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**Defend the environment and territory from floods by producing energy.**

Earthquakes are not caused by man, but we can defend enough well with the earthquake-resistant buildings. But in the floods there is much human responsibility, because we do not do prevention, and because we use energy systems that promote climate change, and so even floods.

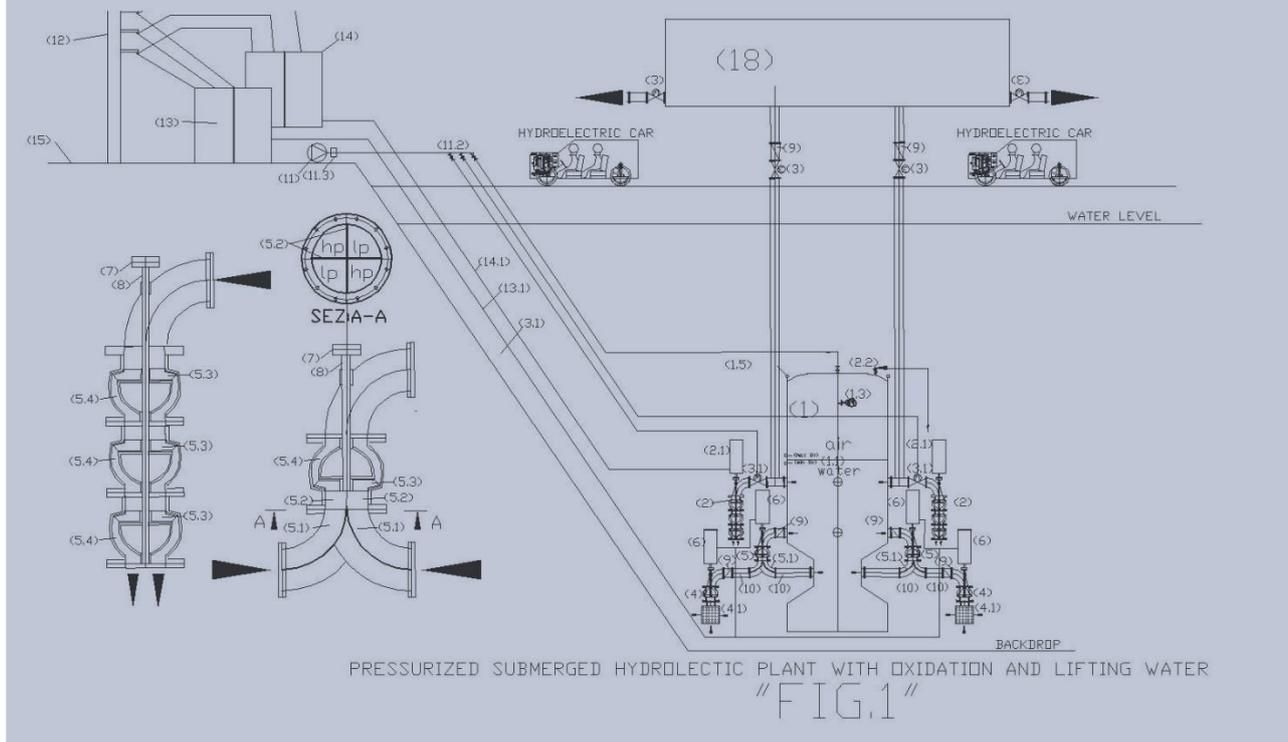
I speak not only of fossil energy, always under attack and always attested on 'Eighty percent of world energy, but I also speak of hydroelectric generation, which is the queen of renewables, which is very expensive to build dams and reservoirs, but unfortunately in case of torrential rains, it produces more harm than good, because rainwater, finding the mountain reservoirs already filled, flock with greater speed in the plains.

The problem is not only Italian but worldwide, closely linked to the global state of the art in environmental protection, which can not advance because the state agencies do not know how to design globally and multinational procurement adapt happily to the same, having the insured work forever (Who makes and destroys never waste time). Even multinationals and specialized companies that produce machines and plants provide the one that requires the public procurement market, improving performance, but not the systems. Other multinationals dealing commercial machines, that without rules, national and international, make their contribution to heat the planet, boilers, air conditioners air coolers and so on. We do not speak of environmental performance and energy efficiency of industrial plants, which certainly cannot be higher than the public state. Also they adapt happily to respect specific regulations, not global, fearing higher costs to bear. Instead, the global power systems solved at source at least 80% of the environmental problems, without cost to private companies.

In this global context of environmental protection, where all shine for specific skills and none for global expertise, it happened to a pensioner who has installed public and private systems, of all types, teach the public and to multinational institutions, as They could put together the environmental and energy plants rationally. In this presentation we talk about a single application. The other can be found on <http://www.spawhe.eu> website. E 'was hard work, but necessary, because the interests of hand, scientific, economic policy, involving all sections of society, and no one can be expressed freely, as a pensioner. I am sure that among the many competent people share these projects but they can not publicly express their consent not to get in contrast to those who pay their salaries.

Figure 1 (in file downloaded from the web) shows the energy alternative to fossil energy and the current hydropower, which is called "Pressurized Submerged Hydropower" that needs no dams and even flooding the mountain valleys, and compared to fossil energy, It does not need fuel. It can achieve in all the lakes and rivers (realizing many of the side calmly wells to water courses) that are subject to flooding, producing energy at costs much lower than traditional coal and hydropower, requiring no great works.

## Defend the environment and the territory by producing energy.



This solution, energy and protective environment, interacting positively with the environment, also by oxidizing the polluted water. In fact, the submerged pressurized systems using compressed air for pressurizing the submerged tank. The compressed air volume does not vary, because in the pressurized tank enters and leaves the same amount of water, therefore, the compressed air trapped in the upper part of the pressurized tank behaves like a spring, but the effect of the principle of Dalton on partial pressures of the gases and Henry on the solubilization of the gases, we have an important effect of the oxygen solubilization due to the pressure of the air cushion. This entails an increase in purifying water self capacity, without increasing the cost of production of electricity, which are already lower than all other energy invented by man. However, the dissolving of a part of air in the water only decreases the volume of the air cushion (which is reset by a compressor), not pressure. Therefore, the spring that pushes the water out without cost from the tank continues to operate.

This important renewable energy solution, purifying and for environmental prevention is possible because the invention of the pumps with the dual separate power supply (5), which will allow continuous internal recycle to the accumulated volume of water. Which, based on the fact that water is not compressed, balancing the buoyancy in suction and discharge of the pump, therefore, not only it allows you to circulate water with very little prevalence and very little electricity, but also to include, through the second suction mouth, inside the impeller, low pressure water, which replaces the expelled from the air cushion. (In the current autoclaves, not fed with the pumps with the dual separate power supply until to the impeller,

water can enter only winning the pressure of the air cushion, with an immense energy expenditure, therefore the current autoclaves only serve to decrease the number of starts of the pump motors and mitigate the disruption phenomena of variable motion). Under the new system, we get around the pressure of the air cushion with water entering in the tank and exploit the same pressure to out with more energy by supplying the turbine (2).

In the case of floods, When the water of the river or lake rises to an alarm level, gradually, we reduce, the production of energy by the turbine and divert water to the basin (18) that transfers it into security zones specially prepared low while maintaining the water level of the river or lake that create alluvial dangers.

Practically, in the year 2017, if we had already replaced all thermal power plants with "the Mini Hydroelectric power stations Pressurized Submersible" we would have no fear of floods and at the same time, we would have treated water everywhere. Because these systems, from an economic standpoint cost much less fossil energy and technical and scientific point of view, are more than logical, and can be made of any size and quantity along the water courses, you have to wonder why for which there are not even the reasons why these hydropower solutions that I'm carrying out for a couple of years, only collect silences around the world, without a single euro of funding. Meanwhile, they continue to waste resources in old energy and new, who cannot compete in any way for cost-effectiveness and environmental usefulness of pressurized waterpower solutions. Not surprisingly, in the same design, on the shore of the basin are represented two hydroelectric car. In fact, since, when we produce energy from the designed circuit it does not come out nor water, nor compressed air, this system can be used to motorize all land vehicles, marine and air. But, obviously, for existing thermal engine manufacturers, that the advent of the industrial age have invested in fossil energy, it is not convenient change technology, as for pumps manufacturers, not convenient to change the pumps in lifting equipment, until when in the international regulations, public interest, does not oblige private builders to build hydroelectric and thermal engines in place of ones and pumps with double separate power up the impeller instead of existing pumps.

The global engineering of power equipment and water treatment together exceeds all expectations also from the economic point of view, because it does not waste any resource physics and chemistry of the elements used. This showed the SPAWHE system without a euro of private or public financing, entering into the details of environmental and energy design, while using the same scientific principles and the current state of the art in machine construction. In fact, in the design of a purification plant and energy, every technical detail involves a choice between the public interest and the private sector, or between the local and the global interest. The set of details carry the complete system that can define local system if it tackles a single problem and global system if it tackles many problems. If the world's environmental and energy authorities were competent, they would have realized that to protect the planet, the health of humans and animals, in the end, the global system, as well as more efficient, it is always more economical of the partial purification and energy plants that not exploiting the synergies between more systems, waste resources, first materials and energy transport costs.

The world's authorities of science, politics and economy what expect to assume their responsibility? The authorities of the past have had no choice. If they were wrong, they have extenuating circumstances, because the protective energy solutions of environment, not cumbersome, not fuel, had not yet been invented. These solutions, relieving the balance of payments of countries like Italy, not producers of fossil fuels, would make available immense availability of wealth, even to prevent the damage of earthquakes, reinforcing homes and historic monuments.

But the of the submerged hydroelectric pressurized energy, in particular, while being interactive with the environment will cost even less than the simple extraction and refining and transportation of oil. So, the authorities of science, politics and economics, before funding new energy, calls renewable, just because

they do not emit CO<sub>2</sub>, but have very low yields large dimensions, high cost, and high environmental impacts, and are not interactive, must think about it very well.

Those who hope to get into the history of humanity, as a scientist, politician and economist will be remembered negatively for failing to recognize the usefulness of global energy systems, purifying and protective of the environment, as they are part of history scientists who invented the atomic bomb, the politicians who have created wars and economists that have created the current gap between rich and poor. The wealth of humanity is the science and technology applied globally in the interest of common.

If the powerful, by the way, do not put scientists and engineers together to find common solutions, it is said that such solutions can be hidden forever. Spawhe showed that with patience and perseverance even one technical, with no money, can rebuild logical paths, which require more specialization. The half scientific truths are like the lies. Sooner or later they will discover and also the universal science that we have handed the unsuspecting fathers of science, loses prestige. The real scientists should not allow this.

Best Regard.

Luigi Antonio Pezone