Critical National Need Idea Title;

Full Blown Power, the need to study Turbines and look beyond Propellers for the future of Wind Energy

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A True Turbine Alternative Wind Energy Design that can Challenge Propeller Towers

We greatly appreciate the opportunity to address the problems now facing Wind Energy and we hope to persuade development of a better design concept. At present 'Propeller Towers' seem to be the dominating design and Icon for Wind Energy, but propellers on towers are by no means **new** or perfected, but they are costing more and more. Technical problems still affect their cost efficiency. More and more money has been spent trying to make the concept work, but the very design has its defects and limitations. The idea of using wind was originally for filling sails and propelling boats, then for pumping water as we know from the prairies of America and the Wind-Mills of Holland. The propeller was then designed for boats and aircraft and served well enough that a great industry grew out of propeller designs. But then came a true turbine, the JET! A great fight went with that. Even though proven with military aircraft, commercial aviation went along with the "Spruce Goose" and other over-gross propeller designs for many more years before transitioning to jet turbines. It was around that time that the propeller on a tower with a little dyno/generator got its first recognition, mainly as a novelty, but also for its potential as a clean energy source. Now, it has become more than it really is in the promises and assumptions of

politicians and businessmen, whose expectations far exceed any actual output, just the more the investment the greater the expectation.

Research and development costs alone for “Propeller Towers” have constantly increased, and problems have continued to grow right along with the size of them. No actual prices and costs are easily available as public information, but our research discovery was over $5 million for an older model installed. Parts replacement and service is not cheap and causes downtime. Since there is no way to store the electricity produced, and there’s no way to control the wind, the on-line, off-line effect due to any type of mechanical failure often causes black outs and surges and inverter problems. Propeller Tower generators produce Direct Current that has to be inverted before being transmitted and put on-line into a grid. Wind shear and sudden shifts can cause extensive damage as well as lightning. The bearings, transmissions, and even blade surfaces have been in a perpetual state of rework for years now. For a manufacturer’s warrantees to be good, the manufacturer has to stay in business, for as long as 30years in the case of some of the components of ‘Propeller Towers’. The biggest wind energy researcher and manufacturer, General Electric now appears to be in serious financial difficulties, we guess they may soon ‘blow away’. We also can see that the available models of ‘Propeller Towers’ are quickly outdated with ‘bigger and better’ models way before putting out $5 million worth of useful electricity. We also know that land lease and subsidies have been paid out of taxpayer dollars for ‘Big Wind’. The ‘Wind’ dynasties have been chasing the wind for profit for many years now with only break-even success, if that, to date. They only want development of wind generators that are useful only to their invested interests that the private sector has no say so about and cannot easily obtain in proper scale or price for private use.

We firmly believe that with a logical and radical reconfiguration of the Wind Energy turbine design, we can economically improve overall electrical output from our wind sources for a fraction of what is now being spent. To the purponents of ‘Propeller Towers Only’ we are a threat. This is something that can outperform them dollars per Kilowatt. We do see a global need for what we intend to create. We can see that it will create more and more jobs and produce exportable products. We can see that it can partner with solar energy and help in many places where independent power beyond any grid is needed. What it is basically is a cylinder to which proportionally large, multiple, contoured, ‘mouse ear’ fins are attached to the outside of it and it rotates around an open centered stationary cylinder. When functioning as a vertical axis, it is most compatible with any and all variations of directional wind force and will always rotate in the same

direction regardless. The hollow center will meet several needs. It will allow placing a lightening rod through it to protect from electric strike, it may enable direct Alternating Current output, and it will increase circumference without increasing mass to interact more fields per revolution.

It can function horizontally, like a pinwheel, but would not be as radially efficient at matching wind direction. Up-side down, like under a bridge, it would function just as well as upright. It could also function as a turbo-charger with any heat exchange system using ducted exhaust air for energy rebate and savings. This type of vertical axis turbine can stabilize itself gyroscopically like a top, and therefore does not require an elaborate and expensive anchor base or any sort of shaft armature. It can be manufactured to any size, scale, and electrical output, and can be mounted many ways in many places. It can even be made in half sections and installed on any existing pole structure, or be mounted one above another on the same pole. It is easy to see how this integral turbine generator could revolutionize our ability to get electricity from wind at a fraction of what's being paid now. They don't use propellers in the "turbine" drives for the generators at any hydro-electric dams, and Propeller Towers are not intended to propel for flight, though according to Bernoulli's Theory, air is a fluid itself, so maybe there are more compatible turbine designs.

We still require adequate funding to contract and employ the necessary and accredited personnel to design and create prototypes and test as many variations as possible using the design described herein, to assimilate a size to output ratio that can enable a cost to output comparative study. This is an exciting project that can produce a real change in the way we see wind energy. A unit can be built to size for a home residence to mount on the roof for about what it costs to manufacture a washing machine. Why with all our advances in alternative energy resources, has this yet to be seriously studied? Is it because of the very manner of funding becoming intellectually prejudiced and biased to deliberately discredit or ignore any really new alternative design? We realize our energy and economy are interwoven, and because of that, we are very aware that we must look and look again for energy alternatives for now and in the future. We went to the Dept. of Energy on-line. We got to; "Hydropower and Wind Energy" then went to "Funding" which got us to 'Innovation & Invention'. The page has obviously been ignored since June 2007 and it says there are no funds available anyway. We then managed to make contact with DOE and got copy of their latest solicitations for grant funding. All of the ones for Wind Energy research are tailored for only Propeller Tower enhancements or Improvements. We know if people knew there were alternatives being

ignored instead of researched they would feel cheated, especially those who voted for Change! A lot of people in our society, especially us, want to see **new** GREEN technology ideas at work, and we can see all the meters running up our electric bills with add on's for 'clean energy research and development'. We're not impressed with "Big Wind" costing "Big Bucks" and delivering "Big Excuses." We know "Propeller Towers" are nothing **new**, and for the record, the very "Change" specified "**NEW**" alternative renewable, clean energy invention, innovation and development. This **new** alternative wind turbine design can create not just good jobs, but ultimately **new** and exportable products, but because it is radically different its to be considered high risk till its adequately proven. We don't have the necessary resources, only the capabilities. Yes we can manage our own invention, just give us the tools and we'll get the job done.

To conduct a proper and fair evaluation of this or any other meritous "Alternative" wind energy concept it is necessary to employ accredited consultants specialized in Electric Motors and Generators, to verify feasibility of every aspect of the dyno-generator's design and creation. A working test prototype may be necessary to assure validity of design or component function. All data gathered becomes scientific reference for design and build of later phase full scale prototypes and production models for performance and cost comparison, and would provide proof of functionability adequate to justify further and more comprehensive research and development of this or any **new** configuration as an effective Alternative Wind Energy Generator. For our Global Society, this design example will be a high demand energy supplement when produced in smaller scale models. We're sure to see them everywhere from rooftops to automobile roofs, Some of our street-lights are now solar charged battery supplemented and could be even more effective by putting a little wind turbine near the top of the pole. The "Full Blown Power" wind generator concept could easily be caged to protect from birds, animals, or people.

Such a design could benefit so many people in so many ways. Wind energy can help us all deal with the economic crisis by 'reducing the cost of producing.' "Giant 'Propeller Towers" wont be able to do it all, so why is almost all Wind Energy research funding still being spent on their 'improvements' after all these years. Their industry by now could fund their own 'New and Improved" versions and upgrades without the taxpayers help. Their future cost to return projections have become manipulated speculative fantasies, otherwise known as excuses. If they were telling the truth and if their cost to returns was truly profitable, there would be plenty of research and development funding available for other potential wind energy research

by grass roots GREEN inventors instead of “we’re sorry, …there’s no funding available ..and we don’t have a category for that…” But.. after over fifty years of taking all the Government can dish out, it should be time that the great ‘ICON’ Propeller Towers should have to give way to allow feasibility research funding for real turbines that may produce in all different sizes and shapes and in all different places. It’s easily assumed that damming for wind is cheaper and easier than damming for water, and a ball or oval shaped multi-blade turbine design configuration is highly adaptable to funneled or super ducted wind sources, through canyons and above and under bridges, along the rooftops of homes and businesses. They could be sealed and submerged to function underwater at slow, constant speed with currents and flows and even tidal changes. Multi-fin or cupped vanes spaced out around a revolving integral dyno housing will provide maximum wind force capture from any direction. The fin-vanes have to be shaped, formed, and spaced for maximum performance. All of this requires Government help and funding which is now virtually monopolized by “Big Wind” interests and advocates who are still after all these years, dependents of the taxpayers.

Due to the urgency of our society to come up with **new** alternatives to help produce adequate environmentally friendly, clean, renewable energy, we feel that ‘true turbine’ wind alternatives should be funded, tried and compared to all other means of generating electricity from wind for overall cost and performance. This is why we feel it is our duty to submit this White Paper in hope that the potential of this invention can yet be proven and utilized beneficially and that the Administration should be willing to fund investigation and research of **new** alternative designs and concepts brought to their attention as was promised they would, and wind “turbines” should not be limited to ‘Propeller Towers’

[from the ‘free dictionary on-line’] ……. **turbine(**tur’bĭn, bīn); Any of various machines in which the kinetic energy of a moving fluid is converted to mechanical power by the impulse or reaction of the fluid with a series of buckets, paddles, or blades arrayed about the circumference of a wheel or cylinder. {French from Latin turbō, turbin, perhaps from Greek-turbē, *turmoil*}