

# SOLAR ELECTRICITY, AQUA TOWER (SEA TOWER)

Open source idea [www.Future-Beam.com](http://www.Future-Beam.com) 2008 (Free for anyone to build)

## CONCEPT

Globally, electricity is mainly made by steam driven turbines. This established technology works very well. Instead of burning a fuel to create the steam (uranium, coal, oil etc.) focused sunlight could become the source of heat. See diagram below.

The excess heat could be stored in MgH<sub>2</sub> heat cells, with a near 100% efficiency. This would enable the heat to keep the turbines going through cloudy days and at night. Backup water to gas systems could also be used. Heat cells can be recharged endlessly without aging and because they can be made to be portable, countries with little sunlight could import the cells from sunny countries and then send them back for recharging.

As an example, one day of sun the size of Australia could power the planet with all of its energy needs for over 2 decades, using this simple and environmentally sound technology. Ships powered by these very cells could ecologically transport the energy.

At the SEA tower, if ocean water were to be used as the water source, the steam produced could be easily made into the healthiest drinking water via a condensation tower. Condensation is quickly achieved by extracting heat from the steam after it has passed through the electricity generating turbines.

Stirling heat engines could be used to extract the heat and convert it into additional electricity. Around 1% of solar UV sterilized ocean water mixed with the desalinated water would make perfect drinking and irrigation water, due to the fact that ocean water has all of the minerals required for human, animal and plant health.

As steam rises naturally, SEA towers could be built near cities on coast lines with gravity fed piping systems bringing the drinking water to nearby dams or reservoirs without the need of extra power.

Solar powered Stirling engines could then be deployed to further pump the dam water to distant inland farms.

As an additional extra, the waste steam could drive air compressors which in turn could pump pressured air into large underground tanks for the use in, air tool, air car and further power generation technology.

## SOLAR DRIVEN DESALINATION AND ELECTRICITY GENERATOR

