Flexible polycrystalline modules: 2 x 12 cells

Perpendicular Voidratio = 32%

Northward tilt = 10°

Sunlight reduction (winter) ≈ 50%

Daylight reduction ≈ 20%

Solar PV Technology

Lightweight tensile structure made from flexible ultra-high efficiency solar photovoltaic modules. The modules create a light filtered surface over Jacka Boulevard providing 8,600 solar components.

Motion Damper System

Dampers located in the bridges convert wind motion into wind energy via the tensioned cable structure.

Each of the flexible solar modules will pivot independently in the wind, from across Port Phillip bay in winter and largely from deep inland during summer months.

Buildability

Each renewable energy element of our scheme has been tested in the market and can be realised.

Structural System

Lightweight tensile structure made from a subset of cables spanning between bridges and the hotel. The undulated surface is achieved by a series of Vierendeel trusses connecting to the bridges and cross tension cables.

Buildable Unbuildable

1000 100 30 10 3 1

Buildability

Flexible Solar PV Modules

Recently-commercialised ultra-high-efficiency proprietary modules supported and warranted by permanent presence in Australia, produced by a reputable international manufacturer with good industry-credibility.

Turf Cell Module

Turf field made of microbial fuel cells which generate electricity from organic matter released by plants.

Car Park Ventilation

Openings in the turf field (carpark roof) allow for natural passive ventilation and daylighting to the car park below.

Energy Storage

Lithium-ion battery storage cells integrated within the bridge structure store electricity from on-site energy production.

Battery

Motion Damper System

Dampers located in the bridges convert wind motion into wind energy via the tensioned cable structure.

Each of the flexible solar modules will pivot independently in the wind, from across Port Phillip bay in winter and largely from deep inland during summer months.

Ventilation & Daylighting

Openings in the turf field (carpark roof) allow for natural passive ventilation and daylighting to the car park below.

Turf Cell Module

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