Radiant Energy Research Manual - version 3.0.0

by Bruce A. Perreault

The actual mechanics and electronics of building and validating a radiant energy prototype is relatively simple. It is fun and easy.

Those involved in building prototypes must first confront some serious issues before beginning. I will try to enumerate a few pitfalls and make descriptions as clear as I can. This will fortunately and blessedly push some of you off the fence, but for others it will be viewed as a challenge.

What are the most important assets to begin with?

1. Dedication
2. Motivation
3. Passion
4. DO instead of just theorizing.

The "hands-on-imperative" must be at the very core of your being.

What is the second most important thing?

The lone wolf researcher will need a lot of skills if their project is to succeed. Among the most valuable skills are those involving electronics technology, plus some familiarity with machine shop practice and materials. A good sense of organization and being able to stand back and see the big picture along with a lot of plain good old common sense is a must have.

What about if I have few tools and skills but have the dedication?

Then you need to have some cash....the green stuff. You will have to buy the skills, knowledge and the time of others. You can farm out electronics and machining chores but it will be expensive. The more that you can do for yourself the better off you will be.

A fully equipped, skilled, advanced amateur energy experimenter might slip by for just over $500.00 for everything! If you already have basic tools then a proof of concept prototype should cost around $400.00 to build. Later you can build a more powerful prototype to replace the proof of concept design. Your basic working design will not have to be replaced. You will add more components as your research progresses. Simple dedication goes a long way watching, paying attention to details and doing it right the first time. With this borne in mind you could complete a powerful prototype for around $5.000.00 that could provide power for the average home. However, it is not my intention at this time to instruct you on how to build a home power unit. At this time it is my intention to validate the technology, refinements still have to be made. When my technology is validated by others then I will move on to designing and building a home power unit. To reach this height public support must be gained.

Are there any dangers?

Yes, of course there is, there are any number of ways to wind up in an early grave! Most of the lethal dangers can be avoided with skills. Otherwise, you must pick up the skills as you go along. Read first and do second. Reference books and a solid, broad based scientific library is your true asset. Know the danger zones in the various disciplines you are going to come across.

Electrical:

Alpha fission circuitry uses high voltages from 5KV to 300KV at low amperages, direct current. This current may not electrocute you but caught within its grip could cause you to hit something and cause serious bodily damage. If you get knocked into a sharp object or suffer head injury by a shock while working on a power unit it may not be your first but it could definitely be your last!

Machining:

Crushed and mangled hands to the unwary, metal splinters in eyes or skin.

Welding:

Burns and eye damage hazards.

Vacuum Technology:

Imploding glass bell jars, power valves, can scatter glass splinters at high velocity into face and body.

Radiation:

This is not much of a problem using alpha fission, neutrons are not emitted. Radiation in a concentrated state may produce harmful x-rays that can burn you. My rule is that if does it not burn you then there is no need to worry. With some degree of respect, like with many other potentially dangerous chemicals, it does not pose an over whelming degree of safety hazard.

The concern about uranium poisoning is justified. When uranium becomes finely divided and enters the body it becomes a deadly toxin. A melt-down of a conventional nuclear reactor can release finely divided uranium particles into the air. Military shells using depleted uranium will release particles less than 5 microns in size upon impact with its target. My system of radiant energy conversion poses zero health risk as it does not produce thermal neutrons. Melt-down can never result. The radiant energy reactor converts decay products directly to electricity. There is no heat cycle.

Do you have the right stuff?

If you think that you have what it takes and have a burning passion for this research then you are probably ready to begin. This is not a place for whiney mentality. If you become frustrated or fail in your experiments have the courage and good grace to realize that you did it to yourself and make the effort to find out where you made your mistakes.

More than likely, you are going into this research with what you have learned in books that have been designed to hide certain facts from you. Do not expect results over night! Learn all that you need to learn by careful observation, educate yourself, search out the truth first, let nature be your guide.

Fundamental Principle

My present research involves the development of a standard *Alpha Fission Reactor* for commercial applications. This technology in a nut-shell is basically a clean neutron-free way to speed up and release the energy contained in isotopic materials. The energy released can be used directly to heat hot water, homes or businesses. It's **polonium** by-product can be designed into *radiolytically* assisted electrolytic-cells or *capture capacitors* to directly produce electricity. This energy source is no mystery to me. It can be explained simply and does not break any laws of science. It is a very old source of energy being extracted and harnessed in a very unconventional way.

Direct Energy Conversion

I have made a number of discoveries over the past years in my line of research. During these years I experimented with what I call a *thermoelectric capacitor.* It is constructed with thermally differing metal plates. The dielectric between the plates is slightly moistened. It is my contention that this type of *electrolytic capacitor* is a common factor to several "free energy" devices of yesteryear. When pulsed with energy they are heated like any other capacitor. They are unique in that they convert this normally wasted heat into usable electrical energy. It has been found that there is a certain amount of chemical deterioration that takes place but this is kept to a minimal by using close to neutral electrolytes. The object of the electrolyte is to provide an electrically conductive medium without causing excessive plate deterioration. This objective can be met by making distilled water either slightly acidic or alkaline, just enough to make the water conduct electricity, a liquid semiconductor to be more exact.

My *capture capacitors* are essentially unique electrolytic cells that are **assisted** by *radiolytic reactions.* Simply stated, chemical energy is cascaded with nuclear energy. The combination of the two energies produces seemingly phenomenal results.

In a *capture capacitor* radioactive emissions occur through *radiolytic* decay processes, energy is absorbed and converted to electrical current. By confining this cell within a suitable container the energy released is greatly enhanced. A high-voltage, low-amperage biasing potential acts as a trigger to the process. Energy in these cells are "captured" and then released in the form of electrical energy. A capture capacitor is both an energy generator and storage cell all in one.

An Unsuspected Source of Energy

There is a source of energy that could provide us with all of our energy needs for countless of generations. With this energy we can reach for the stars, or at the very least explore our own solar system. The fuel that I speak of is called Polonium. It releases more energy than any single element ever to be discovered by man or woman. Polonium was the first element discovered by Madame Curie in 1898 while seeking the cause of radioactivity of pitchblende. Her electroscope showed it separating with bismuth. Polonium is also called Radium F. Polonium is a very rare natural element. Uranium ores contain only about 100 micrograms of this element per ton. It is found in Radium and its abundance is only about two tenths of one percent. In 1934, it was found that when natural bismuth (Bi^{209}) was bombarded by neutrons, Bi^{210}, the parent of polonium, was created. Milligram amounts of polonium are now prepared this way, by using the high neutron fluxes of nuclear reactors. Polonium-210 is a low-melting, fairly volatile metal, 50% of which is vaporized in air in 45 hours at 131°F. It is an alpha emitter with a half-life of 138.39 days. A milligram emits as many alpha particles as five grams of radium. This represents a whopping five curies per $1/1000^{th}$ of a gram, making Polonium 5,000 times more powerful than radium. The energy released by its decay is so large (140W/g) that a capsule containing about half a gram reaches a temperature above 932°F. A few curies of polonium exhibits a blue glow, caused by excitation of the surrounding gas. Almost all its alpha radiation is stopped within the container that it is stored, where it gives up its energy. For these reasons polonium is an attractive lightweight source of energy. Twenty five isotopes of polonium are known, with atomic masses ranging from 194 to 218. Polonium-210 has been the most readily available. Isotopes of mass 209 (half-life 103 years) and mass 208 (half-life 2.9 years) can be prepared by alpha, proton, or deuteron bombardment of lead or bismuth in a cyclotron, but this method has proved to be quite expensive.

However, there is another way to produce Polonium fuel, the Moray method. This involves speeding up the decay process of uranium ores. This method electronically excites *alpha particles* into fissioning. With this type of reaction it is possible to speed up the half-life of uranium from 4.4 Billion years to a half-life of around 25 years. The by-product of which is Polonium. With a reactor using this process no fission fragments result as is the case of today's commercial neutron reactors. The neutron reactor produces several magnitudes of deadly toxic radio isotopes. The *alpha fission* process speeds radioactive decay the same way that occurs naturally except at a much more speeded pace. Conventional nuclear reactors speed up decay by brute force and crack atoms into many jagged fragments. While the alpha reactor gently creates the right conditions for an isotope to follow its natural path of decay. Furthermore, once Polonium decays it leaves behind only stable lead elements in its wake. This lead can then be used safely for other purposes.

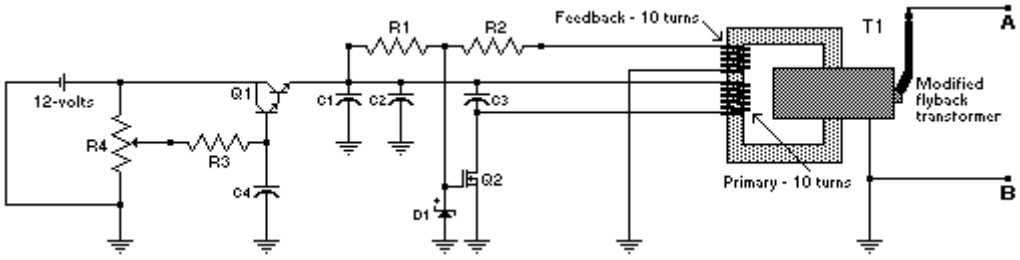
WARNING

Polonium is very dangerous to handle in even milligram or microgram amounts. Damage arises from the complete absorption of the energy of the alpha particle into tissue. The maximum permissible body burden for ingested polonium is only 0.03 micro-curies, which represents a particle weighing only 6.8×10^{-12} 12g. Weight for weight it is about 2.5×10^{11} times as toxic as hydrocyanic acid. The maximum allowable concentration for soluble polonium compounds in air is about 2×10^{-11} microcuries/cm^3. If it is respected, like anything else it poses little risk. So, you don't want to take apart a capture capacitor. Getting this material into your blood stream via an open wound on your body could be fatal. If the capture capacitor remains sealed then there is nothing to worry about.

High-voltage Power Inverter for *Alpha Fission*

I use a special flyback transformer that has a low resistance over-wind that has wire windings added to its ferrite core. The high-voltage, high-frequency is the result of the transformer being driven into resonance at about 143Khz. The flyback transformer **T1** outputs around **10KV**, **15KV** peak to peak at the above mentioned frequency and is inputted to a solid-state multiplier section. The multiplier steps up and rectifies the voltage to about **300KV** optimally. This extreme voltage is utilized to power the *Alpha Fission Reactor*. The heat that results can be used directly for homes, businesses, or factories. *Polonium* can also be obtained by this method to supply the *alpha particles* required in the assembly of *radiolytic capture capacitors.*

The flyback **T1** has one added primary coil. A feed-back coil is also added that is 180 degrees out of phase with the primary coil. These two coils are hand-wound onto the flyback **T1** ferrite core. The circuit is driven by one Mosfet **Q1**. Full core saturation occurs with this design and a minimal amount of energy is consumed. The frequency is variable with control pot **R4**. This allows fine tuning of the frequency, driving **T1** out of resonance where it can reduce over-all output voltage from the flyback for various adjustments. Capacitor **C3** and the primary windings form a tank circuit to effect flyback oscillation. Resistor **R2** limits current to the gate of **Q2**. **R1** provides the circuit imbalance to start oscillation.



PARTS LIST

Resistors
R1 & R2 – 100 ohms 1 watt
R3 – 470 ohms ½ watt
R4 – 10,000 ohms potentiometer

Capacitors
C1 -- 470µF 25 volt electrolytic
C2 --.01µF 25 volt ceramic
C3 --.27µF 100 volt ceramic or foil
C4 -- 2200µF 25 volt electrolytic

Semiconductors
Q1 – Motorola TIP 100 Darlington NPN Power transistor.
Q2 -- IRF540 MOSFET
D1 – 8 volt Zener diode ½ watt

Miscellaneous -- electrical
T1 -- Modified flyback transformer - * see text.

Miscellaneous -- hardware
2-inch square perforated construction board.

Mosfet needs a good heat sink.

Inverter Power Circuitry

Assembled & Tested -- $130.00
* Batteries and case not included...

We offer a 30-day, no questions asked, unconditional money-back guarantee!

This guarantee is null and void if a product is returned damaged due to misuse! It must be returned in resalable condition...

Please add 10% for shipping...

This circuit draws about ½ watt when properly constructed. I use a small 12-volt direct current

(dc) computer processing unit (CPU) fan, that is normally used in personal computers, to cool the Mosfet heat sink.

Assembly

1. Spread out and identify electronic components and hardware. Confirm resistor values by using resistor color codes.

2. Insert and solder all electronic and electrical components onto a 2-inch square piece of perforated construction board.

3. Using 16-gauge magnet wire, wind two coils consisting of 10 turns each onto the flyback core. These coils are wound side by side. Then wrap these coils tight with electrical tape.

4. Mount Q1 & Q2 onto transistor heat sinks.

5. Recheck all wiring according to the schematic.

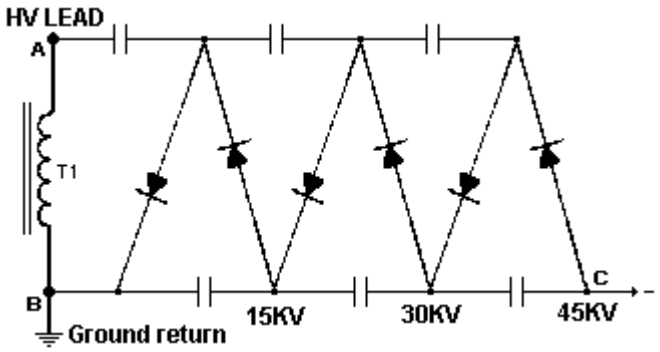
Test Circuit

6. Turn R4 fully counter-clock-wise, switch S1 to off, insert 10 amp fuse into it's holder.
7. Connect the negative probe of an amp-meter to supply ground. The positive probe is connected to the negative terminal on a twelve-volt power supply.
8. Now connect the positive terminal on your power supply to the positive input of the high-voltage, high-frequency inverter circuit.
9. Next, turn on power switch S1, notice a reading of ¼ amp on your meter. Slowly adjust R4 clock-wise and there should be a rise in your reading to about ½ amp. You should also see some ion glow around the output terminal. This is the lowest operational output that this circuit put out and can be used continuously in this mode without overheating. Continue to turn R7 and you should then notice a sharp rise in your reading. This is the maximum operational mode and you should be reading around 1 amp. Do not continue to operate in this mode as the Mosfet can become quickly damaged without being cooled.
10. You can enclose the flyback in a 6-inch PVC tube. Seal around all wire feeds using silicon sealant. Use PVC plumber's cement to seal tube pieces. Make sure that your circuit is functioning properly before making final seals.
11. I use a small 12-volt dc personal computer processing unit (CPU) fan to cool the heat sink to avoid damage to the Mosfet.
12. The output of the flyback is terminated to a suitable hardware bolt.

Electronically induced *Alpha Fission*

United States Patent No. 4,961,880 Electrostatic Voltage Excitation Process and Apparatus illustrates that *alpha fission* has been confirmed by someone other than T.H. Moray or myself. The only difference is that I am using solid-state components instead of a Van de Graaff machine. I was delighted to find this patent in March as it validates what I have been trying to tell folks all along. All the numbers and figures are outlined in this patent... I will continue to develop this invention.

300KV Voltage Multiplier



Three sections of voltage multiplication are shown here. Beyond six stages will require good insulating material. Mineral oil is a good choice. A 300KV multiplier will require forty 15kv capacitors and forty 20kv diodes.

.001/15KV ceramic capacitors $2.50@
20KV diodes $3.00@ 15KV Stage $30.00@
Assembled & Tested 300KV multiplier $450.00

Radioactive emanations expelled from radium, thorium or radioactive ores can be concentrated on a negatively charged conductor. Radioactive matter decays and expels *emanations* that will travel to a negative electrode. The collecting distance will depend on the potential of the charged wire. This emanation, is widely known as **radon** gas, it will decay to **polonium** in a few days.

As an illustration of the enormous activity deposit of polonium, Marckwald stated that a precipitate of 1/100 milligram on a copper plate, 4 square centimeters in area, illuminated a zinc sulfide screen so brightly that it could be seen by an audience of several hundred people.

In a nutshell, polonium is deposited on the wall of an *alpha fission reactor* by the application of a negative charge. This deposit accumulates and an intense *alpha flux* results. The flux is highly focused and if exposed to nuclear material *alpha fission* results.

This discovery has enormous implications in the way we obtain energy. With this process nuclear remediation will be simple and its by-product will provide additional energy for generations to come. It is safe, clean and abundant. I am a *catalyst* to getting this technology implemented. It is the answer to our nuclear waste problem. Let's all work together and bring positive changes to our world. We are indeed running out of time. Will you make a difference? The future of our world depends on what you do today...

The Radiolytic Effect Explained

compiled by Bruce A. Perreault, August 20th, 1997
Updated February 9th, 1998

Of all the radiation-chemical reactions that have been studied in aqueous solution, the most important is the decomposition of pure water itself. It has been shown by Pierre Curie and Debierne that a vacuum can not be maintained with a solution of radium salts, that from the solution a continuous evolution of hydrogen and oxygen takes place.

It must be mentioned that the decomposition of water in any form by alpha particles renders the practice of sealing radioactive salts in small tubes for long periods of time a dangerous one unless certain precautions are observed. Accidents involving serious loss of radium have occurred through the explosion of tubes by accumulated pressure of hydrogen and oxygen. It appears to be dangerous to heat an old tube or to exert any mechanical stress upon it. It is possible that weakening of the glass container by the continued radiant energy bombardment enhances the danger through devitrification of the glass. A far reaching disintegration of quartz containers by radium rays has been reported.

The wide variety of chemical actions brought about, particularly by alpha particles, is surprising, and one must be struck by the universality of the phenomenon of chemical change by radiation. We find that alpha and beta particles, in their passage through molecules, are almost universally capable of changing them chemically; their action does not depend upon any wave-length relation with the atom or molecule affected. This is in marked contrast with photo chemical action, where the specific nature of the reaction and of the system being acted on depends entirely upon the wave-length of the light, and the capability of being absorbed by a given element or molecule. Owning to the tremendous kinetic energy of alpha particles they always ionize and frequently produce chemical changes in substances through which they pass.

Water when exposed to radiation undergoes a breakdown sequence into hydrogen peroxide, hydrogen radicals and assorted oxygen compounds such as ozone which when converted back into oxygen releases great amounts of energy. Some of these are explosive. This decomposition is produced mainly by the alpha particles, that can be entirely absorbed by very thin layers of water. This fact was not recognized by early experiments.

It has been observed by Runge, Bodländer, Ramsay, Kernbaum, Duane, and Scheuer that a mixture of hydrogen and oxygen obtained by the decomposition of water by radium radiation contains an excess of hydrogen. The excess is greater in the early stages of the reaction and has been found to amount to an excess of 36% in one case. Kernbaum showed that hydrogen peroxide is formed in water in an amount equivalent to the deficiency of oxygen in the gaseous mixture. As the quantity of hydrogen peroxide accumulates in the solution a point is reached where its rate of decomposition just balances the new formation, under which condition of dynamic equilibrium the gases evolved would have normal composition. This explains the gradual diminution in the observed excess of hydrogen.

Radiant energy as a *catalyst* holds the key to obtaining an endless supply of electrical power. Just a few sprinkles of radium introduced into a weak solution of sodium hydroxide by *catalytic action* will produce hydrogen and oxygen for a fuel cell. There is nothing to wear down. The radium endlessly, day or night, generates hydrogen and oxygen to provide the fuel for a capture capacitor. The only thing required is to draw off the electrical current so that the gasses will not build up. By drawing off electrical energy the hydrogen and oxygen will recombine and revert back to water! The cycle then starts all over again with nothing to replenish!!!

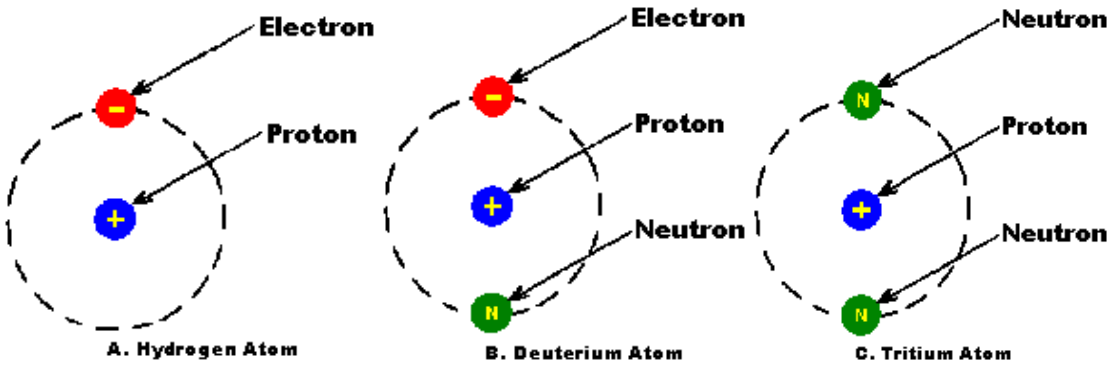
Neutron Oxidation – Reduction Theory

Promises non-polluting, portable electronic nuclear direct conversion devices.

The first law of thermodynamics – the principle of the conservation of energy states that "energy is not created or destroyed; it merely changes its form." It is matter that can not be created nor destroyed. In fact, energy is a result of matter being transformed from one condition to another.

The elements were created at the beginning of the universe and they can not be destroyed or altered. The lithium atom for example has a mass that is slightly larger than the hydrogen atom, it is the center of it's universe and has a resonate frequency representative of it's mass. Having a larger mass than hydrogen it will vibrate at a lower rate. Logically lithium is heavier than hydrogen because it is caught by earth's gravitational pull more readily. This analogy may be applied to the rest of the elements on the chart. It is quite clear that isotopic differences in atomic weights are due solely to their neutron counts.

I dare to speculate further that the neutrons do not occupy the space where atoms reside, that they are not part of a "nucleus." The most simplistic expression of the Perreault atom makes the bold statement that the neutrons reside in balance with electrons in the atomic shells. This concept is implied to exist throughout the entire periodic table of the elements.



Using hydrogen as an example, it represents a positively charged mass that is seen at the center of its universe, it is an atom that has a specific resonate frequency according to this mass. Three hydrogen elements are known to exist that are chemically similar but weigh differently. The reason why they weigh differently is that they individually have a differing combination of electron or neutrons. They are all hydrogen atoms, however, it is the neutron count in the atomic shells that determines what isotope of hydrogen it is.

By using this atomic model it can be clearly shown how triple weight hydrogen (tritium) decays to helium-3. In this particular transformation a charged normal weight hydrogen element (protium) that carries an excess electron in it's shell can react with a tritium element and emit an electron as a by-product of the reaction. When this occurs an electron is emitted at an accelerated rate and is seen as beta energy. This model will not alter the way we view chemistry, however, it will change how we view nuclear changes. In light of my theory I postulate that isotopic differences in atomic weights are due solely to the neutron counts in the atomic shells.

Mysteries of nature such as gravitation may be better understood this bold theory. Lithium for sake of comparison is an atom that has a mass that is slightly larger than the hydrogen atom, it is the

center of it's universe and has a resonate frequency representative of it's mass. Having a greater mass it will vibrate at a lower rate than that of hydrogen, therefore we may say that it is caught by earth's gravitational pull more readily and therefore has more weight. This can also be applied to the rest of the elements on the chart explain their attractions to the earth.

Furthermore it is my contention that the atoms were created at the beginning of the universe and they can not be destroyed or altered. The good news is that the elements, cosmic soups of atoms with orbital neutrons and electrons can be altered to serve humankind.

Swedish Stones

Around the year 1911 T. H. Moray was able to power a 16-candlepower carbon-arc lamp at about half its light output with a simple electrostatic charge obtained from an antenna and ground connection. So, ”radiant energy” power generation was born. In 1912 while Henry Moray was on mission with the Mormon Church in Upsalla, Sweden, he had a passion for crystal radio reception. Every spare moment he searched for a mineral that could possibly work as a radio detector. Moray had found two specimens that worked well as radio detectors. One was the sensitive galena that he found in a hillside and the other was a white, powdery, stone-like material that he found in a railway car, located in Abisko, Sweden. From military records we know for certain that the white material was “fused silica.” Back in the early days quartz (silicon dioxide) was crushed and used for the mining roads. Moray had taken the powdery quartz material, along with its impurities and fused it with a welding torch knowing that *fused silica* in those days made a good detector for crystal radio. He also knew that the galena taken from the hillside would make a good radio detector material. One day he put the two specimens back to back with a silver *catswisker* and to his surprise got wonderful results. In fact, he found that he could drive a small horn speaker with the combination.

Sometime in late spring of 1925 Moray designed devices that could put out higher wattage’s. Often times people would demand that he draw too much power and the white, stone-like material would overheat and burn up. When he ran out of this material he was forced to find a substitute. I have identified Moray’s material taken from the hillside as being a type of *argenti-zinciferrous-galena*, this he was able to synthetically duplicate, this formula is found in his Electrotherapeutic U.S. Patent No. 2,460,707. However, he was unable to figure out what the impurities were in his *fused silica* material. This forced him into exhaustive research with semi-conductive materials. Silicon and ultra-pure germanium were what held the most promise. To increase the sensitivity of these materials he induced *artificial radiation* into them. As a result of his experiments he was able to formulate a satisfactory mixture. It was a triboluminescent zinc comprising pure zinc sulfide that was doped with a bismuth activator. This material was then exposed to radiation emitted by a unique high-voltage powered vacuum-tube that contained radium chloride. This created “active bismuth,” today known as polonium-210. It would glow a bluish-green after treatment. This is what Moray called “artificial radiation.” When doped into ultra-pure germanium it made an excellent transistor type material. Moray called this new synthetic “fission material.” This transistor material is said to have been superior to the Bell Laboratory transistor materials. Moray was never able to duplicate his *fused silica* material that produced power. However, he was able to build cylinders that housed a central corona wire. These cylinders when charged with electrostatic energy added current to the ions. Excess power could be obtained with certain circuits.

Energy Release by Alpha Disintegration

When positively charged helium atoms (alpha particles) collide with the *electron cloud* that envelopes another atom its' positive charge is eventually canceled by these collisions. This is called "absorption." Atoms ring like a bell when impinged upon by *alpha particles*. This ringing state generates *x-rays*. The wavelength of this generated *x-ray* depends on the charge of the *alpha particle* and what type of atom it hits. If the *x-ray* generated has an energy level that exceeds 10 MeV it is absorbed by atoms, in which case the neutrons are raised to an excited state and they may be broken loose from the shells of an element or a neutron may be added to a shell. Isotopes may be created by gaining or losing neutrons in this process. We can efficiently do this by exposing atoms to *alpha particles.* From this model it is clear that ENERGY can be created or destroyed by one state to another.

The formation of a chemical compound is in general accompanied by the release of a definite amount of heat per unit mass of compound formed. The burning of a fuel is a chemical reaction in which oxygen unites with it. The quantity of heat released when a unit of fuel is burned with oxygen is called the heat of combustion. For the average coal this value is from 7,000 to 8,000 calories per gram or 12,000 to 14,000 BTUs per pound.

In contrast, *isotopic* transformation is accompanied by the release of enormous energy when compared to conventional oxygen – electron oxidation. However, this does not justify the theory advanced that neutrons occupy the center of atoms. It is my hypothesis that neutrons reside in the orbital shells of elements and not within the nucleus. To envision this atomic structure one only has to look at our own solar system to see this on a grand scale. Isotopic oxidation – neutron oxidation simply involves the neutrons. However, the energy involved is much greater because the neutrons represent neutral charge and therefore the binding energy to the elemental shells are of a greater magnitude.

When the unstable isotope of an element reverts back to it's stable state energy is released in the transformation. Now, if incident impinging electrons are impinged upon a naturally occurring element like U-235 and the wavelength is correct according to the resonate frequency of this element then excess energy can be released. This may be done with any isotope, however, U-235 is "self-fissioning" and under the right conditions will not require any other source of energy other than what it releases. It will fission by capturing neutrons. Excess energy is released only after the amount of captured neutrons equals the amount used for the transformation. This is called the "break even" point, beyond this excess energy is released.

We are not limited to the U-235 isotope to use as a fuel source. This element is used in commercial nuclear reactors because it is self-fissioning and requires no external energy to get it to "burn." U-235 is burned by capturing neutrons. This reaction is deadly to biological materials. What is not generally known is that the U-238 in a commercial reactor does not undergo fission. The only reason for it being there is too capture neutrons to transform it into weapons grade Plutonium (Pu-239).

U-238 will fission by alpha fission and will not fission by neutron fission. However, there is a hitch to the alpha fission process, the U-238 fuel requires an initial external energy to get it to burn faster than its normal decay rate. This is not a problem. All that is needed is the right type of spark to speed up the decay rate. This involves a simple and economical alpha fission process, furthermore, ZERO neutrons are emitted by this process.

Fully deleted U-238, uranium that does not contain U-235, is the answer to our energy needs because it's entire decay chain emits only alpha particles. Alpha particles are stopped by a thin piece of paper and therefore can be contained safely. No deadly neutrons result, this is my definition of a clean nuclear fuel. The end product is stable lead and can be used for other applications.

Nuclear decay by electronic stimulation

My 1996 radiant energy findings show that the decay rate of radioactive matter can be accelerated by confinement and electronic means. Isotopes can be stimulated into storing or giving up excess energy. This technology indeed holds great rewards.

A non-polluting, neutron free, portable electronically stimulated nuclear reaction process named "Method of Generating Nuclear Decay by Electronic Stimulation," was publicly disclosed by me on the internet on November 28th, 1997. My method of nuclear decay by electronic stimulation was first disclosed by me to the United States Patent disclosure office on July 27th, 1996. I do not claim to be the first to use this process to accelerate nuclear decay by electronic stimulation. T.H. Moray to the best of my knowledge was the first to accomplish this. At the end of March of this year I discovered that about ten years ago another inventor had also rediscovered the Moray process and received a patent for his work. This inventor has validated that the technology is safe and is clean, no neutrons result. In fact, as documented in the patent, nuclear waste can be used as a fuel source and the "waste" becomes non-radioactive. This technology could eliminate the need to store fuel and batteries aboard vehicles.

My approach to directly convert radioactive energy into electrical energy is a very old approach with a new twist. This, together with *alpha fission* could be the answer to our energy needs. That is if I am permitted to bring it to the world. My research in the alternative energy field spans about fifteen years. Nuclear decay by electronic stimulation could provide additional energy to radiant energy conversion processes.

> "Ere many generations pass, our machinery will be driven by power obtainable at any point in the universe...it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature." -Nikola Tesla

Radiant energy devices under development

For almost fifteen years now I have performed many experiments. The fruits of this research is now taking shape. Many fruits are within grasp but they are not yet quite ripe for the picking. My intent of revealing my progress to the world is to insure that my work is not done in vain. Through my writings I have attempted to explain the many facets of "radiant energy" and how it is possible to draw power from it. If radiant energy can be given to the world then humankind will have the potential to reach heights not yet dreamed or conceived of yet. Today I freely give to you the results of my life's work. It is my hope that in the months to come that with your support that this mode of power generation will become a commercial reality.

Acknowledgment

I would like to thank Calvin Bahlmann for volunteering his expertise in the manufacture of Radiant Energy Products. He is a fine mechanical designer and you will be hearing more about him as our projects progress.

WARNING!!!

The information herein is deemed as research material. We can not guarantee results. We do not take responsibility for accidents due to negligence or ignorance!!! Electricity is EXTREMELY DANGEROUS and caution should always be used when working around it. Please take the time to educate yourself sufficiently. If you don't understand something, investigate further before attempting. Take liberal advantage of encyclopedias, science books, and other reference materials. This manual was compiled for information purposes only. We do not control the materials used in construction, the methods of construction, nor the applications of the construction, therefore; WE ARE NOT RESPONSIBLE FOR DANGEROUS OR UNDESIRABLE RESULTS. Always use protective gear.

ALL SAFETY PROCEDURES MUST BE CAREFULLY OBSERVED.

MEASURING THE HIGH VOLTAGE IS NOT RECOMMENDED

Send correspondence to: **Nu Energy Horizons, P.O. Box 22, Rumney, N.H. 03266**

What is Radiant Energy?

"To Summarize -- Radiant Energy as herein used is that energy existing in the Universe, kinetic and exercised in wave transmission and rendered sensible by conversion of its energy into a detectable frequency, the phenomenon of the transducer, the magnetron combined with fission. IN THE FINAL ANALYSIS RADIANT ENERGY IS A MEANS OF USING THE ENERGY RELEASED BY THE FISSIONABLE REACTIONS TAKING PLACE IN THE STELLAR CRUCIBLES OF THE UNIVERSE."

* Introduction page, 4th edition, The Sea of Energy in which the Earth Floats

When Moray refers to the "Universe" he was making reference to the stellar and atomic universes concurrently. Moray's summary describes a "transducer" fueled by a fission reaction.

The oscillator tube described in the above analysis may be found in T.H. Moray's Electrotherapeutic Apparatus Patent #2,460,707 as shown on Sheet 3 -- Fig. 13, 14 & 15.

Moray's Radiant Energy Detector Tube (RE-valve)

Dr. Moray also invented what he called the "*Moray Valve*." It was one of the first transistors to be invented. His *radiant energy detector* was a variation of this invention.

T.H. Moray invented a unique type of photo voltaic vacuum tube. He called this invention, the "Moray-Valve." It functioned as a high-voltage, high-frequency, minute capacitance type tube. This tube consisted of solid-state semiconductors mounted "under ideal conditions." This tube contained a material that consisted of pure germanium metal doped with a special phosphor. The phosphor consisted of **zinc sulfide** activated by what Moray called "*fission material"* or "synthetic radioactivity." Moray created this material by exposing **bismuth** to radium emanation. This tube contained a molybdenum disulfide anode that acted as its collector. This was made in the form of a rod. The metal case of the tube served as a parabolic reflector type emitter, it concentrated and focused secondary ions generated from his specially doped semiconductor material.

"Radiant energy" comes to us in waves of separate and distinct little quantity units called *photons*. There are definite relationships between the energies of these photons at various wavelengths and the number of ions they cause the cathode to emit when they impinge upon it. Since the shorter wavelengths have photons of more energy, gamma or x-rays are basically better producers of *photo-ionic* emission than visible light, and visible light better than infra-red photons.

Photoelectric tubes will convert *radiant energy* into electric current. The radiant-energy wavelengths to which they are sensitive include the infra-red, visible light, ultraviolet and

x-ray regions, and the process of conversion bears some resemblance to the reverse of the process by which light is produced in a glow lamp.

A photoelectric tube may be either vacuum or low pressure gas filled and is comparatively simple in construction. This tube consists of a cathode that emits *photo-ions* when radiant energy impinges upon it. The cathode usually takes the form of a plate. These *photo-ions* reduce the cathode barrier. It is postulated that the Moray Radiant Energy Detector was a photoelectric tube that responded to a particular wavelength of energy emitted from **activated bismuth** *(fission material)* or "synthetic radioactivity." Photo-ions are be emitted when radioactive particles expelled from the *activated bismuth* **impinge** upon the Moray semiconductors.

The cathodes used in photo-electric tubes were usually coated with materials such as cesium, potassium and others that reduce the barrier energy at the cathode surface and allow ions to be emitted more readily. The coating used depends upon the wavelength of energy to be converted into electrical current (ion flow from the cathode to the anode), since the different materials have differing characteristics with respect to the wavelength of energy falling upon them. Thus, photoelectric tubes are designed for a number of wavelength regions. Those sensitive to visible light are not suitable for infra-red, ultraviolet, x-ray or gamma energy.

The Moray germanium mixture gives certain unique results in functioning as in a valve and or booster (amplifier). Made in form of rounded stones or pellets compressed under high pressure and fused. Combination contains **active bismuth, zinc sulfide (0.03% ZnS), pure germanium metal (99.97% Ge) -triboluminescent zinc.** Some pellets fastened to envelop with pure tin in place of solder. Bismuth pellets fused to side. Germanium mixture pellets float between other pellets but making firm but needlepoint like contact. Have used silicon too, which has some of the properties of germanium. Germanium works best when impurities are introduced. Care must be taken when alloyed with other substances, as too much other mixture added worsens conductivity, and germanium looses its properties.

* T.H. Moray, 5th edition, Sea of Energy, 1978, p. 71

Thomas H. Moray successfully demonstrated an electrical device that extracted enormous amounts of energy, 4,000 watts, weighing only sixty pounds. This unconventional source of energy is abundant day or night throughout the year.

To understand how this device generates energy you must carefully read the material contained in this guide. I have compiled this information to assist you in understanding *radiant energy*. Hopefully it will help to clear up the mystery for you.

The Sea of Energy in which the Earth Floats
by T.H. Moray, 5th Edition 1978

Have used Moray lead made in various forms bi-anode being used as keeping valve at slightly raised temperature. p. 68

* Electrotherapeutic Apparatus #2,460,707 p. 5, par. 2, Moray lead formula.

Eyring Research Institute before Henry Moray died, is working in what is now called "Direct Energy Conversion Systems." This involves using radioactive material in conjunction with the quartz junction. p. 89

I have just talked to Dr. Henry Eyring of Salt Lake City (who just returned to town after a long trip) concerning Mr. Moray's project to obtain energy from "radiation." p. 97

In 1942, shortly after World War II began for the United States, Henry Moray attempted to rebuild a Radiant Energy Device, using the remaining bit of what was known as the "Swedish Stone." This material limited the amount of power he could draw. Consequently, in the larger unit, he developed a second detector that forced him into extensive research involving nuclear materials and radioactive reactions. He became deeply involved particularly in the study of synthetic radioactivity as described by Gustave LeBon in his book, The Evolution of Matter. p. 186

Others may discover Direct Energy Conversion Systems using synthetic radioactive materials. Bell Laboratories has made millions of dollars from semiconductors, though no credit has been given to Henry Moray. p. 190

Speech giving by T.H Moray on Jan. 23, 1962
at Valley State College
Northridge, California

It is now estimated, because of present advances in present dielectrics that a 100 lb., unit can be made to deliver 300KW gross weight, not net weight. p. 11

There is much to be learned in the disintegration of the deuteron by a photoelectric effect and other mechanism which contribute to disintegration. p. 5

* This was back in 1962, we now have even higher dielectric materials.

The Sea of Energy in which the Earth Floats
by T.H. Moray, 4th Edition 1960

Nickola Tesla was not referring to so-called "atomic energy" or nuclear energy but to the energy that is continually bombarding the earth from outer space. Call it cosmic, *neutron* or what one will. p. 1

Enough energy is coming to the Earth to light one million, one hundred ninety-three thousand, six hundred, one hundred-watt lamps for every human being on the earth today. No fuel of any kind will be taken as a dead load for energy can be "picked-up" direct by great ocean liners, railroads, airplanes, automobiles or any form of transportation, to say nothing of heat, light and power available for use in all kinds of buildings. p. 1

A battery of vibratory units can be made to produce 50 kW of energy per unit of 60 pounds. A device whereby energy can be obtained by oscillatory means in harmony with the vibrations (oscillations) of the Universe. p. 14

Electrons are spontaneously being emitted from the nuclei found in nature and every new discovery on the subject bears out this claim that all "space" is filled with energy millions of amperes at very high voltages. p. 89

In the case of RE device a different effect is established because the oscillations from the Universe, trapped by the RE valve, continue to enter the circuit as waves of the sea beat upon the shore. p. 92

* The "oscillations of the Universe (ions) are supplied by the potential difference of an antenna and ground, *ions* are trapped by the RE valve.

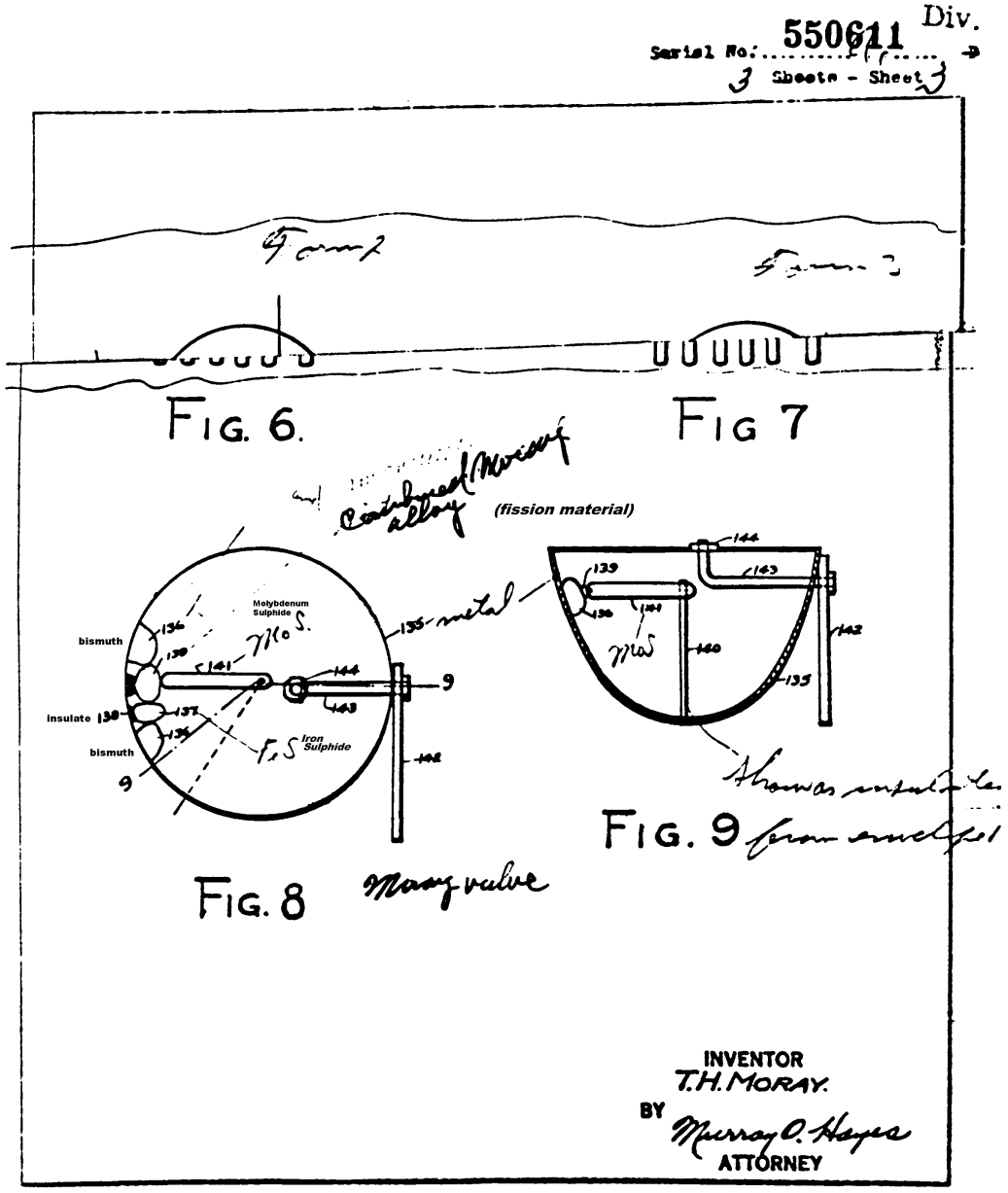
By making “pellets” of a mixture of the Moray lead, which withstands heat up to over 1800°F, and, or using pure germanium mixed with activated bismuth, zinc sulfide (triboluminescent zinc), and certain other impurities including *Moray fission material*, he obtained a substance that had wonderful properties as a detector or valve for radio signals. p. 128

With this germanium combination alloy used as a detector, it was found that radios would operate without batteries or tubes or any other source of power than that obtained from the **radio transmitting station.** p. 128

This special RE radio valve, he also took a lump of lead (Moray lead) treated according to the process he has discovered and got wonderful reception on a radio. p. 129

At 139, in the form of a rounded stone, is a small mineral body containing.....,.....,....., -triboluminescent zinc and germanium compressed into a hard, rounded stone. (*material is blanked out in this paper for security reasons but can say it describes the Moray **fission material**.) p. 130

Extending through the case 135 but insulated therefrom, is a metallic pin 140, this pin being connected to the antenna lead-in and carrying a piece of molybdenite (molybdenum sulfide or a molybdenum metal combination of Moray mixture of the germanium alloy).



Letter from Mr. R. L. Judd to Dr. Harvey Fletcher
October 25th 1928

Mr. Moray feels that as a preliminary step you should not disclose the fact a stone is used in the detector, that there is moisture in the tube with electro-litic effect, the metal covering of the tubes.

Radiant Energy
by T.H. Moray, 1945

"This energy, or as Dr. Moray explains it -- these oscillations of Energy, are picked up by the device through the oscillators, or neutron bombardment." p. 8

"In reference to electrons, neutrons, protons, and ions: It is my theory in using these terms that they are the energy of the universe" p. 17

"My device oscillates because of the oscillations of the Universe caused by the disintegration of matter." p. 18

Radiant Energy
by T.H. Moray, 1931

As far as nuclear energy, atomic energy is concerned for heat, light and power, it is and always will be nothing more or less than expensive, dangerous, glorified steam plant or an equally dangerous thermoelectric device or a breaking into the radiation lines of force of the radiation field that surrounds the reactor to capture energy. Such a plant, no matter how efficient, can never be the complete answer to the world's energy problems. Costs, weight will always be a great problem. p. 1

Any nuclear fuel, even to the most "super nuclear pile reactor," or what have you, is, and always will be, just another source of fuel to operate an energy plant from any heat, light and power viewpoint. p. 1

When it comes to energy for automobiles, trains, airplanes and all forms of transportation, the fuel costs will be greater than practical; the cost of shielding and weight involved impractical. p. 2

The total energies involved in "cosmic" radiation's are individually and collectively very large. The methods or processes of their generation involve a basic relation to the total structure of the action of the universe. p. 2

* "Universe" = atom in Moray's translation of the word, Moray refers to cosmic energy that relates to both "stellar space" as it does to "atomic space." p. 61

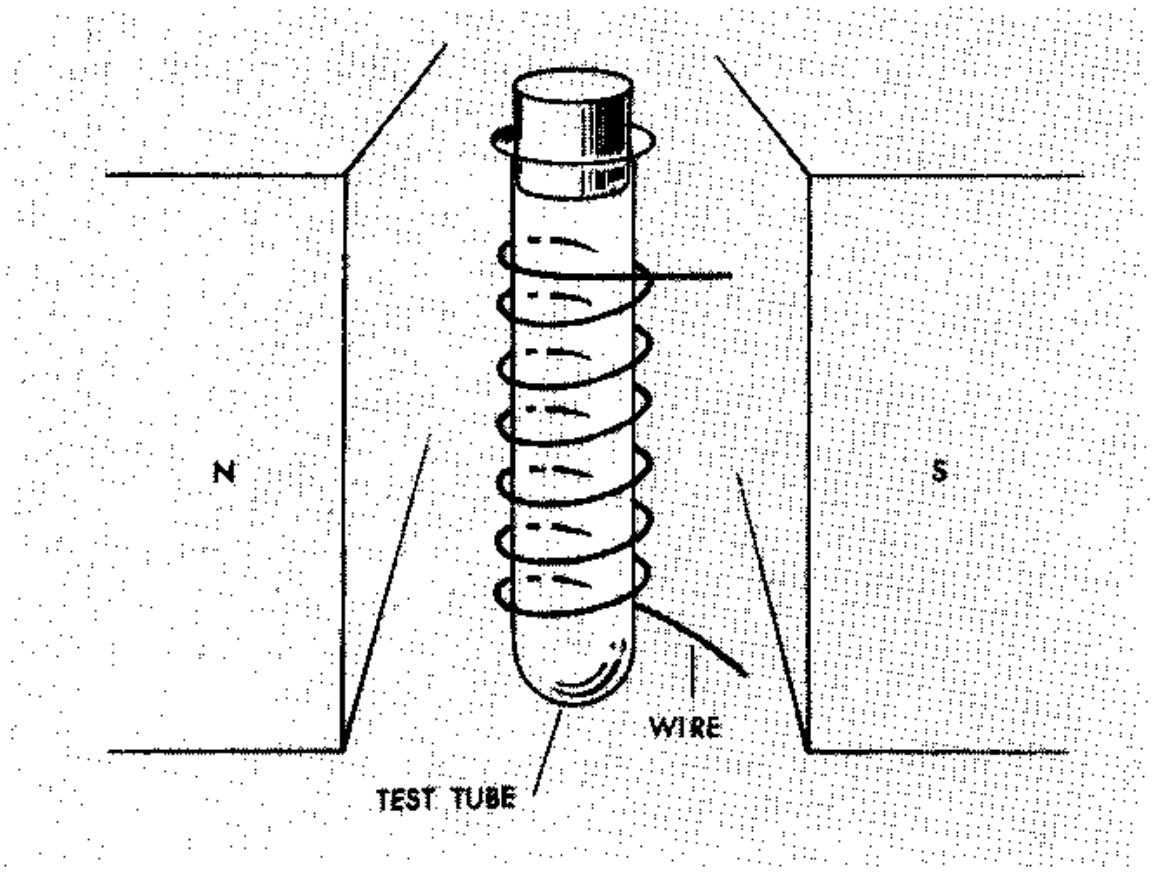
The facts involved are the same in both the radio receiving set and this device. The nature of the mechanism, however, in one differs greatly from the other. The radio receiving set receives man transmitted energy waves out of the air and transposes them into "sound waves," the R.E. device receives oscillations from the *universe,* atomic universe and transposes them into electricity. p. 13

If the frequency is raised high enough its molecules will separate and the atoms are freed. Raise the vibration of the atoms still higher and higher and they will resolve themselves into the original elements of which all matter is constituted. p. 15

Elements maintain an equilibrium, *made stable* by oscillations, rotations, attractions and repulsions, but this does **not** interfere with a transformation of equilibrium, which when the transformations of equilibrium are rapid, *unstable* enough become heat, light and electricity, i.e., matter is turning into energy and energy into matter, *radioactive*. p. 21

Cosmic rays are constantly creating radioactive carbon and fusion of small atoms together to make larger ones gives off more energy than so-called "splitting" of the larger uranium or plutonium atoms, the uranium energy release ratio being only 1 to 1000 -- that is only 1/1000 of the heavy atoms changed in the uranium "atom splitting" process of the atomic pile." p. 60

CAPTURE OF ENERGY BY NUCLEAR RESONANCE
with the Radiations of the Atom



The resonate frequency of atoms can not, as a rule, be observed, as the atoms of a solid or gas do not precess in phase with each other. If, however, a small alternating field is applied at right angles to the constant aligning field, phase relationships are established and the resultant magnetization will then be found to precess with the angular velocity of the individual components. The magnitude of this angular velocity is of great importance. It typically falls into the range of megacycles (10^6 cycles) per gauss for magnetization resulting from electronic motion, and in the range of kilocycles (10^3 cycles) per gauss for magnetization resulting from the motion of positive charges in atomic nuclei. Using fields conveniently produced by magnets, of the order of thousands of gauss, atomic precessions of the order of 10^9 cycles can be produced. Such frequencies are in the microwave range and microwave techniques are used to observe them. Nuclear magnetization, however, precesses in such fields with frequencies of the order of megacycles, and can be observed with radio-frequency circuits. An apparatus for observing nuclear magnetic resonance is illustrated in the above drawing. The poles of the electromagnet produce a uniform field, from one pole to the other. The substance to be observed is placed in the test tube in the magnetic field. If now a radio-frequency field is produced in the small coil shown around the test tube, we would find that there are selective resonance phenomena in the vicinity of one particular frequency, namely that at which the gyroscopes in the sample are precessing. This resonance is similar to that which we make use of when we tune a radio to one particular broadcast frequency, or to that which we may observe by sounding one note on a piano when the pedal is held down. The atomic gyroscopes respond selectively to the particular frequency at which they precess.

CHEMICAL REACTIONS BY MEANS OF ELECTRON EXCITATION

Moray Power Tube

A hydrogen ion having a kinetic energy of one electron volt would have a velocity of 9.85×10^3 meters/sec. Or nearly 6.1 miles per second. Hence the mobility of charged particles, positively charged molecular ions and negatively charged molecular ions or atomic ions in the electric field may be controlled by simply controlling the difference of potential through which the particles are falling. Further, since the molecules are to react with one another the rate of reaction and the intensity of said reaction may be controlled at will.

A specific case in which the electric field performs the double function of molecular excitation and the creation of inter-molecular and atomic ions is being given by the system used by the inventor *(T.H. Moray)*.

It is a system utilizing the principles of the wire corona with concentric cylinder at different pressures. The system is modified in conformity to the concept that chemical reactions must take place when the oppositely charged molecular ions from an appropriate activated catalyst are accelerated against one another in the wire corona, it consists of a cylinder made of a suitable catalyst (nickel, platinum, iron, vanadium, etc...,) from which positive atomic ions are emitted. The reactants (gases) streaming through the chamber parallel to the length of the wire attain the polarity of the negative molecular ions by the high electric field close to the wire. As these negative molecular ions are accelerated at the right angles to the wire in the direction of the electric field toward the positively charged catalyst cylinder, they are met by an avalanche of onrushing atomic ions from the catalyst. A certain amount of reaction takes place in that instant. (10^{-8} sec.) However, some of the negative molecular ions outside the mean free path of the positive atomic tons are free to rush headlong toward the positive cylindrical field where they are neutralized, and instantly given a positive charge by the avalanche of out rushing positive ions. These positive molecular ions are accelerated back into the field and collide against the negative molecular ions coming from the direction of the negative electrode corona. This melee continues until the reaction has come to a point when the individual participants are either all gone or the mixture is outside of the electric field; back-rush oscillations.

* Radiant Energy by T.H. Moray, 1945 p. 31

Please study all aspects of this energy conversion device before attempting construction. Bruce A. Perreault takes no responsibility for any form of damage or injury of this experimental device. Acceptance of this guide warrants this on your part.

The Power Source in my Radiant Energy Capture Device

The Radiant Energy Capture Device will capture and convert static charges. It "captures" nuclear ions emitted from isotopic transformation.

Electrical current may be obtained simply by attaching an antenna and ground to trigger nuclear reactions in a Perreault Radiant Energy (RE) valve. However, this takes too long to charge up a high-voltage capacitor and the required antenna height and length make this impractical. This problem is remedied by using an electronic circuit to produce the required activating high-voltage.

Clean atomic "cold" fusion reactions

Back in 1932 John Cockroft and Ernest Walton demonstrated the first *atomic reaction*, he accomplished this by bombarding lithium with protons. What is not generally known is that their discovery was *non-radioactive.* This fact has been covered up by omitting minor details from our textbooks.

The Department of Energy (DOE) has hindered the development of non-radioactive research over the years. They fear that a non-radioactive miniature power source will deny the Department of Defense its supply of weapons-grade plutonium.

The DOE's 45-year H-bomb fusion program sucks up all government fusion funding. The DOE's fusion projects are located in a Princeton University Plasma Physics Lab. These projects are top-secret cold-war research projects for the use of fusion for massive production of plutonium and tritium for nuclear weapons.

Their fusion reactor burns tritium, a radioactive fuel that produces deadly *neutron* radiation, 80% of its total output of energy. This reactor if used in conjunction with a breeder reactor, is capable of "breeding" 100 times more plutonium than can be produced by a conventional utility reactor. They have a fuel machine for their weapons of destruction. This new reactor would be so "dirty" that Utility companies are rejecting this government fusion program.

In 1984 the DOE rejected the utilities' requests to fund the fusion research pioneered by Cockroft and Walton. The Electric Power Research Institute has phased out its fusion research in protest.

Meanwhile, the news media continues to promote the DOE's deadly radioactive fusion reactor as the peace maker and clean energy source for the future.

Congressman George Brown, Chairman of the Science, Space and Technology Committee, introduced a new bill in early May of 1994. This bill would have allowed for clean, compact, non-radioactive, “neutron-less” fusion energy technologies that would compete with the DOE’s weapons program. What happened to this bill?

In spite of the resistance from the DOE’s position against clean atomic reactions the “Fusion Energy Research and Development Act” would create an Office for Alternative Fusion Energy and a separate budget for alternative fusion technologies.

A neutron-less atomic device like Moray’s could generate electricity at minimal cost. It would compete with any petroleum based fuels. This would mean no more oil spills.

The driving force behind the neutron-less and the alternate-fusion bills is Dr. Bogdan Maglich. He discovered the *omega meson* and other particles. In 1961 his omega meson discovery won him and three associates a citation from President John F. Kennedy.

Dr. Maglich invented the “migma," a miniature, non-radioactive reactor that demonstrated the principle for a non-radioactive nuclear reaction in a 6-cubic-inch volume. While most fusion reactions are radioactive, Dr. Maglich’s reactor utilizes a design that generates a non-radioactive nuclear reaction. In 1984 Dr. Maglich planned to demonstrate the migma’s energy capabilities, the tests were to be done in cooperation with nuclear labs in Russia, under the State Department’s “Conversion of Peaceful Nuclear Research” program for Russian Scientists.

Dr. Maglich had flown supporters with him to Washington to persuade the Congress to give the project an affirmative vote. The vote was defeated by the DOE and the nuclear-industry lobbyist. Mankind was on the brink of an energy technology that is compact, safe and has almost zero residue except for the electricity that it will produce.

A space-shuttle full of moon dust has enough helium-3 in it to meet all the energy needs of the U.S. for an entire year. Dr. Maglich has pointed out that nine grams of helium-3 holds the equivalent to 1,000 barrels of crude oil. A migma reactor can breed light helium from sea water, you do not need to go to the moon.

The Bechtel Corporation in 1989 subcontracted Dr. Maglich to produce an engineering design of a clean-nuclear reactor slated for a space power station. Dr. Maglich was at this time, about ready to publish his completed design. The Defense Department at this point stepped in and classified the plans before he could utter one word, calling his reactor export controlled, a classification forbidding any written or verbal presentation of this invention to anyone except for government officials. This clearly violates an international agreement that forbids withholding information on controlled nuclear reactions. The agency justifies this classification by saying that this type of research contains “ground-breaking work.”

The bottom line is that non-radioactive atomic reactions do not generate weapons fuel. The DOE would stand to lose its funding for nuclear weapons fuel if non-radioactive

reactors were to be commercialized. Non-radioactive energy devices threaten all nuclear power plants.

I will leave you with a thought to ponder on non-radioactive reactions. Radioactivity is not a by-product of either nuclear fission or fusion reactions. The biggest lie about nuclear reactions is that fusion is not radioactive and that fission always is. The truth is that it is the fuel used that generates radioactivity and not it's process. A non-radioactive reaction simply is a *neutron-less* atomic reaction, using alpha particles as its fuel source.

Electronically Induced Fusion

Before 1919 no one had succeeded in disturbing the stability of ordinary atoms or affecting the decay rates of natural radioactive substances. In 1919 Rutherford had shown that alpha particles could cause an alteration in the atom of an ordinary element, specifically he succeeded in changing a few atoms of nitrogen into atoms of oxygen by bombarding them with alpha particles. Rutherford has tested all the elements up to atomic weight 40, with the exception of helium, neon, and argon. Several other elements, higher in the scale were also tested, but none above phosphorus gave positive results. Boron, nitrogen, fluorine, sodium, aluminum and phosphorus yielded long-range particles. Elements with atomic weights that are whole multiples of 4 give no hydrogen particles when bombarded with alpha particles.

In 1930 W. Bothe and H. Becker in Germany found that if the natural alpha particles from polonium fell on the light elements of beryllium, boron or lithium, an unusually penetrating radiation was produced, at first this radiation was thought to be gamma radiation although it was more penetrating than any gamma rays known, and details of the experimental results were very difficult to interpret. The next important discovery was reported in 1932 by Irene Curie and F. Joliot in Paris. They showed that if this unknown radiation fell on paraffin or any other hydrogen containing compound it ejected positive ionization of very high energy.

Later in 1932 J. Chadwick in England suggested that in fact the new radiation consisted of uncharged particles of approximately the mass of a positive charged hydrogen atom, and he performed a series of experiments verifying this hypothesis. Such uncharged particles are now called "neutrons."

The one characteristic of "neutrons" that differentiates them from other atomic particles is the fact that they are uncharged. This property of "neutrons" delayed their discovery, makes them very penetrating, makes it impossible to observe them directly, and makes them very important as agents in atomic change. To be sure, a charged hydrogen atoms' mass is ten thousand times larger than an uncharged hydrogen atom (neutron). Furthermore, charged ions lose energy in passing through other substances. They exert

electric forces that ionize the particles of the material through which they pass. The energy taken up in ionization equals the energy lost by the charged particle, which slows down the particle. The uncharged hydrogen atom (neutron), however, is unaffected by such forces. It is affected only by a very short range force, a force that effects it when it comes very close indeed to an atomic pair. Consequently a free uncharged, high speed hydrogen atom (neutron) goes on its way unchecked until it makes a "head-on" collision with an atom.

In 1934, Curie and Joliot reported that if light elements of either boron, magnesium, or aluminum are bombarded with alpha particles will continue to emit ions for some time after the bombardments are stopped, that the alpha particle bombardment produced radioactive forms of boron, magnesium, and aluminum. Curie and Joliot actually measured half-lives of 14 minutes, 2.5 minutes, and 3.25 minutes, respectively for the radioactive substances so formed.

E. Fermi reasoned that these newly discovered uncharged particles, because of their lack of charge, should be effective in penetrating atomic bonds, especially those of high atomic number that repel positively charged hydrogen ions and alpha particles strongly. He was able to verify his prediction almost immediately, finding that the atomic bonds of the bombarded atoms captured uncharged hydrogen atoms and that there was thus produced an unstable atomic bond that then achieved stability by emitting negatively charged hydrogen ions. Thus, the final, stable atomic bond was one unit higher in mass number and one unit higher in atomic number than the initial target atoms.

Experiments carried out since 1934 resulted in radioactive isotopes of nearly every element in the periodic table can now be produced. Some of them revert to stable atomic bonds by the emission of positive ions, some by the emission of negative ions, some by the emission of gamma energy.

Not only does artificial radioactive decay play an important role throughout our project with which we are concerned, but its future value in medicine and in many other fields of research can hardly be over estimated.

The scientific community must work towards these understandings before they can begin to understand the values of the energy capture device. Thus, if electronically induced fission in substances is, then energy must be supplied to its constituent particles.

As I have said, Rutherford's work in 1919 on artificial nuclear disintegration resulted in further experimentation by a number of researchers. Improvements in high-voltage techniques have made it possible to direct the collisions' alpha particles (positively charged ions). Cockcroft and E. T. S. Walton in Rutherford's laboratory were the first to succeed in producing atomic changes by such methods. In 1932 they bombarded a target of lithium with positively charged hydrogen ions of 700 kilovolts' energy and found that alpha particles were ejected from the target as a result of the bombardment. Cockcroft and Walton generated these high energy particles by ionizing gaseous hydrogen and then

accelerating these ions in a transformer-rectifier high-voltage apparatus. A similar procedure can be used to produce high-energy deuterons from deuterium or high-energy alpha particles from helium. Higher energies can be attained by accelerating the ions in cyclotrons or Van de Graaff machines. However, to obtain uncharged hydrogen atoms (neutrons), radioactive substances must be used as sources. Radiation of sufficiently high energy must come from naturally occurring radioactive substances. "Neutrons" are commonly produced by the bombardment usually of the element, beryllium or of boron, by natural alpha particles, or by bombarding suitable targets with positively charged hydrogen atoms. Alpha particles from radium and its decay products will penetrate the Be-9 atomic bond, that will give off "neutrons" and become stable ordinary carbon. A source of "neutrons" will result from accelerated deutronium ions impinging on frozen deutronium dioxide, "heavy water" ice. Here the high-speed deuterons strike the target deuterons to produce "neutrons" and tritium atoms. Half a dozen other reactions are also used involving deuterium, lithium, beryllium, or boron as targets. Take note that in all these reactions the total mass number and total charge number are unchanged.

The agents that are found to initiate fission are in approximate order of importance; neutrons, deuterons, positively charged hydrogen ions, alpha particles, and gamma energy.

Alpha particles are clean and effective in producing fission. Why are not they used to produce power? If their initial source is a natural substance, emits safe alpha particles, what is the problem? The energy implications are enormous! Furthermore, alpha emitting radioisotopic fuel is easily obtained from the good earth. Do we need ask for more?

Energy can be self-propagating. Lighting a fire with a match releases enough heat to ignite the neighboring fuel, which releases more heat that ignites more fuel. Neither the energy released nor the new particles released are sufficient to maintain the reaction. However, we can transfer and build up these individual energy packets. It is only when a sufficient amount of energy is built up that the reaction becomes a self-propagating reaction. If the transformation is a nuclear reaction it is called “fission.” This is the secret of harnessing the stored up energy in radioisotopic material. Revealed here is a fascinating energy mechanism. The results of this science are striking, confusing, and its interpretation, intricate.

The final explanation is relatively simple. The alpha particle proves to be an effective particle in inducing fission. The results are at first glimpse, puzzling. First studied by Fermi and his colleagues in 1934 they were not properly interpreted until several years later by T. H. Moray and now by myself.

In the final analysis the net result is the transformation of stored energy by alpha particle bombardment, with the release of incredulous amounts of energy for our use.

The ideal radioisotopic source is an element that emits only alpha particles, free of excess neutrons. Pu^{238} is such a source, it emits only alpha. Furthermore, there are stockpiles of this energy radioisotope. There are many natural sources in nature that can be explored.

Alpha Fusion Oscillator Tube Equations

"Positrons" may be produced by bombarding aluminum with alpha particles;

$$13Al^{27} + 2He^{4} \rightarrow 15P^{30} + n \qquad 15P^{30} \rightarrow 14Si^{30} + {}^{+}e$$

in which n is a neutron and ${}^{+}e$ is a positron. The P^{30} produced in the first step is artificially radioactive. It has a half-life of 2.25 minutes, emitting a positron as indicated.

Many artificially radioactive elements can be produced by bombarding appropriate target elements with high speed alpha, protons, and deuterons. The particles must be accelerated to high speeds to overcome the repulsion between the positively charged particle and the positively charged nucleus.

$$4Be^{9} + 2He^{4} + \rightarrow 6C^{12} + n$$

These reactions are especially useful in initiating nuclear fusion reactions since, being neutral, they are not repelled by positively charged target nuclei.

General Electric

This photograph gives a close-up of uranium dioxide fuel pellets, before going into a nuclear reactor. As can be seen, no special shielding is used. They become deadly when forced to fission. However, Pu^{238} may be extracted from the deadly mix caused by forced fission and a clean safe source of energy can result. The pellets shown are the equivalent of a 85-ton load of coal. Radiant Energy Devices harness the ions that result from the natural decay rate of radioactive material.

OBTAINING RADIOACTIVE MATERIAL FOR POWER TUBES

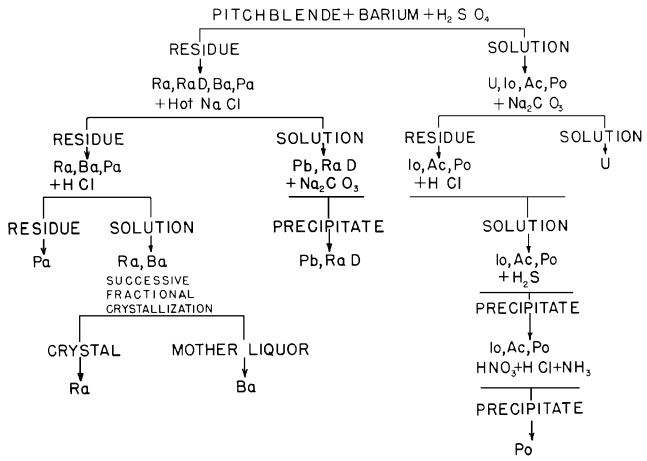
The heart of this device uses unique **ionic tubes.** These tubes require low-level radioactive powder. Details are given below that show you how to extract radioactive powder from radioactive rocks. With this information you may be able to build your own experimental prototypes. You can either go out and find the radioactive rocks or buy them from mineral suppliers.

Next, research where you are going to find your rock material. Your state should have a booklet on Mineral & Mine locations. There are also mineral books that will give you a general idea of what these rocks look like. There are well over 100 different radioactive minerals throughout the world. **Autunite**, **carnotite**, **pitchblende** and **gummite** are the materials that I prefer to use at the moment.

Now go out and locate your radioactive rock source. It is much easier if you are prospecting for fluorescent radioactive rocks. These rocks can be spotted at night by being exposed to an ultraviolet light source. A good portable UV-lamp will cost you about $300.00. It is much cheaper to locate your own materials than to buy them from a mineral supplier. In fact, it is getting to be harder and harder to buy from mineral shops. The United States Government has told these suppliers that they will no longer be supplied by the mines. They are being told that radioactive rocks are highly toxic.

The Curie Process for the Chemical Separation of Radioactive Ore

Radioactive ore from St. Joachimsthal, Vzechoslovakia served as the source for the first polonium and radium isolated by Pierre and Marie Curie. In this deposit the ore is associated with dolomite and quartz at a depth of about 1500 feet. The phases of extraction are shown schematically in the diagram;



Barium was added as a carrier for the radium, and the pitchblende was dissolved in sulfuric acid. The radium followed the separated residue which after purification was converted to a chloride or a bromide solution. After purification this was subjected to successive fractional crystallization to separate the barium from the radium. This later operation as first carried out was exceedingly tedious and involved scores of successive crystallization's. This lead to a crystal richer in radium until the final crystal was regarded as sufficiently pure.

My Process

Step #1. Half-fill one gallon pickle jars with crushed radioactive rocks. Next cover the rock material with muriatic acid (28% hydrochloric acid). You can get this acid from your hardware store. This is used to clean bricks. Your rock material should be fully emerged in this acid solution. Let sit for about three days before proceeding to the next step.

Step #2. Empty your solutions into a clean one gallon pickle jar, using a coffee filter. The color of this extract solution should be a canary yellow. The jar should be less than half-full. Now you will have to add clear lye to this solution. You will add approximately the same amount of lye solution as what is now in your extract jar. Simply stated, double the volume of your solution.

Step #3. Next, transfer half of the extract into another clean jar.

Step #4. Get yourself another clean one gallon jar and empty a 12oz. container of pure sodium hydroxide into it. This material is bought at a supermarket or hardware store. It is called "lye." It is used to unclog water drains. Now slowly add about ¾ of a gallon of distilled water. Slowly stir this solution with a plastic stirrer. Never use aluminum because

it will violently react with the lye. Make sure that you are wearing safety glasses and rubber gloves when working with lye. Never add water to dry lye.

Step #5. You will now add half of your lye solution to each half-gallon of extract. A brown and yellowish solid will now be seen to precipitate out of the extract. Let these precipitates settle for about three hours. A brown material will settle to the bottom of your jars. The liquid above this brown precipitate will be clear.

Step #6. Now you will have to siphon off the clear liquid. I use a turkey baster bought from the hardware store. Be careful not to draw off the brown precipitate. Save your clear liquid. It can be used over and over gain to precipitate your extracts. You will have to add a little additional lye each time.

Step #7. You will now add clean distilled water to the brown precipitate. Fill to about one inch from the top of the jar. Let sit for about three hours. Again siphon off the clear liquid. This process removes the lye.
Do this step three or more times, the cleaner the precipitate the better. Don't worry the precipitate is non-soluble in water.

Step #8. After you siphon off your clear solution for the last time you are now ready to dry your precipitate. Put your precipitates into glassware that is used to bake food. You will dry your precipitates in your cooking oven at 250 degrees Fahrenheit. The precipitate is dry when it forms a crust around the inside of the glassware. Let the material cool before handling it.

Step #9. This is the last step in the extraction process. Scrape out the brown material. Leave behind any substance that looks white. There may be a thin crust of white at the very top towards the rim. This is the lye. Now take your brown material and pulverize it. You can use a back side of a spoon to do this. You can use mortar and pestle if you are processing large amounts of material. You will have a fine brown powder when you have completed this phase of your project. Store this material in a plastic container, never more than one pound per container, just to be safe from federal regulations.

Step #10. My original prototype used radium paint from old clock dials. It took me a few years to scrape enough material from clock dials to build my first prototype. The new prototypes use the radioactive brown powder extracted from radioactive rocks. I wish that I had this material available to me years ago. The brown powder that I have just shown you how to extract is the fuel source for what I call *ionic radiant energy power tubes or Perreault-valve*, call them what you will.

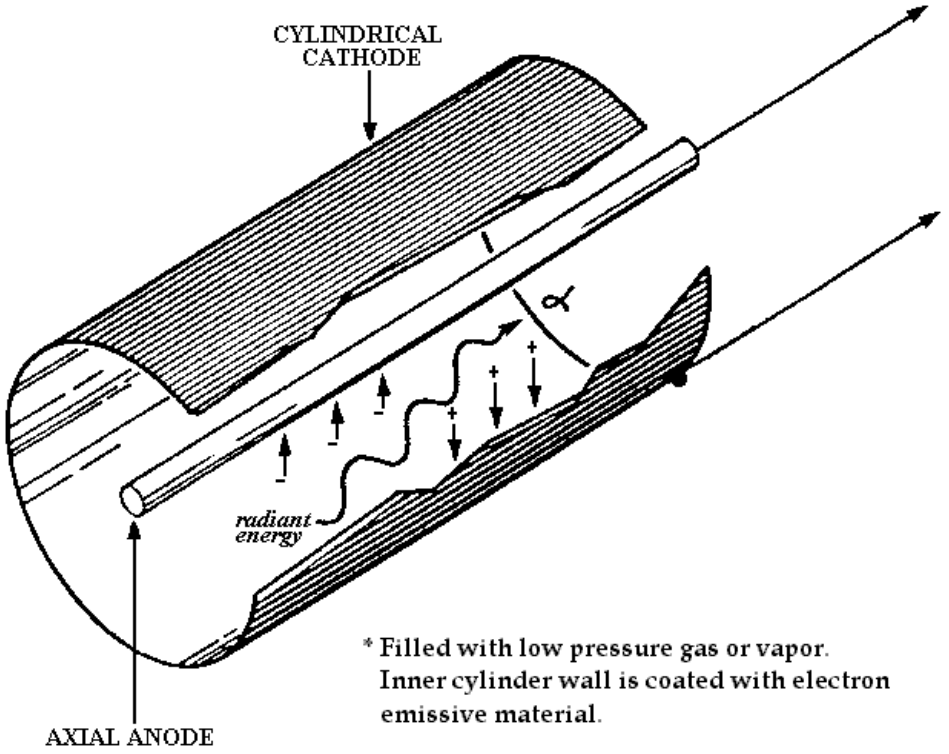
I think that you will find this new research guide much easier to follow. This revised edition should tell "the rest of the story."

Perreault Radiant Energy (RE)-valve

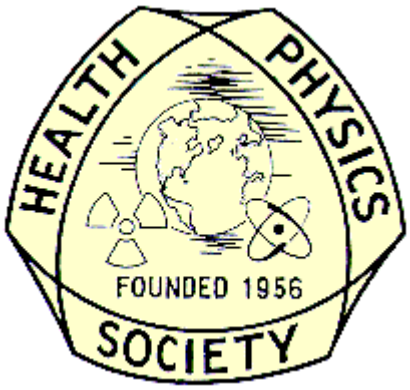
The *Perreault Valve* is a unique way to convert the energy of radioactive particles that are a result of radioactive decay to electrical energy. The energy of an alpha particle will be used as an example. The average alpha particle has a kinetic energy of about 6.00 MeV that will ionize inert gas in the valve.

Therefore, if an alpha particle dissipates all of its energy ionizing an inert gas, about 100,000 electron-ion pairs are generated over a path length of about 4 centimeters (1.5 inches). As a result, a charge of 10^{-14} coulombs can be collected by the electric field inside the valve chamber.

The *Perreault RE-valve* shown in the drawing, has a cylindrical form. It has an axial, positively charged wire anode that extends the length of the cylinder.



Negatively charged ions (-) are attracted to the positively charged anode and arrive a few microseconds after an ionizing event while positively charged ions (+) are attracted to the negative cathode cylinder liner. A few milliseconds later these positive ions recombine with the negative ions. The result is an intense, short duration of electromagnetic energy. This energy now **impinges** upon the cylinder's photo emissive material, resulting in a flow of electrical current in one direction. This flow of current acts as a valve to many wavelengths of ionic energy. It prevents ions from returning to their originating source. This valve does not change high-frequency to direct current. The valve prevents energy from flowing back from whence it came.



RADIATION RISK IN PERSPECTIVE

POSITION STATEMENT OF THE HEALTH PHYSICS SOCIETY*

Adopted:
January 1996

Contact:
Richard J. Burk, Jr.
Executive Secretary
Health Physics Society
Telephone: 703-790-1745
Fax: (703)-790-2672
email: hpsburkmgt.aol.com

Kenneth Mossman, Marvin Goldman, Frank Massé, William A. Mills, Keith J. Schiager, Richard J. Vetter

Scientific & Public Issues Committee

Health Physics Society

In accordance with current knowledge of radiation health risks, the Health Physics Society recommends against quantitative estimation of health risks below an individual dose of 5 rem1 in one year or a lifetime dose of 10 rem in addition to background radiation. Risk estimation in this dose range should be strictly qualitative accentuating a range of hypothetical health outcomes with an emphasis on the likely possibility of zero adverse health effects. The current philosophy of radiation protection is based on the assumption that any radiation dose, no matter how small, may result in human health effects, such as cancer and hereditary genetic damage. There is substantial and convincing scientific evidence for health risks at high dose. Below 10 rem (which includes occupational and environmental exposures), risks of health effects are either too small to be observed or are non-existent.

Current radiation protection standards and practices are based on the premise that any radiation dose, no matter how small, can result in detrimental health effects, such as cancer and genetic damage. Further, it is assumed that these effects are produced in direct proportion to the dose received, i.e., doubling the radiation dose results in a doubling of the effect. These two assumptions lead to a dose-response relationship, often referred to as the linear, no-threshold model, for estimating health effects at radiation dose levels of interest. There is, however, substantial scientific evidence that this model is an oversimplification of the dose-response relationship and results in an overestimation of health risks in the low dose range. Biological mechanisms including cellular repair of radiation injury, which are not accounted for by the linear, no-threshold model, reduce the likelihood of cancers and genetic effects.

Radiogenic Health Effects Have Not Been Observed Below 10 Rem. Radiogenic health effects (primarily cancer) are observed in humans only at doses in excess of 10 rem delivered at high dose rates. Below this dose, estimation of adverse health effect is speculative. Risk estimates that are used to predict health effects in exposed individuals or populations are based on epidemiological studies of well-defined populations (e.g., the Japanese survivors of the atomic bombings in 1945 and medical patients) exposed to relatively high doses delivered at high dose rate. Epidemiological studies have not demonstrated adverse health effects in individuals exposed to small doses (less than 10 rem) delivered in a period of many years.

Limit Quantitative Risk Assessment to Doses at or Above 5 Rem per Year or 10 Rem Lifetime. In view of the above, the Society has concluded that estimates of risk should be limited to individuals receiving a dose of 5 rem in one year or a lifetime dose of 10 rem in addition to natural background. Below these doses, risk estimates should not be used; expressions of risk should only be qualitative emphasizing the inability to detect any increased health detriment (i.e., zero health effects is the most likely outcome).

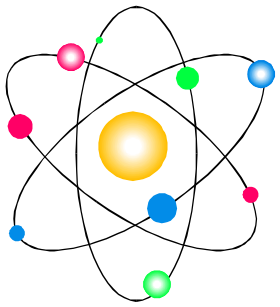
Impact On Radiation Protection, limiting the use of quantitative risk assessment, as described above, has the following implications for radiation protection:

(a) The possibility that health effects might occur at small doses should not be entirely discounted. Consequently, risk assessment at low doses should focus on establishing a range of health outcomes in the dose range of interest including the possibility of zero health effects.

(b) Collective dose (the sum of individual doses in an exposed population expressed as person-rem) remains a useful index for quantifying dose in large populations and in comparing the magnitude of exposures from different radiation sources. However, for a population in which all individuals receive lifetime doses of less than 10 rem above background, collective dose is a highly speculative and uncertain measure of risk and should not be quantified for the purposes of estimating population health risks.

(c) The Health Physics Society is a non-profit scientific organization dedicated exclusively to the protection of people and the environment from radiation. Since its formation in 1956, the Society has grown to more than 6,800 scientists, physicians, engineers, lawyers and other professionals representing academia, industry, government, national laboratories, trade unions and other organizations. The Society's objective is the protection of people and the environment from unnecessary exposure to radiation, and its concern is understanding, evaluating and controlling the risks from radiation exposure relative to the benefits derived from the activities that produce the exposures. Official Position Statements are prepared and adopted in accordance with standard policies and procedures of the Society. The Society may be contacted at: 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101; Telephone: (703)790-1745; FAX: (703)790-2672; e-mail: hpsburkmgt@aol.com.

* 1 rem is the unit of effective dose. In international units, 1 rem=0.01 sievert (Sv)



SYSTEMATIC PHYSICS

by Bruce A. Perreault

Elemental vibration

Atomic theory does not conform to every reaction created by the various states of matter and of energy. There are principles in nature yet to be revealed. Something has been missing from the over-all atomic picture of matter and energy. To begin with the "elements" are singular particles. Atoms that have individuality. Some atoms are small. Others are large. The physical size of a particle is what determines its unique characteristics. Its physical size, its mass, gives it a signature. This signature is given an "elemental" name.

If a given element is not vibrating it is said to be at complete rest. It is cold. A particle's *energy level* is determined by the external forces acting upon it. When struck by another particle it vibrates with more *intensity*. It is this intensity that gives the particle heat. Its *heat* or *energy level* may be raised by particles that impinge upon it that have higher energy levels. A particle's *heat* or *energy level* may be lowered by particles that impinge upon it that have lower energy levels. This will cause the particle to lose some of its energy. The impinged particle is “cooled.” However, the particle's fundamental vibration frequency is never changed. An element may possess the energy level of visible light and still retain its fundamental vibration. Its signature is not changed.

Gamma Radiation

An atom that absorbs or expels *neutron particles* it will ring like a bell giving off *gamma* energy. Whenever an atom gains or loses *neutron energy* it generates *gamma energy*. *Gamma energy* is also a disturbance phenomenon.

The only difference between natural and artificial *gamma energy levels* is their origins. Natural gamma rays are emitted from the nucleus of a radioisotope. Artificial gamma energy is generated outside the atom. Gamma rays and x-rays are often called **photons.** They have no mass and no charge and may be considered energy disturbances in space. This rule also applies to *neutron energy* disturbances.

Wavelength

The wavelength of energy is determined by the speed that a mass vibrates. A slowly vibrating mass displays a long wavelength. A fast vibrating mass displays a short wavelength. The *"speed of light"* is therefore a relative term.

X-rays begin at about the middle of ultraviolet, these are called soft x-rays. X-rays that extend into the upper end of gamma are called hard x-rays. Beyond this they are called *cosmic ray or neutron energy*. These energy disturbances are called *"photons."* Photons are not particles they are disturbances. This energy spectrum extends in order of decreasing wavelength; perceived sound, perceived thermal-infrared light, perceived light, ultraviolet light, gamma.

Pair Production

If a **photon** has sufficient energy, it may escape interaction with surrounding atoms and come close enough to them be influenced. The interaction between the photon and the atomic forces will cause the photon to be absorbed by an atom. This process is called pair production.

Photo-disintegration

High-energy x-ray photons, those with energies above 10 MeV, escape's interaction with the surrounding atoms and will be absorbed directly by them, in which case the atoms are raised to an excited state and instantaneously emits high energy *gamma energy* that makes atoms receptive to nuclear transformation. This process is called **photo-disintegration**.

Energy barrier

It has been calculated that the energy equivalence that an *"electron"* disturbance creates is 0.51 MeV. Since two *electron* disturbances are formed in a pair production event, a photon must have at least 1.02 MeV of energy to generate a pair production event. A photon with less than 1.02 MeV will not obtain a pair production event. Any energy in excess of 1.02 MeV is distributed equally between the two *electron* disturbances. Because pair production evolves only electron disturbances, it is unimportant as an energy breeder.

Electrical Energy - ionization

An atom is said to be negatively *"ionized."* when it gains electrons. The atom is then said to be positively *"ionized."* when it loses electrons. It is when electrons rush towards a positively charged atom to reach equilibrium that an electric current is generated. Electric current is represented by two differing energy states called voltage. In a metallic conductor with the electrical current flowing in one direction, one end of the conductor has an excess of electrons, while the opposite end has a deficit of electrons. All "electric oscillations" are a result of this phenomenon. Battery power, d.c. -- generators, a.c. --

alternators, a.c. -- power, radio, microwaves, radar, electronic oscillators, metallic coils and condensers, electron-tubes and transistors, magnetrons, klystrons, lasers, masers, molecular transitions; all function within alpha and beta energy levels.

What is electricity? This question has eluded the most able intellects. Could this be because atomic theory is flawed? As observation shows two states of energy exist. How can it be that there are two states, same in their properties, opposite in character, both clinging to matter, both attracting and yet completely neutralizing each other? Simply, that electron differences create the effects of electricity.

Chemical Cohesion

Atoms are attracted by virtue of their differing vibration phase relationships. Matter stays together because of this principle. Atoms are continually expanding and contracting in unison with their vibration frequencies. Expanding particles are attracted to contracting particles and visa-versa. "Gravitation" is a grand display of this phenomenon. Atoms will repel atoms only if they are in the state of *coherent vibration*. Coherent vibration occurs when atoms are vibrating in phase with each other. Coherence will raise energy levels.

Chemical Compounds

Differing elements will form "compounds" when their fundamental frequencies are in accord with each other. They must *ring* harmoniously. I could write an entire text on this one subject.

Tritium & Helium

T*ritium* atoms are extremely reactive, more so than any other known atom. It is in my opinion that *tritium (beta particle)* and *helium (alpha particle)* are the basic transitory *catalysts* that are responsible for the creation of all radioactive *isotopes,* that they are at the seat of all radioactive phenomena.

Artificial Radioactivity

When bismuth is exposed to radium, initially it becomes several hundred times as active as the radium. If beryllium is exposed to radium then *neutron* energy is produced. The *neutron energy* will have penetrating power several times that of the most energetic *gamma* energies. This activity is due, not to an alteration of the inactive matter itself, but to an admixture with it of a very small quantity of intensely active matter, radon gas.

I have found that “radioactive” matter can be **electronically synthesized.** I find that matter in a radioactive state is simply in a charged state. It has been recognized that when an atom gains or loses electrons that it becomes “charged.” However, I have taken this one step further and by recognizing the fact that matter also becomes super charged when

it gains or loses **neutrons.** This super charge that the atom obtains depends on its energy state and the type of radioactive gas that it reacts with at the moment of contact.

Stored Energy

Atoms can gain or expel *neutron particles,* some to a greater or lesser degree. Thorium can readily absorb three *neutron particles* transforming it into U^{235}. The thorium atom is the only atom that is known to be able to absorb three *neutron particles*. This represents a tremendous amount of stored energy. It is only by passing from one state of equilibrium to another state can matter loose or gain its energy, consequently emitting radiation. The notion that radioactivity originated in a peculiar chemical process was adopted and defended by Rutherford. "Radioactivity," says he, "is due to a succession of chemical changes." It has been found by study that this "succession" is due to neutron *transformation*. Transformed thorium could be our most economical source of energy, being almost as abundant as lead.

Accelerated Decay

Neutron particles and *gamma energy* levels are generated in nuclear transformations. These energy levels result in the atom becoming super charged.

A "*chain-reaction*" in radioactive matter is due to the concentration of its *catalyst*, the greater the concentration of the *catalyst* the more accelerated the decay process becomes.

For example, if an impurity of beryllium metal is added to radium metal *neutron energy* is generated, this *neutron energy* will accelerate radioactive decay. The beryllium acts as a *catalyst* producing agent. Beryllium-9 will absorb three neutrons from *helium* atoms that are expelled from radium metal. Beryllium will react with *helium*, transforming into Carbon-12. Two *neutrons particles* are released as a by-product of this reaction.

The energy released by the transformation of beryllium is estimated to be at around 50 million electron-volts, and that of boron nearly as large. These *neutrons* can be used to super charge atoms making them *radioactive*.

Normally a *neutron particle* encounters a radium molecule head-on only once in many of millions of times. When *neutron particle* encounters a radium atom it absorbed. The radium now undergoes nuclear transformation. Confinement of the radium will increase the number of encounters to further accelerate this decay process.

Transmutation

Elements can become unstable. These unstable conditions are called *Isotopes*. When an atom absorbs *neutrons* it is called a "fusion" reaction. When an atom loses *neutrons* it is called a "fission" reaction. All elements can *"transmute"* into an isotope. The isotopes are unstable. They eventually revert back to their original elemental stable condition. These

isotopes are natures' storehouses of energy. We need not look any further for our energy needs. Nature holds an inexhaustible supply of energy.

Conclusion

Bombardment by alpha particles or beta particles does not "disintegrate" atoms. Rather, this bombardment goes beyond normal chemical changes. Energy is transformed by neutron absorption or by neutron emission.

What other discoveries await us? The future is indeed a glorious jewel to behold. Will we allow the suppression of this great storehouse of energy?

Nu Chemistry

The Energy Revelation that will Power the 21rst Century!

"Energy can neither be created nor destroyed" -Albert Einstein

I am proud to announce on this 10th, day of 1997 November, that I have discovered the fundamental mechanism behind "spontaneous radioactive decay." Have you ever wondered about *spontaneous radioactive decay*? It is my finding that **tritium** *(beta particles)* & **helium** *(alpha particles),* are the *catalysts* to nuclear transformation. In fact, the most fundamental discovery of this "Nu" Chemistry is that there exists two distinct *electrostatic* charge states. An atom can become *chemically ionized* by either gaining or losing electrons. What has gone unnoticed is that atoms can become *ionized* if they gain or lose **neutrons,** called *nuclear ionization.* This may at first appear incidental but is the very heart of my discovery of a *Nu chemistry*. It is the very phenomenon behind *natural spontaneous radioactive decay.*

FACT: 25 tons of helium-3 (one shuttle load) would supply the total US energy needs for a total of one whole year. The shuttle load would have a value of about 25 billion dollars, which would equate to oil at $7 per barrel.

IT IS NOT MY PURPOSE TO DESTROY THE WORK OF THE MANY DEDICATED SCIENTISTS THAT HAVE FORGED THE LAWS OF NUCLEAR SCIENCE. IT IS MY MISSION HERE TO STIR UP CREATIVITY AND TO ADD TO THE WEALTH OF THIS SCIENCE. WE MERELY NEED TO PAVE NEW ROADS.

Summary

Light Metal Fission via Proton Fusion

On April 28, 1932, at a meeting of the Royal Society, Lord Rutherford announced that two of the workers in Cavendish Laboratory, J. D. Cockcroft and E. T. S. Walton, had successfully disintegrated the ***nuclei*** of ***lithium*** and other light elements by *protons* entirely *artificially* generated by high electric potentials. The most surprising feature at the time was the relatively low voltage necessary. The generator installed had a peak voltage of about 750,000 volts, but disintegration started at only one-sixth of this, 125,000 volts. Indeed, later Rutherford, using ***deuterons*** (atoms of the hydrogen isotope of mass 2) instead of protons, pushed back the starting point to some 20,000 to 40,000 volts, which is well within the range of quite a small x-ray ***induction coil.*** The protons were generated in a long vertical hydrogen vacuum-tube, specially designed to withstand the high voltage, and with a window of the thinnest possible mica leaf at the end, through which they emerged to ***impinge*** on the target element being bombarded. The protons were estimated to have a velocity of one-thirtieth of that of light, and their range in air was only 1 cm. The bombarded substance was examined by the scintillations produced in *zinc sulfide*, through a screen thick enough to absorb the protons. At 125,000 volts, bright scintillations, in every respect identical with those produced by the fastest normal *alpha-rays* of *thorium*, began to appear, and, as the voltage was increased, their number rapidly increased, but not their range or the brightness of the scintillations. At 400,000 volts, several hundred a minute were counted.

Lithium Fission is Clean!

The proton, however, has only one-sixtieth of the kinetic energy of the alpha-particles produced. This showed that they merely pulled the trigger and released energy from the lithium nucleus. The scintillations were proved to be due to veritable alpha-particles of some 8.76 M.e.v., which is practically the same as those of thorium of range 8.6 cm. in air, and somewhat faster than those from *radium* of 7 cm. Though the term "***fission***" has since come into special use denote the new type of disintegration which *uranium* and *thorium* undergo in certain circumstances, this ***artificial disintegration*** of lithium is fission pure and simple.

The lithium nucleus of mass number 7 combines ***"fusion"*** results, with the proton of mass number one, momentarily to produce the unstable beryllium isotope of mass number 8, which splits into equal parts, giving two alpha-particles or helium nuclei. In this "fusion" to "fission" reaction, from 7 grams of lithium and one of hydrogen to 8 grams of helium, approximately, there is a loss of 0.0181 gram, equivalent to 17.1 M.e.v., due to the Aston fraction of hydrogen and lithium being so much greater than that of helium. This is in good accord with each of the two particles that results from the fission reaction, each split particle receiving some 8.76 M.e.v.

Also, some of the unstable beryllium nuclei produced from the lithium, emit, during the fusion cycle, a ***gamma-photon*** of no less than 17 M.e.v, which at the time was an unprecedented energy for these rays, the subsequent fission into two helium atoms then occurring with relatively little energy. By using deuterons instead of protons, the lithium isotope of mass 6, acts much like that of mass 7 with protons, but the energy released is even greater, namely, 22 M.e.v.

The Energy Evolved from Lithium

It is noteworthy that about 43 M.e.v. is released per fusion to fission reaction. This may seem small compared to the 200 M.e.v. released in the fissioning of a heavy isotope like uranium-235. However, the released energy **per mass** of fuel is actually greater for the lithium reaction. Weight for weight, 43 M.e.v. energy is some ten times the given out in the complete disintegration of uranium and thorium into lead and helium, in their natural radioactive change, and is twice as great as in their artificial fission in a nuclear reactor; but thorium less than 1 per cent. of its mass undergoes fission. The bottom line here is that the disintegration of lithium by either protons or deuterons, affords, weight for weight, more energy than any other possible nuclear change. Additionally, the disintegration of uranium-235 produces deadly radioisotopic toxic by-products that nobody seems to know where to properly dispose of them. The disintegration of lithium yields pure helium as its by-product, this gas finds further use in other areas.

The Age Old Lithium Disintegration Secret is now Exposed!

Lithium is the lightest metal, in fact the lightest of all solids. It is actually lighter than cork and will float on water or oil. Whereas a cubic foot of aluminum weighs 169 pounds, a cubic foot of lithium weighs 33 pounds. Lithium is a very unstable metal and will easily combine with gases. Weight for weight lithium will yield two times more energy than uranium.

However, it is clear as the nose on my face that the information on this page is highly classified information that relates to hydrogen-bomb physics. It will not be until this information gets out that lithium will be used as a fuel in nuclear reactors. Isn't time that we use this science for peaceful purposes?

The Radiant Energy Device

Alpha & deutronium fission provides amazing sources of concentrated power. The potential applications that have been proposed are widely varied. There is room for unlimited innovation and creativity.

Imagine what it would be like to have a device that could provide power for several decades without recharging. Sounds almost like science fiction you say?

By using a radioactive material (like plutonium-238) it becomes a scientific fact. Plutonium-238 is a non-fissile isotope of plutonium that decays by alpha particle emission with essentially zero associated gamma emissions. This type of plutonium spontaneously produces about one kilowatt of energy for two kilograms of mass. The energy is actually released in the form of alpha particles that can only travel a short distance before they are stopped. This energy level decreases slowly over time; after ten years the energy production is about 92 percent of the initial value. Even after 87 years, the material produces half as much energy as it did when it started!

Plutonium not being feasible at this time, then plain old naturally occurring uranium will work even better. One pound of “yellow-cake” (U_3O_8) is equivalent to 31 barrels of oil or 10 tons of coal, at the moment *yellow-cake* costs only $12.50 per pound.

Decay products from naturally occurring radio emissive uranium or other radioisotopic products can be directly converted into electricity. The case surrounding these materials

will provide adequate shielding. These devices can be designed to be compact so that a lightweight unit can be built. It has been estimated that for every pound of fuel that one kilowatt of power will be generated.

For political reasons' people, organizations, and government agencies have opposed the use of radiant energy devices strongly. These people have made the general population's paranoid of radioactive materials. Despite this strong opposition and threats against its development, work continues with the dream of harnessing this needed source of energy.

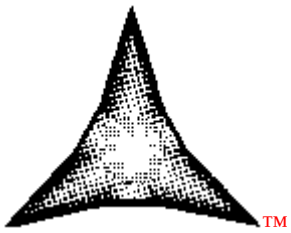
The atomic reactor makes energy available to us. An atomic theory has been put fourth to explain the nuclear energy process. This atomic theory has many flaws. It does not completely explain the energy created by a nuclear reaction. Does this mean that the nuclear reactor does not completely create energy? No matter what theory you wish to use in explaining radiant energy conversion, the fact remains, energy is transformed.

In order for radiant energy power generation to enter into public use radioactive ores must be secured. Recent attempts to obtain these ores has been blocked by the United States Government. Once these ores are obtained I will isolate the required radioisotopes to be used as fuel for high-power radiant energy generators. You simply can not get something for nothing. The radiant energy generator directly converts the energy of nuclear decay products to electrical power. Through my many writings and references I have attempted to explain the energy source from which the "Radiant Energy Device" draws its power. No longer should this method of power generation be a mystery to you. Over the past years I have given you my heart & soul through my many lectures and articles. Now it is your time to give. Do whatever is required to get these ores to me. You must support this mode of power generation for it to become a commercial reality. I make no apology if I have failed to communicate this technology. As a former United States President once stated, “sometimes when we reach for the stars we fall short but we must press on...”

Copyright Information

Send correspondence to: **Nu Energy Horizons, P.O. Box 22, Rumney, N.H. 03266**

Disclaimer: *The author assumes no liability for any incidental, consequential or other liability from the use of this information. All risks and damages, incidental or otherwise, arising from the use or misuse of the information contained herein are entirely the responsibility of the user. Although careful precaution has been taken in the preparation of this material, we assume no responsibility for omissions or errors.*



Last Modified: September 9th 1998

www.cyberportal.net/nuenergy/main.html

Nu Energy Horizons, Inc., P. O. Box 22, Rumney, New Hampshire 03266-0022 USA