Peru 2.0: Electrical Energy Generator From Plant Photosynthesis and Water Generator From Air

Gomez Quilca, Jheriko (School: Politecnico Regional Del Centro)

It is expected that in 2030 Peru will begin to seriously feel the lack of water and the lack of access to electricity will worsen. So the proposed alternative solution is to build a generator of water from the air, as well as a generator of electricity from the photosynthesis of plants in order to close the gap in access to basic services without damaging the environment. The Water Generator from the air captures the air from the environment through a wind turbine, transporting it to a condensation chamber, passing through a double filtering, then a condenser will go from gaseous to liquid state through the dew point, then purifying it and obtaining drinking water finally. Likewise, the generator of electrical energy from the photosynthesis of plants, which is an alternative solution, consists of building a bioelectric cell using two electrodes, a copper cathode and an aluminum anode that will capture the electrons of the earth produced by photosynthesis in plants and bacteria. The results from the generator of electrical energy from the photosynthesis of plants (60cm x 50cm) supplies for 8 hours, turning on a 5-watt bulb and recharging 2 cell phones. Similarly, the generator of water from the air: (80cmx50cmx80cm) generates 20 liters per day. Therefore, the larger the dimension, the greater the capacity of the generators. Through the project, it is concluded that with both generators the accessibility gap to basic services is closed, improving the quality of life.

Awards Won:

Patent and Trademark Office Society: Second Award of $500