First Quarter 2018 Update

Business and Technology Objectives
General Operations Update

• SunCell® engineering is progressing well.
• I am working on achieving the ideal SunCell® design and patenting it.
• We are working on a strategy to fund the company and succeed at commercialization.
• Considering new structures for BrLP and possible JV’s such as LLC’s with Investor tax benefits and other licensing structures to support business development and to raise enough money to fund the development of the SunCell® to an obvious commercial viability.
General Operations Update cont’d

• The current cost of our operations is about $5M/y.
• Last year we successfully raised $20M at a $6B market capitalization.
• We are working on cost projections and timelines to achieve prototypes of thermal and electrical SunCells® that demonstrate an obvious commercial viability.
• We are also working on updating our business plan, financial projections, and presentations.
• As a high priority, BrLP will consider corporate partners to succeed at developing a commercial SunCell® product.
• Also, bidding out development of components of the new advanced SunCell® power source and MHD converter to multiple engineering firms.
Carbon-Domed SunCell® for PV Conversion
Columbia Tech SunCell®
Engineering Program Update

- Since October, Columbia Tech (CT) was tasked with the goal of mastering continuous injection and ignition with the carbon-domed SunCell® design for thermal photovoltaic (PV) conversion.
- CT made some incremental changes to improve the electromagnetic (EM) pump, but have not been able to achieve SunCell® operation goals.
- One impediment is that CT has not succeeded to melt the silver.
- On the week of January 22nd, two CT engineers and their SunCell® and support equipment were on-site at Brilliant Light.
- We have built a new antenna that should solve the melting problem, but due to a priority shift to an advanced design, we plan to quickly finish this phase of development using gallium, a low-melting-point metal to eliminate the heating challenges that are anticipated to be optimally solved in the advanced cell design.
2018 Program Goals

• We have been focused on a much more advanced design that has the capacity to generate arbitrarily high power with much less complex systems that should have a significant impact on the time to commercialization.

• I am working on pioneering innovations and blocking intellectual property regarding the SunCell® power source and electrical conversion.

• The same power source can serve as a platform for myriad thermal power sources having $3T/y markets.

• Both the advanced ceramic and current carbon SunCells® can power the heating technologies, but the ceramic SunCell® has many advantages.

• TMI has completed their work on a SunCell® radiative boiler design.
Advanced SunCell® Design Advantages

• All-ceramic SunCell® reactor that can operate in air, no sealed chamber required, standard materials and seals, operates at standard elevated temperatures, has no cell electrical connections, power leads are low current, supports known hydrino reaction chemistry, no corrosion potential from reactants, standard mass flow reaction gas delivery, near perfect reservoir level control to enable steady head pressure for submerged injectors, enables optimal efficiency of heater antenna design, enables magnetohydrodynamic (MHD) conversion, and supports thermal and electrical power production.

• MHD has the capacity to generate arbitrarily high power with much less complex systems that should have a significant impact on the time to commercialization.

• With MHD conversion, the power level may be much greater than PV with much less time to big power such as megawatt-scale that operates reliably at lower cost.

• Relative to thermophotovoltaic, MHD is a means to avoid possible more lengthy field trials due to MHD being proven technology for large scale power generation with the advantages of standard operating temperature, standard materials and seals, a much higher power density, lower costs, higher efficiency, much greater robustness, and much simpler off-the-shelf components.

• MHD comprises system simplicity with no moving parts.
2018 Program Goals Cont’d
Magnetohydrodynamic Converter

• We should be able to move more quickly to a commercial SunCell®
electrical power generator once the advanced ceramic SunCell® and
MHD engineering come together, albeit we are also pursuing the
carbon SunCell® radiator and photovoltaic conversion.

• Modeling of a number of MHD thermodynamic cycles, modified for
the SunCell® showed at least one of low efficiencies and a need for
undesirably large support equipment.

• I invented a novel MHD thermodynamic cycle that seems suitable
for the SunCell®.

• We have three outside consultants working on modeling the MHD
converter with results expected in a week that should provide
further answers to its capability.

• Currently, the prospects look favorable.
Due to recent developments our goals for 2018 have taken shape.

One goal is to prove our power source to the world in the near term through power measurements, identification of the hydrino products of the reaction, and engineered power systems.

The power source is our core business and basis of the majority of our value.
Power balance:

20 MW from 10 millionths of a liter volume:


- The power produces extraordinary and unique signatures such as extreme ultraviolet continuum emission, an essentially fully ionized, high-pressure plasma based on Stark effect measurement by Balmer alpha line broadening, and a shock wave that has recently been determined to be about 10 times more powerful than that produced by the same weight of TNT.
• The hydrino products comprises a new field of chemistry that will be pursued commercially.
• The energetics of the hydrino reaction produces a shock wave that is the basis of an energetic materials business that will be pursued commercially.
• The energetics of the hydrino reaction produces extraordinarily intense short-wavelength light that is the basis of a light source for photolithography, chemical curing, bioremediation and other applications that will be pursued commercially.
• The hydrino reaction power can be harnessed by engineered power systems such as the SunCell® having boiler and electrical converter components for the thermal and electrical power markets, respectively.
• The molecular modeling software business based on the underlying classical theory will be pursued commercially. Currently 1000’s of users have tested the freeware with great satisfaction.
Energetic Materials

- Initial data such as shock wave propagation velocity on hydrino energetic materials shows superiority to gunpowder: http://brilliantlightpower.com/wp-content/uploads/papers/Hydrino-Blast-Power-Paper-120517d.pdf

- An explosives expert’s report is about complete that shows that the hydrino reaction blast parameters are ten times better than those of TNT.

- Analytical evidence indicates that we are forming novel hydrino compounds during the detonation. See video of extraordinary compounds at http://brilliantlightpower.com/plasma-video/
Analytical identification of hydrino product is about 75% complete. The elemental composition of reactants to form hydrino hydrogen products is known to 99.99%. This is below the analytical detection limit for any contaminants. The analytical tests further confirm the elemental composition. Known possible compounds of the starting elements are easily eliminated. The products are not known. Moreover, the products exhibit magnetism that is unknown to the elemental composition. Current data supports that the products comprise hydrinos. There are analyses that appear unequivocal, but the results need repeating.
Novel Hydrino Compounds
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Ongoing Validation

• We have perfected state of the art optical power measurements and are near completion of advancing our calorimetric capabilities to the same gold standard caliber.

• Validation of our gold standard optical and calorimetric power measurements (http://brilliantlightpower.com/wp-content/uploads/papers/Hydrino-Blast-Power-Paper-120517d.pdf) by an expert is near completion with additional validators to follow.