

THE LILYPAD ENERGY

KINETIC PLATFORM
3D-PRINTED POLISHED BIOPLASTIC THAT FLEXIBLE IN X/Y/Z AXIS.

BUOY

PISTON
FORGED TO BUOY, TRANSLATES WAVE MOTION TO SINGLE AXIS MOVEMENT.

GASKETED PISTON CONNECTION
PROVIDES WATER-TIGHT SEAL FOR WEC ENGINE AND ITS COMPONENTS

WEC ENGINE
UTILIZES THE WAVES MOTION TO GENERATE ELECTRICITY AND CREATE PRESSURIZED OCEAN WATER FOR DESALINATION ON LAND.

MODULAR STEEL SUPPORT STRUCTURE
A HEXAGONAL TRUSS SYSTEM THAT STACKS TO FACILITATE PLACEMENT OF WEC ENGINE AT PROPER DEPTH IN RELATION TO SURFACE.

GUY WIRE
TIED BETWEEN THE ARRAY OF GENERATOR TOWERS TO CREATE STABILITY WITHIN THE ENTIRE SYSTEM.

WEC OUTPUT CABLES/PIPES
CORROSION RESISTANT HOUSING OF WATER PIPING AND ELECTRICAL CABLES FOR UNDERWATER CONDITIONS.

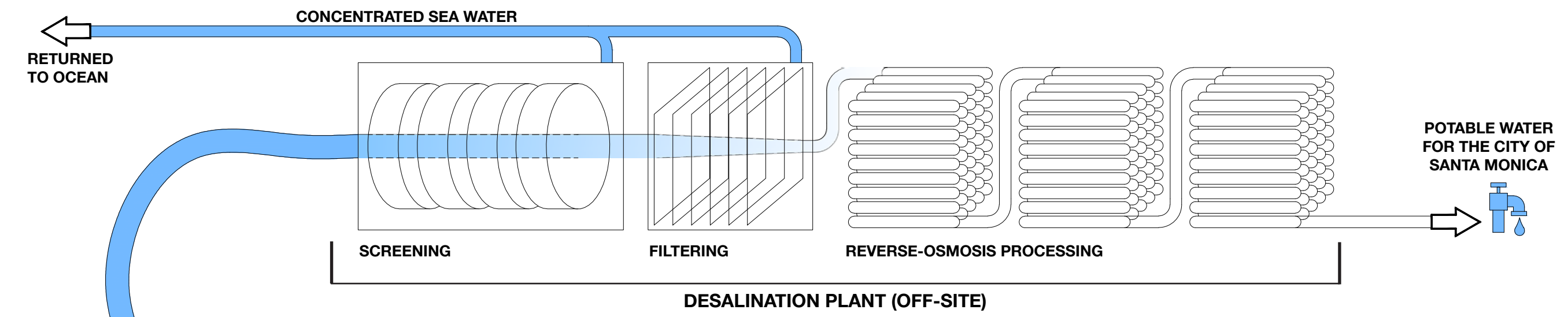
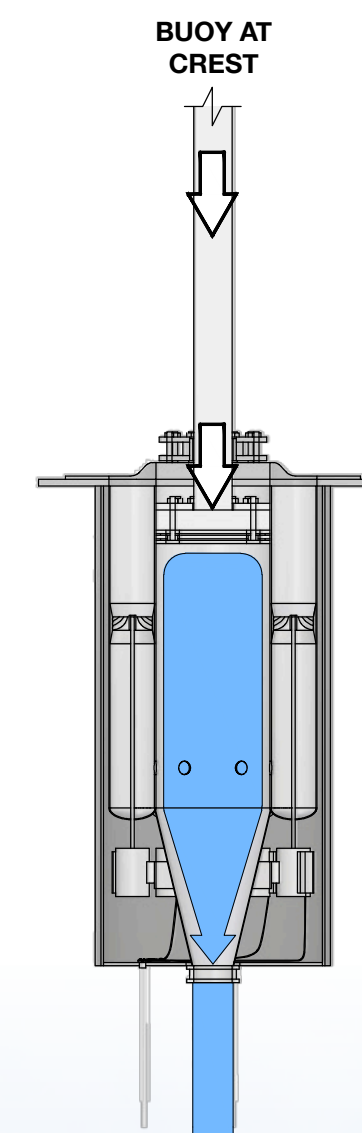
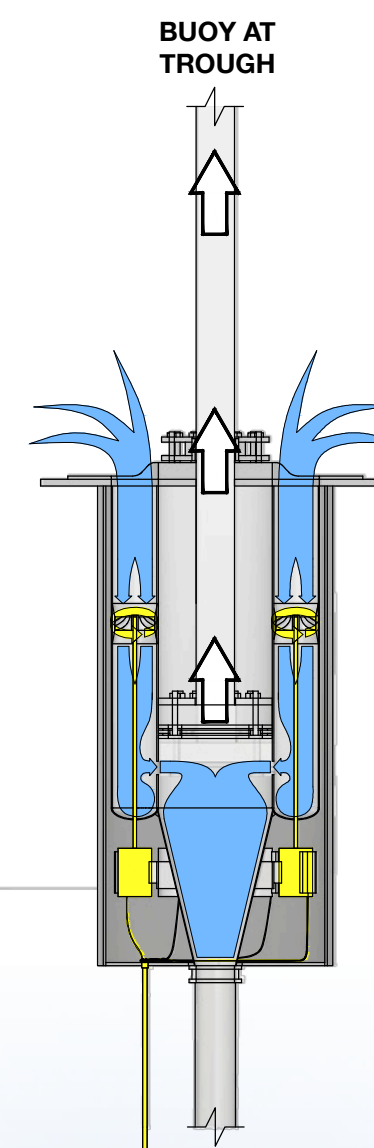
BUTONG CONCRETE ANCHOR
PRE-POURED CONCRETE BASE TO SECURE TOWER TO OCEAN FLOOR MADE OF UNIQUELY FORMED CELLULAR CONCRETE.

GENERATOR TOWER

WEC ENGINE

FROM THE TROUGH THE BUOY IS DRAWN UPWARD WITH THE INCOMING WAVE, ENGAGING THE PISTON TO SUCK WATER IN THROUGH THE INTAKE VALVES AND ACROSS THE TURBINE GENERATOR. THE ENERGY CREATED IS THEN CHANNELLED THROUGH TRANSFORMERS INTEGRATED INTO THE ACCESS DOCK AND DELIVERED TO THE PIER AND THE CITY GRID AT A USABLE VOLTAGE.

AS THE BUOY TRAVELS OVER THE WAVE AND IS AGAIN PUSHED DOWN, THE PISTON FORCES THE WATER WITHIN THE HOLDING CHAMBER THROUGH HOSES THAT MAINTAIN THE PRESSURE AS THEY ARE BROUGHT ON SHORE. FROM THERE THE PRESSURED OCEAN WATER PASSES THROUGH THE VARIOUS STAGES OF DESALINATION, OUTPUTTING POTABLE WATER FOR THE CITY OF SANTA MONICA.



WEC GENERATED POWER UTILIZED LOCALLY FOR SANTA MONICA PIER



REMAINING WEC GENERATED POWER DELIVERED TO GRID

