

Hydro Power

Hydro power is most commonly thought of as hydro-electric dams, that pool water behind them, and let it flow out through a set of pipes, driving large generators in the process. It can mean other things, however, such as power generated by oceanic currents, the advance and retreat of tides, and the up-and-down motion of waves on large bodies of water. On a planet whose surface is 70% water, it's a resource that cannot be ignored.

Water-powered water pumps

These [spiral water pump designs](#) run off of running water. They're simple, and sustainable by design, because they won't run if there's too little water. Additionally, the basic design could be adapted to work with other power sources (like wind, for example) to move water from standing bodies like ponds or lakes!

Programming the best arrangement for tidal turbines

[Computer simulation](#) provides best setup for hydrokinetic power generation from tides and ocean currents.

Waves from swimmers to generate pool lights

A college student has developed a [generator](#) that uses the motion of water in a swimming pool to power the lights for the pool.

Using seafloor "carpets" to harvest wave energy

People have been working to harvest energy from the ocean for years, and every once in a while, somebody comes up with an idea nobody had tried before. [This design](#) would take advantage of the constant presence and pressure of waves to generate power through a hydraulic system without little to no damage to sea life, boats, or even the scenery.

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