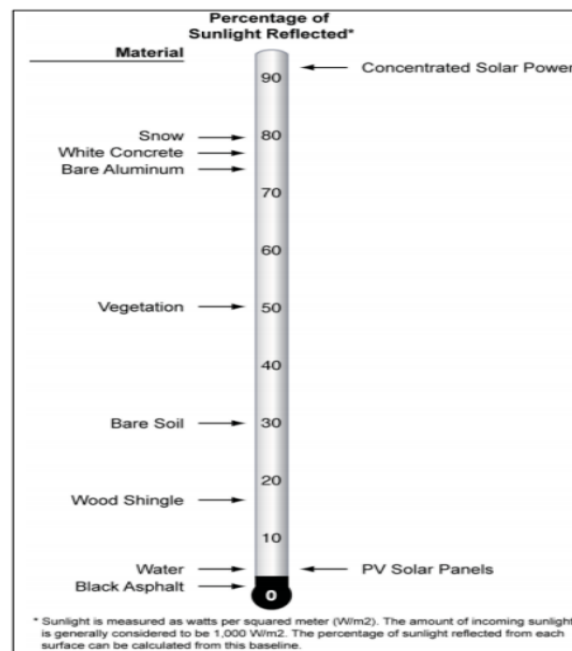


## 12. Glare Study for TNT Howard LLC – 5/16/25

The purpose of the glare evaluation is to determine potential effects of glare on the neighboring roadways and residential/commercial sites.

Solar panels are designed to capture light and convert it to electricity and therefore as shown in the figure below, have a reflectivity/glare approximately 16 times less than grass and 25 times less than snow. As solar panel efficiency improves to convert a higher percentage of the light hitting its surface into electricity, this will further be reduced. These test results were performed by TUV Rheinland using the ISO 9050 standards.

The introduction of bifacial panels with solar cells on the underside of the panel collects sunlight reflecting off the ground, further enhancing energy production and reducing reflectivity from the vegetation. Finally, solar panels have an anti-reflective coating to reduce most of the remaining light coming off its surface.



Additionally the TNT Howard LLC solar location is ideal because of its seclusion. No roadways border the property. No residential or commercial sites exist to the South or West. Additionally, a border of trees exist to the South and West. To the East, an existing 50-60 ft wide tree buffer separate the site from the residential area. To the North, an existing tree buffer plus a planned tree solar site tree buffer performs the same benefit. Additionally, the ground slopes to the South, facing away from the residential area on the North.

Therefore, based on glare studies and this site location, glare is not expected to be an issue and further study is not required.

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