FAQ

Question:

Simple diagram of the panels currently in use, dimensions, mounting height, orientation, do they have movement during the day? support structure diagram, etc.

Answer:

The modules installed are typically monofacial and bifacial. In case of bifacial modules, it is necessary to consider that the ground reflectance is fundamental for the energy production of the PV plant.
The structure typically installed are horizontal tracker with tilt angle that can achieve +/- 60°. The tracker is installed with the axis in the N-S direction and it moves in the E-W direction. When the tracker is at maximum tilt angle it is necessary to consider 0.5 m as minimum height from the ground (sometimes also less). In some projects are also considered the fixed structures that have typical azimuth equal to 0° and different tilt depending on the latitude of the projects. The fixed structures don't have parts in movement.
The distance between the structures is defined according to technical and economical parameters defined during the conceptual design. The Ground Cover Ratio (GCR) could vary between 2.5 and 4.
Thus it is necessary takes into account that any mitigation activities (for example planting grass or considering grazing animals) should not impact negatively on the energy production of the plant. For example it is necessary to avoid all the measures that could:

- Cover the modules (front and back parts eventually)
- Hinder the movement of the tracking structures.
- Damage the modules or the structures.

Question:

How cleaning is carried out, frequency, quantities of water used, does the water drain directly to the ground or is it collected? etc.

Answer:

All mitigation activities that could support in the managing of the water in the field (sustainable drainage systems) that could be used for the cleaning of the modules during the O&M activities are appreciated.

Water management is an important topic in the challenge, and for the same reason specific indications on the issue are not given. Solvers are free to use their expertise to have a multidisciplinary approach on the project, integrating water management in designed solutions.

Question:

In the panels, are there areas of risk or that should not be accessible by non-expert personnel?

Answer:

The access to solar plant to contractors for any activity of maintenance is granted after performing:

1. training of safety and environmental risks of the area (induction);
2. area delivery (by written module) for work activity;
3. delimitation (physical) of work area to the scheduled activity

Due to fact that the plant is in service, it's required the supervision by a person EGP having the qualification of expert for electrical risks management (in Europe CEI EN 50110) in the case that the contractor has not this qualification; the presence of EGP supervisor is required also for emergency management.

Question:

Could this hypothetical solar farm include solar glass technologies or is it a standard utility scale PV plant ?

Answer:

EGP uses also glass to glass modules. It depends on the procurement process.

Question:

How large is this solar farm in MWs?

Answer:

EGP designs, builds and operates PV Plant with different sizes, up 700 MWdc and more.

Question:

Who owns the farm?

Answer:

It can be assumed that EGP owns the farms

Question:

Are innovations you are seeking economically driven as well?

Answer:

As explained in the text of the challenge, in the framework of the CSV (creating shared value) model, EGP is searching for solutions that will create benefits for the environment, EGP and local communities. So it will be necessary to demonstrate that the solutions/practices proposed will be able to create effective value for:

- **the environment** (i.e. mainly focused in terms of soil use)

- **the company** (i.e. increase the operational efficiency of the PV plant reducing temperature below the panel and increasing the albedo, etc.)
- **the community** (i.e. possibility to use the land for tea, medicinal plant, plant to be use as fodder, etc. for commercial use, etc.) if present

Question:

Is this farm new (in its design phase) or existing?

a. If existing, what kinds of PV panels are you using? (i.e. double-axis tracking, single-axis tracking, height above ground?)
b. If new, how much is ENEL willing to accommodate for innovations? (i.e. how high above ground are you willing to install these panels, how much distance between rows is allowed, etc.)

Answer:

a. Generally Enel uses single axis tracker system and fixed structures. When the tracker is at maximum tilt angle it is necessary to consider 0.5 m as minimum height from the ground (sometimes also less).
b. New plant configurations, which imply new geometries, are acceptable. However, the new configuration suggested by the proposer will have to be economically convenient as a whole (for example improving the albedo on the back of double-sided modules)