ATTN: Dr. Steven Koonin
Undersecretary for Science
Department of Energy

Dear Dr. Koonin:

Sadly, not a single one of your scientific attendees who will be at the Quadrennial Energy Review (QRV) appears to have the foggiest notion of the *real cause* of the world energy crisis.

You desperately need this information as to the real cause of the energy crisis; please let me explain it.

The rigorous technical cause of the energy crisis was and is the DELIBERATE SYMMETRIZATION of the Heaviside vector equations in 1892 -- by Lorentz as elicited by the infamous J. P. Morgan -- and the continued use of these *modified* Heaviside vector equations which are a horribly mutilated and mangled tiny version of Maxwell's actual theory -- and indeed even of Heaviside's original vector subset of Maxwell's theory.

Let me put it this way: For a total of 200 million dollars and three years time, the world energy crisis can be solved forever. The necessary team of physicists and scientists to do this is already forming here in Huntsville, Alabama and is seeking the funding to do it. I'm fervently praying that they succeed in attaining the necessary funding and then get on with this task which has so desperately needed doing since 1892.

In 1891 Nikola Tesla -- who gave us AC electric power, the rotating magnetic field that makes modern motors and generators possible, and radio -- had already discovered how to take all the EM energy one wishes directly from the seething "active medium" -- i.e., in modern physics terms, from the *active vacuum*. He was already briefing technical societies that this could be done at will.

For rigorous proof that Tesla had actually done it with real systems he had already built, Dr. T. W. Barrett did a rigorous quaternion EM analysis on some of Tesla's actual patented circuits that Tesla had in 1891. Dr. Barrett rigorously and mathematically proved that Tesla had indeed done what he said -- take and use real excess EM energy directly from the "active medium" (in today's terminology, from the active modern virtual state vacuum). See T. W. Barrett, "Tesla's Nonlinear Oscillator-Shuttle-Circuit (OSC) Theory," Annales de la Fondation Louis de Broglie, 16(1), 1991, p. 23-41. Barrett shows that EM expressed in quaternions allows shuttling and storage of potentials in circuits as one wishes, and also allows additional EM functioning of a circuit that a conventional EM analysis cannot reveal. He shows that Tesla's patented circuits did exactly this. So Tesla's special circuits could dissipate power where he wished in his circuit, powering different parts of the circuit independently. [The paper is carried at internet link http://www.cheniere.org/references/TeslaOSC.pdf .]

Please note that Dr. Barrett is one of the cofounders of modern ultrawideband radar, and he is a higher group symmetry electrodynamicist of world renown.

Quoting Nikola Tesla:

"Ere many generations pass, our machinery will be driven by a power obtainable at any point in the universe. This idea is not novel... We find it in the delightful myth of Antheus, who derives power from the earth; we find it among the subtle speculations of one of your splendid mathematicians...Throughout space there is energy. Is this energy static or kinetic? If static our hopes are in vain; if kinetic – and this we know it is, for certain – then it is a mere question of time when men will succeed in attaching their machinery to the very wheelwork of nature." [Nikola Tesla, in a speech in New York to the American Institute of Electrical Engineers, 1891. Quoted from back cover of his biography, Margaret Cheney, Tesla: Man Out of Time, Simon and Schuster, 2001].

"Electric power is everywhere present in unlimited quantities and can drive the world's machinery without the need of coal, oil, gas, or any other of the common fuels." [Nikola Tesla].

“We have to evolve means for obtaining energy from stores which are forever inexhaustible, to perfect methods which do not imply consumption and waste of any material whatever. I now feel sure that the realization of that idea is not far off. ...the possibilities of the development I refer to, namely, that of the operation of engines on any point of the earth by the energy of the medium...” [Nikola Tesla, during an address in 1897 commemorating his installation of AC generators at Niagara Falls, thus giving us the kind of electric power that could be transmitted for long distances down transmission lines.].

"Whatever our resources of primary energy may be in the future, we must, to be rational, obtain it without consumption of any material." [Nikola Tesla, 1900].

Free EM Energy from the Vacuum and Its Use to Power Loads is Already Rigorously Proven

Also, please check the rigorous recent work by Dr. Victor Klimov et al. Dr. Klimov and his colleagues in Los Alamos National Laboratory in New Mexico have constructed a solar cell which can absorb the light of a specific wave length in such a way, that one photon input to the solar cell can *energize more than one electron*. As soon as the electron absorbs a photon, it disappears for a very short moment into the quantum field. Being in the virtual state the electron can borrow energy from the vacuum and thereafter appears again in our reality. Now the electron can energize up to 7 other electrons. This leads to a theoretical coefficient of performance (COP) of up to 700%. A COP = 200% can be easily achieved and it has been, as has been higher values. The experiment has also been replicated successfully by the National Renewable Energy Laboratory in Golden Colorado. [See Herb Brody, "Solar Power - Seriously Souped Up." New Scientist, May 27, 2006, p 45].

Quoting Brody: *“Make solar cells as small as a molecule; and you get more than you bargained for. Could this be the route to limitless clean power?"].*

Comment by T.E.B.: Note that the super-excited electron, after emerging from the seething virtual state vacuum immersion, actually splits into two or more energized electrons! So the output current of the solar cell process is *freely amplified* by excess energy from the local virtual state vacuum. Note that at about COP = 3.0, one could conceivably add clamped positive feedback of one of those output electrons back to the "dive back into the seething virtual state vacuum" input, replacing the original electron input, and the unit would be "self-powering" (powered by energy from the vacuum) while putting out the other two electrons as output.

Or by using some of the output current in a standard photon radiation-producing process, one could have the positive feedback input changed to a radiation photon, to replace the initial solar input entirely. In this fashion, once "jump started" by some source of solar radiation, the resulting "solar panel" system would become totally *self-powering*, taking all its input and output energy directly from the seething active virtual state vacuum itself.

It appears that Klimov's team and its work is being used presently to develop superpowerful laser weapons that will revolutionize warfare. E.g., a powerful, self-powered laser weapon the size of a bazooka and carried by one infantryman can in principle be developed that can destroy large buildings, destroy hostile tanks and vehicles easily, destroy ships and boats and trains, shoot down hostile aircraft, and -- with a small sensor apparatus added -- detect and shoot down incoming hostile field artillery rounds.

It appears that the long-desired superpowerful laser pistol is possibly also being developed for U.S. Internal Security civilian guard forces, also as an application of Klimov's work. Such a pistol will be able to disable or even kill a targeted human at a mile and a half.

Additional references: Richard D. Schaller, Vladimir M. Agranovich and Victor I. Klimov; "High-efficiency carrier multiplication through direct photogeneration of multi-excitons via virtual single-exciton states." Nature Physics Vol. 1, 2005, pp. 189-194.

Richard D. Schaller, Melissa A. Petruska, and Victor I. Klimov; "Effect of electronic structure on carrier multiplication efficiency: Comparative study of PbSe and CdSe nanocrystals"; Appl. Phys. Lett. Vol. 87, 2005, 253102.

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M. C. Hanna, A. J. Nozik. "Solar conversion efficiency of photovoltaic and photoelectrolysis cells with carrier multiplication absorbers," Journal of Applied Physics, vol. 100, No. 7, 2006, p. 07450.

Sung Jin Kim, Won Jin Kim, Yudhisthira Sahoo, Alexander N. Cartwright, Paras N. Prasad, "Multiple exciton generation and electrical extraction from a PbSe quantum dot photoconductor," Applied Physics Letters, Vol. 92, No. 3, 2008, p. 031107.

Alberto Franceschetti, Yong Zhang, "Multiexciton Absorption and Multiple Exciton Generation in CdSe Quantum Dots," Physical Review Letters, Vol. 100, No. 13, 2008, p. 136805.

G. Allan, C. Delerue, "Role of impact ionization in multiple exciton generation in PbSe nanocrystals," Physical Review B, Vol. 73 (20), 2006, p. 205423.

Hsiang-Yu Chen, Michael K. F. Lo, Guanwen Yang, Harold G. Monbouquette, Yang Yang, "Nanoparticle-assisted high photoconductive gain in composites of polymer and fullerene," Nature Nanotechnology, Vol. 3 (9), 2008, p. 543.

M.C. Beard, R.J. Ellingson, "Multiple exciton generation in semiconductor nanocrystals: Toward efficient solar energy conversion," Laser & Photonics Review, Vol. 2, No. 5, 2008, p. 377.

Quoting: *"Now Victor Klimov and colleagues at the Alamos National Laboratory have designed nanocrystals with cores and shells made from different semiconductor materials in such a way that electrons and holes are physically isolated from each other. The scientists said in such engineered nanocrystals, only one exciton per nanocrystal is required for optical amplification. That, they said, opens the door to practical use in laser applications."* ["Scientists Create New Type of Nanocrystal," PHYSORG.COM, Nanotechnology, May 24, 2007].

Seo, Hye-won; Tu, Li-wei; Ho, Cheng-ying; Wang, Chang-kong; Lin, Yuan-ting. "Multi-Junction Solar Cell," United States Patent 20080178931, July 31, 2008. A photovoltaic device having multi-junction nanostructures deposited as a multi-layered thin film on a substrate. Preferably, the device is grown as InxGa1-xN multi-layered junctions with the gradient x, where x is any value in the range from zero to one. The nanostructures are preferably 5-500 nanometers and more preferably 10-20 nanometers in diameter. The values of x are selected so that the bandgap of each layer is varied from 0.7 eV to 3.4 eV to match as nearly as possible the solar energy spectrum of 0.4 eV-4 eV.

J. R. Minkel, "Brighter Prospects for Cheap Lasers in Rainbow Colors," Scientific American (website), May 25, 2007.

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So the entire Department of Energy is sitting on its laurels, and totally ignoring how easily the energy crisis can be permanently solved, even after rigorous scientific proof has already been accomplished at LANL and is widely published in leading physics and nanocrystalline journals.

Let us examine the simple modern physics basis for free EM energy from the vacuum. Indeed, all EM energy we evoke and use in our circuits comes directly from the vacuum! Any dipole or charge, once made and "fixed" in place, is a *proven broken symmetry* in modern physics. This means that -- once made -- it FREELY and continuously absorbs virtual particles from the seething virtual state vacuum, excites and integrates the absorbed energy past the quantum level and into the observable state, and

continually decays back to the quantum level by steady emission of REAL PHOTONS -- REAL EM ENERGY.

Indeed, what electrical engineers mistakenly call "static voltage" from a dipole or battery is in fact a steady output flow of observable photons whose energy is extracted from the virtual state vacuum by the broken symmetry of the dipolarity.

So it is very, very simple and cheap to easily make a free source of FREE EM ENERGY "WIND" FLOW anywhere in the universe -- a source that, once made and then just left alone, will sit there and freely pour out real, usable EM energy *until the end of time*. Every EM charge and dipole in the universe is already doing just that!

This emission of real EM energy flow from the source dipole of any EM circuit provides what the electrical engineer erroneously calls "static voltage". Instead of being something "static", it is a continuous flow of photons -- it is similar to a "static waterfall", which is continually being created and sustained by the flow of water molecules through it. But our EE is erroneously taught that static voltage cannot be used to power circuits -- which is a bald-faced lie. E.g., Tesla's famous electric car of the 1920s was so powered, and its "battery" (more like a charged capacitor since it furnished no current) thus did not run down. The car could run for weeks on a single very small battery/capacitor charge.

If you will send a physicist and a representative to see me, we can easily tell you how to go about powering systems off the free EM energy wind from any source dipole. Renowned inventor John Bedini has more than a dozen such systems in early successful prototype right now. All you have to do is build a separate "windmill" system that is NOT connected to the source dipole by wiring, but simply sits "downwind" in the free EM energy flow, diverts a bit of the flowing energy and collects it by "pinning" the current in this windmill system momentarily and during that moment of frozen current, potentializes the entire "external windmill circuit" FREELY with the flow of the so-called "static" voltage (electrostatic scalar potential) over the circuit at light-speed. And, once this separate "windmill system" energy collection is accomplished, then -- STILL SEPARATE FROM THE SOURCE DIPOLE -- the freely potentialized "windmill" subsystem dissipates this collected free energy to power the loads. No current in the external "windmill" system is ever pumped back through the source dipole to destroy it, because that would then destroy the ongoing free flow of EM energy "wind" from the vacuum.

Use of such a "static voltage" powered "windmill" electric motor is precisely what Tesla's car did in the 1930s, and what all our cars could very readily be doing right now. And that is why the Tesla car did not "discharge" its battery; no current was drawn from the battery, or passed back through the battery. It was powered by so-called "static voltage" alone.

Anyway, best wishes on your meeting; but I fear it will be very saddening because even after more than 100 years, all our scientists and engineers mistakenly think the decrepit old mutilated electrical engineering model is perfect! Indeed, *it has a dozen proven falsities*, already pointed out in the hard literature by Nobelists etc., which nonetheless continue to be ignored and taught by all our universities etc.

The electric power problem is actually due to the use of only SYMMETRIC systems, with the "external" current always forcibly pumped back through the source dipole to destroy it. We already have far better systems of higher group symmetry electrodynamics available in modern physics, which contain not only symmetrical systems but also ASYMMETRICAL systems; it is about time we took one of these far better electrodynamics models (the quaternion electrodynamics model is strongly recommended, since it is very close to Maxwell's actual theory) and applied it to all our electrical engineering.

You see, eerily, that the GREATEST BARRIER to cheap, clean, continuous, permanent extraction of all our needed EM energy from the active medium (the active vacuum) is our mutilated and decrepit old 1892 electrical engineering model which was deliberately curtailed at its very birth to contain only SYMMETRICAL systems! The ubiquitous use of symmetrical-only systems since then has generated all

our electrical power systems etc. to be SYMMETRIC, and thus always destroying their dipolar source of free energy from the vacuum faster than they use some of the free energy to power their loads.

And thus we have to keep pumping the shaft of the generator to forcibly restore the destroyed dipole -- NOT to power the external loads of the system!

Sincerely,

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