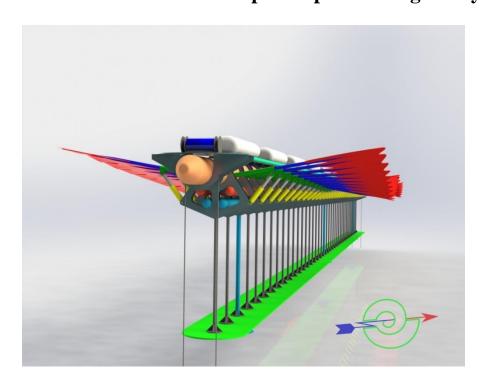




## "Wave desalination and power plants designed by Ovsvankin"



Commercialization project summary:

To implement our commitments to inte

To implement our commitments to interact with the UN program to achieve the goals in the field of Sustainable Development by 2030, we are commercializing the technology "Wave desalination and power plants of the Ovsyankin design"

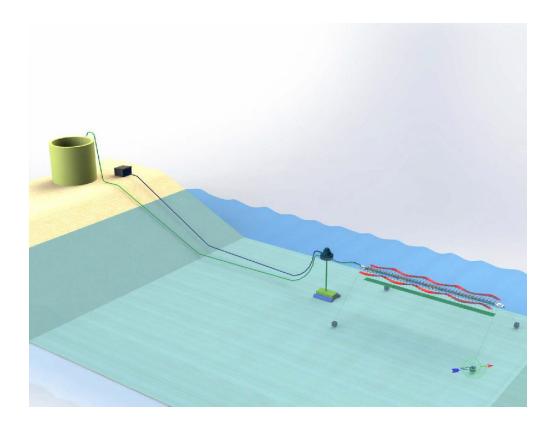
Promoting sustainable development goals Ovsyankin's Marine Wave Stations will make a significant contribution to achieving the Sustainable Development Goals under global climate change.

Climate change is driving significant increases in water consumption in most countries of the world, according to recent United Nations reports. (The growing shortage of water resources can only be compensated for by industrial desalination of seawater.

The existing desalination technologies require high energy consumption, up to 10 kW per 1m3 of water. The production of one kilowatt of electricity from hydrocarbons leads to emissions of 0.5 kg of CO2 into the atmosphere and, accordingly, up to 5 kg. CO2 per 1m3 of fresh water produced. Therefore,



increasing the production of fresh water by the traditional desalination method significantly increases CO2 emissions into the atmosphere and, as a result, accelerates negative climatic changes!



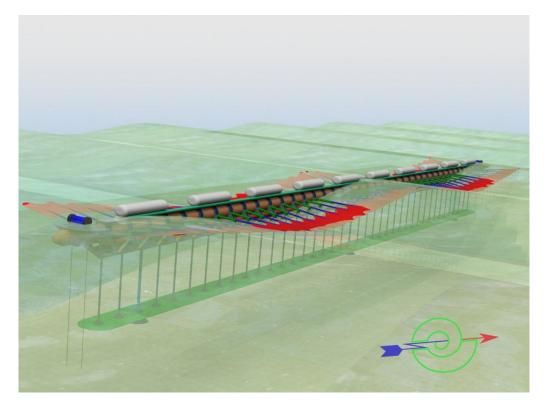
One wave desalination station designed by Ovsyankin, the capacity of which for the ocean water area is up to 1000 m3 per hour of fresh water, will avoid CO2 emissions in the amount of more than 30,000 tons per year.

Wave desalination and power plants designed by Ovsyankin operate on the basis of environmentally friendly, renewable energy of sea waves and currents. Wave stations are an anchored floating vehicle capable of submerging under water to the required depth during storms, into the zone of action of waves of the design range and continuing to generate fresh water or electricity.

## Concept

The project is based on the use of patented innovative technical solutions transforming the environmentally friendly, renewable energy of sea waves and currents to produce fresh water and electricity.

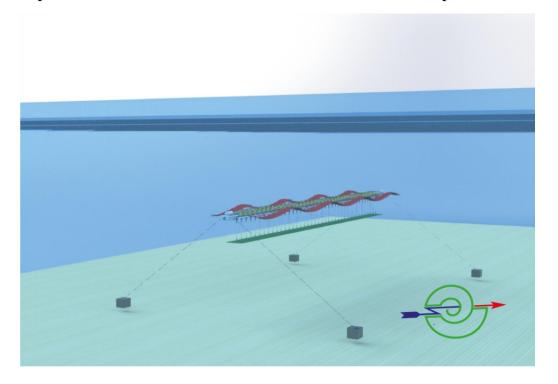




The efficiency of a wave station is ensured by its basic properties, such as:

- the presence of a flexible self-adapting energy-absorbing element, which changes its shape under the influence of each incident wave, from a flat longitudinal body to a spatial spiral;

the design of the station is permeable to waves and has the ability to dive to a depth, into the zone of action of waves of the calculated parameters;





- the main structural elements of the station are made of composite polymer materials;
- availability of a hydraulic system that supplies seawater under pressure to the desalination sections or to the hydro turbine;
- the wave station is an anchored floating vehicle;
- It can be adapted to any water area of the seas and oceans and is an anchored floating vehicle

The station models have passed multiple tests in the wave basin of the Institute of Hydromechanics of the National Academy of Sciences of Ukraine and a pilot sample of the Wave station in natural conditions in the Black Sea.





https://www.youtube.com/watch?v=fV0632i4\_pM&feature=youtu.be

### A wave station can generate:

- for oceans up to 1000 m3h of fresh water per hour and up to 5 MW h of electricity;
- -for inland seas, up to 300 m3h of fresh water per hour and up to 1 MW h per hour of electricity;
- The specific investment per unit of installed capacity (1 m3 h) of the desalination wave station will be 15,000 20,000;
- -Specific capital investments per unit of installed capacity (1 m3 h) of a desalination wave station will amount to 15,000 20,000 euros, for electricity of 1 kWh 2,500 3,500 euros;
- -The prime cost of one cubic meter (1-m3) of fresh water is 0.2- $0.3 \in$ , of electricity 1 kWh 0.03- $0.04 \in$ ;

The average annual rate of utilization of the installed capacity is 0.6 - 0.8 (60% - 80%);

The return on investment directly depends on the tariffs for the generated resource (fresh water, electricity).



The construction of wave stations designed by Ovsyankin will significantly increase water security in many countries and regions of the world, the standard of living of the population and create favorable conditions for the development of agriculture in dryads.

# Details of the strategy program for the commercialization of the project "Wave desalination and power plants of the construction of Ovsyankin"

- -Formation of a consortium of project participants.
- Expert testing of the wave station layout 1:10 in the wave pool of the research center.

In parallel, the creation and development of IP to monetize the value of intangible assets.

- The construction and testing of a full-scale pilot sample of the Wave Station on the Ocean Platform will allow the formation of a package of applications for the construction of Wave stations.
- Building a strategy to implement the project to achieve water security in needy regions through collaboration with UN structures and other international and governmental organizations.



https://ceowatermandate.org/posts/krok-1-commits-ceo-water-mandate/





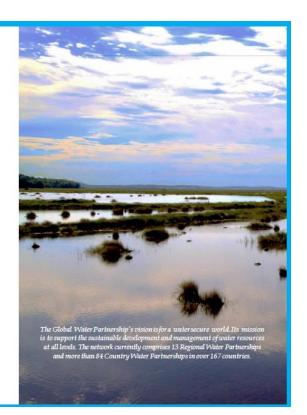
This is to certify that

#### Krok-1

has become a Partner of the Global Water Partnership

Date 2020-06-29

Peter Repinski, Interim Executive Secretary & CEO Global Water Partnership



# Proud partner of WIPO GREEN













