

FAQs

(Applicant responses in BLUE)

1. The Sunenergy1 handout states that solar panels have a life of 40 years. Have these panels been manufactured and proven to have over a 40-year operational life or is the 40 years a forecast?

This is a forecast.

2. Do the panels, if lasting for 40 years, degrade and the electrical output drops over time? If so, what percentage of the original design output is left at the 20 year and 40-year point?

Yes. The industry standard for annual production degradation for tier 1 solar panel degradation is estimated at 0.5% per year. Using this degradation calculation, a 20 year old tier 1 solar panel would have a reduction of approximately 10% of its original output. A 40 year old panel is expected to generate approximately 20% of its original output.

3. 170,000 panels are proposed. How many fail in the 1st year and need to be replaced? 5 years. 10 years.

Most tier 1 solar panels come with a 25 year production warranty, so we anticipate that very few will fail within that time frame.

4. One option for the project site at the end of the proposed 40-year life is to return the property back to it's original state. Will Sunenergy1 provide a performance bond to cover the reclamation of the site should Sunenergy1 not be in business 40 years hence?

Yes.

Reclamation should not be at the expense of Hanover County.

Agreed.

5. What guarantee do we have that there will be viable recycling companies at the end of life of this project that can recycle the panels? 325 acres of panels is a lot of panels. How will the recycled materials be used?

There are no guarantees that there will be viable recycling companies in 40 years from now, however with the growing need for renewable solar facilities, we anticipate that there will be a thriving recycling market in Virginia to create a more circular economy for utility scale solar facilities. It's difficult to say what will come of the recycled materials that make up a solar panel. The glass will likely be separated from the frame and recycled. The frame and metals that make up the panel such as aluminum and copper will likely be melted down and reused.