

From: "**Fred Hapgood**" hapgood@pobox.com
To: "**Carmino Cifaldi**" Ccifaldi@tampabay.rr.com
Sent: Wednesday, September 17, 2008
Subject: **SKY WIND FARM**- Double Quadruple Principle

Thanks!

Lots of good things in here..

Fred

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9-15-2008

Dear Mr. **Hapgood**:

I read with interest your article, re **Windmills in the Sky**: Does my article hold any interest for you? You may find it on my Website, cifaldi.org, along with other papers, or even books, (of a technical nature)... Though they may be more comprehensive, than technical, but based on scientific principles. one of which, as seen in **Wikibooks**, is relative to the manufacture of Black & White Picture tubes, located in:

http://en.wikibooks.org/wiki/Television_Manufacture_and_Repair

SKY WIND-FARM(s)

In **1965**, I designed a **kite-like unit**, which would be positioned **10+** miles in the air, connected by a steel cable. The unit would carry an **F. M.** antenna, and associated equipment. (**F. M.**) broadcasts signals, go in a straight line, "**line of sight**", instead of bending with the curvature of the earth, **like A. M. signals do**).

It would be extremely valuable in areas, where there is **NO** electricity, for transmitting **F. M.** television signals, carrying **cell- phone communications**, as well as other reasons!

Such a system(s), network, would also be valuable for **nations**, who do **NOT** have the technical knowhow, or otherwise could **NOT** afford geo-stationary satellites....much cheaper too! Several separate units spaced at the appropriate intervals from one another, would be able to provide data, to an area, **thousands of miles, in diameter**.

This system, of communications, would be especially useful, for areas of the globe, which had large expanses of desert land, mountainous terrain, where **NO** signalization, (**F. M.**) is available. It would also be extremely useful as a **telephonic-relay station**, or as a **weather station**, or many other uses, **NOT** specifically mentioned herein!

With modifications, the **Kite-like** arrangement, (partially supported by **HELIUM-filled** permanent enclosures), which would supplement buoyancy. The units may **ALSO** contain **Wind Turbines** which would be able to generate **tremendous** amounts of electricity.

In view of the twin disasters, (**Global-Warming/Oil Crises**), facing the world today, **wind-capturing turbines**, in **GANGS** of **(10)**, or more, **generating electricity**, may be erected in the sky and connected. They may be called “Wind-Farms”).

Because the unit(s), would be **above most clouds**), they could also **provide electricity, in another way**, by using **photo-voltaic solar cells**. These **Solar cells**, would be able to supply power to **strobe lights**, attached on the Cable, at various heights, which would signal, that the Cable, is in that position.

You may also have small, wind-direction panels, affixed to each individual section, actuated and controlled by a computer program, which may avoid entanglement of units, in the “**farm**”. Dependent on need, with enough **Solar Cells**, you may also accomplish other tasks, which **require electricity**.

The main thrust of this document is directed toward **perpetual electricity-generation, WITHOUT** the use of finite energy resources, (**OIL, GAS, COAL, WOOD**, ... even **atomic fission**, [splitting the atom])!

“**FARMS**” of **Wind-capturing turbines, powered** by the **infinite renewable energy-source. (wind)**, floating in the sky, (much like a kite. in a strong wind), would be able to supply electricity, in **very large quantities, [Megawatts]**, (see **UPDATE**, below).

The electricity generated by the “**Farms**”, would allow the use of modern-day electronic equipment, at a very affordable cost. At certain times, it could be life-saving for the nations’ governments, throughout the whole world).

NOTE: It would be especially valuable, in remote areas, where people still live in “**stone-age**” conditions, because **NO** electricity is available. They would truly be fixed ... in **Geo-stationary position!**

UPDATE: Pictured in **Discover Magazine, Oct. 2008, Page 21**, an article composed by **Fred Hapgood**, speculates **wind-turbines**, may generate tremendous amounts of electricity. The article also shows the picture of a single unit, which has **(4)** wind-mill blades, on that one unit.

One of the reasons that large amounts of electricity may be generated, is because the **wind-velocity** at those higher altitudes, is much **higher** than the sea-level winds. Another reason is, that the winds are **CONSTANT**, unlike the winds, which are prevalent, (or lacking), at sea-level!

Together, those **(2)** reasons translate, (**aided and abetted by the Double-Quadruple Principle**), into the production of electricity, which is many times higher, than that, which could be produced at sea level. It can & does so, **24 hours**, per day!

Wind Mills/turbines, may generate tremendous amounts of electricity because one of the Laws of Physics, teaches the **magic** of the “**Double-Quadruple Principle**” (Q/D/P). It teaches the precept, as explained next!

Double-Quadruple Principle

The **magic**, of the **Double-Quadruple-Principle** (D Q P). A **1”** pipe can pass through **100** gallons of water per minute (GPM). Doubling the diameter of the pipe, as you would suspect, does **NOT** pass **200** gallons of water per minute, but, in reality, actually **passes 400** gallons of water, through the **(2)”** pipe!

The same principle applies to **WIND GENERATORS** (wind-mills/turbines). A **(10)** Mile per hour wind, may generate **1 Kw** of electricity, but a **20 MPH** wind can generate **(4) Kw** of electricity, according to the **(D Q P)**.

It is easier to see, when discussing, the **(D/Q/P)**, how & why it works, as it is explained, when discussing Television signals. **More** bandwidth/space is required for Television broadcasting, over the air waves, because this use, is **ALSO** governed by, the rule of the **(D Q P)**.

The **American** T.V. system, has always (and still does), **[2008]**, projected **(525)** lines in horizontal resolution for its television pictures. **HDTV** projects **1,080** lines. This appears to be. only **double** the amount of resolution.

While apparently, only **doubling** the amount of lines, (which can be seen), it **ALSO doubles, (2X)**, the data on the lines, themselves, (which basically is out of sight). Therefore, by **doubling** the data **ON** the **lines themselves**, times **doubling the amount of lines**, now results in the final, **[2 X 2 =s (4)]** times the amount of air-wave space which is needed.

NOTE: Modern-day technology, **(2005)**, now allows signalization of pictures/data, over the air, through a process called “**streaming**”.

Streaming, **negates** the problem for the need of much more bandwidth, (the amount of space needed in the transmission of the signals).

Because **HDTV**, is subject to the **(D Q P)**, such would require **(4)** times more air-space, than that allotted in the long-used **(525)** line system. Owners of adjoining frequencies would have to be combined. But, they would **NOT** agree to join with other parties, which would then become a necessity!

This new method of T.V. transmission, which gets around that principle, (basically does so), by the picture being broken down into **(1)** line at a time. The data on the **(525)** lines, are converted into digital signals, then compressed, and in that form, are transmitted. The T.V set receives those compressed digital signals, de-compresses them, as one-at-a-time, individual lines, also.

It does so, so rapidly, that the **decay** time, (the period of time the phosphor particle is excited [lighted]), and the fading time to **NO** color of the phosphor, lets the signal persist. In that manner, the eye effectively, sees a complete picture!

This is a simple way of providing the answer/rationale for the apparently side-stepping of the **(Q D P)**. While **HDTV**, really **DOES** produce a sharper image on the T.V. Screen, for most purposes, **(525)** lines, is **NOT** bad at all!

However, that **(D Q P)** is **VITAL**, as disclosed herein, when discussed relative to **generating electricity**, by wind -generators or wind-turbines. It is well-known, that we have **high wind-velocities**, constantly traversing the sky, **(24 hours a day.... FOREVER !**

A wind generator with **(6) ft** blades, may generate **(1) Kw** of electricity in a **(10) MPH** wind. When the wind speed picks up to **(20) MPH**, the same generator, will now produce **(4) Kw** of Electricity. Now let's replace those **(6 ft)** blades with **(12 ft)** blades, this same generator will now produce **(16) Kw of electricity**. More extrapolations next

To give you some idea of how important the Principle **(D Q P)** is, imagine wind velocities in the **Stratosphere** at **(160 MPH)!** That represents a **quadrupling** effect of **(4)** successive times. The end result of the former **(1) Kw** unit, is now producing **1,024 Kw**, per single, Wind Generator Turbine.

Extrapolate further: The estimated amount of electricity consumed in the U.S. for **(1) year**], is approximately **(1.4) Trillion Kwh**.

UPDATE: Therefore, **(4)** wind-turbines per single unit, [as suggested in the **Discover Magazine (Oct 2008)**, Page **21**], times a gang of **(10)** units, per **Wind-Farm**, times thousands of units, then, the **(1.4) Trillion Kwh** goal, **MAY** be attainable, in an acceptable period of time.

The end result would be far safer than **Atomic Fission**, (**SPLITTING ATOMS**) and easier to do, than **Atomic Fusion**, (**JOINING ATOMS TOGETHER**).

Global Wind-Farms, should be the aim of every government in the world, to be achieved, as a collaborative effect. This would ensure, that the world does **NOT** run out of Oil or Gas, in the **foreseeable** future.

NOTE: According to the **U.S. Department of Energy**, a barrel of oil, consists of **(42)** gallons. Those **(42)** gallons, only produce **(19.5)** gallons of gasoline! The residue, is used to manufacture other products!

Very-very importantly, Wind-Farm produced electricity, will make the world much safer. The reason is ... **(99 %)** of the world's atomic energy plants, may now be closed/eliminated. However, most important of all, there is still a need for medical uses, (**nuclear isotopes**), and other irreplaceable uses, now currently being employed.

Motor vehicles use, consume/waste, too much oil! Since the **U.S.** has plenty of **natural gas**, ... **Battery/gas, Hybrid Vehicles**, should be developed. The ultimate goal, should be that, of an **ALL-ELECTRIC** vehicle, whose batteries may be recharged, by electricity derived from renewable energy sources, (**Wind, Solar, etc.**). **Geo-thermal** heat-recovery, would be a welcome assist, to electricity, which now-provides heating. Geo-thermal inexhaustible heat, should be used for all home-heating purposes!

With plenty of renewable-energy electricity available, oil trapped in large quantities of **SHALE (rock)**, may also be recovered. This would be added to the world's, natural oil reserves. **Oil** should **NOT** be used for **heating, fuel for motor vehicles, NOR**, for generating **electricity!**

We **SHOULD** start to, and erect, **(200)** "**Wind-Farms**", each day, for the next **(10)** years. Rough extrapolation estimates, indicate that, this amount of wind-Farms, can supply **100%**, of the **U.S.'s** electricity needs, [as used in the year, **(2007)**], ... some **1.3 Trillion Kwh**.

As a bonus, that would be accomplished with absolutely **NO** necessity for storage of wind-generated Electricity, in periods, (at sea-level), where there is **NO** wind! There will be **NO** air-pollution, **NOR** oil-use, whatsoever, for the generation of electricity, from then on!

NOTE: It is evident now, as the world's population is growing, at more than **71,000,000** people per year, water is increasingly, **becoming scarce**. **NOW**, **Thanks** to the past "**Greenhouse**"

effect, we have (2008), MORE water in the eco-sphere, than ever before, in recorded history!

Here is the bonus, of all bonuses!

NEVER-HEARD-BEFORE ... with enough "WIND-FARMS", ERECTED AND DEPLOYED, producing that amount of electricity, THROUGHOUT THE U.S., WE, IN FACT, WILL ACTUALLY be able to DO the FOLLOWING: The generation of electricity by many clusters of Wind-Farms, would:

SOLVE the oil/energy crisis,

SOLVE the Global-Warming problem,

Next, EASE, and then ERASE, MOST EFFECTS OF GLOBAL WARMING!

SOLVE the Water-shortage problem, BEFORE it starts, in earnest, (which has already been reported (2006), in certain areas of the world).

With copious amounts of electricity, we would also BE ABLE TO CONVERT SALT WATER, INTO FRESH WATER, (derived from the oceans of the world), and put it where it is needed most!

A FINAL BONUS! There are virtually NO life-saving problems, which can NOT be alleviated, negated, NOR solved, by plentiful amounts of electricity, including the ability, to synthesize water!

Finally, the powers of extrapolation, when applied to the world's increase in population, yields the following data minimums, (which is constantly accelerating): 71 million/yr =s 710 Million/10 years =s 7.1 Billion in 100 years.

That is more than double the amount of population on earth, than in (2008). Obviously, some method must be imposed, before then, for PLANNED parenthood. The ultimate goal of parity for all nations, according to some prescribed formula, should also be agreed upon!

I am sure that people who follow me, will be able to build on what is written herein. They will devise more, & NEW ideas, for providing methods of well-being, for a better life. This outcome would be especially happy for the unfortunates, of ALL the world's inhabitants!

Best regards,

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