

Establishment of Ground Cover (required to close out sedimentation and erosion control permitting)



Operations and Maintenance (24/7 monitoring, vegetation maintenance, preventative maintenance)



Electrical Shock and Arc Flash

Any electricity over 50 volts presents an electrical shock hazard, including the electricity in PV facilities. However, like electrical systems in buildings, the solar facility must adhere to the National Electrical Code (“NEC”) and the equipment must be certified to the appropriate UL safety standards. Unlike buildings, members of the public are restricted from entering a utility-scale solar facility (via a perimeter fence). To help ensure that only qualified people have access to the equipment, the NEC requires a perimeter security fence with electrical warning signs. The lack of public access coupled with the high U.S. electrical safety standards results in effectively no risk of electric shock for the public.

In circuits with significant available fault current there is another electrical hazard, called arc flash, which is an explosion of energy that can occur due to a short circuit. This explosive release of energy causes a flash of light and heat, and creates a shockwave that can knock someone off their feet. The risk of arc flash in a solar facility is no different than the risk at commercial or industrial buildings, except that solar facilities are much less accessible. Equipment with an arc flash risk requires arc flash warning labels, and only trained personnel wearing the proper personal protective equipment are allowed to work on it. Due to the secure perimeter and the high U.S. electrical safety standards, there is effectively no arc flash risk to the public.



Figure 1. Perimeter Fence with Warning Signs