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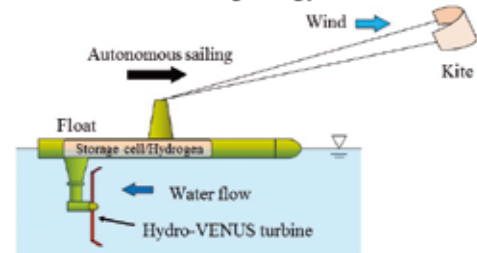
Autonomous Kite-Sailing Energy Harvester: Innovation of offshore wind energy technology

Offshore wind power is the most promising energy source for a 100% renewable energy society. But conventional wind turbines can harvest only small amounts of nearshore wind energy due to the constraints of water depth, long distance electric power transmission or competition against fishery industry.

The **Autonomous Kite-Sailing Energy Harvester** generates power using a kite-sailing float with hydro turbines. Due to its sailing-based highly movable system, it can harvest vast amounts of wind energy in the pelagic zones and does not compete with fishing operations. The hydro turbines are more compact than wind turbines, and this system does not require tall supporting towers or deep water anchoring.

We also have been developing the **Hydro-VENUS** turbine to apply to the Autonomous Kite-Sailing Energy Harvester. It is a flow-induced oscillation based hydro turbine using columnar pendulums. Due to the simple geometrical shapes of the pendulums, the Hydro-VENUS is cost-effective, light-weight and high-strength. Its patents are acquired in Japan, EU, US, China and Australia. We have established the Hydro-VENUS Co., Ltd. start-up company.

Autonomous Kite-Sailing Energy Harvester



Medium scale test model

