Speaking of Melbourne and Australia, we can imagine the bright sun. There is no reason we don’t make use of this grace. But, there are some problems.

 At first, it about horizon landscape. Speaking of solar panel, we imagine black or blue. So, it does not suit the beautiful ocean view that is loved by residents. Then, we have decided to use white solar photovoltaic module technology. The conversion efficiency is about 10%. In comparison efficiency is inferior. But to grant hope of residents. We decided that. Solar panels are embedded in the pedestal of the bridge. It can generate about 1000kW system. And that use white solar photovoltaic module, because to avoid damaging landscape and design. This technology has been developed by CSEM (Switzerland). They realized a white solar photovoltaic module by attaching a filter that transmits infrared ray and reflects visible light on the solar cell technology. (Technology to convert only infrared ray of sunlight into electricity.)

 Second problem is about climate, weather and season. Melbourne may be known for its fickle weather. Climate change is often intense. In the summer (December-February), especially December experiences the longest hours of daylight with sunrise at approximately 6 am and sunset at 8:45 pm. So, sunlight hours are 14 hours and hours of daylight with sunrise at approximately 7:30 am and sunset at 5 pm. It has only 9 hours and a half. And in the Spring (September-November), October is the wettest month with roughly 10 days of rainfall.

These seasons is not suitable for solar power generation. So, to supplement it, this bridge has two more function.

First, it is wave power generator named BioWave. That system has been developed by BioPower System (Australia). BioWave, a device with a total height of 25 meters, generates electricity by rotating a turbine attached to the root of the device, with the floating portion shaking according to the current. Instead of swinging by tidal currents, we are turning the rotary motion, which drives the generator. Even if you use rotational motion, propeller-type turbines do not turn like wind power, so you will not hurt marine life. Since the part of the rotating turbine is contained in the equipment, marine organisms will not hit and damage the turbine. Also, when the waves are severe due to bad weather etc., the floating parts will be laid sideways so that the floating parts will be parallel to the seabed surface, preventing excessive force from being applied to the equipment and failing.

Second, it is wind sails. Melbourne has strong winds in autumn and spring. When that seasons come, cloth spreads from the pillar extending from the bridge piers.