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ABSTRACTS

Physical Review B

Submitted by Patrick Bailey

Reference: Thomas Valone
President, Integrity Research Institute

Volume 60, No. 21

1 December 1999-I

Engine cycle of an optically controlled vacuum energy transducer F. Pinto*
Jet Propulsion Laboratory, M/S 301-150, California Institute of Technology,
Pasadena, California 91109-8099

Received 28 May 1999: revised manuscript received 14 July 1999!

An idealized system composed of two parallel, semiconducting boundaries separated by an empty gap of variable width is considered. A gedanken experiment is discussed to show that, in general, the total work done by the Cashmere force along a closed path that includes appropriate transformations does not vanish. It is shown that, in the limit of an engine cycle bringing the two boundaries to a relatively small distance, positive net exchange of energy associated with the Cashmere force field could quite possibly be achieved. Viable techno-logical implementations of this idealized system are analyzed in some quantitative detail, in particular, in the case of doped and undoped c-Si boundaries. For the purpose of direct experimentation, measurements with both macroscopic and microelectromechanical devices are suggested. A full theoretical and experimental study of systems of this kind on every scale will greatly contribute to a much deeper understanding of the nature of the Casimir force and associated concepts, including the possible manipulation of semiconducting nanostructures and the noninvasive optical characterization of semiconducting samples. In the event of no other alter-native explanations, one should conclude that major technological advances in the area of endless, by-product free-energy production could be achieved. [S0163-1829~99! 05345-X]

BOOK REVIEW

The Last Hours of Ancient Sunlight

By Thom Hartmann
Three Rivers Press (1999)
An imprint of Crown Publishing

Quick review by Remy Chevalier

Much like the Celestine Prophecy, Thom Hartmann's book is a word of mouth affair and Thom has become a favorite on the speaker circuit. By all definition it's an environmental book, but the ambiguous title misplaced it on new age shelves in megabookstores.

Ancient Sunlight reminds me of Rob Nelson's Last Call, 10 Commonsense Solutions to America's Biggest Problems. It to was a book jam-packed with extraordinary insight. Except Rob is too good for common folk and that's why he has never been able to build a successful organization or make a go of his fantastic opportunity as a Fox TV talk show host. Thom on the other hand comes across as a really genuine individual who is open to new ideas and suggestions, and will take time with his fans to make things happen, not just let his words lay dead on the page. He's seems to be building community with every breath he takes.

Ancient Sunlight is an aphorism for fossil fuels stored on earth over millennia. We modern humans are burning through it in just a few generations. Thom has his solutions. A return to community, doing more with less, barter (e-Bay?), and connecting back to the sacred as a substitute for entertaining ourselves to death.

I say OK! But here's the catch. He too has fallen prey to corporate lies and governmental cover-ups. Thom, wake up... eyes just a little wider!
In Part 1 he writes: "if cold fusion or hydrogen cells became immediately and widely available, their rapid proliferation may actually accelerate the destruction of the planet and the death of billions of humans."
Hum... I don't think I agree. I think the opposite might take place. It's worth the gamble. What do we have to lose anyway, face it? For every problem man created on earth in the past, there has always been a built in solution. But at the turn of the century, there was a fork in the road. Tesla proposed free energy for everyone, yet instead of embracing the idea, his financial benefactor Morgan pulled the plug on the work, commencing a century of repressed energy science and associated dirty deeds.

I understand where Thom is coming from. I've been there. 6 billion low brow lunatics zipping around in ZPE skycars would drive a stake through the biosphere's weakened little heart. So what is a poor environmental activist to do if the techno-fix can't be set in because of black budgets and X-Files conspiracies?

When Thom writes: "We can't use today's solar cells to make more solar cells." He is misinformed. One of the most outspoken and conservative photovoltaic pundits Paul Maycock wrote this back to me: "Remy, there have been several studies on "energy payback".

The standard response is: sliced silicon/single and poly have 3-5 years payback without aluminum frame and 5-7 years with frame. The amorphous silicon films in a glass/glass package unframed have paybacks less than two years. The total energy consumed is embedded in the energy per kg of the materials and the energy in the process. Although the studies are somewhat weak, I've never heard of "zero payback" from even those who are pushing other options. Paul" In other words, PV panels will produce about 4 to 5 times more energy in their 35 years life expectancy than it took to produce them, all included.

Thom goes on to lighten up a little bit. He says: "even if alternative energy sources are developed, they may actually worsen the problem (by adding more people) if our culture doesn't change along with them." So he admits it's not the technology itself but the way it might be used that would spell disaster. He also agrees that: "American oil and coal industries are actively blocking the development of those technologies."

Well, yeah! Massive rampant consumerism, whether we have clean free energy or not, is still going to put a big dent in the landscape. But at least we wouldn't be contributing greenhouse gases to the mix if we stopped burning carbon. So we need to address the energy technology suppression issue head on and stop pussy footing around like the majority of environmental organizations today who have become complacent and totally dependent on corporate hand-outs.

Ancient Sunlight is another fantastic descriptive account of the harm humans are doing to the earth and Thom's last chapters give us alternative lifestyle choices inspired by true indigenous cultures. I've always believed the aliens themselves were keeping the secrets of ZPE from mankind for fear we would export our brand of barbarism to the stars. But I don't think it's final. I think if man can prove himself worthy of free energy, it will be allowed him eventually, hopefully before he turns the entire planet into desert. Without that hope keeping me going, I may as well pack it in.

Thom's book and his message are a path in that direction, even though Thom himself may not yet believe it or be ready for it. In a brief email exchange I told him I had a surefire way of cutting automobile traffic in half. He replied the "only" way was to charge \$20 a gallon for gasoline, the price it's really worth taking into consideration environmental cost accounting. I replied that was one solution, but mine was better! That's because mine is a doable thing, here and now, no slight of hand.

He even hints to it in his book but could not free-associate it back to the surface. Thom, think! It's so simple you will kick yourself for not thinking of it.

I won't reveal it now either, because it will be a major part of the magazine

strategy I'm currently working on in New York:

www.projectlu.com

If the magazine works, and it will, we will reduce traffic in America by 50% in just a few years. And we won't have to charge \$20 a gallon to screw the working class!

Thom later in his book goes on to say about the development of renewable energy sources: "They could be viewed as putting capital into our energy bank, rather than simply removing energy from it. Solar panels, wind power systems, hydropower systems, hydrogen systems: all of these represent ways that current oil can be used as an investment rather than expenditure. If we as a society begin to wisely use our fossil-fuel resources to wean ourselves off the need to use fossil fuels for heat and electricity production, then the impact of "the end of oil" can be softened. At the same time, we'd be reducing our consumption of oil as these alternative-energy systems come on-line." Someone once said oil had become too precious to burn. We need it for plastics!

Another quote that made me think was about the historic movement of people away from the equator being a trend that was encouraged by the availability of fuel. Make you wonder why we are not building solar power plants today all along the equatorial belt. That would make Ecuador, Columbia, Brazil, Gabon, Congo, Zaire, Uganda, Kenya, Sumatra & Borneo prime global electricity exporters (or whatever these African countries call themselves now. My atlas dates back to 1977.) What a calamity that would spell for trilateral economics.

Read Ancient Sunlight. He's on the right track. But keep in mind the messenger is often blinded by his own message. Thom's website is www.thomhartmann.com

A GREAT LOSS

Dear gentlemen:

I would like to inform you with regret that Dr. Shuji Inomata the president of Japan Psychotronics Institute, suddenly passed away on April 17 morning in a hospital near his residence in Niigata, Japan, due to liver cancer. We lost an important figure in the field of new science (to cover new energy and consciousness).

Regards,
Eiichi Yamamoto, pres. Yama Trans Co. Ltd.

ARTICLES

What improvements can be done to bend nuclear radiation???

Submitted by Patrick Bailey
Reference: <http://www.msnbc.com/news/555287.asp?0nm=N22C&cp1=1>

April 9, 2001

Summary:

Material 'bends' the laws of physics

New composite twists radiation in a novel way, could be used in antennas, lenses

The material used for the experiment consists of a series of thin fiberglass sheets coated with copper rings and wires, and arranged into squares like the interlocking inserts in a case of wine.

Article:

WASHINGTON, April 5 - Experiments on a newly created composite material have shown that it bends microwaves passing through it in a direction that seems to defy the laws of physics, scientists say, in a discovery that could help in making more advanced lenses and antennas.

THE COMPOSITE, made of fiberglass and copper, caused microwaves shot through it to bend in an opposite direction than the laws of physics predict, making it the first material to have a "negative index of refraction," physicists said in a study appearing in Friday's issue of the journal, Science. When electromagnetic radiation - such as light and microwaves - passes through ordinary materials, the beam is deflected in the same "right-handed" direction, giving those materials a "positive index of refraction," they said. An example is the way light bends when it passes from air to water.

The composite could be useful in developing better antennas and other technology for the cellular communications industry, said physicist Sheldon Schultz, who created the material along with colleagues David Smith and Richard Shelby at the University of California at San Diego. Although the composite cannot focus visible light, Schultz said he hopes that obstacle can be overcome in the future.

Physicist John Pendry of London's Imperial College has said that a material with a "negative refraction" would make possible the construction of a lens capable of focusing light to limits not currently achievable.

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CAN NEW YORK AVOID CALIFORNIA'S BLACKOUTS?

Submitted by Remy Chevalier

Reference: www.nypost.com/04022001/postopinion/opedcolumnists/27810.h

Monday, April 2, 2001

By WILLIAM TUCKER

Will New York be able to avoid a California-type power shortage this summer? Right now, the odds look pretty good. A lot depends right now on whether Mayor Giuliani can keep his mouth shut.

Last week, the mayor departed from his Republican principles for a moment to advocate "temporary" price controls on wholesale electricity in the Northeast.

"The double-digit price increases that New Yorkers had to pay last summer are just unacceptable," said Giuliani at a press conference. "Deregulation should not be abandoned, it should be completed. The problem is when we deregulated we didn't think it would affect us so quickly. We need a little adjustment right now."

Ah yes, just a teeny-weenie little adjustment just to get us through the next few months, right? Just like rent control – a "temporary wartime measure" imposed in 1943.

Price controls are never temporary. They just make things worse by producing shortages. And the more shortages they produce, the more people agitate for more regulations. It's a vicious cycle that eventually becomes almost impossible to escape.

California is having blackouts right now because, until this week at least, the public and political officials were unwilling to accept a rate increase. (Before last week, Gov. Gray Davis' major power-conservation achievement was having "energy savings tips" printed on McDonald's placemats.)

Rate hikes do two essential things: 1) encourage people to conserve and 2) bring in more supply. That's exactly what's needed. Mayor Giuliani's price controls would only anaesthetize the public to the need for conservation and discourage supply – a perfect prescription for California-type blackouts.

What's even more important than avoiding rotating blackouts, however, is convincing people that environmental amenities don't come free. If everybody is going to oppose power plants in their neighborhood, then nobody is going to have enough electricity.

California got itself into its mess by refusing to build power plants over the last 20 years. The state didn't want nuclear (too dangerous), it didn't want coal (too dirty), so it formulated a make-believe strategy of "conservation and renewables." In fact, the Golden State has done a heroic job in both. California ranks dead last among the 50 states in per-capita electricity consumption. It also gets 12 percent of its energy from renewables (geothermal, windmills, biomass, solar electric) – as opposed to 1 percent for the rest of the country.

Yet the state still finds itself woefully short of power. There isn't any substitute for large generating stations. Contrary to public opinion, electricity is not produced by sticking the plug in the wall.

New York faces the same long-range problems. The city has not built a new power plant since 1959. Nobody upstate wants power plants either. (They argue it would "reindustrialize the Hudson.") Right now, residents of Rockland County are furiously resisting a clean, new 600-mega-watt power station in an already industrialized area. Yet even building in Rockland won't help New York City, because nobody wants the transmission lines either.

The final verdict from the laws of supply-and-demand is simple. If demand goes up and supply doesn't respond, then prices will go up as well. Even mainstream environmental groups now acknowledge this. "We're all in favor of building new gas generators," says Ashok Gupta, senior economist at the Natural Resources Defense Council, which is not opposing the 10 peaking generators proposed for the city. "The new plants are twice as efficient and much cleaner. Every time we build a clean, new gas plant, we back out two dirty older ones." The Sierra Club is also backing new natural-gas power plants in California.

What's needed is a system for compensating people who live in the immediate vicinity. There are dozens of possibilities. Property taxes could be lowered, people could be paid cash rewards or given free electricity. Many an upstate town and village lives comfortably with prisons or power plants because they lower property taxes and provide jobs for the community.

"We can have both adequate power and a clean environment," says Gupta, who lives and works in Manhattan. "The technology for improvements, both on supply and demand. The only thing lacking is consensus and leadership." It's a small price to pay for avoiding a California debacle.

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Massive Global EMF Pollution Said Major Element Of Eco-Meltdown

Submitted by Remy Chevalier

Reference:

<http://www.rense.com/general9/mdd.htm>

From Top View hawknews@iname.com

3-30-1

A scientist associated with NOAA, who has been apprising us of some vitally urgent information related to the top-secret government report "Interagency Overview and Assessment of Vital Global Resources and Eco-Systems", says that some of NOAA's research and findings indicate clearly that some of the seriously destructive factors impacting a number of such resources and ecosystems are the incredibly dense, multi-layered artificially-generated electromagnetic fields and extraordinarily high levels of electromagnetic/radio frequency "pollution" now enveloping the entire globe.

In particular, this unprecedented state of affairs has a direct and major impact upon such things as:

- * The electrically-charged portion of the upper atmosphere known as the ionosphere, which in turn has major effects upon global weather and climate the Earth's magnetic field (or lack thereof)
- * Potential pole shifts
- * Upon wind and moisture currents in the lower atmosphere
- * Upon (the integrity of) the vital bio-electromagnetic fields of every living organism on the planet -- the DISRUPTION of which by such all-pervasive EMF fields and EM/RF transmissions is seriously harmful on physical, mental, emotional, psychological and spiritual levels.

(Note - Visit the New Earth banner and click 'EMF Protection')

While much of this is more or less a by-product of the technological age we live in, a significant percentage of this kind of pollution is being deliberately generated by such technologies as HAARP, to potentially/intentionally induce and provoke drastically negative results and effects upon the entire planet as a whole and it's "vital global resources and eco-systems, as well as upon humanity, itself, as a whole.

What's more, of course, many HAARP operations, as well as certain ELF/ULF transmissions and other EM/RF activities, have specific debilitating, deleterious and injurious effects upon the psychological, emotional and physical health and well-being of those targeted, as is utterly irrefutable. Of course, not only human beings but any other living organisms which happen to be in the target area of such transmissions will likewise be negatively affected.

Our source at NOAA is well aware of the extent to which such systems as HAARP are being deliberately used to in fact hasten the immanent catastrophic failure of this Earth to support our existence. This and other factors are said to be pushing some within the agency to disregard the cover-up that's been put in place

about the eco-cataclysm report and to get the truth out under NOAA's own "banner".

LETTERS

Bruce Stephen Holms
bsh@timelessvoyager.com forwarded this letter
taken from Tom Bearden's website, at:
<http://www.cheniere.org>

Tom Bearden letter to National Science Foundation

CIRCULATE WIDELY

Dear National Science Foundation technical staff,

This is a serious communication, backed up by both theoretical and experimental work in the published literature, explaining how to solve the energy crisis. Please bear with the time required reading and studying it; it is rigorous. We do cite some scientific papers in the hard literature, which you can check at will. You have a nice professional website, with certainly quite a bit of work devoted to it. Nonetheless, considering your highly influential and leading position in the scientific community, and particularly with respect to influencing or determining the scientific research funded and accomplished in the nation, I honestly find too much of a "we're a government organization so we must have a website" approach. That of course is true, but in its unique position the National Science Foundation is looked up to as the rightful leader of research, to including driving the forefront of that scientific effort. Sadly, in the energy field, it does not appear that the NSF is vigorously exercising this vital leadership role. E.g., we are already into a very seriously escalating energy crisis that will only get worse. California was just a wake-up call; wait till this summer and then this winter. We are looking at an escalating crisis that will rather shortly in a few years-lead to the economic collapse of the United States and the Western world, along with many of the other nations of the world. I need not emphasize the strategic importance that effect could play in inducing more numerous and more serious conflicts, including the unleashing of all the arsenals of weapons of mass destruction acquired by some 25 nations, and more all the time.

As an example, the NSF has no separate website "front page" category for "energy", and in fact it seems to be doing little really innovative in the energy field. I see no indication of interest in the fact that the present electrodynamics used to design and build electrical power systems is 136+ years old in its foundations, riddled with errors, or that it really should be corrected.

Particularly I see no realization at all of the enormous nondiverged energy flow already in the immediate external space surrounding every circuit and transmission line—a mind-boggling energy flow discovered by Heaviside in the 1880s, never even suspected by Poynting, and arbitrarily "buried" by Lorentz since no one could explain the source of such a vast energy flow from the terminals of every generator and battery. I challenge you to fully examine the total energy flow from the terminals, including what gets intercepted by the circuit and used, and what misses the circuit and is totally wasted. You will not find that calculation in any textbook. But you will find an illustration of the external wasted energy flow in Kraus, *Electromagnetics*, 4th edition. More on that in a moment. Let me give you a "for instance" of the lack of NSF innovation and "rethinking" the energy problem from the ground up. None of the shaft power input to a generator adds one watt to the power line. All the hydrocarbons burned, the dams built, the windmills erected, and the nuclear power cells consumed, does not furnish one single watt of the actual electrical power that flows along the external circuit lines, filling all space around them. None of that energy input to the generator shaft is transduced into energy output from the terminals! Is that insane? No it is not!. All you have to do is deliberately track the actual energy transactions.

First, the mechanical shaft horsepower input forces the rotation of the rotor against resistance, creating a magnetic field. For an assumed perfect generator, that transduces 100% of the mechanical input energy into internal magnetic field energy. So far so good. So what does the magnetic field expend its energy upon? Quite simply it forces the positive charges in one direction, and the negative charges in the other, separating them and forming the source dipole. All the magnetic field energy is expended to that and nothing more. So what powers the external circuit, if it isn't the input shaft energy transducer? Quite simple, if you will bring in a particle physicist and fire the staid electrical engineer! Since the discovery of broken symmetry in the 1950s, we know that (see T.D. Lee's Nobel Prize) opposite charges such as in a dipole form a broken symmetry in the fierce energy exchange between the dipole charges and the active vacuum.

Now please notice that the classical electrodynamics model used by those power system designers doesn't even include the vacuum interaction, much less a broken symmetry in it! In short, forget the electrical engineers. They don't even know what powers their own power lines or circuits. Anyway, what is the importance of that broken symmetry of the source dipole? Well, rigorously it means that something virtual has become observable. In other words, those dipole charges continuously absorb virtual photon energy from the active vacuum—well known for decades. But not all the absorbed energy is re-radiated as virtual photons! Broken symmetry requires that some of this absorbed virtual energy is transducer into real, observable EM energy by that dipole. So the dipole excitation "decays" by emitting real, honest-to-God EM energy right out of the generator terminals to which it is connected. That is the actual source of the energy that pours from the generator terminals, filling space around the attached external power line and circuits. Well, here again the NSF is sleeping on its hands. For God's sake, go check the original papers by Poynting and by Heaviside, the independent discoverers of "EM energy flow through space"—a

concept which did not exist in physics until their work in the 1880s, after Maxwell was already dead. If you will check the actual original papers, something remarkable emerges. Poynting never considered anything at all except that small energy component that (in today's knowledge) strikes the surface charges in the conductors, and gets diverged into the wires to power the Drude electrons. Heaviside, on the other hand, also discovered that the tiny component that gets diverged into the wires to power the circuit, is a very tiny portion of the overall EM energy flow through space around that transmission line. Indeed, he pointed out that the diverged alters the angle of the remaining flow that misses the circuit entirely and is wasted.

Why do we not have a single textbook or paper calculating (at least examples) of how much power is in the external "Heaviside component" that misses the circuit altogether, passes on beyond it into space and is wasted?

Reason is simple, and it is what frightened Heaviside so he would only speak cautiously of it. The component that is just wasted is so very much larger than the component that is intercepted, diverged, and used that it boggles the mind. My own "back of the envelope calculation" for a particular simple little case shows about 10 trillion times as much energy wasted as is actually caught and used. Enter the greatest electrical scientist of the day, Lorentz. He understood Heaviside's additional nondiverged component, but in the 1880s there were no electrons, atoms, nuclei, active vacuum, Feynman diagrams, etc. in the scientific literature. No one had the foggiest notion of any possible source for a little 100-watt generator actually outputting 1,000 trillion watts of power, if it were all intercepted and used. Anyone actually trying to point this out then would instantly have been labeled a total lunatic and perpetual motion nut. So not able to solve the problem, Lorentz eliminated it, as do all electrodynamicists since then.

Lorentz reasoned that, well, since this bothersome enormous energy flow component did not power anything, it "had no physical significance" (Lorentz's term). So he simply integrated the energy flow vector itself around a closed surface assumed around any volume element of interest.

Voila! That neatly and quite arbitrarily discards Heaviside's nondiverged energy flow component, while retaining Poynting's diverged, collected, and utilized component. Also, the Poynting component will agree with "circuit measurements". We essentially measure by dissipation from the circuit, and all the energy that is dissipated from the circuit must first have entered the circuit, hence is the Poynting component. And with that neat trick, and the continued adamant universal use of Lorentz's trick, the National Science Foundation and the U.S. scientific community have guaranteed the present escalating energy crisis. Not a single university in the U.S. teaches how a circuit or power line system is ACTUALLY powered from the broken symmetry of the source dipole in the "power source". Everything we ever built, was and is powered by EM energy freely extracted from the seething vacuum by the source dipole in the generator or battery. And not a professor or national research organization has the gumption to go after that long-neglected fierce Heaviside energy flow component, to intercept it, collect it, and use it. Not a textbook even shows its magnitude (although at least Kraus, Electromagnetics, 4th edition does show the energy flow around the conductors, that is missed, and shows the contours for

how many watts/meter squared can be intercepted at each point by one unit point static charge. Please register the following! At each of Kraus' contour points, if you put 1,000 unit point static charges, you will collect precisely 1,000 times as much power at that single point as Kraus shows on the labeled contour. And you can intercept such energy at every surrounding point. If you collect that available energy flow already there around every line, using a switching-collector arrangement in a totally separate circuit (after all, this is transmission from one station (the source dipole in the generator) to a distant receiver (the intercepting point and system), and there is no need for that separate system to have any connection with the generator dipole than just its own antenna intercepting energy.

So if all the generator in our power systems does is just make a dipole, why do we have to keep powering up that shaft? Again, it's because of the insanity of engineers. In the prevailing closed-current loop circuit all our power systems are designed and built to, every "depotentialized" electron in the ground return line is forcibly rammed back up through the source dipole in the generator itself. It is simple to show that precisely one half the EM energy the external circuit does feebly catch in its Poynting component, is thus dissipated to forcibly do work on those dipole charges against the back emf, scattering the charges and destroying the dipole, thereby stopping the energy flow from the vacuum. The other half of the energy intercepted by the external circuit in its Poynting component is used to power the external loads and losses. That means that less than half the collected energy gets to power the load, while a full half is used to destroy the dipole. So the stupid circuit simply guarantees the destruction of its source dipole-and cutting off the extraction of energy from the vacuum-faster than it powers its load. Well, it requires as much work on those scattered charges to RESTORE the dipole again, as it took to scatter the charges and destroy the dipole. So we have to forcibly turn that generator shaft some more, to make the magnetic field again, and to force the charges separation into a dipole again. Even in a 100% efficient generator, we have to therefore input more energy to get the dipole restored, than we got out in the load. Is it any wonder that this stupid system has a $COP < 1.0$? The thing is diabolically designed to kill itself faster than it powers the load!

Isn't it insane to (1) go to all the trouble of burning hydrocarbon to burn and heat water in a boiler, to make steam and run a steam turbine to crank the shaft of the generator, to form a source dipole which has a broken symmetry in the vacuum, and therefore establishes the system as an open dissipative system freely receiving energy from its external vacuum environment, and then (2) continually destroy that disequilibrium and extraction of vacuum energy, by destroying the dipole faster than any of the free energy from the vacuum is used to power the load ?

Is that the best the National Foundation of Science is capable of conceiving? Don't you even believe the proven results of all that research in particle physics, where the broken symmetry of that source dipole has been known for nearly a half century? Why have you not mandated the correction of the hoary old classical EM model used by "modern" electrical engineers, so that the vacuum interaction and the source dipole's broken symmetry in it are explicitly included and modeled?

And why do you not commission some "example" calculations by experienced physicists to show how much energy can be freely caught from the long-neglected Heaviside nondiverged energy component surrounding every electrical power line? If you are at all interested in this, please check my website,

www.cheniere.org

to see some papers dealing with these problems. See my paper, "Giant Negentropy from the Common Dipole", to show precisely how that energy (in classical EM rather than in QED) is directly extracted from the time domain. For a rigorous new look at the problem, I also suggest some excellent papers by M.W. Evans and the AIAS theorists: Specifically, see M.W. Evans, P.K. Anastasovski, T.E. Bearden, et al., "Classical Electrodynamics without the Lorentz Condition: Extracting Energy from the Vacuum," *Physica Scripta*, 61(5), May 2000, p. 513-517; ----- "Runaway Solutions of the Lehnert Equations: The Possibility of Extracting Energy from the Vacuum," *Optic*, 111(9), 2000, p. 407-409; ----- "The Effect of Vacuum Energy on the Atomic Spectra," *Found. Phys. Lett*, 13(3), June 2000, p. 289-296; ----- "Explanation of the Motionless Electromagnetic Generator with O (3) Electrodynamics," *Found. Phys. Lett*, 14(1), Feb. 2001, p. 87-94.

The AIAS also has more than 90 very serious scientific papers, many dealing with energy and extracting EM energy from the vacuum, on a Department of Energy website. These are in O (3) electrodynamics, which is a much-extended higher symmetry electrodynamics far superior to the standard U (1) model. Respectfully, the energy crisis can be totally solved, with rather cheap and very clean solutions, in two years for about \$40 million. Every power system we ever built, was only a system to extract the EM energy from the vacuum via the broken symmetry of a source dipole once formed. Yet also, in the appalling lack of understanding of the engineers, every one of those systems deliberated self-enforces Lorentz symmetry in the system's vacuum interaction during the system's excitation energy discharge, by using the simple closed current loop circuit. The desperate needs of the energy-badgered citizens of the U.S. are for a new and innovative scientific examination of the entire energy problem, from ground zero up. And that particularly means a thorough and immediate revision to the 136-year-old seriously flawed electrodynamics.

In an open system far from equilibrium with its active environment, classical equilibrium thermodynamics does not apply. Instead, the special thermodynamics for open disequilibrium systems apply. As is well-known in the science of such systems, they are permitted to (1) self-order, (2) self-rotate or self-oscillate, (3) output more energy than the operator must input (the excess is freely received from the active environment, in this case the active environment), (4) power itself and its load (all the energy is freely received from the active vacuum), and (5) exhibit Negentropy. The source dipole does all five functions, once formed. It also extracts a truly enormous energy flow from the vacuum. The puerile power systems we build, however, continue to ignore the vast component of that energy flow that does not strike the circuit, hence does not get diverged into the wires by the surface charges, and is just wasted. Since every electrical system ever built already is powered by vacuum energy via the source dipole's broken symmetry, it

follows that we ourselves have been unconsciously building those same systems in such fashion as to destroy their own vacuum energy extracting function (their source dipoles) faster than they can power their loads. How can we possibly continue to justify "scientific understanding" when the basis for all the above has already been in physics for 50 years in all parts of it, and for over 100 years in some of the parts of it? Why do you not have some sharp young grad students and post-docs funded to thoroughly go into these matters? The Maxwell-Heaviside equations, BEFORE Lorentz's arbitrary symmetrical regauging, do include electrical power systems far from equilibrium with their active vacuum environment. As such, they do allow electrical power systems that perform those five magic functions. Since Lorentz's regauging, every electrical power system is designed and built to be fully in accord with those symmetrically regauged equations-which arbitrarily discard all that class of Maxwellian systems exhibiting $COP > 1.0$ and conforming to the laws of physics, laws of disequilibrium thermodynamics, conservation of energy law, and the Maxwell-Heaviside theory before further "tampering" to get easier equations!

Simply check my paper on Bedouin's process whereby a negative resistor is formed in a common lead acid storage battery. Bedouin has been building little laboratory demonstrations of legitimate $COP > 1.0$ little power systems for more than 20 years. He does it by utilizing the (relatively) enormous momentum of the lead ion current between the plates and the electron current between the outside of the plates and through the external circuit.

By deliberately dephasing the internal ion current from the external electron current, and using a self-forming overpotentialization of both, the battery ion current can be overpotentialized and in charging mode, at the same time the electron current into the external circuit is Overpotentialized and in powering mode. Check it out, it's easy to see if one takes into account what is discussed in my paper explaining the principles of the proven Bedini process. The process can easily be demonstrated by Bedini.

As my close colleagues and I have shown here in our motionless electromagnetic generator (a successful proof-of-principle laboratory experimental device), the Aharonov-Bohm effect alone can be applied in deliberately opened transformer-type systems far from equilibrium in the vacuum exchange, so that the system permissibly outputs more EM energy than the operator inputs. Every electrical power system out there already outputs enormously more energy than the operator inputs, if you will but fully account the output energy flow to include that Lorenz-discarded Heaviside nondiverged energy flow output! I would challenge you to send me a calculation of that TOTAL energy output flow, in both the Heaviside and Poynting components, for an assumed simple circuit. Let me put it simply.

The Poynting diverged component is what enters the circuit, and what all the textbooks account. The Heaviside nondiverged component is an extra, known energy flow component in addition to the Poynting component. A priori, every circuit already outputs more EM energy flow than the energy that the operator inputs to the shaft of the generator, or the chemical energy residing in the battery. Check it out, try it and see. Simply try to find a text or paper calculating BOTH those energy flow components. So on behalf of the long-suffering U.S. taxpayers

and consumers, this note is to urge you to give serious attention to these matters discussed, to quickly resolve the energy crisis forever. It's eminently doable. We need it. The world needs it. The strategic survival of the United States of America requires it. We simply need the National Science Foundation to rise to the challenge, and take a very positive and vigorous leadership in innovative rethinking the entire electrical power generation problem and presence of a ready solution.

Most respectfully,

T. E. Bearden, Ph.D.
Dir., ADAS
Fellow Emeritus, Alpha Foundation's Institute for Advanced Study

MEETINGS

Thanks to Remy Chevalier for sending us this information

**2001 INTERNATIONAL SYMPOSIUM ON ELECTRONICS
AND THE ENVIRONMENT**

<http://computer.org/tab/ehsc/index.htm>

Date: May 7-9
Location: Denver, Colorado
Denver Marriott Tech Center
4900 South Syracuse
Denver, Colorado 80237
Phone: (303) 779-1100 Fax: (303) 770-6112

**LIFE CYCLE ENVIRONMENTAL STEWARDSHIP FOR
ELECTRONICS PRODUCTS**

The IEEE Technical Activities Board is pleased to announce the ninth IEEE International Symposium on Electronics and the Environment to be held at the Denver Marriott Tech Center,

Denver, Colorado on May 7-9, 2001.

For information about joining the Electronics & the Environment Committee,
please contact

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IEEE Technical Activities
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Courtesy of Matt Aldissi
fractals@infobridge.com

VIII- th International Seminar on The Technology of Inherently Conductive Polymers June 18-20, 2001

Queen's Landing Inn & Conference Resort,
Niagara-on-the-Lake, Ontario, Canada
Contact Information: Dr. M. Aldissi, Advanced Polymer Courses,
Tel: 813-854-4332, fax: 813-854-5596
Email: fractals@infobridge.com,
Web site: www.conductivepolymers.com

Thank you for your help.
Matt Aldissi

Thanks to Toby Grotz for sending us this information

11TH CANADIAN HYDROGEN CONFERENCE

REMINDER

The 11th Canadian Hydrogen Conference will be held at the Victoria
Conference Center, Victoria, BC from June 17 - 20, 200.

The preliminary PROGRAM is now available on the conference website:
www.iesvic.uvic.ca

Please make note of the following deadlines:

Early registration: April 30, 2001
Hotel reservations: May 16, 2001

At the conference this year there will be representation from all areas of the hydrogen industry from novel methods of hydrogen production to new innovations in fuel cell systems. In addition to the plenaries and parallel sessions, the conference will include: extensive industrial demonstrations of new technologies student poster presentation employment forum evening public information session designed to promote new clean energy alternatives to a lay audience.

Please email or call the conference office if you require additional information.

Ged McLean
Conference Chair

Institute for Integrated Energy Systems (IESVic)
University of Victoria
PO Box 3055, Victoria, BC V8W 3P6
Tel: (250) 721-6295 Fax: (250) 721-6323

11th Canadian Hydrogen Conference website: www.iesvic.uvic.ca/cha

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Fort Collins, Colorado 80525
wireless@rmi.net 970-493-2429

Russian Academy of Sciences
Russian Physical Society
Nuclear Society of Russia
Mendeleev Chemical Society of Russia
Moscow Lomonosow State University
Russian Peoples= Friendship State University
State Technical University (MADI)

Dear Colleges,

The 9th Russian Conference on Cold Nuclear Transmutation (RCCNT-9) is to be held during September 30 B October 7, 2000. The place of the Conference is in

Dagomys near the city of Sochi that is the best recreation and holiday place on the Black Sea shore of Russia.

The program of the Conference includes the following subjects

- Experimental research in cold fusion, transmutation and ball lightning;
- Theoretical models with respect to cold fusion effects;
- Applied technologies and devices.

The organizing Committee of the Conference is pleased to invite you to attend the Conference. The terms of your participation are as follows:

The full cost is \$900 which will include the registration fee, hotel reservation and living, three daily buffet meals, conference proceedings, transportation from the Sochi airport and back, social dinner and special excursion or entertainment.

The languages of the Conference are Russian and English.

The total cost can be reduced down to \$800 if transferred before August 10 to the account of the Organizing Committee shown below:

Intermediary: Sabrrumm 100 Saving Bank of the Russian Federation Moscow Bank;

Account with institution: 891200011 at Izmailovskoye Branch 2695/0437;

Account holder: Yuri Nikolaevich Bazhutov;

Personal account: 42304.840.9.3834.0600087

The correspondence banks of the Moscow Saving Bank of Russian Federation in your country you will find attached.

If you make a decision to take part in the Conference please let us know before July 20 about the title and abstract of your report.

Contact telephone: (7)(095) 196-7117 (ask Mr. Igor Goryachev)

Fax: (7)(095) 196-6108

e-mail: gnedenko@kia.ru

Address: 123182, Moscow, Russia, 1 Kurchatov Sq., I Goryachev 105077, p/o box 169, Yu.Bazhutov

Yu. Bazhutov, Chairman of the Organizing Committee

I.Goryachev, Scientific secretary

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USA	The Bank of New York (New York)	IRVTUS3N

Congress

New Hydrogen Technologies and Space Drives

Saturday, June 23, and Sunday, June 24, 2001

***Congress Center Thurgauerhof,
CH-8570 Weinfelden/Switzerland***

Organizer:

Institute for New Energy Technologies (INET),
Jupiter-Publishers and
German Association for Space Energy (GASE)

Check-In: June 23th, from 11:00 a.m.

Registration: June 23th, beginning at 11:00 a.m.

Welcome Reception and Drink:

June 23th, beginning at 11:00 a.m.

Congress Organization and Pre-Registration:

INET / Jupiter Publishers, P.O.Box, CH 4622 Egerkingen,

Phone/Fax. 062 38898 50/1

Email: adolfschneider@datacomm.ch

