Soitec Solar Facility Fire Safety Requirements
March 2013

The following fire safety features are applicable to Soitec solar electric producing facilities in San Diego County – including Tierra Del Sol, Rugged, LanEast and LanWest. These measures clarify requirements of the San Diego County Consolidated Fire Code and project specific Fire Protection Plan.

Project Design Features

1. **Access:**
    a. Primary access road into the O&M/switch station site and perimeter access road inside the fence shall be 20' wide
    b. Fire apparatus access must be provided to within 150 feet of any site habitable structures (O&M building)
    c. Site driveways (travel ways) will be 12' wide occurring at 600 foot intervals. No facility appliance (including trackers, inverters) will be more than 300 feet from one of these fire apparatus driveways.
    d. Turnouts (30' long pullouts with appropriate taper on each end) will be provided along each site "driveway", spaced about every 400 to 600 feet. Turnouts can be eliminated with permission of the fire marshal if sufficient technical data is provided indicating that the surface adjacent to the "driveway" will support fire apparatus for the life of the project.
    e. Service drivable areas are to remain drivable for the life of the project. To maintain drivability, and to ensure surfaces do not become soft/powdery over time, service drivable areas will be treated with a soil binder, or similar substance.
    f. Perimeter of projects to include 18' cleared, drivable surface on outside of fence, and 20' driveway/road inside fence. This area will encompass most of the perimeter fuel modification zone.
    g. Provide a hammerhead or similar turnaround outside the front gate

2. **Fencing/Gates/Signs**
    a. Provide pedestrian/man gates approximately every 750' feet along perimeter fences to enable firing operations
    b. Prefer chain with padlock for all gates except primary access gate where keypad or similar will be installed.
    c. Primary access gate – keypad ok, but must also provide siren activated opener
    d. Illuminated sign at primary access gate entry to include a motion sensor that activates light and/or reflective sign so headlights/flashlight will adequately illuminate.

3. **Defensible Space**
    a. 50' of fuel modification around perimeter of project site to include rock/gravel, no vegetative fuel
    b. Fuel modification throughout the site (whole site will include low, 6" or less, low-fuel ground cover)
    c. Inverters that are not located on a fire access road will include 10' in all directions free of vegetation (landscape fabric with gravel over, for example)

d. Each tracker pole to include at base landscape fabric with gravel over similar to fire hydrant clear area of 36" in all directions.

4. **Water**
    a. Include water storage on site, near entrance, O&M building, and in each project quadrant (as possible). Tierra del Sol to include 50,000 gallons total in up to five tanks. Rugged Solar to include 70,000 gallons total in up to four tanks.
    b. Sprinklered O&M building (NFPA 13 system) that is a steel building (as described in FPP)
    c. Connections for fire hose must be confirmed (not the same as service trucks)

5. **Additional Requirements**
    a. Protocol for contacting Soitec's project representative with knowledge of site operations, so that fire personnel can ask questions and / or request site trackers be remotely placed into "stow mode".
    b. Electronic and video monitoring of site
    c. Automated placement of panels into "stow mode" during high wind conditions (As required by equipment manufacturer i.e., over 32 mph) and when an emergency call is made to the facility as required by the Fire Authority.
    d. No Arc Flash Mitigation other than standard protocol is necessary

Fire and Emergency Protection Services Agreement

- Two (2) Type VI engines ($190K each = $380K total) – one to be stationed at Boulevard fire station, one at Campo fire station
- Maintenance and replacement for Type VI engines = $9K + $19K = $28K annually x 2 = $56K + annual escalator for inflation
- Two (2) Paramedic Assessment Engines (PAE) ($30K per year each = $60K per year + annual escalator for inflation) – one to be stationed in Lake Moreno, one to be stationed in Pine Valley
- Annual funding fee will be paid to a SDCFA managed grant program in the amount of $50.00 per Mega Watt (MW) installed and operational for the duration of the project life. The purpose of the funding is to be used for creating defensible space for citizens in the fuel bed that cannot afford to provide defensible space for themselves.

Public Benefit Measures

- Dedication of Soitec tracker to SDCFA for use at Boulevard fire station or elsewhere, as determined by SDCFA.
- Dedication of Soitec tracker to Campo for use at Campo community room or elsewhere, as determined by Campo Community.

FIRE AND EMERGENCY PROTECTION SERVICES AGREEMENT and Public Benefit CONTRIBUTION AMOUNTS

Item	Each	Number	Lump Sum	Annual
Type VI Fire Engine	$190,000	2	$380,000	$0
Type VI Fire Engine Replacement	$19,000	2	$0	$38,000
Type VI Fire Engine Maintenance	$9,000	2	$0	$18,000
Paramedic (3 staff per station)	$30,000	2	$0	$60,000
SDCFA Defensible Space Grant Funding	$50/MW	140 MW*	$0	$7,000

Total – Fire and Emergency Protection Services Agreement			**$380,000**	**$123,000**[1]
Public Benefit Measures				
Tracker Panel (30 amps) at Boulevard Fire Station	$Unknown	1	$Unknown	$0
Tracker Panel (30 amps) at Campo Community Center	$Unknown	1	$Unknown	$0
Total –Public Benefit			$Unknown	$0

*includes MW for Tierra Del Sol and Rugged Solar only. Additional projects would include additional contributions at $50/MW.

[1] Total not including annual escalator for inflation for maintenance and replacement of Type VI engines and Paramedic Assessment Engines.