

1. Project name

HYDROELECTRIC PLANTS WITH LIFTING, RECYCLING AND WATER DISTRIBUTION.

2. Explain your idea in a sentence

Current systems for lifting and distributing water from large energy absorbers can be modified and transformed into energy producers by circumventing the gravitational force by modifying the pumps and inserting turbines into the water recycling circuit.

3. Explain your idea in a paragraph

The lifting and water distribution systems represent one of the highest energy costs in the world, while modifying the pumps, making them with the double separate supply until the impeller and also modifying the systems, the lifting of the water would come in steps, from a tank to other, by inserting the water to be lifted in the open recycling circuit of the upper basin. This circuit would produce hydroelectric energy exploiting the kinetic energy produced by the energy of high water position in the pump that feeds the turbine.

4. Explain why your idea is innovative in the context and in the country where it will be implemented. Alternatively, if your idea is based on an existing concept, explain how your idea differs from this.

The state of the art in the exploitation of water resources on land and hydropower generation has been conditioned by the absence of synergies between the pumps and hydraulic turbines and from the incorrect approach to the gravitational force, which is not to be won by the hydraulic lifting but sustained, with circulation of water one way in open reservoirs, placed in the top. With the triple synergy between the dual power supply pumps, turbines and water recycling in an open vessel, applying hydraulic principles known for centuries, such as the principle of communicating vessels, the laws of Bernoulli and Pascal, and by placing the electric pumps and turbines under a high positive hydraulic head, working with a balanced hydraulic load in the pumps, with a small energy consumption, we overcome the inertia, allowing the transformation of the pressure energy of the water column into kinetic energy and transferring it to the turbines, which produce energy. The hydraulic energy circuit ends at the exit of the turbines, where the collector that receives the water, with a large section, is connected to the upper tank. For the principle of communicating vessels, the water must not be lifted, therefore we have a simple loss of load at the outlet as in the submerged hydroelectric plant ($V^2 / 2g$). However, with the separate dual

feed pumps until the impeller, we have the possibility of replacing in the recycling circuit almost 50% of the pump flow with low pressure water.

5) Explain how your idea will allow young people to fully participate in a changing economy and how you would use a location-based approach.

This idea can have a huge impact for the large amount of clean energy that can produce, for environmental benefits for the development of employment due the construction of the plants, which concerns both energy plants and purification plants. But this idea is only the tip of an iceberg that changes the entire energy, purification and world-wide system because the applications that will arise from this intuition will allow to realize also sustainable desalination plants, water lifting systems that instead of consuming energy will produce it. By deepening the synergies between compressible air and incompressible water, increasing the hydrostatic pressure on the accumulated water, we will come to realize compressed hydroelectric plants that can replace the current thermal engines, today used in the world public marine and aerospace world transport, as described in others cards of this competition.

6) Explain how you will design and test the idea with potential users to develop it in a sustainable project over the next three years.

These projects can be tested immediately, existing already, pumps and turbines. The only thing that does not exist is the pumps with the double supply separate until impeller, which provisionally can be obtained by hand from existing pumps, simply having to change only the supply that must be divided into two or four distinctly separated flows, which must not be encountered before entering in the impeller. But it must be the public bodies worldwide that favor these solutions because the current pump manufacturers prefer the current market where there are more expensive multistage pumps that absorb more energy and the intubated submersible that should be over and changed even installed upside down for exploit the energy of gravitational force. But although the undersigned has published these changes for some years, this does not happen because the world's public research bodies have failed the energy solutions in the water systems, the patent offices have declared them contrary to the principles of energy conservation, therefore, together with the multinationals boycott these sustainable solutions. This solution has not found public and private interlocutors because there is a strong link between public bodies and multinationals that also includes the sale of patents of public bodies to individuals. Until global public entities and corporations do not cooperate openly without hypocrisy with private inventors they will only

continue to develop the existing commercial solutions that will not produce any sustainable development.

7) Explain how you will grow your idea in the future so that it can reach more people or be replicated by other people across Europe.

I confirm what I wrote in the previous point. For this reason I created the website <http://www.spawhe.eu> where all the industrial, environmental and energy solutions that are not realized by research institutions and multinationals are published. In many cases, as in this case, accused by the Italian and European patent offices of violating the principles of energy conservation. I believe that, in order to create sustainable development, it is necessary above all a correct and transparent scientific information. Which in the absence of economic means, can also be done by publishing logical reasoning based on the experience of those who have worked in industry and the environment for a lifetime. I think that especially young people must learn global scientific reasoning, which goes beyond single scientific and technological specializations. Today, above all, in hydraulic and hydroelectric plants, science makes correct hydraulic calculations, but realizes wrong plants not applying synergistically the basic principles legislated by the fathers of science.

8 What do you hope to learn from participating in the competition?

I hope to learn that in public bodies worldwide there are also people able to reason with their own heads. Because in eleven years of work as an inventor of sustainable depurative and energy solutions I have not even met one. I only collected silences and over three thousand six hundred silent contacts on LinkedIn.