BioPower Systems – bioWAVE™

The bioWAVE oscillating wave surge converter system is based on the swaying motion of sea plants in the presence of ocean waves. In extreme wave conditions, the device automatically ceases operation and assumes a safe position lying flat against the seabed. This eliminates exposure to extreme forces, allowing for light-weight designs.

Oceanlinx – Oceanlinx Device

The Oceanlinx seabed mounted version of this device, a three-sided oscillating water column (OWC) chamber, is positioned over the focal region of wave reflecting parabolic wings and converts the wave energy into pneumatic energy. Static pressure in the chamber is converted to kinetic energy in a converging/diverging duct that houses a bi-directional turbine and generator unit. A future version will include floating units.

Orecon Ltd. – Multi Resonant Chamber

The Multi Resonant Chamber (MRC) device is a multiple-resonant chamber oscillating water column, which can be deployed as a free floating device. This device features three vertical capture chambers with various lengths, which have different oscillation frequencies (based on the length of each chamber). The independent chambers supply air to impulse air turbines. The rotary motion is converted into electrical power via a directly coupled generator. The unit is tension-moored to the seabed using a gravity anchor.

Ocean Energy Ltd. – OEBuoy

The OEBuoy is a floating, oscillating water column (OWC) that uses wave energy to compress air in a plenum chamber and pump it through an air turbine system. The mouth of the OWC faces away from the wave direction, resulting in high energy efficiencies at the operating point due to the motions of the float system relative to the waves.

PG&E has not selected any of these Devices for the proposed pilot project.