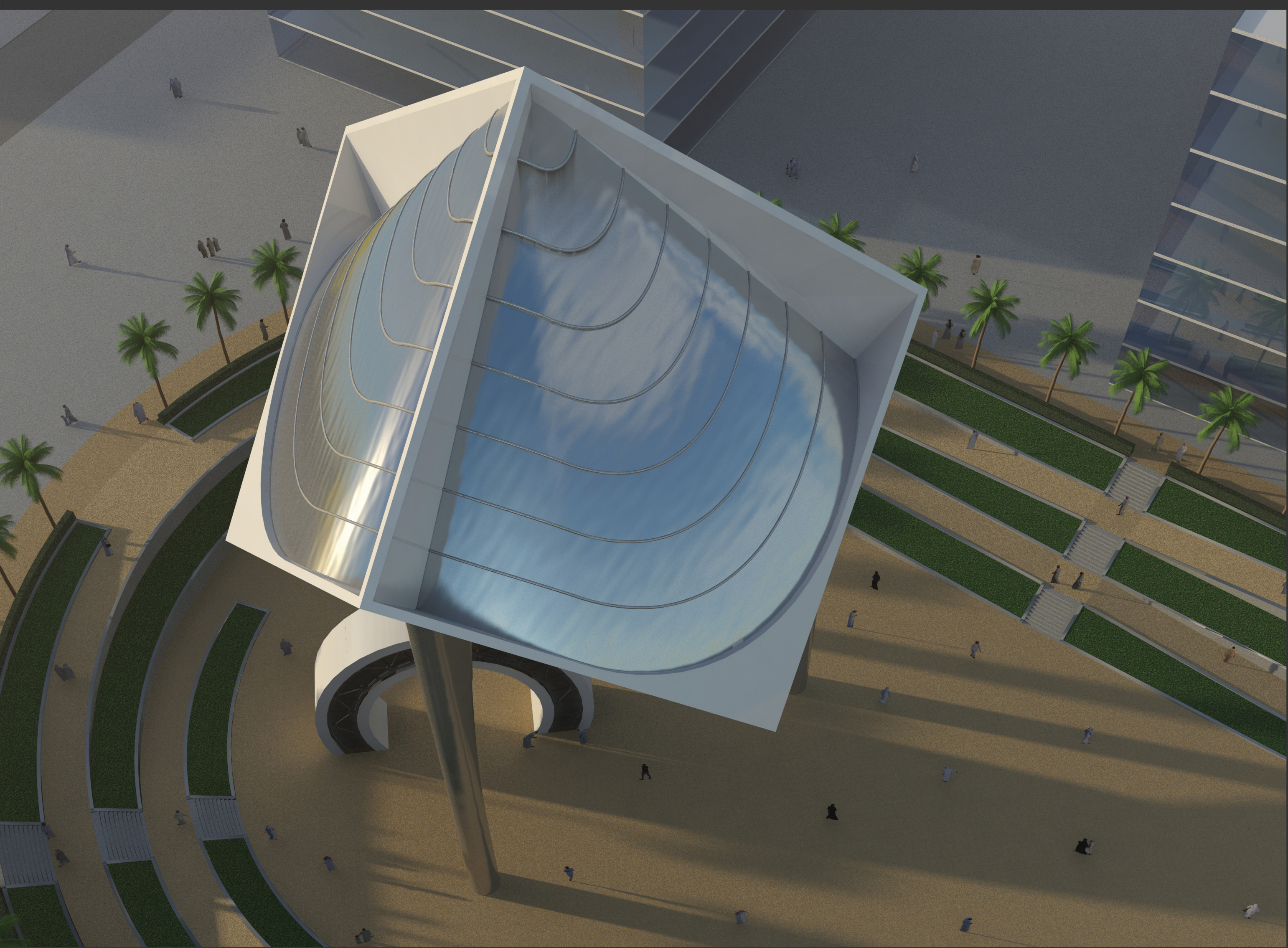


S<sup>4</sup>P<sup>2</sup>

SEMI SOLID  
STATE STORAGE  
POWER PLANT

EAST ELEVATION

SOUTH ELEVATION



+45.0 m

±0.0 m

-4.5 m

0 5 m 15 m

**FORM & SITE**

The form of the installation is a cube stepped on his vertex on the wheel and supported by a tripod. The composition between a circle (movement, instability) and a square (rest, stability) gives a sense of dynamics or frozen kinematics.

That giant sculpture is placed on the west side of the proposed site. The terrain is modified in such a way that it forms an amphitheater 4.5 m under the ground level. It has pedestrian access to the east side under the city road by a tunnel and a ramp.

**FUNCION**

The proposed installation for Masdar city is a storage power plant with use of sand. On the one hand, the sand at rest is a solid-state object, that weights is 1.8 time more than the water. On the other hand, when the sand is falling, it has a high viscous liquid behavior. Therefore, the current project's name is Semi Solid State Storage Power Plant or in short S<sup>4</sup>P<sup>2</sup>. Thus, this technology is suitable for countries that do not have an excess of water, but have a lot of sand. The principle is the same as the one of PSH.

**CONSTRUCTION**

The sand is stored in underground storage and then is raised to the overground silo by three chain-bucket elevators driven by electric motors. Then the sand falls down and rotates a turbine to produce electricity.

The skeleton of the S<sup>4</sup>P<sup>2</sup> is spatial steel construction. The tripod structure supports the cubic frame (24 x 24 x 24 m). The steel sand silo is stretched on this frame. The silo's volume is 11'000 m<sup>3</sup> or 19'800 tons of sand. The height to the top of the installation is 45 meters from ground level.

**Legend**

- A. S<sup>4</sup>P<sup>2</sup>
- B. Square
- C. Amphitheater
- D. Ramp



0 20 m 60 m

SITE PLAN