NuEnergy Technologies

Hydro-Magnetic Dynamo

Hydrogen Excitation System

My Research shows that over the past 80 years significant breakthroughs in energy generation have occurred. They have been suppressed by governments and powerful multinational corporations with opposing vested interest. Since the time of N. Tesla, T. Townsend Brown and others in the early part of the past century, we have had the technological ability to replace fossil fuel, and nuclear power with advanced non-polluting electromagnetic and electrogravitic systems. This is another one of such systems. The time is, ***NOW***! We will bring about these needed changes.

Dr. Hector M. Guevara
06/12/2012

HYEXSYS – HYDROGEN EXCITATION SYSTEM

Simply put, Dr. Guevara's concept is to change the nuclei of two hydrogen protons into one by creating an electromagnetic field which reduces the electrically charged positive repulsion of these proton forces. The major application is the unique release of the immense potential electricity in a far more economical and non-toxic manner than any method that exists today.

The upside of this potential renewable and sustainable energy source is mind boggling. The preeminent device and technology that is being proposed holds the following potential promise:

- **A clean renewable energy system that will impact the environment positively by displacing fossil fuel burning equipment with a passive, non-polluting method at a price that will capture market share immediately.**
- **An invitation to reduce the problematic nuclear experiment.**
- **An energy idea that will alter the current energy industry and reduce global dependence upon petroleum.**

Fusion (defined):

The union of light atomic nuclei to form heavier ones, taking place with an overall loss in atomic mass and resulting in a great release of energy. Dr. Guevara has postulated that fusion reactions may occur when two hydrogen nuclei, or protons, fuse, through his controlled process of transmutation, thereby releasing an enormous amount of energy. To get hydrogen protons close enough to fuse requires overcoming their extremely strong positive electrical repulsion to one another.

Physicists at Brookhaven National Laboratory and Stony Brook (New York State University), with which Dr. Guevara had been associated as a material supplier and incubator in its mentor-protégé program, believe that protons may fuse only if they collide at outrageous speeds, which is why they go to considerable expense to heat them to extreme temperatures. One of Dr. Guevara's previous companies, Hytech Industries Corp., had also been supplying the nano-second cable jumpers for the proton accelerator at Brookhaven Lab, while the project was under the management of the US Department of Energy.

Dr. Guevara's concept to change the nuclei of two hydrogen protons into one by creating an electromagnetic field, which reduces the electrically charged positive repulsion of these proton forces, is novel.

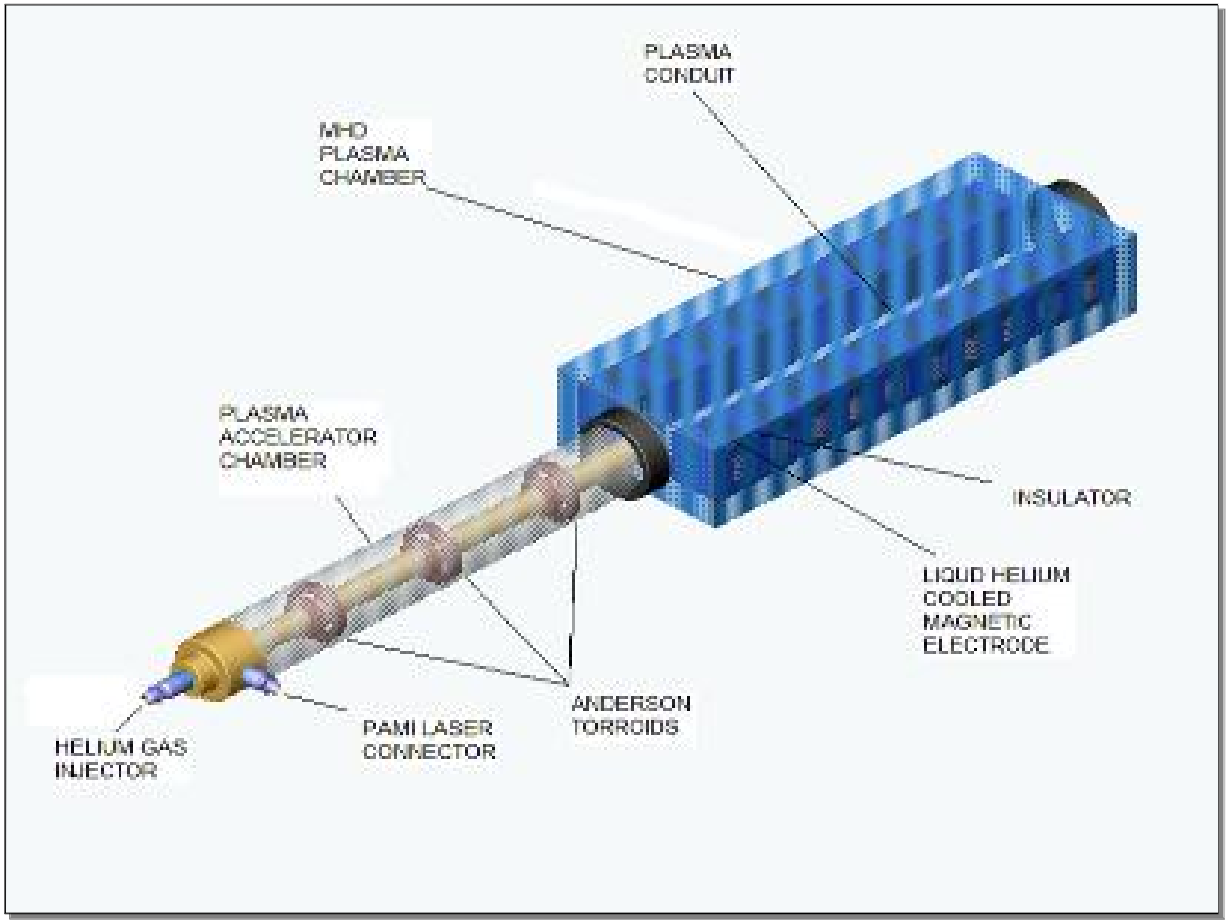
Scientists have postulated and agreed that energy possesses the dimensional properties of mass. According to the special theory of relativity, we can easily calculate a value for energy. So that, assigning to mass (M) an energy value such that $E/C^2 = M$; where E is the energy and C is the speed of light (186,280 miles/sec or 299,800,000 meters, per second (m/s), they reconcile the postulate. Of course, inversely $E=M(C^2)$.

NuEnergy plans to complete research to develop a device conceptualized by Dr. Guevara, working with other scientist and engineers, whereby they may fuse two deuterium (D) isotope nuclei into one, and/or use other ancillary mass transmutations, thereby releasing an enormous amount of energy. The projected timeline for this prototype development project is approximately 18-24 months from set-up.

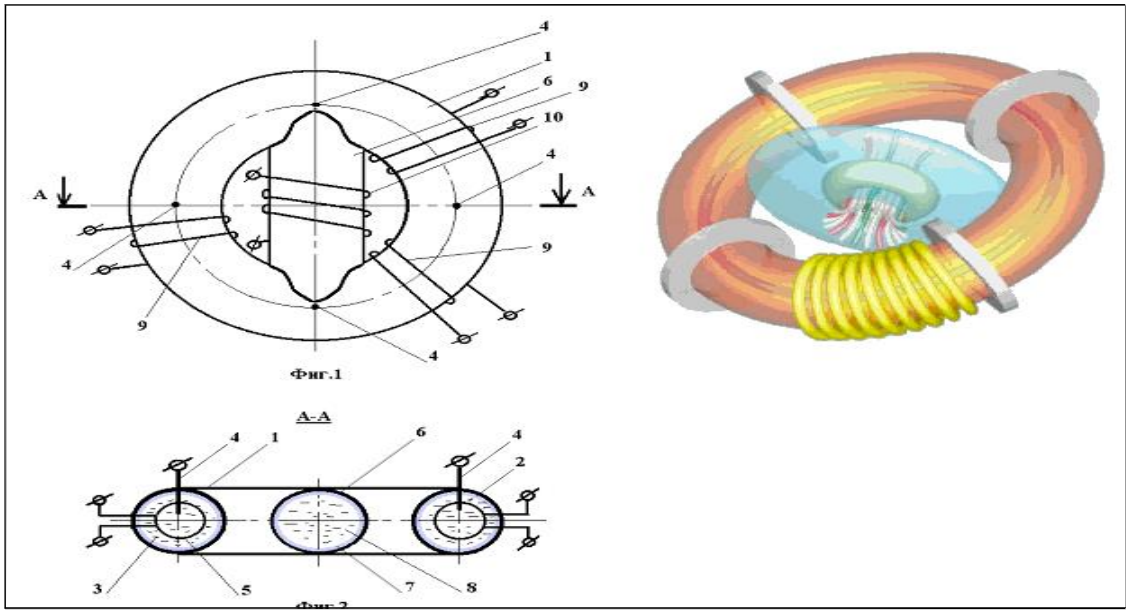
During Phase I, NuEnergy's objective is to design and fabricate an excitation field, described later in the section: "How HyExSys May Work and Its Advantages", using components that are physically placed in such a manner that duplicate and continuous operation of the device may be assured. Phase I consist of excitation circuit design, materials research, and assembly. In Phase II of this project, actual manufacture of the HyExSys prototype for commercial and industrial distribution is targeted.

The following drawings reflect one of the main subsystems, which will be produced to create the above noted excitation and acceleration of heavy water (H_2O_2), thereby releasing the deuterium and tritium hydrogen isotopes. This device is being called a magneto-hydrodynamic generator or Dynamo. The other drawing is simply depicting a conceptual mock up of the housing unit within which the excitation of electron function will take place:

Accelerated Deuterium Plasma MHD (Magnetohydrodynamic) Generator



Housing Unit for MHD



Competitive Advantages of Dynamos

Dynamos are scalable from 100 kilowatts to 1,000 megawatts. Dynamos can be built as large as 1,000 megawatts. Seven such dynamos can be stacked on top of one another to make a single 7,000-megawatt unit about the size of a two-car garage. For comparison, Hoover Dam's 17 generators have a total rated capacity of 2,000 megawatts

Competitive Economics of Decentralized Power Systems

The economics of decentralized electric power generating systems such as solar, small-scale hydro, fuel cells, and wind energy have gradually become price competitive. NuEnergy intends to be a leader of the next energy revolution, which will remove us from the practice of burning polluting hydrocarbons, owned by special interest, and invites you to join NuEnergy in becoming part of this revolution.

There are no patents pending or issued on this intellectual property, which Dr. Guevara has assigned to NuEnergy Technologies Corp. It is expected that after a prototype is produced, NuEnergy will have a proof of concept on which the granting of an international patent must be issued.

The dynamo's production cost is estimated at $500 per kilowatt, which is competitive to nuclear power's capital costs of $5,000 per kilowatt, windmill capital costs of $4,000 per kilowatt, etc. A well-run nuclear power plant can generate power for 1.5 cents per kilowatt-hour, coal 1.8 cents, natural gases 3.4 cents, and oils 4.1 cents, on the average. The dynamo's operating cost would be approximately .1 cent per kilowatt-hour with no external fuel needed or pollution.

A dynamo can reliably run continuously for 25 years or more with little or no maintenance, no external fuels source, and no pollution. If a dynamo's output is 1,000 kilowatts; its total input power is approximately 10 kilowatts. Thus, the dynamo's energy efficiency is 10,000 per cent, or 100 to 1.

Executive Summary

Magneto-hydrodynamic Generator

The primary objective of NuEnergy is to grow the business through the development of its viable sustainable energy products in the following ways:

- Provide for funding to cover assembly, operational testing, and certification of 1500 kW MHD Generator industrial sample.
- Sale of licenses to manufacture MHD-Generators.
- Organizing company-owned mass production line for MHD-Generators in Florida.
- Development of efficient distribution network to promote MHD-Generators in the local market.
- Development of company-owned network of small enterprises – generating and selling electricity with MHD Generators.

Tactical Plan:

The fact that the MHD-Generator is a competitive product both on US and on foreign markets for a majority of countries in the world is the key to success of the project. Taking into account an intensive competition in the market of small capacity power generators (up to 30MW), as well as strict requirements for certification, it is necessary first of all to concentrate on promotion of small capacity MHD-Generators for telecommunication company, hospitals, emergency services, mobile systems for northern and remote areas, residential power supply, agricultural needs, small business as well as municipal and railway transport. Beginning with the market of small capacity generators it is planned to expand gradually to the market of generators and electric drives of medium capacity.

Marketing Opportunities:

The worldwide electrical energy market has been estimated at $800 billion (US) per year and rising. “There are 2 billion people who still lack electricity today, and the world demand in developing countries is doubling every eight years." (World Watch Institute)

Improvements in energy intensity are the only factor that has minimized the growth of energy.

The U.S. government wanted to achieve $5 billion in annual export sales of renewable energy systems by 2012, and to create millions of jobs. DOE has drafted a strategic plan to serve as a focus for the next several years, but wants input before the plan is released. It is designed to support programs to increase diversity of energy sources and to bring renewable energy sources into the market and to boost energy efficiency, and it suggests a number of measures that could be met by 2015. DOE wants technologies that can triple the amount of renewable non-hydroelectric energy capacity by 2015, by which time the plan envisages annual exports of renewable energy systems of $5 billion, creating millions of jobs.

A U.S. company recently built a system to desalinate water using solar energy. The prototype production plant was built in San Diego, and uses reverse osmosis to produce fresh water at less than 29 cent for every 1,000 gallons. The SunSpring project will use solar energy for power, allowing salt water to be desalinated at less than the current cost of $6 per thousand gallons, which is too expensive for agricultural applications. The Solar Power & Energy Storage System uses a solar collector that consists of four layers of plastic film coupled to the earth. The company estimates that one square mile of land would generate more than $50 million worth of electricity, at $0.05/kW, with a two-year payback. Storing solar energy during the day allows generation to continue at night, although at a 30 percent reduction inefficiency.

Competitive Advantages:

The proposed MHD generator as compared to other known non-traditional devices for generating electric power permits to increase efficiency, reliability, and ecological safety, to optimize composition, and to minimize expenses related to operational use and services / maintenance.

Traditional electric power stations involve the following negative consequences:

Thermal power stations (coal powered) – pollution of environment, acid rains, discharge of combustion products into the atmosphere. This is presently a very serious problem in many cities around the world. Further increase in generating electric power due to introduction of the new stations of this type or due to increasing capacities of existing power stations of this type is bound to increase toxic discharge into atmosphere. Another serious problem of coal-powered stations arises from the fact that their present share in total generated electricity is considerable and presents a considerable workload for transportation. Thus the very process of restructuring the power generating industry presents a complicated task. Construction of hydroelectric power stations involves flooding considerable areas of land further excluded from land utilization, disruption of microclimate, and complications in navigation.

The invention in question - The MHD-Generator does not have the above short comings of traditional power sources; it doesn't involve high construction costs, and is ecologically safe. Approximate (generally accepted) life term (cycle) of such an invention with regards to normal wear (aging) is 5 – 12 years. The term of the licensing agreement depends primarily on the estimated term of the normal wear of the technology in question. Experience in international sale of licenses indicates that this term does not exceed 10 –15 years. As long as the method of generating power in question is non-traditional it permits to reduce production costs and tangibly increases the range of applications. Thus, with regards to the fact that an intensive research is under way in this particular field and a considerable scientific – technical potential is accumulated, it is possible to forecast a possibility and competitiveness of generating electricity by the claimed method and device for the term of 10 – 15 years and longer. With regards to the above-mentioned, the calculated term of licensing agreement is considered to be within 10 years range. Further forecasting of the invention utilization is not realistic, as there always exists a possibility that a new and more competitive technology may emerge, or of some break through in an application of qualitatively new technical solutions and materials.

Table 1

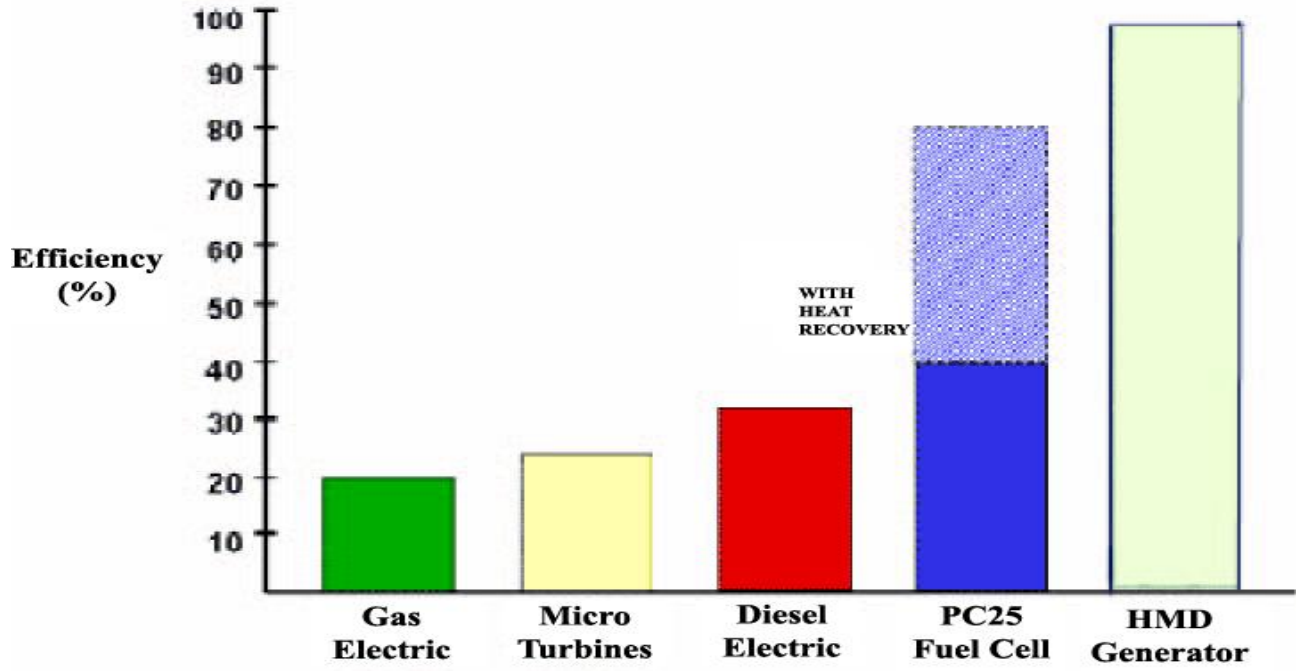
Economic Comparison of Distributed Generation Technologies

Technology Comparison	Diesel Engine	Gas Engine	Simple Cycle Gas Turbine	Microturbine	Fuel Cell	Photovoltaics	MHD-Generators
Product Rollout	Commercial	Commercial	Commercial	1999- 2000	1996-2010	Commercial	2001-2002
Size Range (kW)	20–10,000+	50 - 5,000+	1,000+	30 – 200	50-1000+	1+	100-1000+
Efficiency (HHV)	36 –43%	28–42%	21– 40%	25 – 30%	35– 54%	N/A.	89 - 93%
Gen set Package Cost ($/kW)	125 –300	250–600	300 – 600	350 –750*	1500–3000	N/A.	95 - 200
Turnkey Cost-no heat recovery ($/kW)	350 –500	600–1000	650 – 900	600 –1100	1900– 3500	5000 –10000	310 - 450
Heat Recovery Added Costs ($/kW)	N/A.	$75–150	$100 – 200	$75 – 350	incl.	N/A.	N/A
O&M Cost ($/kWh)	0.005–0.010	0.007–0.015	0.003– 0.008	0.005 – 0.010	0.005-0.010	0.001– 0.004	0.003-0.005

Comparative Advantages in Production

- No specific user training of MHD-Generators is necessary except for knowledge of labor safety and general requirements for users of electrical equipment. Operational use and control of MHD-Generator may be carried out via a dispatcher in case a number of units are working simultaneously in a general local network or in case of individual device user.
- MGD - Generator Benefits
- *Highly Efficient* - 93 percent electrical efficiency;
- *Low Operating Cost* - The efficiency of the MHD - Generator will reduce the operating costs (energy bill) of the building.
- *High Quality Power* - The electrical output is computer grade power. Meet critical power requirements without interruption. Minimize lost productivity, lost revenue, product loss or opportunity cost.
- *Reduced Peripherals* - No need for UPS systems, rooms of lead-acid batteries, diesel generators, storage tanks, secondary containment vessels, or additional HVAC requirements.
- *Green Power* - MHD - Generator power installations are exempt from air emission permitting requirements in many municipalities and provide flexibility under many federal, state and local air pollution standards.
- Operates in Diverse Climates - MHD - Generator have operated in a range of climate condition and in temperatures ranging from -60°C to 90°C.
- Flexible Siting Options - MHD - Generator can be sited indoors or outdoors. Valuable indoor space normally occupied by batteries and UPS systems can be eliminated, translating into more available high rent space.
- No Emissions - MHD - Generator is the cleanest power generating technology available today.
- Quiet Operation - 40 - 60dB at 30 ft.
- Modular and Scalable - As building needs change additional MHD - Generator can be added, optimizing up-front expense.
- Simple operational use of MHD - Generator and safety systems
- *High Efficiency*
- MHD - Generator extract more energy when compared to combustion engines. This helps preserve our supply of precious Natural resources

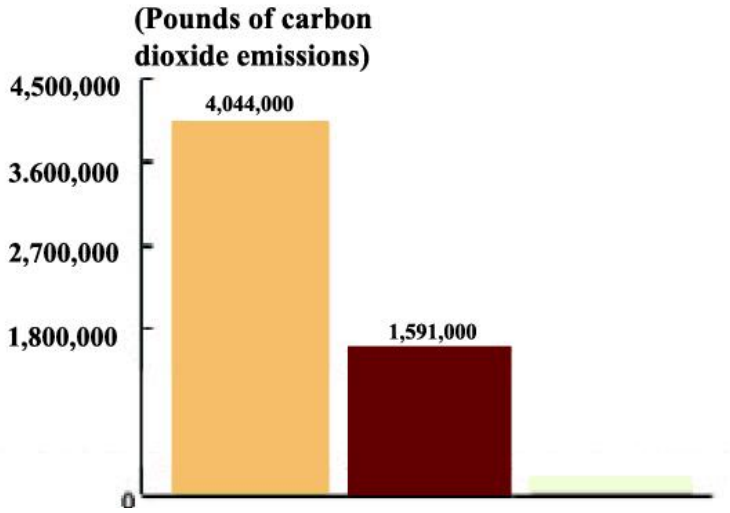
EFFICIENCY COMPARISON



Greenhouse Gas Reduction

Automobiles, buses and utility companies spew billions of tons of carbon dioxide, a greenhouse gas, into the air each year. MHD Generator is carbon dioxide-free.

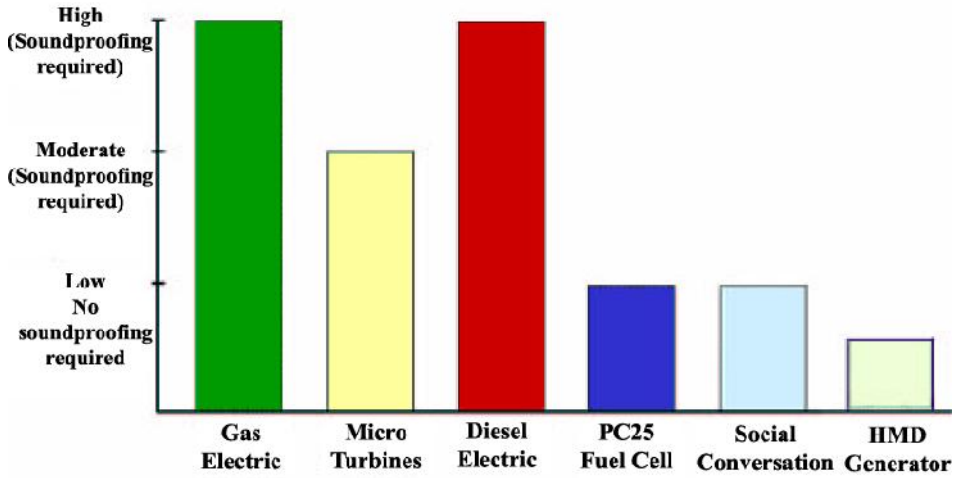
GREENHOUSE GAS REDUCTION



Low Noise

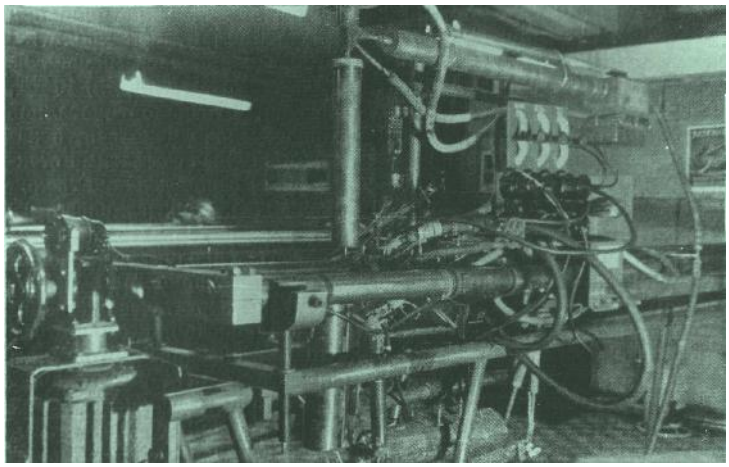
MGD - Generator are also environmentally friendly with regard to noise generation. A MGD - Generator's sound level is 40 decibels when standing 30 feet away from the unit.

NOISE LEVELS



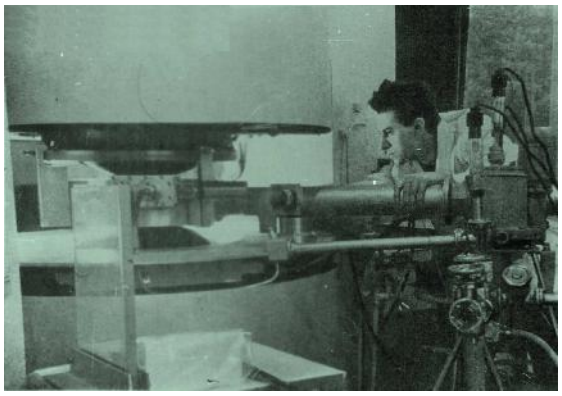
The performance claims for Hydro-Magnetic Dynamo are as follows:

The source of the dynamo's massive electrical output is a low energy nuclear reaction (LENR), which is not generally known to mainstream science. However, it is known that the dynamo produces alpha particles, which are helium nuclei, made from fused deuterium, an isotope of hydrogen with one proton and one neutron. The electrons missing from the helium nuclei are what seem to provide a copious "sink" of electricity, and which happens to be the source of the dynamo's ability to generate an exceptionally large amount of electricity. It is also known that the dynamo uses high-density charge clusters. High-density charge clusters are the basis of plasma-injected transmutation of elements and low-voltage nuclear transmutation of radioactive materials.



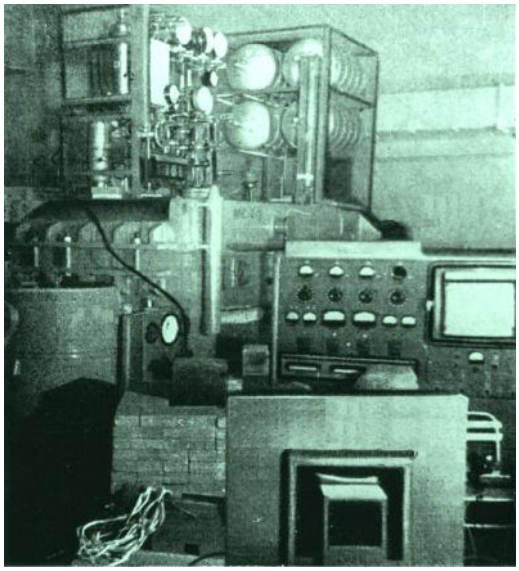
It is known that there were three dynamo prototypes built. The first two small experimental prototypes were built in Russia. The third and last prototype generated electricity off and on from 1992 to January 1997 in Armenia. (It was sadly destroyed during an armed rebellion by local religious fanatics unhappy with the Armenian government.) It generated a constant current of 6,800 amperes at 220 volts DC. That multiplies out to nearly 1.5 megawatts. In the winter when lower temperatures allowed more efficient cooling, the power output was increased to 2.5 megawatts. The Armenian prototype dynamo's toroid weighed 900 kilograms and had a diameter of approximately 2 meters.

Cooling water is circulated through copper pipes wrapped around the toroid. The heat is expelled from the cooling water with a heat exchanger.



After a dynamo is assembled in a factory, the water is literally jump-started (by discharging a large bank of capacitors) to moving around the toroid. The dynamo's controls are temporarily set to generating enough of a modest amount of electricity to self-sustain, even while being transported from the factory to its site. For the Armenian prototype dynamo, two 10-farad capacitor banks (from Russian military radar stations) were used to provide the initial water motion (acceleration and excitation of water). Using a total of 20,000 joules, 100,000

volts with 0.05 amperes of current were applied to the Armenian dynamo for 3 - 5 minutes for starting its generation of electricity.



After these Russian radar capacitors were used to jump-start the Armenian prototype dynamo, a bank of buffer batteries sustained continuous operation when water motion and ionizing occurs. This battery bank contained 8 powerful 12Volt, 150-ampere lead batteries. The Armenian dynamo's sustaining input power was 14,400 watts. (For comparison, in winter, the Armenian dynamo's output power was 2,500,000 watts.) Once, the output current was accidentally increased to 40,000 amperes for almost a minute. Fortunately, the power was reduced to a safe level before the water started to boil. Internal coils (windings) control water velocity and therefore dynamo power.

The dynamo's operating cost would be approximately .1 cent per kilowat
hour with no external fuel needed or pollution. Dynamos could replace all nuclear power plants, solar installations, wood-burning furnaces, hydroelectric dams, windmills, fossil-fueled power plants, etc. Satellites, locomotives, heavy trucks, airplanes, and ships are obvious transportation applications. It does not seem that dynamos can be made compact enough to power electric cars although it certainly would be worth doing Finite Element Analysis off a 3D solid model.

A Forbes article states that PECO (formerly Philadelphia Electric Company), with an income stream to back it up was able to sell on Wall Street $4 billion worth of bonds paying 5.8 per cent. A dynamo manufacturer could simply sell bonds to build and operate dynamos at a low interest rate. Dynamo loan payback times may be in the Ball Park of a half-year to a year, depending on the local electricity market price. As soon as a dynamo is paid for, the revenue from that time on would be almost pure profit. Once a track record is established by successfully installing a few dynamos, the Dynamo company could raise money to build more dynamos by simply selling billions of dollars of bonds instead of stock. So therefore, there wouldn't be any dilution of ownership.

A recent IEEE Spectrum article stated that world demand for electricity increases approximately 500 megawatts every day. To put this in perspective, the equivalent of another Hoover Dam would have to be built every four days to keep up with world electricity increase demands. Or, a dynamo manufacturing company would have to build another 500-megawatt dynamo every single day to keep up with world electricity increase demand in addition to replacing all existing generators fueled by hydro, nuclear, and fossil fuels.

This invention is regarding a new source of energy, i.e., about deriving an electric power by using MHD generators. The method of deriving energy [1] (in particular thermal) by means of organization of movement of water in certain direction inside a closed loop is already known. The given method uses unique properties of water which cause a release of energy as an outcome of a rupture of hydrogen connections. Along with heat, an outcome of electrical energy occurs. However, the given method does not allow receiving electrical energy in a suitable for use kind. A flywheel, ultracapacitor, or other electrical storage device would be linked to the output side.

An organization and method of deriving electrical energy [3, 4] are known by means of organization of movement of ferromagnetic spheroids in certain direction inside closed channel when the voltage, obtained as a result of an electromagnetic induction, was used with the help of electromagnetic windings. The device realizing this method contains tightly closed (hermetically sealed) toroid-style channel, in which a conducting media and electromagnetic system with windings have been placed (as ferromagnetic spheroids). The device being projected by NuEnergy would have a high efficiency transverter.

An organization and method of deriving electrical energy [5, 6] are known, and were chosen to be placed in at prototype phase, by means of organization of movement of a conducting media in certain direction inside closed channel, in the case when obtained electrical energy is used by electromagnetic windings. Ionized gas is used as a conducting media. The device that accomplishes the realization of this method (the MHD generator) contains a closed (sealed) toroid-style channel whose body is made from a non-magnetic material, whose inside part is covered by dielectric material, and electromagnetic system with windings as well.

Ultimate purposes (goals) of prospective engineering solutions are the following: increasing of efficiency, reliability and ecological safety, and simplification of a construction of the MHD generator as well.

The indicated goals can be achieved as follows:
In the known (mentioned before) method of deriving electrical energy by means of organization (controlling) of movement of a conducting media in certain direction inside a closed (sealed) loop when
the electrical energy is derived by electromagnetic windings, new point is the fact that a polar liquid is used as a media, which liquid gets ionized and actuated even at the start-up time by a running magnetic field with the help of stimulating electromagnetic windings, and the movement of a media is organized (controlled) inside a tightly sealed channel (circuit) whose internal walls' factor of a dielectric permeability is greater than the polar liquid's one. Dr. Guevara's recent research in the field of using graphene is a major breakthrough.

The liquid can be ionized by a high-voltage discharge or with the help of disk made from a non-magnetic material, which is gyrating inside the channel with a liquid. Liquid's movement can be stabilized with the help of tight hermetically sealed chamber, filled-in with a polar liquid. And the chamber has electromagnetic windings and it is connected to the channel. If water is being used as a liquid, it can be preliminary activated by adding heavy water.

In the known (mentioned before) device of the MHD-generator containing a closed toroid-style channel with a body made from a non-magnetic material, whose inside part is covered with a dielectric material, and electromagnetic system with windings as well, a new point is the fact that the channel is built tight (hermetically sealed) and is filled in with a polar liquid, where the factor of the dielectric permeability of the covering material is greater than the liquid's one. Water can be used as a liquid, containing heavy water as an option.

The MHD-generator can contain a tight (hermetically sealed) stabilization chamber, having a junction with the channel, placed outside of it in the internal area of a toroid. In this case the chamber can be built as a cylinder, whose axis lies in the plane of a middle axis of the toroid-style channel.

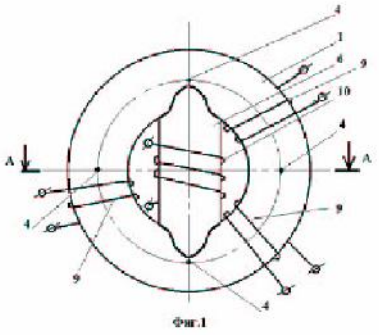
The MHD-generator can contain a device for ionization of the liquid, which device can be built either as electrodes (placed inside the channel and joined with a source of high-voltage periodically), or as a disk made from a non-magnetic material (placed the same way inside the channel and joined with the drive of rotary movement).

The electromagnetic system can contain force (power) windings and windings of stimulation which can be physically placed inside the channel. A special-electrical material can be used as a cover of walls of the channel. These inventions are explained (accompanied) by drawings (figures), where on dr.1 (fig.1) the general view of the generator as shown, and on dr.2 (fig.2) the transversal slit (section, cut) is shown.

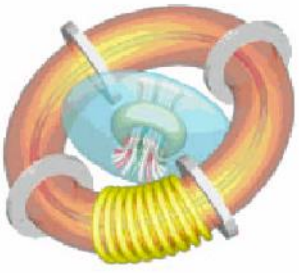
The invention is explained by the example of a hydro-magnetic dynamo:

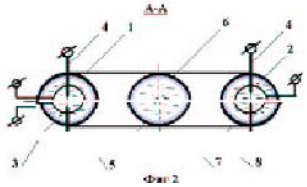
The dynamo contains hollow toroid-style body 1 of a cermet (metal + ceramics), whose internal surface is covered with a synergetic stratum (layer) 2, and the concavity is filled in with a pure (distilled) water 3 with added heavy water in it. In the body's channel 1 electrodes 4 (made from a hard-alloy material) are placed, connected to a power supply, and also stimulation windings 5 connected to the power supply are placed. Inside the body's ring 1 a cylindrical stabilization chamber 6 (made from a cermet) connected with the body's channel 1 is mounted. The internal surface of the chamber 6 is covered with a synergetic stratum (layer) 7 as well, and the concavity is filled in with pure (distilled) water 8 with added heavy water in it. The body 1 and the chamber 6 have force (power) windings 9 and 10 at the outside.

Hydro-magnetic dynamo works the following way:
The partially pre-ionized (on the part of the heavy water) water 3 gets ionized further by the high-voltage discharges by electrodes 4. With the help of windings 6 a running magnetic field is being created, which field creates movement of water 3 in one direction inside the body's channel 1. An electromotive force gets created by the electromagnetic induction in windings 9. During the movement of the water stream free electrons get produced, and an additional energy gets emitted because of water's friction (viscosity) 3 against the stratum (layer) 2, and because of electrostatic breakdowns of cavitatal-vacuum structures and of the ongoing reaction of the cold nuclear fusion. In this case the energy's (power's) volume received in the windings 9 can be greater than the energy's volume wasted for liquid's ionization and start-up by the electrodes 4 and windings 5. Moreover, the presented organization and method do not conflict with the energy conservation law. Because the redundant energy (in relation to brought-up energy) gets emitted from the water 3 and from the internal stratum (layers) 2 as well, which are due for replacement after certain interval of usage.
The stabilization of the liquid's movement 3 gets created during the interaction (-e) of charges in it with other charges in the chamber 6. The electric power from windings 10 also can be used.



Фиг.1





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Future
PRO FORMA INCOME STATEMENT

	2014	2015	2016
Net Sales	$45,821,932	$272,846,295	$998,294,820
Direct Cost of Sales	4,190,000	34,061,333	58,308,000
Gross Margin	$41,631,932	$238,784,962	$939,986,820
Expenses:			
Sales & Marketing	$ 1,954,282	$10,875,550	$46,756,480
Property & Utilities	819,980	5,386,468	23,484,076
Operations	4,426,000	36,536,000	56,912,000
Banking & Other	326,200	628,500	1,283,900
Other Wages & Benefits	649,000	1,100,000	2,073,000
Interest Operating Loan	1,000,000	1,000,000	750,000
Interest Term Loan	90,000	90,000	67,500
Depreciation	0	250,000	250,000
Total Expenses	$9,265,462	$55,866,518	$131,576,956
Net Income Before Taxes	32,366,470	182,918,444	808,409,864
Less: Income Taxes	14,720,846	81,073,713	356,170,030
Net Income	$17,645,624	$101,844,731	$452,239,834

Future
RATIO ANALYSIS

RATIOS	**2014**	**2015**	**2016**
Gross Margin	91%	88%	94%
Net Profit Margin	71%	67%	81%
Return on Assets	88%	74%	68%
Average Collection Period Days	113	39	49
Inventory Turnover	3.7	7.5	12.8
Total Assets Turnover	1.3	1.1	.8
Debt to Net Worth	.9	.8	.7
Return on Owner's Equity	168%	130%	117%
Times Interest Coverage	32.4	146.3	808.4

MORE TO FOLLOW...