Innovative Wind Turbines

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The main purpose of this project is to increase productivity of conventional wind turbines economically and decrease the negative ramifications those should be contemplated on our environment. The idea that will be generated in this abstract, have been considered to reduce all repercussions to the minimum in the framework of possibilities and more importantly to raise efficiency of traditional turbines to the maximum. In my observations those were made in Baku(in “Caspian Fish” wind power plant, on the types “Gamesa G8” turbines) proved that power station gained only 63% energy out of possible capacity. This made me think about viable methods which could escalate wind speed even in the time that of its lowest indication. Then I decided to implement Bernoulli principle(Venturi tubes) which I took in Physics lessons. According to this principle, constricted part of the tube has the lowest pressure. The fact that a pressure drop accompanies an increased flow velocity is fundamental to the laws of fluid dynamics (P1+ ½ ?v12+?gh1=P2+½?v22+?gh2). Based on this concept, I created handmade model of this device. To enlighten, entrance’s diameter of the tube is the largest. As it goes in, I have made it narrower and I locate turbines in the constriction (narrowest part). As a result of the experiment, I generate roughly 2.5-2.8 times more energy with new device (which has been located in Venturi tube) than the same sized ordinary wind turbines. Unlike conventional turbines, this device will neither kill birds nor obstacle radio signals and make noise.

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