis, P.E.



Attachment: DECOMMISSIONING PLAN for "Southbridge PV,"
located at Clemence Hill Rd, Southbridge, MA

DECOMMISSIONING PLAN FOR THE
“SOUTHBRIDGE PV FACILITY”

LOCATED AT CLEMENCE HILL RD, SOUTHBRIDGE, MA

Use of the Solar Facility (which is a “Commercial Ground-Mounted Solar Photovoltaic Installation,” per Southbridge Bylaw §8.5.2), will be discontinued at the end of its effective life, expected to be approximately 20-25 years after installation. At that time Clean Energy Collective, LLC, or the Owner of Solar Facility, will be responsible to physically remove the Solar Facility from the site within 150 days from the effective discontinue date. “Physically remove” will include, but not be limited to:

- a) Removal of the solar module frames, supporting structures, foundations, electrical equipment and connections, CEC-installed utility poles and overhead transmission lines, all other equipment, equipment shelters and vaults, security barriers and all appurtenant structures from the Solar Facility site,
- b) Proper disposal of all solid or hazardous materials and wastes from the site in accordance with local, State and Federal solid/hazardous waste-disposal regulations, and
- c) Restoration of the location of the Solar Facility site to its natural condition, including stabilization and re-vegetation of the site as necessary to minimize erosion and runoff; the access road and landscaping consistent with the character of the site and neighborhood may remain.

We estimate that the removal work will take 6-8 weeks to complete. Inverters, Transformers, Batteries and Switchgear will be removed from their concrete pads. The electrical equipment will be sold back to the manufacturers or to a recycling facility. The project contains copper, aluminum and other metals that will be recycled. Racking materials and fencing will be pulled from the ground and folded for transport. The Owner of the Solar Facility will be responsible for all decommissioning costs and will obtain all permits or approvals required by the Town prior to commencing decommissioning work. The estimated cost of decommissioning the project is \$195,210 (2019 dollars, at current Prevailing Wage Labor Rates for Worcester County), per the following table.

Removal Cost Estimate				
Item	Quantity	Rate/ea/day	Days	Amount
Electricians & Laborers (1:1)	8 men	\$484	30	\$116,160
Heavy Equipment Rental	2 units	\$640	20	\$25,600
Equipment Operator	2 men	\$605	20	\$24,200
Debris Container/Disposal	25 ea	\$850	--	\$21,250
Site Repair (grade/seed)	1 Lot	--	--	\$8,000
Total				\$195,210

In order to meet the bonding/security requirements of the Town of Southbridge Zoning Bylaw §8.5.8(B), the Owner of the Solar Facility will post security in the amount of the Removal Cost Estimate, or \$195,210, in the form of a long-term Surety Bond. As the Solar Facility ages, the Owner of the Solar Facility will review the Removal Cost Estimate at five-year intervals and adjust the Estimate for actual inflation that may have occurred during each interval. If as a result of this re-calculation the Estimate increases, said Owner will increase the bond amount accordingly. Upon completion of removal and restoration work in accordance with this Plan, any funds not needed for said work will be returned to the Owner of the Facility.

Plan Date: 18 Jan 2019