Second International Conference On Free Energy (COFE 2006)

By Paul Murad, September 30th, 2006

Key Note Speaker Dennis Bushnell (Chief Scientist at NASA Langley Research Center): ***Précis of Post-Petroleum Energetics Including Seawater Agriculture.*** Man has evolved from a hunter/killer moving to an agrarian society then into industrialization and with bio/Nano/IT, into the virtual age. We went from 97% of the population in agriculture to produce food in this country to 2% of the population. This would go lower with robotization. Humans have overtaken evolution of the Earth compared to other species. The environment went from natural, manmade, and then into a virtual environment. CO_2 levels are higher, the ocean is producing more methane gas, which is worse than carbon dioxide, and the polar ice is melting. This demonstrates a collapse of the ecosystem and breathing may soon become a problem.

Currently half of the U.S. balance of payments is for petroleum. With global warming, there is a need for green energy, a shortages of sweet water and arable land thereby increasing food shortages. The largest producers of biomass are the U.S. and Brazil. Geothermal is small right now but has immense potential especially if we transfer oil-drilling technology. The further down you drill, the higher the Earth's temperature. The idea would be to inject water in these drill holes at high pressure and take advantage of the steam that comes out a second hole.

New forms of energy are required. The use of drilling and obtaining cheap oil production has peaked. The U.S. has 745 cars per 1,000 population whereas the Chinese have 3/1,000. If they go to 5/1,000, the Chinese demand for oil doubles and could easily go to $180/barrel. Seventy five percent of this results in waste energy that creates climatic changes. Photovoltaic efficiencies are going to 70% and plastic voltaics are extremely cheap. Photocatalytical approaches may get hydrogen from water. Biomass is CO_2 neutral and does not need any new infrastructure compared to hydrogen. Biomass could be distilled and used for direct energy as well as produce plastics using 6% of the U.S. landmass to produce the biomass. Water scarcity is a major problem for world health; 44% of the land worldwide is wasteland, desert, or contains brackish water.

Saline/salt water agriculture can kill conventional plants although 10,000 plants can be used. Here 66% of the saltwater used is recyclable. Interestingly 97% of all water on the Earth is seawater with numerous minerals, therefore there is no need for fertilizers for Nitrogen. Mining is currently the biggest pollutant of the ocean. Halophyte plant stock love salt. The Chinese have genetically modified plants to include tomatoes, to live on seawater and this makes sense at $60 per barrel of oil.

Terraforming is altering a planet's surface vegetation. The need is to lower infrastructure costs verses that to store hydrogen. This could solve the worldwide

energy and food problems. Other technologies involve frontier energetics, biomass, solar, H_2 production/storage, CNT, SMES/CNT magnets, geothermal, LENR and Nano-fusion. Others involve CNT flywheels, isomers/quantum nucleonics, methane hydrates, fusion with hydrogen and Boron-11. Femto-second lasers can generate positrons that now could be stored for years, ZPE, anti-protons from the Van Allen belts also show promise.

CNT computing is the next revolution where a worldwide IT revolution is currently underway. There are some global warming solutions such as triggering volcanoes to put dust in the air to change the energy balance of the Earth; seed the ocean with iron; etc. vice using green energy. The wild cards are solitons, positronium, fuel cells, room temperature superconductors, and SMES. *(Solitons loss energy like 1 over r where electromagnetic radiation losses energy at 1 over r^2.)*

Currently quantum mechanics and relativity do not merge and there is no clear-cut explanation of dark energy or dark matter. Where is the anti-matter that was created during the 'Big Bang'? We need to explain the 20 constants that we use in mathematical equations describing physics that were literally plucked from thin air. There are extent explanations to include time reversal/retro-causality, extra dimensions, string/Brane theory, ZPF, etc. The current state of physics is in an analogous position as it was in the early 1900s before capturing breakthroughs that changed everything.

Professor George Miley: ***Advances in Dense Plasma Focus.*** Propulsion depends upon exhaust velocity and propellant energy. Fusion can produce 10 KW/kg. We need to travel fast in space because the body deteriorates over long periods of time at space conditions. Such a candidate craft would require 10-100 KW/kg at an exhaust velocity of 500 km/sec or greater. (The vehicle is really huge about 5 times the size of the space shuttle.) Robotic missions could also benefit from a specific impulse of 70,000 seconds (liquid propulsion reaches 464 seconds). Fusion is not, however, a solution to today's energy problems and current concepts may be operational in 2030. Moreover, propulsion applications may come first before solving Earth-bound energy solutions.

People have looked at torus, Tokomak, levitated dipoles, inertial electrostatic confinement (IEC), and dense plasma focus. The objective is to convert fusion energy into thrust and how do you restart such a system that needs radiation shielding. One approach suggests using an Aneutronic reactor to reinitiate fusion (current reactions such as $D + T = n + He^4$ creates radiation effects on people and instruments). This does not happen with Aneutronic fuels and thermal management is a crucial problem. Moreover, the need for Tritium is problematic; typical Aneutronic reactions would involve: D-He^3, Pb-B^{11}, He^3-He^3 and charged particles. Fusion cross-sections push toward using Aneutronic systems for more energy needed to create and initiate the reaction. He^3 should be a byproduct of lunar mining. Moreover, the IEC concept does not use magnetic fields and is lighter.

Dense plasma focus (DPF) is the key to burn P-B^{11}. DPF was developed in the 1950s and uses a magnetic field only internal to the device where fuel is focused at the end of an anode in a pinch. (The anode is an insulated rod located in the center of a cathode cylinder. The propellant travels toward the open end where huge fields exist and create a nuclear pinch at the end surface of the anode.) The objective is to rereflect Bremstrahlung radiation back into the reaction to sustain the reaction. Each pulse could erode 10 μm per day. To minimize this erosion and prevent vaporizing the wall, a sacrificial plasma is used and also reflects laser radiation from the wall in lieu of using direct laser radiation on a pellet target. This is more uniform and may rereflect Bremstrahlung energy back into the reaction. Filaments form plasmoids- dense spherical ball where fusion takes place (nano-structures). Miley will use the Sandia Z-pinch machine.

(Miley has written several books as well as invented the free-electron laser).

Dr. Glen Gordon, MD: ***EMF Transduction, Electrogenomics and Electrochemistry*** (www.em-probe.com). Schumann resonance involves lighting effects to create life. In 1952 to 57, magnetic responsive elements with para and diamagnetic properties were discovered to interact with amino acid, which involves self-assembled proteins and production. The approach created phonons that generate energy at the speed of sound in the protein. Basically reactive surfaces are hidden within the protein interior. (Like a closed flower.) Beta-blockers unfold these surfaces allowing reactions to take place to produce an adaptive response. Proteins represent an interactive system keyed to electromagnetism. There is a cell-membrane noise detected that is really protein acoustic information.

Protein conformational adaptive responses are all nonlinear as an intelligent system. The DNA can shift the vibration as a function of frequency if it is not useful. There is a stochastic resonance with hundreds of these amino acids within the DNA; if certain modes occur, then the DNA can fracture. Electrochemistry provides instantaneous anti-oxidant effects. The Ph shifts to acid for incidents as the device reduces Ph instantly.

This also reduces inflammation and is currently used to treat injuries from IEDs on a STRICKER unit. They are healed the next day using electrochemistry to reduce trauma. The approach restores healthy tissues without using surgery. In Iraq they are bleeding to death or free radicals cause shock and hypothermia and acidosis. These effects have a common mechanism that could readily be healed in a stabilized manner using an EM array to stabilize the effects. Moreover, these effects could up-regulate and de-regulate genes to affect aging influencing restorative genes that are improved whereas a lot of intelligence exists in these proteins. Rats in a magnetic field lived 15% longer than those without a field.

EM radiation is used to affect an EM response in a protein. Basically there is a need for engineers and scientists to get involved in biotechnology. The Chinese are currently using EM effects to treat trauma as a national priority. Moscow

treated heart patients in 1972 using these effects; however, visiting U.S. scientists did not bring this technology back to the U.S. because of breakthroughs in other areas such as heart transplants and appearance of new medicines (Billions of dollars compared to treatments that would only involve $250.00 using the Russian research).

James Dunn- ***A Hydrogen Economy:*** Hydrogen may be obtainable as a means by separation from CH_4. Electrolysis is too costly and may not be viable. The extraction process should be sustainable and renewable; using hydrocarbons is not a 'clean' process especially if carbon dioxide is created. Hydrogen could be obtained from natural gas as well as from gasoline using a steam-reforming process. Storage is also a problem; high pressure tanks and in some cases liquid hydrogen is used for shipping. Ammonia may also be ideal to obtain 17% hydrogen. Methanol could be reformed or used in a fuel cell. Basically hydrogen is too costly to generate, store or distribute when compared to gasoline. Steam reforming is 90% efficient where electrolysis is only 70%.

There is a new approach that uses Vanadium Chloride ($V Cl_3$) as a catalyst, waste heat and water to create hydrogen. Here Vanadium chloride breaks down into chlorine and hydrochloric acid. Adding water produces hydrogen and oxygen and the vanadium chloride ($V Cl_2$) combines with hydrochloric acid to produce the original compound ($V Cl_3$) and more hydrogen. The process, although it changes the catalyst to a new form and then back, remains and only consumes water.

Similar processes to generate hydrogen would use sulfur and ammonia driven by solar energy. Another would use solar energy and water to produce both hydrogen and oxygen.

Several car entries are appearing that use hydrogen. The Ford E-450 van has an additional cost of $30,000 for hydrogen storage tanks. Mazda and BMW are both putting together hydrogen cars using hydrogen-burning internal combustion engines that operate at 30% efficiency compared to 26% for gasoline powered engines. The free-piston engine goes to 50% using hydrogen.

For phased energy, a fuel cell would be used at night to compliment solar energy.

Thorsten Ludwig: ***Uncertainty Principle, the Zero Point Field and Vacuum States-*** These approaches involve understanding the Casimir effect, Lamb shift, electron charge, and creating a magnetic ZPE near absolute zero to examine neutron scattering. The Casimir effect denies cavity penetration between two parallel plates of long wavelengths. This creates more virtual particles on the outside of the plate compared to the inside and the pressure on the outside of the plates, force the two plates together. The Casimir effect has been examined in more detail recently by: Lamoraux of LASL; Mohideen at Riverside, California; Iannuzzi, MacLay; Decca; and Onofrio of Italy. All of these experiments were successful and in most cases, the use of a sphere and flat plate were attractive. When

these experiments are performed, static electricity in the apparatus should be eliminated especially when the distances to be measured between the objects are of the order of nanometers. If parallel plates were used, the force varies like $1/r^4$ compared to the force for a plate and a sphere at $1/r^3$. The Planck length has no meaning compared to these nanometer dimensions and there is an influence dependent upon roughness, temperature, and other effects.

The EU has a nanocase where nano-scale machines are used that exploit the Casimir forces. (One needs to consider a prime factor that is problematic with MEMs and these devices to include molecular forces, van der Waal forces, and the Casimir effect. These additional forces increase friction or appear as an induced drag as well as create starting problems to overcome static friction.) This work also leads to defining the cosmological constant where the energy density within the vacuum varies of the order of 10^{118}. Dark matter could clump together where dark energy cannot.

Einstein used this value assuming there was a stable universe (no expansion or contraction). Because of these effects where the Planck length does not match the cosmological length, physics for quantum mechanics and relativity do not agree. This is needed to define the energy density of the vacuum. Aladin, an Italian venture is an activity to literally weigh the vacuum with and without Casimir energy. This process will involve superconductors. There is even a dynamic Casimir effect that needs evaluation.

Over eighty papers are available on http://www.iop.org/EJ/toc/0305-4470/39/21. An excellent paper on gravity and dark matter by Steinhardt at Princeton.

Martin Burger of Blue Energy: ***Tidal Power for Electricity Generation:*** technology has struggled in the U.S.; however, the EU shows interest to spend from $.36/KW when compared to $.05/KW in Canada. The ice pack is shrinking and acts as a reflective mirror that reflects UV and solar radiation back into space. Global tides are predictable and can be used to provide 50 to 100% of the world's energy. Part of this is reinventing the Darrieus' windmill for driving an underwater turbine using seawater that is 832 times denser than air. This technology has been demonstrated and deployed. In some applications, causeways are used to create a psuedo-dam to hold back the tide. This concept is essentially powered by the moon.

Tom Valone: ***Progress in Future Energy***- China will soon surpass the U.S. in pollution. In 20 to 50 years, there will be no ice cap. The number of category 4 to 5 hurricanes has doubled in the last five years. There has been a huge increase in CO_2, which indicates a large increase in temperature and an increase in the height of tides of up to 80 meters over 50 years. Oil output is decreasing. We are also inefficiently transmitting electricity where current systems use wire and wastes about 2/3 of the energy. Tesla talked about wireless energy transmission-the Tesla magnifying transmitter is about 95% efficient. Concerns are in energy, propulsion, and bioenergetics. For example, electrons are anti-oxidants.

The spiral magnetostatic motors takes advantage of magnetic field gradients. Valone is the individual that found an investor to support the Russians Godin and Roschin with their replication of the Searl device and have reported a decrease in the weight of a 370 kg armature by 35%.

An inventor developed an air-driven Wankel motor that requires being refilled with compressed air after operating for 2 hours. These engines are extremely small for the amount of horsepower developed.

An approach exists for the photo-remediation of nuclear waste. Lasers are now capable of producing the right energy level to perform this task. (Valone is also involved with Jefimenko about static electricity. Jefimenko has devised new laws governing gravity based upon using a Heaviside representation.)

Prof. Tania Slawecki of Penn State: ***Electromagnetic healing devices:*** These are items that either add or remove a field. This includes scalars, vectors, and transverse fields. They vary the intensity and waveforms for specific tasks. Moreover, the devices are applied to the body and uses magnetic fields in the form of dipoles as well as electric fields in the form of charges. Brain waves are strong electric fields but have a weak magnetic field while the heart has a strong magnetic field. These are near the Schumann resonance that is a resonance frequency of the Earth.

Healers have the ability to sweep across the fields with their hands to include frequencies and intensities. It was found that they are able to emit three times higher values than the average person. Brain wave entrainment or its natural frequency occurs at about 8 Hertz, which is the same frequency of the Earth. These values can be obtained easily by Qi Gong meditations. The Earth's magnetic field is at .5 Gauss and 2-15 Hertz will induce sleep.

Not all EM is good EM. If the feedback used the body's frequencies, the effect is healing. The idea is to treat the body as an EM entity. Typical EM devices are currently used for sport event injuries to reduce trauma and inflammation. The device has had positive results when used to treat Parkinson's disease.

RIFE Instruments are pulse plasma devices using RF carrier waves, other devices use IR carrier waves. They hit resonance frequencies of viruses and the procedure could eradicate cancers. Tesla coils are also used and it was found that some effects could be generated by light from lasers as well as LEDs. This light can affect microorganisms and could influence the human bio-energy field.

The Chinese Meridian system cannot be evaluated because U.S. scientists will not look at evidence where it is stated phenomenon occurs at speeds greater than light. Some signals with acupuncture of the large toe going to the brain have been measured at exceptionally high speeds close to these values.

Why does Platinum as a catalyst acting upon water create hydrogen and oxygen? They share common harmonic frequencies and if generated differently, there would be no need to include Platinum, which is extremely expensive, in fuel cells. In investigations with acoustics coupled with EM fields, sound appears to have a therapeutic effect upon the body. They have also looked into crystal beds (Vogel crystals) and although there is no valid physical reason for this effect, a positive influence occurs.

Passive devices involve the Q-Link which supposedly protects the body from harmful EM radiation also is effective. Anatol Akimov of Russia used numerous EM removal devices to heal bone breaks. Removing the fields has a similar influence as detoxification. These devices are being patented by the Koreans to look at metallurgical processes. She, as a material scientist, looks at these effects under the premise that most of the body is made of water and the brain is essentially an electric field generator. She has used Raman Spectroscopy to measure and define these effects in these investigations. In this case, she investigated the claim of healers altering the structure of water. She used this device to predict the bending moment on a water molecule (the angle between the hydrogen atoms and oxygen). She noticed a significant effect occurred where the curve was raised by a factor of ten and still maintained the same shape (bumps) of the curve. Also looked at colloidal silver solutions as well. These tests looked at the devices as well and found no effects whereas TM created an effect; the human body could generate such interactions.

Prof. Ted Loder: ***Spiral Magnetic Motors***- Magnetism is created by spinning electrons. A spiral motor is a bent form of a linear induction motor that uses two magnetized rails that are nearly parallel. At one end where they are the closest, a mass is introduced and depending upon the alignment along the rest of the magnets on the rails, you can improve acceleration considerably. Take half of this device and place it on a circular slab (rotor) with fixed magnets and see if the slab rotates. Thus this inverse design includes the spiral on a rotor. At the point of closest approach, an electric charge is used to increase the local magnetism of the stationary magnet creating rotation. This is essentially the spiral magnetic motor or a magnetic Wankel motor to power an electric car. To date a three-rotor device weighing 150 pounds can generate 45 horsepower. These spiral motors use less electricity with coefficients of performance greater than 1. Technology issues involve using a switched magnetic pulse as the major component.

Russ George: ***Tidal Energy Extraction and Cold Fusion***: D2 Fusion Company- Carbon dioxide currently is shocking the ocean causing hemorrhages in plantos growth. Activities involve replenishing the ocean due to the effects of carbon dioxide. Five alarms are sounding to include ocean productivity, level of iron deposits, faltering biological pump that lowers the food chain, changes in ocean acidity due to surface carbon dioxide effects, and warming of the ice caps which have slowed the Gulf Stream by 30% changing circulation patters in the northern Atlantic. Dust from the Gobi desert in China and Mongolia is of a very fine quality that impacts the iron content when it lands in the ocean. Plankton

depends upon iron as animals at the lower end of the food chain impacting the mammals at the top of the food chain. Such dust clouds travel around the world.

Cold fusion occurs in solid states using hydrogen-loving metals. It occurs in nano domains yielding Helium 4 although they have never observed any neutrons, gamma, or x-r-ray radiation. Some Tritium is observed under selected conditions and the process generates nano-particle gas phase. Several hundred watts of excess power have been observed. The issue is to keep the heat down is critical so that the experiment does not self-destrucct. Two Deuterons pass through the Coulomb barrier to produce He^4, which goes to the ground state and should emit excess energy or energetic particles; this just does not happen. Reactions may take place in nano-domains in contact with plasma fusion that generates anomalous heat, Helium and Tritium. SRI looked at D^2 and Pd. D + D goes to He^4 with 23 mev. The experiment reaction time depends upon the size of the experiment; the larger, the longer the time for reactions to occur (days), and if small in a nano-domain, the reactions should be instantaneous.

Sonofusion is using ultrasound to produce a bubble that collapses on a metallic surface. Bubble collapse generates a jet at 5,000 degrees Centigrade with water vapor that injects Deuterons into the metal that can melt it underwater in this process. Scanning the metal reveals volcano-like structures with eruptions that are representative of the effects of heavy metal fusion. Loop punching of Helium is further evidence of fusion in these experiments. They also looked at glow discharge for nuclear product detection.

Poster Sessions

Ed Sines- Creating a new energy generator based upon Faraday concepts. Here a cylinder of superconductor is radiated by a laser to produce electricity at high power densities. (He will be presenting me a proposal that expands upon these concepts and his patents.)

Tim Wilson- Uses a Mercury detector and noted that mercury is concentrated in tumors. His approach is to detox people to remove heavy metal concentrations in the body. This may sound trivial but 43% of all dental fillings are Mercury (I found that my concentration in my mouth exceeded four of five standards based upon my dental fillings!) He suggests going to a biological dentist and get Kelay fillings as well as replace existing fillings at $200 each.

Tesla Tech is a follow-on to the former Tesla Society. Recently they have decoded some of Tesla's writings. (Tesla knew six languages and would write words using letters from each language. Thus the only way you could interpret his writing was to know all six languages.)

New Energy Congress- Lobbyist organization started last year to evaluate new energy concepts/technologies.

Solar Energy Incorporated- Creating solar roof tiles and panels.

Return to Presentations

Photovoltaics (PV)- Building zero energy homes- Germany currently makes 57% of all PV followed by Japan at 20% and the U.S. at 7%. The U.S. lost the lead in 1997 where we controlled 100% of the market. By 2003 the U.S. only controlled 73%. Of 94% of the market uses silicon and this competes with the semiconductor industry, which requires higher quality. Currently the efficiency for PV is at 22% and pushing toward 32%. There is a long way to go with Titanium oxide. In 2005, 1.7 Gigawatts were generated which will go to 10 Gigawatts by 2010 at a 40% increase per year.

Some of these concepts for the home involve units that track the sun in the morning and evening to gain more energy. Some large applications to include roofing tiles on shopping malls can produce as much as a Megawatt.

Future Vehicle Trends: Here the tires will be airless and you actually see through the tire that is suspended by rubber elements by 2008 (similar to the tires used on the Lunar Module). Cars will have electric drives and use ethanol. Sterling and split cycle free-piston engines will operate on multi-fuels.

Searl (SEG) and Anti-Gravity Device: Searl wrote the law of squares relating to the mass, material, and energy in a magnet. Initially as a teenager at the age of 14, he worked in a firm that manufactured magnets. He came up with a concept and mentioned it to management. Rather than fire him, they allowed him to make the device, which consisted of several different and unusual materials. He had the device made and took it home to his boarding house. He placed it on the counter and asked his landlord to plug in several appliances. They did so and the electric devices ran. When he plugged in several others and a toaster, the device, plugs, wires and appliances took off and hovered on the ceiling. He got on a ladder to take it off of the ceiling and noticed the device was ice cold. He ran the experiment the next day bolting the device down on a thick lead plate. This time the device took off going through the ceiling and the roof of the house. He spent that Christmas in jail for damaging the house. He currently is an old man living in abject poverty in London without funds or use of a research lab.

The SEG device uses three sets of rings. There are 12 rollers on the first ring, ten more on the second ring, and another ten more rollers on the third ring. These are concentric rings and both rings and rollers are made from unique materials. For example an SEG for generating electricity uses the law of the squares to 4. All numbers in the matrix add up to 17 that includes the weight of the elements. Neodymium that was used as a glass tint, would provide electrons. Teflon is used to control the amount of electrons generated as a control gate or the electrons would leave the device in pulses as a laser. Copper is used to control the magnetic layer and rare earth elements provide excess electrons. Each roller consists of concentric cylinders made from Nb, Aluminum, copper, Teflon and other materials to provide proper magnetic alignment with the rollers.

From 1956 to 1977 he flew several vehicles trying to get the technology accepted.
He has lost 7 SEGs that he presumes flew into space. He tethered some of these on cables that broke. In one case he used an extremely strong cable capable of holding back 60 tons. The hand held device broke the cable. All craft were flown by remote control and the craft is invisible to radar.

He built a large 12-ton device with clear skin on the top surface. Struts radiated out of the center of the toroidal vehicle. He had ground wires at the end of these struts that allow electrons to leave creating a toroidal field. The craft had a 7.5-degree slope and operated off of hundreds of millions of volts that created their own fields. Although the bottom of the vehicle was black, you could see tree reflections when in flight similar to a mirror and energy was directed toward the upper vehicle surface that was white. Pictures taken showed the vehicle to be blurred because of these fields.

In designing any craft, the weight of the SEG propulsive device should be 7 times the weight of the craft. He placed an accelerometer on the craft and pulled unusual maneuvers. The instrument measured nothing. He thought the device was faulty and used another one with the same results. He then place a test tube full of a florescent material that should shatter at loading of .5 g's. Again the craft pulled maneuvers and the results were the same. The implication was that the device produced its own inertial reference frame and relative to that frame, no accelerations were felt because of the huge electric and magnetic fields.

(It is interesting that these views persist in the UFO mythology and I wondered where they originated. I had seen some of the pictures of the saucer in flight but this author showed twice as many. Moreover, Searl flew two vehicles in tandem taking pictures of each craft. Interesting stuff…)
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