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Via Email C/O Nathan Myhrvold Intellectual Ventures

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Mr. Bill & Mrs. Melinda Gates C/O Nathan Myhrvold Intellectual Ventures 3150 138th Avenue SE Bellevue, WA 98005 **Ref**: Worldwide peace & prosperity through energy abundance. Presentation at: http://fuelrfuture.com/bmg/

Dear Mr. & Mrs. Gates:

This letter presents an urgent issue. It affects the health, prosperity and wellbeing of billions of people worldwide and the future generations of all mankind. Yet it is one issue few people are addressing. Recently Mr. Gates <u>publically discussed renewable energy</u>, and the need to subsidize innovation. Earlier, Google's Dr, Ross Koningstein & David Fork published an <u>article in IEEE Spectrum</u> saying the same thing as Mr. Gates regarding the suitability of current "renewables" for baseload power. Please see our on-line presentation for you.

This is a worldwide issue and a moral issue. We have known the solution for many years. However, short term interests have time and time again diverted us from scientific progress.

In order for all people in the world to live comfortable lives and have the ability to prosper, we must increase current total worldwide annual energy production by a factor greater than 4. This is not possible, and if it were it would <u>deplete fossil fuel reserves</u> before the end of this century. Today the United States has approximately 4.5% of the world's population yet it uses over 25% of the world's annual energy production. "Alternative green and renewable" energy sources <u>can</u> supply less than 5% of projected 2050 total energy requirements. Google's scientists noted that there is only <u>one way</u> to produce this amount of energy to support mankind. That is the conversion of mass into energy through nuclear processes; today fission, tomorrow fusion.

Today we must reinvigorate our nuclear industry and focus on near term solutions such as molten salts reactors and traveling wave methodologies. The nuclear roadblock is not science but rather public perception, media inaccuracies + bias, overzealous legal and environmental groups. America is giving up its lead in nuclear technology superiority and countries like China and Russia are assuming the lead. Today the <u>EPA does not consider nuclear</u> to be part of their compliance option.

As I have told <u>politicians at the federal level on both sides of the aisle</u>, they must "fess up" to the American people and strongly state that the current green energy movement is too little too late.

Today we need to have an active and robust public debate presenting the need for quantifiable levels of energy consistent with American's expectations and its national security interest, as well as the health and prosperity of all citizens balanced against the probability of climate impact. As this happens, people can get more comfortable with science and a sense that real scientists are evaluating this based on energy tradeoffs as well as the economy based on true prosperity...not green energy hyped jobs.

Fission and fossil fuels are the bridge to the future. However, fission must ultimately be followed by the demonstration and development of the process of controlled fusion. As a matter of <u>national security</u>, and as a moral imperative to <u>safeguard the future</u> of all people in the world, Americans must unite to achieve this goal and demonstrate controlled fusion within a decade. In the interim Americans <u>must understand</u> the need for energy conservation and the successful achievement of this global energy mission. Hence our emphasis on <u>Games that Matter</u>.[™]

We are in the process of organizing a consortium of electrical utility companies nationwide. Additionally, traditional fossil fuel energy companies will be invited into the consortium as their long term survival as corporate enterprises depends on shifting from petro-chemical production & distribution to energy production and distribution. Key hardware manufacturers supplying the utility industry in the smart grid and smart meter technology sectors will also be invited.

We have key patents in the <u>field of utility billing system & smart meter topology</u> which will be licensed to utilities to fund a significant percentage of the fusion science and R&D over the life of the patent portfolio. The patents will be used for the public good and the "single end user" is the utility company.

We have the industry background to get this organized and moving quickly. Part of what we will do is to revamp the utility <u>customer service and billings/cash collections</u> cycle to allow for automation and pay as you go approaches. We will build the PayPal of the utility industry, if you will. Options are to partner with someone like Visa now, or build the entire payment collections and distribution operation. We have specific claims in our patents covering this as well as the use of mobile devices like smart phones tied into the smart meter and utility billing operation.

The "green industry" is quick to point out that fusion science has been practiced since the 1950s and yet there have been little apparent practical results. Everyone has heard the refrain that fusion is <u>30 years away and always will be</u>.

What is not apparent to most people making these statements are the factual reasons for the lack of fusion development progress by the government. I would like to share with you my widely cited article, <u>"Who Killed Fusion?"</u> and note its links to an 8 article series derived from it which my EnergyCite® partner, Pat Boone in Hollywood, <u>co-authored with me for non-scientists.</u>

It is equally important to stress the impact the Russians had on our American fusion program in 1985. Arguably this is the greatest single impact on civilian fusion energy programs in the U.S. and it is responsible for the "fusion boondoggle" known as ITER in France which could be the death of fusion this century. My article <u>"How Russia Caused the World's Preeminent Super</u> *Power to Lose 25 Years in Its Quest to Correctly Solve Energy*" explains this.

Fusion is something the electrical automobile industry must champion. There is simply no other realistic solution to solving energy as fossil fuel reserves tighten over the next two decades. And this takes AGW-climate change off the serious discussion table for obvious reasons. The second chart in this section discussing why fusion is the only realistic solution shows that most

current generation capacity will be retired due to age by 2060 and yet at the same time the electrification of the transportation system significantly increases needed generation.

Our <u>Fuel R Future website</u> has an extensive fusion science section. We have plans to pursue the Plasma Jet Magneto Inertial Fusion (PJMIF) approach with <u>LANL</u> as disclosed on: <u>http://fuelrfuture.com/innovative-confinement-concepts/</u> PJMIF was first proposed by C.Y. Francis Thio, Ph.D., at the NASA Marshal Space labs for fusion based space propulsion long known by NASA to be needed for round trip manned space travel beyond mars.

The PJMIF approach is the most promising, least cost, and quickest approach to actually demonstrating a sustained controlled fusion reaction with a net energy gain greater than 10. General Fusion in Vancouver, Canada, as originally funded by Jeff Bezos of Amazon, has been working with a derivative MIT approach; however the Mach velocities they will obtain with their driver approach will in all likelihood fall short of net energy. Please see our white paper on PJMIF.

We lay out a simple <u>project management development plan</u> for Pulsed Jet Magneto Inertial Fusion to be managed by the consortium.

Your previous colleague, Paul Allen, has certainly helped the <u>Tri Alpha group</u> but frankly the physics as we understand it today does not support their configuration.

I would like to meet with the two of you confidentially, and as soon as possible to discuss this project. We need a small amount of funding now to move this forward. And we believe it is imperative to introduce the <u>interactive video games</u> as soon as possible so the public discussion can begin. Part of the marketing strategy for the game strategic component involves a first class Kickstarter project we wish to launch in September...October at the latest.

We feel it would be quite appropriate for the Bill and Melinda gates Foundation to be a lead member of the EnergyCite consortium as well as **Intellectual Ventures.** I spoke with Nathan Myhrvold several years ago as we were developing our IP. Our objective is to launch the consortium and flex our IP strength in the industry without the use of early litigation against the utility industry which in this case is counterproductive. **IV** can help us get that done.

Thank you for your consideration. Please have someone contact me as soon as possible to set up a meeting at a location and time convenient for you at 916-482-2000 or 916-482-2020.

Sincerely,

USCL Corporation,

Tomer (Tom) Tamarkin President

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