

# Re: Solar powered lasers in space

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- *From:* [Willie.Mookie@xxxxxxxx](mailto:Willie.Mookie@xxxxxxxx)
  - *Date:* Sat, 15 Sep 2007 15:11:06 -0000
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On Sep 15, 8:31 am, BradGuth <bradg...@xxxxxxxx> wrote:

As per usual it looks great, except you've excluded the usual ENRON/Exxon 10X factor, making that 0.03 cents per kWh into at least 0.30 cents per kWh, but lo and behold at least it's clean and renewable, as well as usable for many other life and Earth saving things.

Enron still exists as an assetless shell corporation emerging from bankruptcy in 2004. It sold its last asset to Prisma Energy in 2006. Prior to its 2001 bankruptcy, Enron had 21,000 employees and Fortune magazine voted it the most innovative company for six consecutive years, and claimed revenues of \$111 billion. It turned out that these revenues were arrived at through massive accounting fraud, which ultimately caused the dissolution of Arthur Anderson, and the arrest of key individuals and suicide of others.

Exxon replaced Esso in 1973 as a brandname, which was derived from S-O after the 1911 breakup of Standard Oil. Anti-trust settlement. In areas where the Esso brand was blackballed by consumers, the name was changed to Humble Oil – haha.. These were all absorbed and integrated by the New Jersey company Exxon.

Exxon no longer exists, it became part of ExxonMobil in 1999 – and is one of the largest integrate oil companies in the world. A direct descendant of John D. Rockefeller's Standard Oil. It has \$377.6 billion in revenue, and \$517.9 billion in market capitalization. ExxonMobil actually produces 6.5 million barrels of oil per day and distributes it at thousands of retail locations throughout the world – employing 82,000 people directly and hundreds of thousands indirectly to create the fuels it sells.

Have you figured out which significant group of topic/author stocking naysayers is in charge of your private parts, and why your research and best of intentions are not getting Usenet or any other group net supported?

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Well, can you name anyone anywhere that garners support through usenet? I can't think of a soul. So, I don't understand your question. I think like most people, I post things for my own reasons, with little or no expectation of response. I do value some responses, and rarely, I get pissed off at especially dumbass responses.

Too bad that I'm not in charge, as your space based laser cannon energy would have been 50/50 public funded as of a decade ago,

I can imagine you get a little thrill of excitement thinking that you have such power – but you don't. So, what's the point? I don't want public funding anyway. So, I wouldn't have accepted it. Our tax dollars should go to educating our kids and paying police and fire and stuff like that, so that companies have halfway intelligent workers and everyone has a decent job and lives in a safe community.

..

as will  
as any terrestrial applications of converting solar energy into wussy hydrogen or good old robust h<sub>2</sub>o<sub>2</sub>.

Your comments about H<sub>2</sub>O<sub>2</sub> make no sense. H<sub>2</sub>O<sub>2</sub> is an explosive. Its use in Russian torpedoes caused the famous sinking of the Kursk. Gasoline doesn't do this. Neither does hydrogen.

For stationary applications – pipeline delivery of gaseous hydrogen under high pressure is adequate and cost-effective. For mobil applications using hydrogen to convert coal into gasoline by direct hydrogenation is the easiest way to go at present, with a strong R&D into using liquid hydrogen directly as a gasoline replacement.

Check it out – The US burns 1.1 billion tons of coal each year – 880 million tons to make electricity in coal fired power plants. This 880 million tons of coal can be replaced by 142 million tons of hydrogen made from 1.28 billion tons of deionized water – via solar/laser electrolysis. It takes 50 MWh of solar/laser electricity to make a ton of hydrogen this way. So, this is 810 GW of laser energy – beamed 24/7 to Earth.

Now, .03 cents per kWh, is \$0.30 per MWh, so, 50 MWh is \$15.00 – that's the cost of each ton of hydrogen. So, 142 million tons is \$2.13 billion per year.

This eliminates 2.7 billion tons of CO<sub>2</sub> each year – and strands 880 million tons of coal.

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If the 880 million tons of coal each year is taken in trade for the hydrogen, and an additional 80 million tons of hydrogen (costing \$1.2 billion and requiring 456 GW more satellite capacity) is combined with that coal, a total of 6.16 billion barrels of gasoline worth \$544 billion may be produced each year.

When this total is combined with domestic production, the US now becomes an exporter of liquid fuels – re-establishing the geopolitical and economic conditions of the 1950s and the gogo 60s...

If the US would do this along with attempting to power share and share costs with its allies in a true war against terrorism – the reduction in costs combined with improved income – would re-establish US economic leadership in the world.

Since I'm going down this path, haha, I would also humbly suggest that the US reverse the anti-union campaigns began by Eisenhower. The US got rid of its manufacturing business in part due to Eisenhower's observation that liberal and Democratic support stemmed mostly from the manufacturing sector. So, it was no surprise that during the Eisenhower administration that overseas manufacturing skyrocketed, which was combined with union busting in the 1950s. Nixon in his detente with China completed what Eisenhower started, and by the 1980s, unions and domestic manufacturing was history in the US.

Our inability to manufacture the bulk of what we consume, has made us very weak in certain areas, while it has solidified certain conservative norms. We have routinely ignored this weakness – as for example – China accumulates US mortgage debt and US dollars. We are fools to believe they will not exercise their growing economic influence in years to come.

I urged a reversal of this policy. This is rather simple. A thorough house cleaning of unions – which JFK/RFK tried to do before he was shot. Then, adopting legislation making it easier to unionize. Finally, placing fair wage requirements for imports. Forget about taxing or otherwise limiting trade. Free trade is king. But make sure that people who work to make things, can – as Henry Ford envisioned – the people who make the stuff are paid a wage that allows them to buy the stuff. There is something fundamentally immoral about a barefoot ignorant 12 yo child spending 12 hours a day making \$100 Nike's in a sweatshop for \$2 per day so that Phil Knight can increase his stock value by a few cents! Now, I'm not saying Phil Knight is a bad guy, or that he doesn't deserve to be a billionaire. What I am saying is that there are third party effects to every decision and it is the proper role of government to look at these and do what is best for society.

Now, this gets a little complex, but in the US, we're all the same community. So, its clear that if we pay someone starving wages,sure, if we can get away with it, we'll do it because it makes us a little

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richer – that's the way most people think. But if too many people are starving, then they'll do something about it! They'll engage in crime, or they'll organize a revolution and kill the bastards who are enslaving them. So, it pays to be a little clever about this. It pays to have a little decency. Henry Ford created mass-production techniques as an answer to this problem. And increased wages enough so that the people who made the cars, could buy the cars. This created the middle class. And that's what we did in America. And there was a big turn to the left, as formerly downtrodden folks, began to participate more fully in the politics of the 1920s through the 1950s.– and the greatest increase in economic well-being of any nation in history..

Now J Edgar Hoover and others would have us believe that the Commies took over the labor movement throughout this time period and THEY were responsible for liberal ideas that were accepted at that time. I question that. But this was part of the reason in the 1950s the US government began undermining the unions – first by subverting them with organized crime (by indirect means)– and then, by promoting foreign manufacturing.(direct subsidy) – this tied in nicely with the idea that the US should maintain a huge disparity of income to avoid being attacked again. This approach to safety failed on 9/11 – something we have yet to realize. It was the poorest nation that attacked the richest – in part because of the disparity – no matter how much we demonize radical muslims.

The thing is, the poor little barefoot 12 yo girl in Indonesia laboring away 12 hours a day to make thousands of pairs of Nike shoes that are sold at over \$100 retail – deserves more than \$2 – and if the US demanded of Nike that they follow wage, hours, and age laws applied in the US – throughout the world – before the US allowed imports to enter the US – it would do many things. First, it would raise everyone's boat. Second, since labor costs are second or third or sometimes even fourth in the list of costs of running a business – increasing wages will make only a small difference in the total profit picture – so it won't hurt the companies involved (the service companies that organize this labor are something else). Third, the tendency toward radicalism would be greatly diminished – as the tendency toward crime and revolution was diminished in the US during fulfillment of Henry Ford's vision. Fourth, the folks who made the shoes, and whatever else, would become buyers of the shoes and whatever else – and global demand – and the global marketplace – would increase by a factor of 11x.

Now this leads to the deepest darkest rationale for US policies abroad – there isn't 11x the stuff to go around. And by stuff I mean – oil, black gold, texas tea – and that's an issue. Except we have a solution. Low cost powersats in space beaming energy to Earth.

Things take time. It takes time to implement a fundamental shift in policy. It takes time to build up a large infrastructure. And we're

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running out of time. But if we effected these changes now – building up the infrastructure for solar/laser energize synfuels – and adopted a policy of wages and labor rules for all people who manufactured, grew or mined stuff that ended up in the US – we could be a positive force for change in the world – and give everyone hope.

BTW, even if ISS were 100% converted into a viable platform of hosting those IR laser cannons, and outfitted along with those multiple km<sup>2</sup> solar collectors, it wouldn't become nearly as affordable as you've suggested, as for the cost and extremely negative environmental impact of keeping such technology up and running isn't cheap, nor without human risk.

Solar powersats have nothing to do with ISS – so this doesn't make any sense whatever.

I have a fix or two for that, which includes utilizing our moon's L1 and a tether dipole element that'll give your laser cannons access to 97.6% solar and loads of other than solar renewable energy to boot (I'm talking teraWatts of continuous clean energy).

This makes even less sense than the earlier statement.

You do realize that our corrupt government that's faith-based puppeteered and in total denial of their being in denial, will soon enough require us to pay \$1/kwhr, don't you?

Any time you measure any factor in a human population you get a gaussian distribution curve. A bell shaped curve. So, when corruption is measured, there are those who will be corrupt. The question is, does the corruption correlate with power or anti-correlate with power. A buyer may take a \$5,000 kick back to sign a deal with his company. That's different than the CEO scheming with the CFO to produce with the help of their accountants, fraudulent income statements.

In the background of this human drama is mother Earth. The world started out with only so much coal, oil, and so forth. Production rates have a bell shaped type curve that peak at the half-way point. Demand for stuff increases exponentially. And we've reach, or have nearly reached, the halfway point for oil on this planet. So, we're seeing a massive price rise in the cost of oil. The oil companies are supressing change – in an effort to get the most for themselves at the end game. The government seems to have gone along with this strategy – believing that what's good for 'ExxoMobil' is good for the country –

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echoing Truman's statement about GM. And like Tucker at the end of World War 2 – many a good and honest and contributing and hard working innovator has been buried by the military–industrial powerhouse. Where technology has slipped outside the control of this powerhouse – innovation and growth have occurred. But where the technology is deemed important to national security – especially where that technology could challenge the control of major corporations important to national security – innovation has not occurred. We still burn the same kerosene in our jet engines that we used to burn in our lamps when Reagan was a boy. And innovation in energy is either non-existent, stilted, or directed into areas that do not compete with the majors.

Is this corruption? I don't know. I don't think people are that smart or that lucky. I do think though, that a host of abuses can accumulate in a culture and kill it. And that's what's happened in America. We're a declining culture and people can see we're a declining culture, and the more people that see that, and lose any hope that they can make it by being clever, or hard working or honest, those people will do what it takes to get ahead – and they'll add to the problem... and in the end, we'll, to quote Reagan, join the Soviet Union on the trashheap of history.

It doesn't have to be this way. We have plenty of opportunities to reverse this downward spiral. But it won't occur because of conversations on usenets, or rants, or anything like that. It will occur if those in power grab their balls and screw up the courage to make difficult decisions that reverse the trend.

The only thing I can do, as an engineer, is to look at the physics of what's going on and say – hey, here's a solution. Beam energy from space and use it to make hydrogen, then burn the hydrogen in coal fired plants and hydrogenate the coal to make gasoline. Then adopt a policy that increases wages around the world and increases consumption – and supply the energy by expanding this new US source. This is how the US can remain dominant through the next century.

But we won't do it. We're too deeply involved in the strategies of the 1950s and haven't seen they have failed let alone WHY they have failed. Meanwhile, leaders, true leaders, that have the vision, the means and the courage to lead – are non-existent or disheartened or distracted.

If a certain little faith-based group were trying to dominate Earth for all it's worth, why would they allow public access to clean and affordable energy, and especially if it were renewable?

The US is trying to survive as an industrial nation in a nuclear world that is running out of the means to support their industry. Its

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policies were instituted at the end of world war 2 using the ideas and means thought best in the 1940s and 50s. These policies are largely secret – and tended to by a tiny group of experts. Those experts are blind and isolated from the community at large. They do not see 9/11 as a failure of their control paradigms, let alone seeing what must be done to truly address this failure. At best they see 9/11 as a lapse – of them being too lax and lenient, and so they're cracking down – closing the gap – securing the frontier. They do not yet see that they are the cause of much of what is killing America. It will be the next generation of Americans to address that – I doubt it will be as bad as the Civil War – but it will be worse than the Civil Rights movement – to get this particular tick out of our scalp.

Clue No.1) those that are currently rich and powerful don't actually give a tinkers damn as to how spendy, polluting or lethal our energy can be made, because where do you think they obtain their loot that's stuffed into those nifty offshore bank accounts, as is.

The USA is the richest and most powerful nation on Earth. Our poverty line is well above the median of most nations. The US is rich because the US is productive.

Even so, there are more people getting richer all the time – The Capgemini World Wealth Report for 2007 says that there are 9.5 million millionaires in the world a double digit increase. Most new millionaires have arisen in China and India. The total wealth controlled by these 9.5 million folks is \$32 TRILLION !!! Most of this is liquid. Compare this to the \$65 trillion PER YEAR created by human activity. This is an important point.

The so-called rich are that way mostly due to their own efforts – and by creating wealth. After all they only have managed to accumulate 1/2 of 1 years production into their own pockets. On a global scale wealth is broadly dispersed across a huge population, more evenly than at any other time in human history. And its getting more evenly dispersed as time goes on.

The UN in the past – ended small pox. Since then its various organizations have outlined a vast array of issues that face the world community. But since the election of Nixon the US has ignored these issues and gone its own way. Money has dried up. And issues remain outstanding, and they multiply. The massive deaths in Africa for example, and the continuing production of heroin in Afghanistan, as another example...

But many of the issues that face the poorest of us, and face all of us really, might be addressed if the UN for example create a tax-free 'world bond' for investors –

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This would be very similar to a tax free municipal bond that we use to build a library or school or roadway. The county, or city, or state outlines what they need, and they issue tax free bonds – and folks invest in them.

We could do the same on a global scale. We could offer these 9.5 million folks tax free world bonds – that would be used to build up infrastructure that would address issues of drought in Africa, or flooding in Bangladesh, and so forth.. and we would have access to trillions of dollars – and expand the global economy rapidly.

Until you realize whom is in charge of your private parts,

I am.

and  
subsequently of how badly snookered you've been,

The truth is what it is. Lies cannot change the truth. The truth needs no defense.

there's no way in any  
hell on Earth that anything 'Willie Moo' is ever going to fly.

??? I have already done a lot of things – and will continue to do things going forward. So, like many of your statements, they make no sense at all in the light of reality.

BTW, do you even realize what number of our homes are 50% or more heated with wood, corn and even coal, because they simply can't afford their local energy grid or other alternatives as is?

Not a whole lot. Hubbert in a Scientific American article in September 1971 – on the issue entitled Power and Energy – showed that the entire Earth had the following sources of renewable power

50,000 TW – direct solar  
320 TW – tides, rivers, wind, currents  
40 TW – photosynthesis

Humanity uses 10 TW of energy currently and that demand is growing at 4% – which could rise to 7% with the right policies related to labor practice and public investment worldwide.

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Of course, thanks to our corrupt government, many have lost their homes and are living on the streets,

Of 300 million people fewer than 60,000 are living in the streets according to the WSJ. – one in ten thousand. Most of these are folks who in an earlier time would have been put away in a mental institution. But Jimmy Carter helped pass legislation that closed down a lot of the mental institutions – which lead to the current situation. Many of the more violent folks were arrested and are now in prison – swelling our growing prison population – which is another indicator of our decline as a culture.

[http://en.wikipedia.org/wiki/Street\\_children](http://en.wikipedia.org/wiki/Street_children)

A worse problem world wide are the 150 million street children in the world. UNICEF expects this to grow to 800 million by 2020. Horrific actions by 'concerned businessmen' who organize clean up squads to hunt down and murder children in the street – without police intervention. Untold are those from the US, Japan and Europe, who pay to go on these escapades.

This alone shows us that we are culture in decline – more than anything else I can think of.

or if lucky they live in some god forsaken dump of a place with minimal or w/o energy. The American system has badly failed to take care of its own kind from the bottom up,

That's not true. Despite growing problems in some areas, aggregate wealth and its dispersal is growing better and better – and America is a large contributor to this trend. Even so, I do agree that our government is failing us, and that governments generally throughout the world fail to address the issues facing us. So, they all will ultimately fail and something new and better will take its place.

and there's simply not the resources available as long as those Cheney/ENRON/Exxon types and of their fiath-based puppeteers are in charge.

They certainly do not believe there are enough resources. That is true. At the same time, Exxon for example, fears any change in the means of producing energy – that may have an adverse impact on their

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valuation. So, they are creating the very situation they blame for decisions. I do not believe they are doing this on purpose. You need to realize how much courage and strength of character you need to have to stand against the tide and try to affect change. If you would take 6 months or a year vacation from the internet – you'd see how hard such change is.

But then you and others of your pathetic kind don't think there's any such problems to begin with.  
– Brad Guth –

There are plenty of problems. But that doesn't define me. You seem to relish in defining your world in terms of problems. Maybe because it makes you feel superior to everyone. You certainly like ending your screeds with words like 'others of your pathetic kind' and stuff like that. Clearly you're a person of low self esteem who's only joy is feeling himself superior to others – even if its totally imagined.

That's why it makes sense for you to get off–line and do something fun. Forget all the problems and do something that someone else truly values. Mother Teresa said all each of us need do, is go out and find the most miserable person you can find and let them know they are loved. If each of us did that the world would be transformed.

So, do it Brad. Get off line and do it!!

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