Our building for ST KILDA TRIANGLE is a sculptural work inspired by nature: trees. Our proposal is inspired by biomimicry. It represents several trees whose leaves are other than large solar panels. These panels are inspired by solar ovens. With their parabolic shapes, these panels absorb solar energy and transform it into electrical energy. In addition to the photovoltaic plates they are made of, these panels also heat a network of water pipes circulating beneath them. The water thus heated is transformed into steam. This steam rotates mini-turbines which in turn start up an electric generator.

The book we propose contains:

- premises open to the public and intended to raise the masses' awareness of the interest of renewable energies

- A pipeline network designed to promote heat exchanges between water and photovoltaic panels

Each SOLAR TREE has large photovoltaic panels. We recommended to use panels made with monocrystalline silicon. It has a yield of 14.5%

Each panel measuring about 120 m², we obtain a generated power of 120 x 0.0145, or 1.74 kWp. Based on the meteorological documents of the region, we obtain as annual energy produced, a yield of 1.74 kWp x 1500 kWh / kWp, or 2205 kWh per year.

Depending on the orientation of the panels, one can lose 30 to 40% of the theoretical power. With nearly fifteen panels scattered throughout the site, the annual production of the structure we are proposing would therefore be 15 x 2205 KWh x 0.3, or 9922 KWh. Our proposal measures approximately 400 m² on the ground for a height of 50 meters (panels included)The main materials to use to build it are concrete, metal and photovoltaic panels

**Our proposal therefore produces 9922 kWh per year**

Energy is also produced thanks to a system of solar ovens. Indeed, some panels of the SOLAR TREE function as solar ovens and can heat water passing underneath. The latter turns into steam and feeds mini-turbines. Since the direct solar flux is about 800 W / m², the power obtained with a yield of about 60% is 0.6 × 800 W / m² × 50 m² × 5.

In addition to the planned structure within the ST kilda triangle, other mini-TREES are planned along THE ESPLANADE and the Secondary Boundary (THE SHORE). These mini SOLAR TREES are arranged in accordance with the Master Plan. They are an extension of our main work located in the PRIMARY BOUNDARY (ST KILDA TRIANGLE). These mini SOLAR TREES respect the surrounding infrastructure (lighting, power lines, street trees, etc.). They fit into the urban setting and can be arranged next to bus shelters so that users can enjoy their shade. They are important tools for conveying a message of eco-responsibility to the people.

Our work in the triangle of St Kilda is also compatible with the master plan that provides 200 parking spaces at this location. It is arranged so as to be seen from the Jacka Boulevard and to form with THE STOKEHOUSE a harmonious duet. Thus our work also preserves the horizons of Port Philip Bay from the slopes of St Kilda Triangle. It also preserves the view from the Theater Palace