



The installation will produce energy through the 3D irradiance capture photovoltaic cells named Sphelar<sup>®</sup>, which are produced by the Japanese company Kyosemi. The cells work similarly to the commercially popular Si Photovoltaic panels, but rather than cutting the semiconductor silicon into thin wafers, which results in a massive wastage of nearly 50%. Kyosemi melts the silicon and drops it into a gravity free chamber to form a small spherical positively charged p-type core, followed by a negatively charged n-type shell. Two electrodes are then positioned on each side of the sphere - a positive aluminium on one side and a negative silver on the other, this creates the p-n junction that makes the cell able to make photons move electrons and thereby create power.

The spheres will be connected in a large net which will be embedded onto both sides of a reflective sail fabric and hermetically sealed to protect them from the weather. The net is created by parallel and serial connection of the individual cells.

The installation will be connected to the power grid of Copenhagen since it is not a stable resource and making it such would result in a loss of power. The BOS (balance of the system), in this case, consists of the wiring of the panels and an inverter, which transforms the direct current produced by the panels into alternate current which runs in the power grid. If the installation was not connected to the grid, the BOS would be significantly more complicated, since it would need a storage facility, like deep cycle batteries or hydrogen fuel cells.