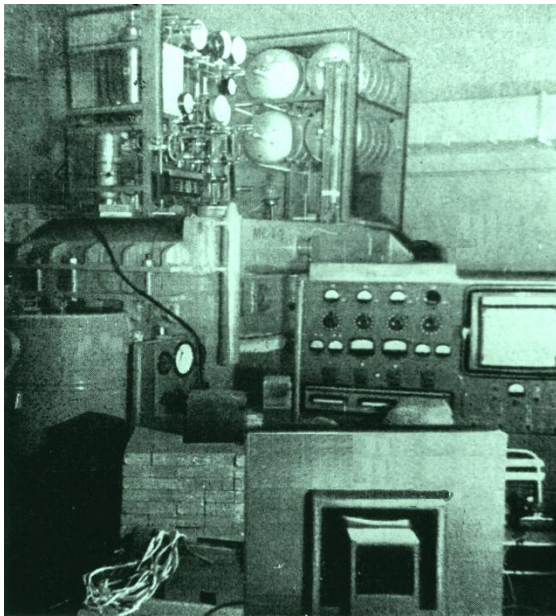


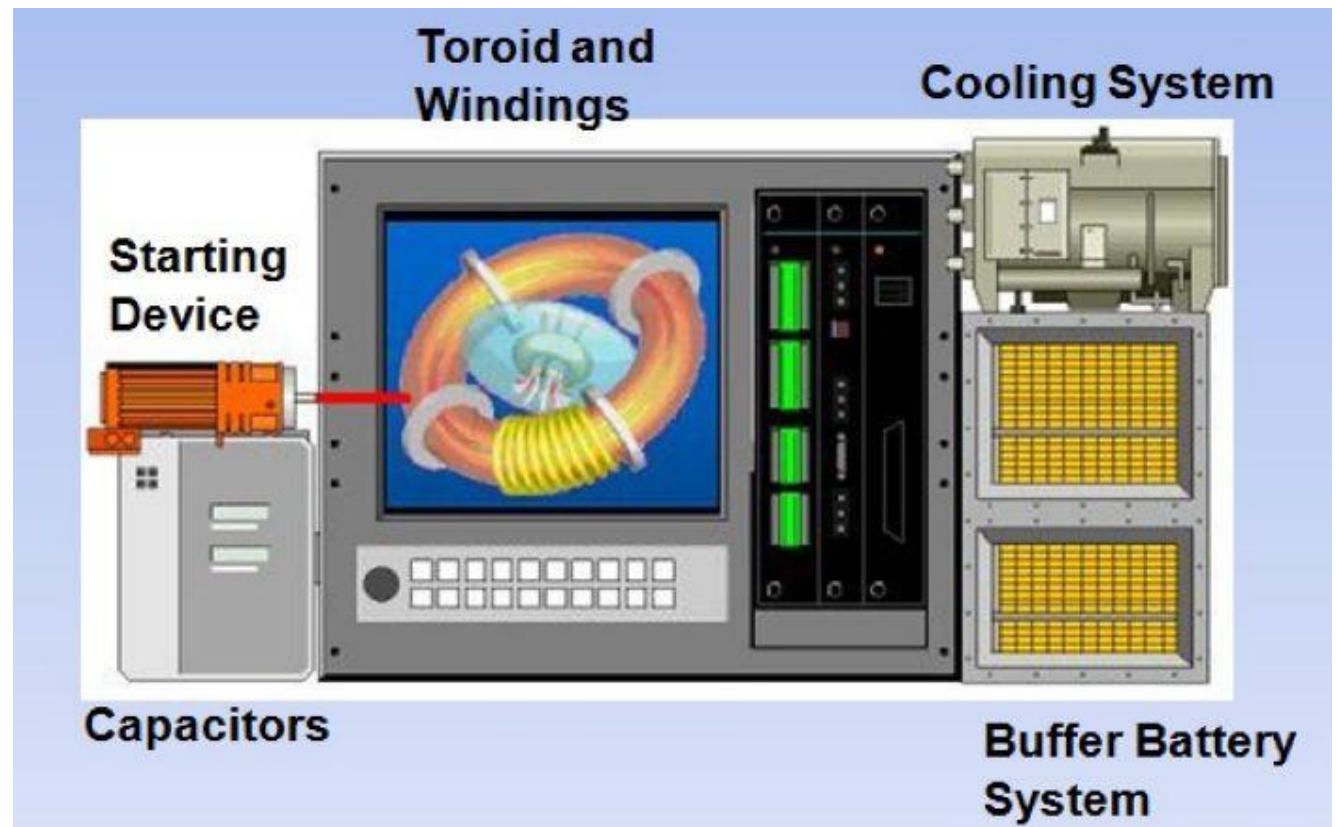
LARGER GENERATORS

Hydro-Magnetic Dynamo

Hydro-magnetic dynamos are scalable from 100 kilowatts to 1,000 megawatts. Hoover Dam's 17 turbines have a total nameplate capacity of 2080 megawatts. One doughnut-shaped, fuel-less 1000-megawatt hydro-magnetic dynamo would be about the size of a two-car garage and could reliably run continuously for 25 years or more with little or no maintenance, no external fuel source, and no pollution. Russian patent 2,183,899 granted June 20, 2002. Needs \$10 million and two years to research and build a 1 – 5 megawatts fourth prototype.



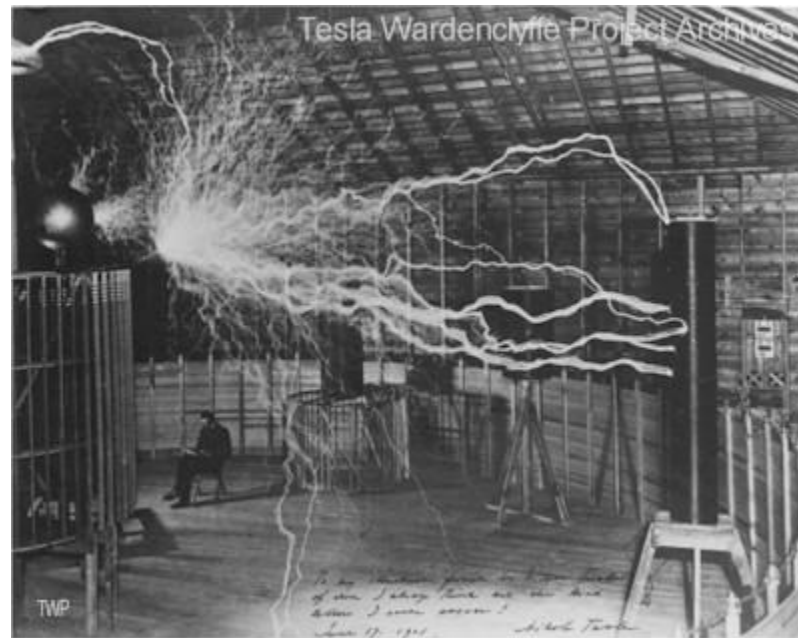
900 kilograms 2 meters dia.
HMD inside plastic 'jacket'.
1992-1997 the Armenian
prototype's output averaged
6,800 amperes at 220 volts DC.
Input power was 1% of output.



Two Megawatts System Layout

Tesla's Global Wireless Transmission of Electrical Power

Nikola Tesla developed wireless transmission of electrical power. Tesla's ultimate goal was to power global civilization with a single mammoth wireless power transmission system. Tesla built in Colorado Springs, Colorado in 1899 an experimental wireless electrical power transmission system. It had a tower 80 feet high and was topped by a 122-foot mast with a large copper ball at the end. The system was based on a 12-million-volt 'magnifying transformer' – a giant high-frequency air core induction coil. Tesla demonstrated it by wirelessly lighting up 200 250-watt electric bulbs at the distance of 25 miles. Wireless transmission of electrical power is being replicated in Russia with modern equipment and materials based on Tesla's design.



BlackLight Power's Hydrino Generator

BlackLight Power, Inc., has developed a catalytic reaction which causes hydrogen atoms to form lower-energy-state hydrogen atoms called 'hydrinos'. Energy is released which in magnitude is between chemical and nuclear energy.

BlackLight has produced millions of watts of power in a volume that is one ten thousandths of a liter corresponding to a power density of over an astonishing 100 billion watts per liter. BlackLight has designed a modular, scalable electric generator having a cell that is less than a cubic foot in volume, which could generate up to 10 million watts – enough to power ten thousand homes.

BlackLight's safe, non-polluting power-producing system catalytically converts the hydrogen of the H_2O -based solid fuel into a non-polluting product, lower-energy state hydrogen called 'hydrino' wherein the energy release of H_2O fuel is 100 times that of an equivalent amount of high-octane gasoline

Plans include retrofitting fossil-fueled and nuclear power plants and licensing nonpolluting electric cars that have a range of 1500 miles on a single liter of water.

IPMS Thorium Energy Accumulator

The I.N. Frantsevich Institute for Problems of Materials Science (IPMS), Kiev, Ukraine, from 1951 through 1991 secretly employed 6600 of the most brilliant theoretical physicists in the entire Soviet Union to work for nearly 50 years with complete freedom. They were able to develop whole new sciences, technologies and materials unknown in the West.

Their models of non-linear quantum mechanics, plasma physics, atomic engineering, nuclear physics and related mathematical and theoretical constructs, which made their development possible, are so unique that they challenge the validity of the most fundamental assumptions embodied in the Copenhagen Interpretation model currently held in general acceptance in the West.

For example, Western-developed particle/wave quantum mechanics is described by Einstein's $E = MC^2$. The Soviet nonlinear model of quantum mechanics is described by the formula $E = M_K v$ [Energy = Mass @ rest as a function of a mathematical constant where the velocity of C approaches zero]. Consequently, the more correct Soviet model has enabled numerous technical advances not yet dreamed of by Western science.

Among several energy inventions developed by the IPMS are free-standing thorium-232 isotope electric power generating plants. They can be scaled to power a single home and large enough to power whole communities. They also can operate for up to 300 years with no refueling and minimal maintenance. They pose absolutely no risk for critical melt-down since Th-232 cannot achieve criticality on its own in a nuclear pile.

Thorium Power Pack

The thorium power pack could generate 50 to 1000 kilowatts of electricity at one-tenth of current electricity prices. Thorium is sufficiently abundant that the entire planet can be powered for millennia. After ten years of continuous operation, a trace amount of U-233 is produced. U-233 recovery to re-purify the thorium is easily accomplished.

A thorium-powered reactor is inherently safe. It doesn't run the risk of 'meltdown' or explosion nor can even a dirty bomb be created. Its nuclear reaction simply stops when its neutron exciter is turned off. The simplest and smallest 'table top-sized' neutron exciter design is close to the size of a 4-D cell flashlight, and starts at about 500-kilovolt neutron output.

A thorium power pack's neutron exciter does not use radioactive flux components as conventionally done for portable systems. Instead it relies on a novel method of resonant phonon pair cleavage using specifically designed nuclear lattice holo-forms (holographic waveforms) to induce neutron imbalance in a host atom where the host atom then attempts to establish 'balance' through the liberation of neutrons. The first model of this novel design was demonstrated in 1966.

Commercial thorium power packs can be developed with 50 or 100 kilowatts of output for home use, and up to 1 megawatts for industrial use. They actually are 'power amplifiers' with estimated power outputs of 60 times over input power. Maintenance would be minimal.

Magneto-Gravitational Converter (Searl Effect Generator)

The Searl effect generator (SEG) comprises of three concentric magnetic rings with magnetic rollers rolling around the rings. Both the rollers and rings are comprised of four layers of titanium, iron, nylon, and neodymium.

The magnetic fields impressed on the rollers have both AC and DC components. The AC component is for floating the rollers so they don't touch the rings. The DC component is to prevent them from flying off. The innermost set contains a minimum of 12 rollers for the same reason that a linear motor will not operate with less than 12 phases.

The inner set of rollers travel around at 250 miles per hour, the middle set travels at approximately 600 miles per hour, and the outer set at approximately 1500 miles per hour. Hundreds of millions of volts are generated the energy of which is picked up by brushes positioned all around the outside set of rollers.

An SEG also creates an anti-gravity field. An uncontrolled SEG will rise about 50 feet as the rollers increase speed, emit a light blue halo which indicates energy is being extracted from the ether, and then shoot up into the sky gaining speed, never to be seen again. The friction-less rollers can be prevented from reaching the critical velocity that produces lift by use of a 'governor', either mechanical or electronic.

An SEG can be easily controlled by immersing it in an electromagnetic wave field the frequency of which is a harmonic of the SEG's primary frequency. While in resonance, the magnetic poles of the rollers reach a unification state, and they stop moving.

Induction Coil Coating Increases Generator Output by One-Third

Coating the induction coils of generators with a proprietary material increases their output by one-third using the same amount of fuel.

It has been demonstrated in a lab that when the induction coil of a common automobile alternator is coated with (deleted) impregnated in an epoxy resin the amount of watts output at the generator is increased by 35%-38%.

The practical implications of this finding are profound – it means, for example, that if all generators used to produce power were (deleted) impregnated using this simple application, the amount of fuel required to generate electrical power to the grid could be reduced by 1/3.

One application is to increase the output of wind turbine generators by about a third.

Wind Turbine Conversion

The gearbox and brake mechanism is removed. The propeller blades are redesigned to operate at wind speeds in excess of 60 mph. Because the integrated system is able to deliver on demand during peak hours and during the night time when the wind is NOT blowing, this system would qualify for long-term power production contracts on a par with coal and gas-fired systems. The installed cost is reduced by more than 60%, and the maintenance costs are reduced by as much as 90%.

When a single 1.5-megawatts wind turbine is converted, the gearbox is removed and so is the brake mechanism. The propeller blades are redesigned to operate at wind speeds in excess of 60 mph, which is four times faster than the average horizontal axis wind turbine is designed for. An adaptation of the (deleted) tied to 10 such turbines will provide 5 megawatts of continuous output power when the wind is not blowing and during the night time.

The entire system will deliver up to 15 megawatts in optimum wind conditions. So by being able to deliver on demand during peak hours, when the wind is NOT blowing, this integrated system would qualify for long-term power production contracts on a par with coal and gas fired systems. The installed cost for such a system is estimated at about \$1,100 per kilowatt of installed capacity.

The elimination of the gear box and brake, coupled with the modification in the drive line system would reduce not only installed cost by more than 60% but would also reduce maintenance costs by as much as 90%. When no offset reserve has to be created to support the five-year replacement cost of the gearbox and brake system, the numbers related to power output vs. cost input become extremely attractive. Perhaps more importantly, the real efficiency of the system is much higher than a conventional system because it becomes in effect a highly efficient heat exchange engine rather than simply a wind energy conversion unit.

Ball Lightning and Self-Confined Thermonuclear Reactions

The long lifetime of ball lightning in an otherwise explosive situation suggests that perhaps the confinement mechanism represents processes that could be exploited to confine sustained thermonuclear reactions. A mathematical model of ball lightning treating it as a quasi-superconducting sphere is presented.

A simple ball lightning fusion reactor is designed that has hundreds of kilo-amperes discharged through two electrodes. The electric field between the electrodes will polarize the discharge plasma into an upper half with negative space charge and a lower half with positive space charge. Magnetic fields turn the plasma sphere into a hydro-magnetic capacitor. A gas jet is initiated which blows the discharge plasma from between the electrodes to the more spacious reaction chamber. Another gas jet then supports and stabilizes the plasma sphere in the reaction chamber. Once the plasma ball is in the reaction chamber thermonuclear fuel is added to the ambient atmosphere. The fuel enters the plasma ball through diffusion, and the meridional circulation carries it to the hot thermonuclear center where release of nuclear energy sustains the reaction.

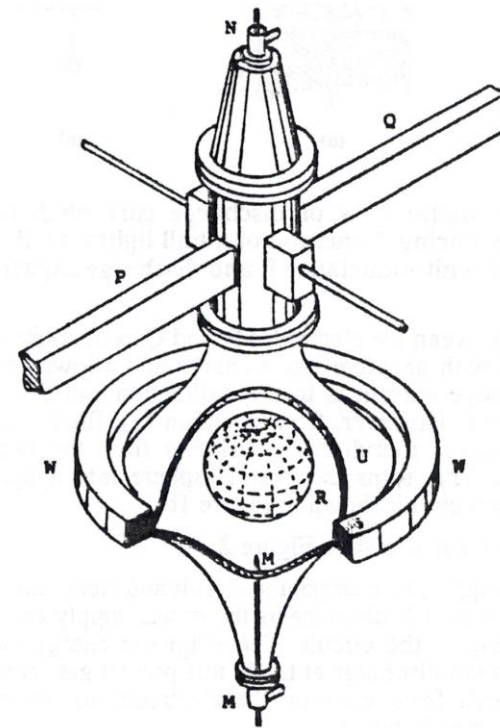


Figure 3. Cut-away view of reaction chamber "U" showing central plasma sphere R in equilibrium position.

High-Density Ions May Make Clean Fusion Energy a Reality

Electron Power Systems, Inc., (EPS) claims to have discovered the explanation for ball lightning. EPS then discovered a new plasma toroid, or ring, that remains stable in atmosphere **with no external magnetic field coils for containment.** Its ion density is 10,000 times greater than magnetically confined fusion processes such as Tokamaks. From that EPS has invented and patented a method of making clean fusion energy a reality by creating high-density ions.

Safe, pollution-free colliding plasma toroid fusion generators could reliably generate 10 kilowatts through 1000 megawatts of electricity at the cost of 10% of today's electricity. All transportation vehicles could be reliably and safely powered with colliding plasma toroid fusion generators with substantially lower manufacturing, operating and maintenance costs. EPS expects to reduce the mass and cost of aircraft by 70% and space launch costs by more than 95%.

EPS is developing a clean electricity generator for powering buildings, cars and vehicles with an 80% fuel cost savings while producing no pollution. The home energy generator is calculated to be the size and cost of a Home Depot 10-kilowatt backup generator. The potential is for clean electricity generators to run 24/7 for a year on one gallon of fuel, vs. 100,000 gallons of gasoline needed for today's fossil-fueled generators.

Direct Energy Conversion

Power generation has remained largely unchanged over the past 100 years and the bulk of our electrical energy still requires a rotating armature to make electrical power. 'Direct Energy Conversion' is a new high-performance, low-cost method of generating electrical energy using existing quantum physics principles and new materials. The device is solid-state and harnesses Type II superconductor technology to perform the same work function as a rotating armature.

DEC requires liquid nitrogen as a cryogenic 'fuel'. This cost is small compared to the fossil fuels. DEC does not use combustion to convert potential energy into kinetic energy. The only byproduct is a small amount of waste heat and nitrogen gas which is released back into the atmosphere where it originated, closing the loop without the production of CO₂.

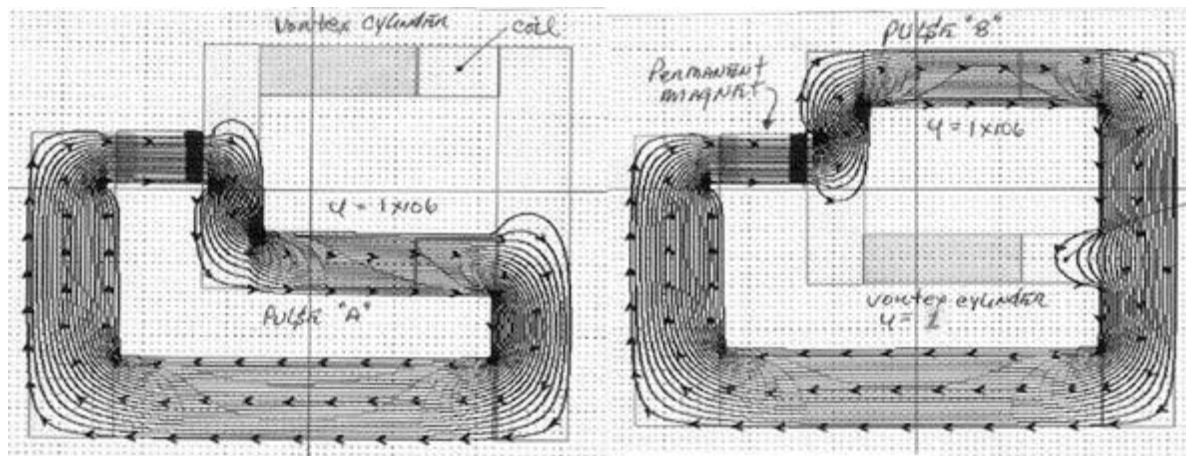


Figure 1. A simple computer simulation of the vortex cylinders in operation, as well as how the static flux could flow in a conventional magnetic circuit. Note how the modulation of the vortex cylinders causes the static flux to modulate between channel "A" and channel "B" coil. The coils are shown in series with the vortex cylinders.

Electrino Fusion Power Reactor

A clean electrino fusion power reactor fuses electron sub-particles, 'electrinos', to generate a net of 1880 megawatts of DC power for 100 years until shut down for refueling with 155 pounds of brass. It would produce no carbon emissions and no radioactive wastes. Supernovas and $\eta'(938)$ decay confirm electrino fusion theory.

The size of an electrino fusion reactor would be about 80' x 10' x 10'. Key components include a polarized positron source, injector accelerators, inflection magnets, end magnets, and the beam transport. The linear accelerator would be a standard commercially available model.

The projected cost of the first 1880-megawatt, net, electrino fusion power reactor is approximately \$100 million. This clean source of abundant electricity could be built in two years, and the necessary Refresher built in one year. Electricity could be generated for only about 1.5 percent of current rates (a little over 0.1 cent per kwh). Subsequent electrino fusion power reactors could be built for less than \$50 million each.

Plasma Biomass Gasification

Plasma biomass gasification systems produce a variety of combustible gases from a wide variety of municipal waste, biomass waste, sewage and other materials containing high concentrations of hydrocarbons with an over-unity energy efficiency of between 125%-150%. South Africa produces 100% of its diesel fuel and gasoline with two plants which operate on these principles.

Plasma biomass gasification systems produce substantially more energy content in the collected gases than is required to drive the carbon-arc filaments which operationalize them. The amount of carbon dioxide generated by the combustion of the gases derived from these processes is precisely the same as they absorbed while the materials were originally being formed.

Advanced Plasma Power is a leading technology provider for advanced waste-to-energy/fuel plants employing its globally patented Gasplasma® technology. After the removal of valuable recyclables, the Gasplasma® process treats a wide range of feed stocks including residual municipal solid waste and commercial/industrial waste – converting it all into two high-value outputs – a clean, high quality, energy-rich synthesis gas, and a solid, vitrified product – each with multiple applications.

Advanced Plasma Power's advanced Gasplasma® technology today delivers 50% electrical conversion efficiency – twice that of conventional steam cycle technologies.

Gas-Phase Catalytic Fusion

Activated carbon catalysts are loaded with various precious metals (by weight, in the range of 0.1% to 0.5%). Palladium works best so far. When these catalysts are heated, considerable excess heat is produced reliably when such catalysts are exposed to several atmospheres of heavy hydrogen gas (deuterium gas). Pairs of deuterium atoms are fused to produce waste helium-4 atoms plus abundant clean heat. No lethal radiation is released. One cubic kilometer of ocean water contains enough deuterium that when catalytically fused, the energy released equals the chemical combustion energy in all of the earth's known oil reserves.

With suitable insulation, the process, once started, is self-heating. Temperatures can rise well above the boiling temperature of water. Engineered with efficient heat exchangers, thermal/electrical energy generators can be built in sizes for applications ranging from mobile homes to large centralized generating stations. No electrolysis is involved nor are finicky electrodes required as with some other types of low-energy nuclear transmutation devices.

Super Steam Technology

The 'super steam' machine combines compressed air, untreated or even polluted water, and almost any combustible fuel to produce steam at any pressure or temperature. The response is instant compared with a conventional boiler taking hours to reach operating pressure and temperature. The efficiency is over 90%, which compares favorably with a conventional boiler's efficiency of 40%.

Maintenance costs, fuel consumption, and air pollution all go way down. Electricity can be generated for 1 cent per kilowatt-hour. Super steam technology can be scaled from the size of a one-pound coffee can to a house. The super steam system has no moving parts to wear out.

3500 applications have been found for super steam technology.

Focus Fusion

Focus fusion uses a pulse of electricity that generates a plasma in a shape that makes it kink itself into a tiny little ball of lightning hot enough to fuse the atoms of hydrogen and boron. Over a million amperes of current is driven across a pair of cylindrical electrodes, creating a dense plasma where fusion reactions occur.

A powerful beam of electrically charged helium nuclei is released that is directly converted into electricity with over 80% efficiency. The second part of the energy comes out in the form of X-rays which are captured in an onion-like array of photoelectric receptors. They collect the X-ray energy and again convert that to electricity.

Focus fusion produces no radioactive waste. The waste product of focus fusion is harmless, useful helium gas.

Focus fusion generators will be only 5 MW, enough for 3500 homes. A 5 MW focus fusion generator may cost around \$300,000 and produce electricity for only one-third of a cent per kWh.

References:

Four files – 153 pages of “102 Electrical Energy Innovations”, 42 pages of “Ball Lightning Fusion Reactors”, 46 pages of “Representations of Electric Induction”, and 25 pages of “A Technical Analysis of the Extra Coil as a Slow Wave Helical Resonator” – are available for free downloading at padrak.com/vesperman and commutefaster.com/vesperman.html.