Introduction

Purpose:

This report assesses the potential health and safety impacts of the proposed Morven Solar project. It also seeks to educate readers on the health and safety impacts of PV systems using accurate scientific sources of information.

Overview of Potential Impacts:

The proposed solar PV system is likely to remain in operation at least 30 years, and this report considers its potential impacts in Brooks County from the start of construction onward, including decommissioning of the project and restoration of the land. This assessment considers all aspects of the project but focuses on those unique to solar projects.

Potential Positive Health and Safety Impacts:

Every utility-scale PV project creates a significant reduction in pollution because it produces emission-free electricity that replaces electricity that otherwise would have been largely produced by burning coal and natural gas. Burning these fossil fuels for electricity production is a significant source of air, water, and soil pollution, so reducing their use is a clear public health benefit.

The US Environmental Protection Agency ("EPA") conducted a study across 14 US regions to estimate how much pollution PV systems avoid and how much public health value the resulting cleaner air provides to each region. These experts calculated that based on the sunshine available, the way electricity is currently produced, and the public health impacts of fossil fuel-fired electricity, every kilowatt-hour ("kWh") of electricity produced by utility-scale solar in the "Southeast" region provides o.81 to 1.83 cents of public health benefit.[1] At this rate of benefit, **the Morven Solar project will produce $1.7 to 3.7 million of public health benefits every year**, which could add up to $50 to $113 million over the life of the project. **The public health benefits of generating pollution-free electricity with PV are very significant.**

The positive benefits of PV are widely understood and well documented, so this report will not address them further. Furthermore, the positive public health impacts of the Morven Solar project dramatically overwhelm any negative health and safety risks.

Potential Negative Health and Safety Impacts:

While PV facilities, like any electricity generating facility, provide some potential for negative health and safety impacts, the Morven Solar project does not present any negative health and safety risks specific to its location or technology choice. The only aspect of PV systems that presents risk of physical harm is the potential for electrical shock, arc flash, or fire, which are hazards present with any electrical system and not unique to solar. There are several other aspects of PV systems that often raise public health and safety concerns, but no other aspect of PV systems poses more than an insignficant risk of negative public health or safety impacts.

The Morven Solar project site is located on several parcels that are currently used for a mixture of for crops, timber, pasture, and a small number of rural residences. Where the Morven Solar project is near residential properties, the project provides a 500-ft setback from the center of each house to any solar equipment, which creates significant separation of neighbors from the solar equipment. In addition, views of the project are minimized or blocked entirely with either existing mature trees or a 10-ft tall constructed earthen berm topped with an offset 5-ft tall planted vegetation buffer. This combination of large setback, significant berm, and thick vegetative buffer is extremely uncommon around existing solar facilities and many other land uses. Due to the relatively flat topography of the area, these buffering features will not only physically separate the public from this project but they will also make the facility nearly invisible to passersby and neighbors, which will greatly minimize the dominant potential impact on the community, the visual impact.

[1] US Environmental Protection Agency, Public Health Benefits-per-kWh of Energy Efficiency and Renewable Energy in the United States: A Technical Report. 2nd Ed, May 2021, www.epa.gov/statelocalenergy/public-health-benefits-kwh-energy-efficiency-and-renewable-energy-united-states