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Executive Summary

Generating Electrical Power from Hydrogen to Dark Matter

Founded October 1991

1244 C Delaware Corporation (cap table attached)

Headquarters in Cranbury NJ

1200 shareholders (all accredited, hedge funds, corporate, family offices, personal wealth)

Founder, CEO & President Randell Mills 63%, others 1% or less

10 generations of technology to achieve 1st in class TPV-SunCell®

\$140M invested

80+ patents worldwide, 100+ patent applications

10 employees

\$10M cash with a burn rate of \$3.5M/y

Brilliant Light Power's Breakthrough Autonomous Green Power Source

Brilliant Light Power, Inc. ("BLP") has created a disruptive, non-polluting new primary energy source that is independent of fuels and grid infrastructure, from the conversion of hydrogen that can be obtained from the electrolysis of water into a previously undiscovered, more stable form called "Hydrino®" that releases 200 times more energy than burning hydrogen. Our SunCell® having a capital cost of less than 1/10th that of solar was invented and engineered to harness this new source of power.

BLP has discovered and proven the existence of Hydrino®; developed a device, a SunCell®, to convert the radiant power release to electricity using concentrator PV to power essentially all thermal, cooling, electrical, and motive applications. Extensive tests/proofs have been validated at commercial scale. The Company began building a prototype of current SunCells® in 2018, completed development of and validation of a 250kW thermal boiler in 2020, and completed development of a commercial prototype optical power source to produce electricity by concentrator photovoltaic conversion in 2023.

Specifically, BLP is operating a SunCell® at commercial scale (250 kW) producing power levels that, upon finalization of engineering and design, can power essentially all power applications with no fuels or grid connection, projected \$20/kW cap cost, \$0.001 kW/h generation cost with no transmission, distribution, or demand charges, no supply chain issues, and zero pollution including CO₂. Our global and significant patent portfolio protects our leading technology position and products.

How the SunCell® Works and How It Will Be Commercially Deployed

The SunCell® comprises a plasma cell that injects hydrogen and catalyst, and two electromagnetic pumps serve as electrodes by injecting intersecting molten tin streams from corresponding reservoirs wherein the connected streams carry a low voltage, high current to form a Hydrino®-reaction plasma in a reaction chamber. The SunCell® is an optical power source that is mated with a commercial dense receiver array (DRA) comprising an ensemble of concentrator photovoltaics cells (CPV) that operate at 1000 times the light intensity of solar-farm PV cells to produce electrical power for total electrification of essentially all power loads. The autonomous SunCell® (i) comprises standard recyclable materials with no expected supply chain issues, (ii) it is manufacturable with known commercial vendor-supplied components, and (iii) upon successful commercialization, it will be able to service all major energy markets: thermal, electrical, and electric motive (e.g., automotive, truck, rail, marine, aviation, aerospace) using existing electrical devices and systems.

Optical power or radiation transfers power at 10 to 100 times the power per area compared to conduction and convection of combustion and nuclear power plants. The 3000-5000K SunCell® plasma emits radiation at a power density of 4.6 to 35 MW/m² transmitted through a transparent plasma reaction chamber. With light recycling, the transmitted radiation incident a CPV DRA can be converted from optical to electrical power at over 50% efficiency enabling extraordinary performance, logistics, low capital cost, and projected electricity costs of less than \$0.001/kWh.

Essentially every imaginable power consuming device in the world can be electrified with proven, cost competitive, reliable, safe, UL approved, warranted systems, mass produced and supported by the world's OEMs. The SunCell® can power these devices completely autonomously of fuels and grid infrastructure, operating in essentially any environment at greater power density and power to weight ratio than any prior known power source.

Scientific Basis of Energy Release from Hydrogen Atoms

Our theoretically predicted energy breakthrough is based on reacting atomic hydrogen with a catalyst to cause the atom's electron to transition to a lower-energy orbital forming Hydrino®, a more stable chemical form of hydrogen. Hydrino® has been trapped in inorganic crystals and as a cryogenically condensed gas permitting independent validation of the existence of Hydrino involving 23 types of methodologies and spectroscopies run at BLP and leading universities showing characteristic signatures that do not match any other known species. The peer-reviewed, enabling, and predictive theory based on classical physical laws has been successful at analytically solving the major problems and mysteries of physics and chemistry from the subatomic to the cosmological scales including exactly solving molecules of boundless extent and complexity and the prediction of the confirmed acceleration the expansion of the universe and the absence of a Big Bang origin of the universe, recently confirmed by the Webb telescope. BLP has published over 100 peer-reviewed journal articles and performed many validation studies with independent leading experts.

SunCell® Characteristics Enabling the Transformation Electricity Generation

The SunCell® is very revolutionary and disruptive since it can be deployed ubiquitously and proliferate at an unprecedented rate due to its inherent advantages. The SunCell® has no moving parts which are all commercially available and reusable or recyclable. Conventional materials are used in production rather than being dependent on rare or obscure inputs. There are no supply chain issues. Massive photovoltaic manufacturing capacity exists especially considering the 1000 times reduction in PV cells due to the 1000 times intensity light of the SunCell® compared to Sunlight. The DC electrical output is the same as that of solar farms such that it can be power conditioned using standard DC-DC converters and DC to AC inverters. The power is modular and scalable to any power type and capacity by ganging-DC or AC output of a plurality of SunCells®. The grid can be used temporarily for instant backup as the technology is learned-out, followed by disconnecting from the grid such that FERC regulation does not apply due to lack of grid connection; only a local generator permit is required. Moreover, there is no utility gatekeeper bottleneck and correspondingly no transmission, distribution, or demand charges. There is also no OEM bottleneck gatekeeper wherein manufacture involves contract assembly of vendor components that can be multiply sourced.

The SunCell® is very safe, comprising a sealed system that operates at less than 1% atmospheric pressure. No pollution of any kind is produced including greenhouse gases. There are no fuel availability, storage, price or supply volatility, or pollution issues. H₂ gas can be generated in-situ by electrolysis of water as the fuel. No complex installation, duct work, fuel storage, fumes, noise, and toxic exhaust is involved. No infrastructure (e. g. transmission lines, grid, gas pipeline, river cooling) is required as in the case of historic power sources. A big liability of solar and wind is eliminated. SunCells have no intermittency, producing constant power 24/7/365. Uniquely, adoption of this extraordinary climate change solution requires no government support; rather adoption will be driven by market forces due to the 1/10th capital cost and 1/200th generation costs. Power can be acquired with zero upfront cost with no metering under a power lease model at a per diem rate with a projected cost basis of about less than \$0.001/kWh DC.

SunCell's® Impact on the Global Net Zero Emissions Targets for Energy in 2050

With one-year's possible production, the 15TW peak generating capacity of the world can be supplied by 60M, 250kW SunCell® without any pollution including greenhouse gases. As a result, the climate change crisis will be gone. Using the projected capital cost of \$20/kW, the most optimistic case is that the world could produce zero greenhouse gases in less than a year at a cost of \$300B, less than the cost of the US-funded subsidies of the Climate Reduction Act of 2022.

Brilliant Light plans to make the breakthrough Hydrino green energy and climate change solution widely available by outsourcing manufacturing, installation, and maintenance of the SunCells® provided under a power generator lease. Autonomous SunCells® can be ganged to any scale, and the power conditioned to any characteristic required to serve essentially all thermal, cooling, and stationary and

motive electrical markets of all scales to meet industry sustainability goals at vastly lower cost and greater logistical flexibility.

Supporting Documents

Business

Full Business Presentation

https://brilliantlightpower.com/pdf/Business_Presentation.pdf

Overview Business Presentation

https://brilliantlightpower.com/pdf/Overview_Presentation.pdf

New Developments

<https://brilliantlightpower.com/news/>

Patents

https://brilliantlightpower.com/pdf/Global_Patent_Portfolio.pdf

Power and Engineering

SunCell® 275 kW Continuous Steam Production Validation

<https://brilliantlightpower.com/validation-reports/>

[https://brilliantlightpower.com/pdf/Report_on_Water_Bath_Calorimetry_\(031621\)_rev.pdf](https://brilliantlightpower.com/pdf/Report_on_Water_Bath_Calorimetry_(031621)_rev.pdf)

Additional Validation Reports

<https://brilliantlightpower.com/validation-reports/>

SunCell® Operational Videos

<https://brilliantlightpower.com/plasma-video/>

Exemplary TPV-SunCell®

<https://www.youtube.com/watch?v=w8A9aVXrWNI>

Hydrino

Hagen EPR paper

<https://www.sciencedirect.com/science/article/pii/S0360319922022406>

https://assets.researchsquare.com/files/rs-144403/v1_stamped.pdf

The “Hydrino States of Hydrogen” review paper

<https://brilliantlightpower.com/hydrino-states-of-hydrogen/>

https://brilliantlightpower.com/pdf/Hydrino_States_of_Hydrogen.pdf

Analytical Presentation

https://brilliantlightpower.com/pdf/Analytical_Presentation.pdf

Theory

Grand Unified Theory of Classical Physics

<https://brilliantlightpower.com/GUT/GUT-CP-2020-Ed-Web.pdf>

Atomic Theory Presentation

<https://brilliantlightpower.com/wp-content/uploads/theory/TheoryPresentationPt1-web-032017.pdf>

Molecular Theory Presentation and Millsian

<https://brilliantlightpower.com/wp-content/uploads/theory/TheoryPresentationPt2-web-032017.pdf>

Collective Phenomena, High Energy Physics & Cosmology

<https://brilliantlightpower.com/wp-content/uploads/theory/TheoryPresentationPt3-web-032017.pdf>

Millsian Exact Molecular Solutions Software

<https://millsian.com/>

Exemplary Theory Journal Articles

https://www.dropbox.com/sh/qucgggr3sbtnmiw/AAA9g_idEnX74c5YD2l8b1HMa?dl=0

Peer Review Theory Reports

<https://brilliantlightpower.com/theory/>

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[Reviews by Dr. Randy Booker and Dr. Mark Nansteel](#)

Simulations and Support Materials

<https://brilliantlightpower.com/atomic-theory/>

<https://brilliantlightpower.com/molecular-physics/>

<https://brilliantlightpower.com/cosmology/>

Journal Publications

Peer Reviewed Publications List

<https://brilliantlightpower.com/pdf/Publications.pdf>

Exemplary Peer Reviewed Articles

<https://www.dropbox.com/sh/proq7b4ur0vttl5/AACk3xqTrew9A7DyZfAgaGsia?dl=0>