



THE OWATEP INITIATIVE

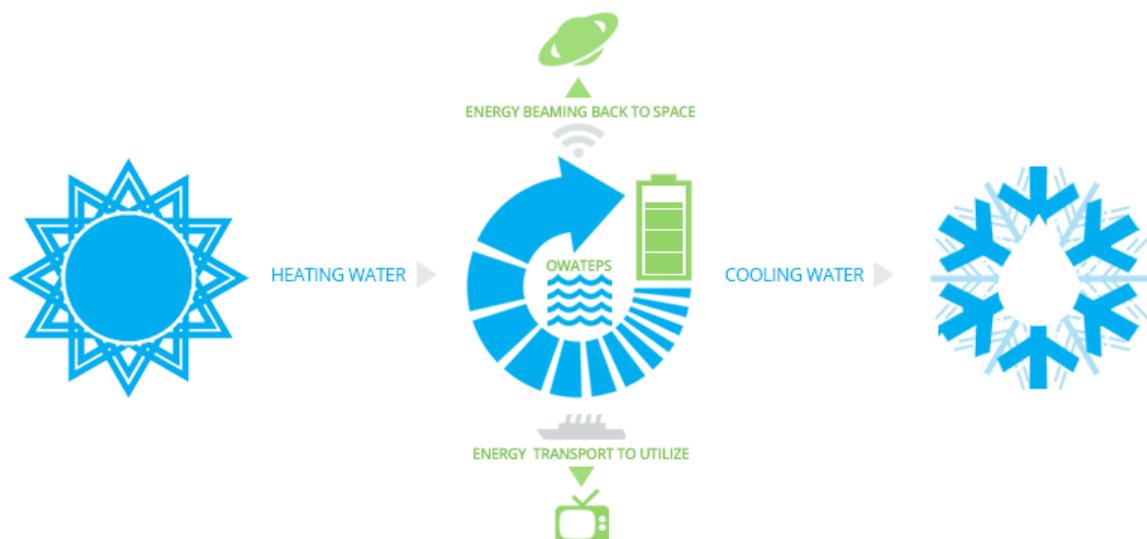
## Harvesting Blue Energy by cooling open waters

[www.owatep.com](http://www.owatep.com)

The water heat pump device (Open Water ThermoElectric Probe, OWATEP), modeled on the geothermal heat pump, is based on the well-documented 200-year-old thermoelectric phenomenon, Seebeck effect.

### RENEWABLE ENERGY SOURCES + CLIMATE PROTECTION

using a mass-produced device that generates electricity from the temperature of water



The device consists of a head unit containing thermal elements that floats on the water surface, connected to thin, flexible tentacles below the water surface. The demo configuration of the device, installed in large numbers (fleets), provides a cost-effective method for regulating the temperature of the oceans, which are constantly warming at an enormous rate and for which there is currently no widely known method, **while also serving as a renewable energy source with excellent technical and economic parameters.**

We are researching several configurations of owateps, specialized for different environmental conditions and our objectives. The primary goal of the solution described below is to draw attention to the global problem and opportunity (**goal 1**), to promote Owatep Solutions (**goal 2**), and to exploit and sell the renewable energy that can be obtained from it (**goal 3**). **Our primary goal is to establish a new international research institute for thermoelectric effect research**, which will continuously explore the global application possibilities and optimal areas of use for this technology.

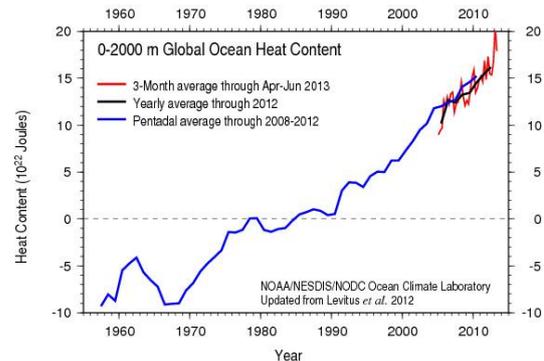
The companies coordinating the project, Atlastic Horizon Ltd. (UK), which owns the idea, and Enterprise Informatika Kft. (HU) in Hungary, are establishing relationships with leading research institutes and market players in the field of renewable energy sources. The company is currently raising capital for complex impact studies and production preparations. The details of the project are contained in a comprehensive document that will be published shortly.

## THE AMOUNT OF ENERGY HIDDEN IN THE OCEANS

Since the subject matter is not subject to concessions under international law from an economic and mining perspective, this gigantic untapped energy resource ensures rapid growth for the first market players:

- 71% of the Earth is covered by open water surfaces, which have a heat capacity thousands of times greater than air.
- The oceans absorb most of the energy from global warming.
- The energy content is approaching 1022 joules, which is increasing at such a rate today that it is **equivalent to detonating 12 atomic bombs per second** in the oceans (378 million per year).

Source: NOAA: [http://www.nodc.noaa.gov/OC5/3M\\_HEAT\\_CONTENT/](http://www.nodc.noaa.gov/OC5/3M_HEAT_CONTENT/)



**Figure 1 – Changes in ocean heat content over the past 60 years** (Source: National Oceanic and Atmospheric Administration federal agency USA)

## FINANCIAL PLANS AND INVESTMENT OPPORTUNITIES

The general objective of the companies owning the project is to create and own international innovation projects in the technology sector (innovation R&D and software business lines). Through its market activities, it strives to establish wide-ranging institutional-university consortium collaborations and significant business relationships, resulting in the creation of cutting-edge technologies and inventions.

### START-UP MANAGEMENT

The management currently consists on these people, more candidates are currently being considered:

- **Our chemical engineer with PhD**, who is a specialist in polymers and nanomaterials, will be responsible for research and development and will coordinate the work of the experts.
- **Our sales manager has 17 years of international experience** in selling cutting-edge technologies at several multinational companies on multiple continents. His job is to bring the company's products and developments to market.
- **Our innovator and IT specialist** has been researching emerging technologies across multidisciplinary fields for 10 years and has been an entrepreneur for 20 years. His task is to connect business and research with the approach of a scientific diplomat.

### SPECIAL LAUNCH PRODUCT, CAPITAL RAISING PURPOSE

Development and market launch of a water probe (Owatep, Open Water ThermoElectric Probe) based on the geothermal heat pump model, and establishment of a research institute specializing in further research on this topic.

## CHALLENGES FOR THE NEAR FUTURE

- Designing the market version of Owatep and starting production
- Acquiring development contracts across Europe
- Opportunities to win large-volume tenders and bids

## RESOURCES, CALLS FOR PROPOSALS, COOPERATION

- European Union Horizon 2020 Innovation Programme – participation in two programs:
  - **Societal challenge: Climate change, Energy efficiency**
  - **Kiváló Excellent science: FET-JFT, MSCA, Research infrastructures**
- Community financing: Kickstarter.com (crowdfunding)
- We are gathering consortium members and collaborators from the world's best research institutes
- Continuous involvement of venture capital, with a significant ownership share and excellent exit opportunities

Sincerely,

**Krisztián Berg**

IT SPECIALIST, INNOVATOR

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