



# NIGHT & DAY

## St Kilda Hydro-Solar Generator

### ST KILDA: CITY TO THE BAY

Water, sunshine and the arts have always been St Kilda's defining assets, resources key to its identity as a seaside cultural hub. Now, as Melbourne moves towards a post-carbon economy, these same resources hold an entirely new potential.

The Hydro-Solar Generator is a power generator that works night and day, combining solar energy with a hydro battery to leverage the full potential of St Kilda's most abundant natural resources: water and sunshine. An inhabitable machine, the structure utilizes potential energy to turn sun and water into electricity, linking the city to the bay in the process.

### BRIDGING COMPLEMENTARY FUNCTIONS

Taking the form of a pedestrian bridge, the Hydro-Solar Generator is an urban intervention that connects public spaces at St Kilda that have become fragmented over time.

### INHABITING THE MACHINE

Along the walkway, visitors experience the machine through its full diurnal cycle, watching during the day as harvested solar energy pumps bay water into the hydro battery storage vessel high above St Kilda Triangle. As the sun sets, the water is released through a turbine, transforming the kinetic movement of water into electricity.

### POTENTIAL ENERGY: HYDRO BATTERY

The Hydro-Solar Generator addresses a renewable energy conundrum: storage. It demonstrates that batteries can be renewable and non-toxic, providing a new model for hydro energy storage for Melbourne and other coastal cities around the world.

