

THE ATOMS LIGHT

ENERGY GENERATION AND METHODOLOGY

The “Atoms Light” is designed to generate about 28776 KWh of electricity from organic flexible concrete solar photovoltaic modules for the public space in Masdar City. While the battery will be installed inside the solid art to store the electricity. The concrete solar photovoltaic modules will be installed within the concrete shell structure covering the stone. The concrete shell then will be expanding over the pedestrian walkway providing continuity to the shape and shade in the same time for the pedestrian. This will provide shade and distribute the source of electricity to light up the pedestrian walk way.



FORM DIFFERENT ELEVATION ANGLES

MATERIAL

Concrete photovoltaic is the main element used to form the “The Atom Light”. The project is designed to use solar panels as a building material themselves, thus, the façade shell consist of concrete material within the concrete shell using flexible formwork and photovoltaic elements. These shells are concrete with built in ultra-solar panels that are integrated as it is the building material rather than add on elements. Creating an astatic concrete shell using concrete photovoltaic was the target of the design. The concrete photovoltaic is designed as a tempered glass tiles with dark tone color integrated inharmonic with the concrete shell which has a form of vertical irregular shape. According to resent studies, these concrete photovoltaic has CO2 life cycle impact five times less than traditional crystalline photovoltaic.

