



## Brillouin Energy Corp. - Summer 2020 Update -

### Unprecedented Progress During These Unprecedented Times

A lot of great progress has been made since Brillouin Energy's last Update. We have exciting news to share. This Update contains details about what we have achieved and been recognized for with our technology, as well as how our business is designed, where we now stand, and the tremendous opportunities that lie ahead.

We recognize that this is a very long Update. It is full of really good news and we highly encourage and truly hope that you will read and enjoy it all. **For those wishing to get to the Brillouin Bottomline quickly, we have highlighted it for you starting on Page 11.**

Brillouin Energy Corp (BEC) is adapting to the "New Normal" of the Covid-19 pandemic as we work to attain higher and higher heat outputs from our clean, radiation-free LENR (Low Energy Nuclear Reaction) Hydrogen Hot Tube (HHT™) Boilers. Despite challenging working and financial conditions, we continue to make very exciting progress.

Brillouin's technology is now dramatically closer to becoming a commercially scalable LENR energy generation system than at any time in our eleven-year history. Awareness of our progress is building, as highlighted in a 5/21/20 news article by the Director of the EraNova Institute, which appeared in the large online news journal, Medium.com (click on the following link):

<https://link.medium.com/FFTqZ3hWF6>

The reasons Brillouin is gaining this growing attention and awareness follow:

[www.BrillouinEnergy.com](http://www.BrillouinEnergy.com)

## **Brillouin Energy – A Winning Hand**

### ***Cheaper, Cleaner, Safer, Scalable, Resilient, On Demand***

Brillouin's Hydrogen Hot Tube™ (HHT™) with Controlled Electron Capture Reaction (CECR™) technology demonstrates our growing ability to tap the tremendous power of nuclear energy, but without any of the downsides of traditional nuclear energy. Our radiation-free nuclear technology is better in six fundamental ways:

***Cheaper*** - Our HHT CECR technology has been developed using our proprietary, patented system which generates LENR heat on demand at incredibly Low Operating Costs. Our system uses tiny amounts of regular Hydrogen (not Deuterium) as fuel. Even in our technology's initial development stages, the cost of this hydrogen usage is dramatically lower than traditional fossil fuel costs. As our technology matures, this operating fuel cost will ultimately be driven down to less than 1% of conventional fossil fuel energy costs to produce the same amount of thermal output. This is a dramatic advantage in reduced operating costs.

Low Capital Costs to produce and install Brillouin HHT energy generation systems will also result from the simplicity of our design as well as the absence of any dangerous radiation from our CECR technology. For instance, the downfall of existing nuclear power has been the many challenges of radiation, including safety, radiation shielding, containment, nuclear waste, monitoring, security, and the very high capital cost of handling these challenges under all circumstances. By comparison, our HHT technology, which does not have any of these issues, projects an ultimate capital cost per-unit-of-energy-output that is less than 20% of the capital costs of conventional nuclear-powered electricity generation systems. On a per-unit-of-energy-output basis our HHT capital costs project to be approximately equal to or less than fossil fuel-powered electricity generation systems, and to wind-powered electricity generation systems, and somewhat more than for solar-powered electricity generation systems. This comparison to wind and solar is not "apples to apples" though, in that our HHT system produces power on-demand whenever and for however long it is needed, while wind and solar are intermittent energy sources with all the associated challenges of their intermittency.

***Cleaner*** - In contrast to fossil fuels' CO<sub>2</sub> and other toxic emissions and nuclear power's harmful radiation or radioactive waste issues, Brillouin's HHT CECR technology creates ZERO radiation nor any other form of pollution. This completely eliminates this difficult issue from the equation. To put it bluntly, BEC has the ultimate solution to energy-caused pollution and Climate Change.

***Safer*** - Because Brillouin's technology eliminates all nuclear safety hazards, it is also incredibly safe. There is absolutely no waste of any form to cause contamination or disposal issues. Because the physical design of our technology is solid-state in nature with no moving parts, it is incredibly stable with absolutely no possibility of runaway. In fact, LENR heat generation with our HHT system will be safer than natural gas used in residential and commercial facilities.

***Scalable*** – Brillouin's technology is more flexible and scalable than any other energy generation technology because of the very small size of the fundamental operational unit of our HHT design.

That design is a 3/8<sup>th</sup> inch diameter metal tube ranging from as little as 1 foot long to as much as 5 feet in length depending on the application, plus a small electronic power control system. These HHT metal tubes can be used individually or bundled for any type and size energy application from very small to very large, for the ultimate form factor and output flexibility. This leads to far greater distribution possibilities, including decentralized and even democratized energy systems, including the ultimate microgrid and energy security concepts that are more and more in demand.

**Resilient** – Brillouin’s HHT is very resilient when it comes to operations and maintenance. It is solid-state in nature with no parts to replace and virtually no on-site servicing, dropping traditional maintenance costs to near zero.

**On-Demand** – Energy generation with Brillouin’s technology is available on-demand at any time. It is not intermittent like solar or wind energy. Utilizing our proprietary electronic Q-Pulse™ technology, our HHT can be turned on and off as well as up and down as needed. This on-demand capability is unique and fundamental to Brillouin’s CECR technology, and stands alone compared to competing LENR technologies in development, as well as to solar and wind energy generation.

When compared to all other competing energy generation technologies, leading in each of these areas of distinction – Cheaper, Cleaner, Safer, Scalable, Resilient, On-Demand – Brillouin clearly has a winning hand. These distinctions create the value of “Brillouin Inside”.

## **Our Business Model: Licensing With “Brillouin Inside™” – And The Total Addressable Markets We Target**

Brillouin’s HHT CECR technology generates heat whenever needed, i.e., on-demand. That is what our technology does – no more, and no less. It really is that simple. We have developed a breakthrough technology that enables heat energy generation on-demand, simply, cheaply, cleanly and safely, in virtually any quantity and at any rate needed.

Our technology already is or soon will be of great interest to many Original Equipment Manufacturers (OEMs) who have need for this breakthrough solution to empower their competitive edge. These include the following very large energy application markets, listed in relative order of expected adoption:

- commercial and residential hot water heater and boiler manufacturers
- commercial and residential space heating manufacturers
- process equipment manufacturers for many industrial applications including HVAC
- electricity generation equipment manufacturers
- satellite and related aerospace technology manufacturers
- various forms of transportation manufacturers

Brillouin Energy’s business model is to license our proprietary technology to OEMs in these markets, i.e., companies who make equipment for these markets. We will also license our

technology to the service companies who run or manage the infrastructure into which these OEMs' equipment is placed. I.e., service companies may be the operators running a specific OEM ecosystem like electricity generation, so they may be the more effective point of entry for our technology. Additionally, in some cases, we will license our technology to very large companies or large governmental entities who want a single use license to use our technology within their own private field of operations. The point is that there are many market entry points where our technology becomes attractive to commercial or municipal entities, all of which create large recurring revenue and earnings opportunities for the company.

We have conceived of and developed all of our technology over the years with this licensing and market entrance strategy in mind. As a result, our technology is perfectly suited to displace current conventional energy sources in all of these markets as nearly a “drop-in” replacement for their existing heat energy sources.

We anticipate that the earliest adopters of our technology will be hot water heater and boiler manufacturers, listed first above. Just these early adopters serve an estimated \$50 Billion annual market. They will have a tremendous competitive advantage with our technology even at the relatively low energy outputs that, given our recent technical development progress, we confidently anticipate achieving within this next year.

As reported next in this Update, we are already receiving strong interest from large, mainstream water heater and boiler manufacturers or their client customers, due to our technology development and licensing strategy. These early adopters will generate substantial up-front fees and royalty revenue streams for Brillouin. In turn this will both fund and accelerate our further technology development and commercialization process to serve other markets requiring higher level energy outputs.

Taking this “Brillouin Inside” licensing route to revenues, where we replace the primary heat generation components inside of well-established market leading products in the above categories (rather than developing our own entire Brillouin product line), will enable much faster access to the Total Addressable Market (TAM) with substantial up-front license fees, annual contract maintenance/service fees and royalty revenues, while greatly reducing our capital needs. This “Capital Lite” strategy is clearly in the interest of all shareholders, stakeholders and partners.

Additionally, BEC has the option of licensing our technology directly to established large entities with a “shared savings” recurring revenue model, or a straight product royalty model on units sold, whichever works best within the licensing channel. The shared savings models in particular can be highly attractive recurring revenue opportunities for the company. In addition, Brillouin continues to explore, and believes it will soon add the concept of having a “consumable” product component for sale within certain license applications. This will become more evident over time.

The number, type and size of TAMs that Brillouin is preparing to serve is nearly overwhelming. Our ability to quickly disrupt all of these markets with a cheaper, cleaner “Brillouin Inside” energy source in the near future is very real. These are very exciting times at Brillouin!

## **Brillouin Already Receiving Real Market Interest**

In the past year BEC was contacted by two different leading owner/operators of large numbers of medical facilities in the US about our technology's perfect alignment with their goals of aggressively pursuing clean Green Energy solutions for their many facilities. One of them is a household name and has a large investment fund specifically dedicated to such goal. Both entities have expressed interest in testing our HHT technology in any reasonable commercial-scale boiler beta test as soon as that can be made available. Either of these two customers alone are substantial enough to attract large boiler manufacturing partners to the table to license and develop commercial boilers with "Brillouin Inside". As it turns out, that has already begun to happen.

Unbeknownst to us, a leading boiler manufacturer and supplier to both of these companies' medical facilities has been tracking Brillouin's progress for a number of years. Upon making the connection among all parties, we were invited to our first technical meetings with this boiler manufacturer in early February at their headquarter facilities. They were very impressed that we had independent, easy to understand verification of positive heat generation, with the key added ability to turn our system's heat output On, Off, Up or Down. The fact that our system uses regular hydrogen as a nuclear fuel and yet operates at temperatures perfect for directly heating water for facility and/or process heat as well as for driving a steam turbine, all while generating absolutely no harmful radiation, clearly won the day. This company has sent BEC a preliminary Letter of Intent to express their interest in further testing our technology for ultimate applications. It is available to see upon request for any due diligence process after signing our NDA.

In addition, we were more recently contacted by a regional manager of a large California State Agency seeking to start a pilot project with Brillouin to test two different medium size (both in the 500KW or 2M BTU range variable outputs or greater) commercial hydronic heaters for one of their northern California maintenance facilities. Their formal inquiry to us is part of California's strong push to drive innovation for energy sustainability. Again this is also available to see upon request for any due diligence process after signing our NDA.

Central to all of these parties' interest is the success we have achieved to date with our technology and system design configurations, which enable quite seamlessly fitting into their existing boiler designs. Our constant focus on these kinds of pathways to commercialization as we develop our HHT technology is already beginning to pay dividends.

## **More Independent Verifications of Brillouin Excess Heat Generation**

Brillouin continues to strengthen our performance verifications, adding to our growing list of independent 3<sup>rd</sup> party technical validations with two new reports:

- 1) A European infrastructure investment company contacted Brillouin and requested additional technical due diligence to verify our system's positive results. In the spirit of full transparency to meet their technical team's requirements, we agreed to a confidential, multifaceted, extended test designed specifically by their lead nuclear physics expert and PhD engineer.



Their consulting engineer designed their own test for our HHT system using new heat flow calorimetry. Their engineer took control of our HHT's in our lab and both directed and monitored their operation in order to compare the heat output of an active or functional Brillouin catalyst tube, with that of a "null" or non-functional Brillouin catalyst tube, in identical side-by-side HHT test beds. This testing was comprehensive, occurring over a roughly 10-week period of time.

The concept was that the "null" catalyst tube should create the same amount of heat output as the energy that is input, meaning it was completely ineffective, or "null", while the active catalyst tube should produce more heat output than the energy that is input, meaning that it is effective at generating extra heat energy, or "excess heat", which is the goal of LENR. This difference in heat outputs is easily measurable by the higher temperatures output by the active catalyst tube system compared to the temperatures output by the null catalyst tube system. There would be no difference in the output temperatures between the two systems if there were no LENR happening in the active catalyst tube.

Successful generation of excess heat from LENR was observed and measured across many test runs under numerous conditions and of varying durations (days to weeks) by their engineering expert to ensure their confidence in the test results. In addition, to ensure there were no biases between the systems, every component that was involved in the production and/or the measurement of LENR heat, which could be moved between the two systems without undue disruption, was swapped between the two systems, and the tests were rerun to see if the results of the two systems changed or did not change. It was definitively shown that no component swapping between the two systems resulted in significant changes in results. Their expert was able to choose what components were swapped, and was fully satisfied that all components that should be questioned, were questioned, and the final results were to their team's satisfaction.

This is a relatively simple but very elegant test that enabled conclusive proof that the Brillouin's active catalyst tubes produce LENR resulting in excess heat. There is no other way to explain the results that were observed. This conclusively proved yet again that the Brillouin system successfully produces LENR heat. While we see this every day in our lab, to this European company and to the outside world, this is yet again a highly significant third-party expert verification of Brillouin's authenticity and successful accomplishment of LENR produced routinely on-demand, replicably and verifiably with no possibility of mistake due to oversight or measurement errors. This led to their engineer writing a positive technical report on the outcome of their testing. The report was written from an advanced industrial perspective seeking electric power generation capabilities, and is yet another promising positive validation point for BEC.

This test was conducted under a mutual confidentiality agreement. We are able to provide a redacted copy of the final test report (the identity of the investment company is still under a confidentiality agreement, but everything else is readable) for any due diligence process to current and potential investors under our NDA upon request. A review of this report shows conclusive proof of excess heat generation and makes clear how extensive the technical effort was to achieve the report's conclusions.

This process resulted in the industrial investment firm making a modest investment in Brillouin and also led to discussions of a very large license agreement investment. Ultimately, Brillouin

and this investment company were not able to agree to terms that were satisfactory to both parties. Some aspects of their offer were very attractive and some gave us concerns about protection and control of our IP, which we were not able to overcome. BEC Management is committed to fair and transparent dealings at all times, and to protecting shareholder value. Nonetheless, this investment company is now familiar with our recent technical achievements and we know they continue to monitor our progress, which we suspect may later lead to more discussions.

2) Our senior science advisor, Dr. Francis Tanzella, also wrote his own report on the outcome of these same tests. Dr. Tanzella's Report was written as an observer where he also monitored all of the data input and output, while interacting with the European company's 3<sup>rd</sup> party engineer. Dr. Tanzella's report was effectively equivalent to the European sponsored test report in its test results, conclusions and final narrative. Both reports conclusively state that the HHT system with the reactive catalyst tube generated clearly identifiable LENR produced heat, vs. no such heat generation by the null catalyst tube. The Tanzella Report is available upon request.

## **Latest Positive Technical Recommendation Letter for Brillouin**

Brillouin is honored to have recently received its latest positive recommendation letter for our technology from a technical and industry expert, Mr. Wally Rippel. Mr Rippel extensively surveyed and analyzed all recent test reports and our historical data for the past five years and consulted and quizzed a number of our development engineers as well as Dr. Fran Tanzella and our Founder/CTO, Robert Godes. **Mr. Rippel's succinct letter, attached as an Exhibit to this Update, concludes by “strongly encouraging further development of the Brillouin technology.”**

Mr. Rippel has 38 patents to his name, some of which were the basis of the original technology license for the beginning of Tesla Motors. In less than two pages, Mr. Rippel, a brilliant man who knows both our technology, plus the entire history of the LENR field quite well, speaks volumes about our recent progress from his in-depth expertise in physics, electrical engineering, industrial power electronics, electrical machine and heat transfer perspectives.

## **Another Brillouin Patent Issues – Our First in Japan**

Brillouin recently received confirmation of issuance of a new patent dated 5/15/20 in Japan. The patent secures our method of fabricating a catalyst tube (catalyst rod), which is a critical component of Brillouin Energy's HHT product family. This is another step forward in building the strength of Brillouin's Intellectual Property portfolio. It is the first time we have achieved a patent in Japan.

## **Clarification of Recent Brillouin Technical Achievements In Context**

For clarification and the avoidance of any confusion, our technical accomplishments to-date have proven that we can create LENR heat in our lab-scale HHT test systems, which were designed and built to meet the exacting standards of an expert 3<sup>rd</sup> party calorimetry (heat measurement) design called “System ID”. The System ID calorimetry focuses on a very specific and precisely

defined part of our overall HHT system, that being only the catalyst tube itself - and any electric or heat energy that is put into or comes out of the catalyst tube. This very precisely defined and measured ('Identified') system is chosen to remove all other variables and parts of the overall system from consideration so that very minute performance differences in just the catalyst tube component can be measured with certainty. When searching for and analyzing early successful production of positive LENR energy by the functioning part of our CECR system, which is the catalyst tube, this very narrowly focused approach to measuring energy inputs and outputs for just the tube is critical to ensuring that results are correctly measured and reproducible, and are not from other unintended or unknown sources.

The System ID results that we achieved at their peak Coefficients of Performance ("System ID COP") of up to 2.7X have been posted on our Homepage and in further SRI related verification documents. It was important for us to prove that we could achieve these results in order to confirm to highly technical 3<sup>rd</sup> parties, as well as to ourselves, that our core LENR technology principles for controlled energy generation, resulting in being able to turn the reaction On, Off, Up or Down, repeatedly and under control, actually work. The incredibly precise calorimetry data that we generated over an extensive testing period that concluded last year, did just that. However, the System ID design is not a commercially scalable product design yet. It was effectively an all-important first phase in a two-phase process to achieve commercial viability. It was a demonstration that our CECR LENR technology and our HHT system truly work and are definitely real.

The fact that BEC achieved multiple 3<sup>rd</sup> party-verified successful demonstrations of LENR System ID COPs of up to 2.7X, which can be turned On, Off, Up or Down at will using our controlled HHT system, is a tremendous accomplishment and should not be underappreciated. To the best of our knowledge, nothing like this has ever been done before. This very positive, "on-demand" outcome of this phase of our development is an unprecedented breakthrough in any branch of nuclear fusion, LENR or otherwise. All the fundamentals of our controllable HHT system design have been conclusively proven to work.

Further, to the best of our knowledge, no other LENR technology's design has reached our HHT's level of manufacturability to enable ultimately producing such a system on a mass-production basis using inexpensive materials, while delivering true "plug & play" capabilities. All other reports of LENR heat production, even if reported to occur at higher COPs, have yet to show any consistency and cohesiveness like this, *which is the acid test* if you want to take the next step toward production to make actual LENR-driven products.

## **Requirements for Brillouin Market Traction and Commercialization**

While our recent results, peaking at a System ID COP of 2.7X, are truly breakthroughs and very promising, they do not get us all the way to the goal of being able to scale into commercial products. Based on a survey of key markets for our HHT technology, the key to beginning HHT commercial viability and production is to generate overall LENR system COPs high enough to generate heat energy at a level that is *at least twice* that of the total electric energy input into the overall LENR system, in this case, our overall HHT system (not just the energy input that goes into the catalyst tubes, as in System ID measurements.)



A simple way to think about this is that when you plug our HHT system into the electric socket in the wall, the amount of electricity that the system uses from the plug or wire coming “out of the wall” is the amount of electric energy that is input into the overall HHT system. To reach commercial viability, the net amount of heat energy generated by the overall HHT system must be twice this amount of input energy that came “out-of-the-wall”.

To initiate licensing discussions and revenue traction, a net doubling (2X) of energy “out-of-the-wall” by our HHT system will push early adopting companies in first-to-adopt market segments over the top. By this we mean, to begin to achieve commercial adoption and success, for each watt of electric energy from the input source, i.e., the plug from the wall, it must generate at least two watts of heat energy output from the system, i.e., 2X Net Coefficient of Performance (“Net COP”). Of course we intend to generate much more than this as we continue to scale - but we begin to become commercially viable when we pass this 2X mark in our engineering development.

This overall system requirement of 2X Net COP for beginning commercialization is nearly a doubling of the COPs generated in the above referenced “System ID” test results. In System ID terms, to achieve the first commercially viable designs we project that the System ID COP would initially need to be approximately 4X (versus the recently achieved maximum System ID COP of 2.7X) in order to produce a 2X Net COP out-of-the-wall. As the engineering of our technology matures over time, the internal Q-Power will not need to be as high to make the same amount of net thermal output from the wall (because our output to input ratio will continue to improve). Thus, this will continue to increase our Net COP and overall heat output (because our ratios will continue to improve as we scale).

With this understanding in mind, we come to the central objective for BEC reaching market traction and the beginnings of commercial success:

*We must achieve a threshold of 2X Net COP “out-of-the-wall” for two critical reasons:*

- First, it proves beyond any possible doubt to even the most hardened skeptics that LENR is real. It is impossible to get 200 watts of heat energy output from 100 watts of electric energy input “out-of-the-wall” without LENR being real and effective. It will be impossible to deny the existence, viability and world-changing potential of LENR when we achieve this clear doubling of energy output in a simple, verifiable, replicable, repeatable, indefinitely sustainable demonstration.
- Second, this 2X Net COP of output heat energy, i.e., twice as many watts of heat output vs. each watt of electric energy input, is where applications begin to become viable in actual commercial use. There are certain applications where this relatively modest Net 2X power gain or Net COP is enough to save costs for heating water with electricity. But the consideration that pushes this performance over the top to drive adoption is that the LENR heat produced does not generate emissions of any kind. Climate Change is driving more and more municipal regulations (including for example in our own city of Berkeley) to prohibit the use of natural gas for heating applications in new buildings, causing rapidly

growing interest in electric heating of water. This makes Brillouin's HHT technology perfect for certain commercial water heating applications even at a 2X Net COP out-of-the-wall.

***This market-driven clarity of a 2X Net COP “out-of-the-wall” requirement to begin to achieve commercial licenses and revenue from our HHT technology is now our focus and driving force.*** Our technical efforts and our fundraising efforts are all focused on achieving this goal. It actually represents a modest improvement from what we have already accomplished in System ID terms, and we are confident in our ability to close the gap. As Brillouin's HHT Net COP increases from 2X to the 10X level and beyond, which we fully expect to achieve within the next two years or less, the markets demanding our technology will expand exponentially.

## **Brillouin's Current Funding and Investment Status**

BEC recently reached a capitalization milestone for our company with a total of over \$18M raised or generated since our founding in 2009. We have continued to raise funding in our Series C Preferred Stock Round and, as part of the \$18M in total capitalization, close to \$4.8M has come in now through our Series C Round fund-raising efforts. Also, as part of our total raised, we have continued to bring in a small amount of ongoing grant funding from a private foundation. We have very efficiently expended this \$18M sum in order to reach our current promising technical status. We are masters at penny pinching, and every dollar we raise is wisely and frugally spent. We challenge anyone to find another organization that has successfully built and tested 4 distinct functioning reactor concepts, with 4 of the latest design currently operating nearly 24X7, all for less than \$20 million.

The LENR field is legendarily difficult to raise capital in due to its unfortunate history of hype, unmet promise, and occasional malfeasance. Additionally, LENR is an incredibly difficult and illusive phenomenon to create and control if one does not understand the underlying physics. (It's not easy!). But Brillouin has definitively proven that on-demand LENR is possible to create and control when pursued with persistence and careful, methodical development guided by brilliant technical minds taking a multi-disciplined engineering approach. This persistent, methodical development is what Brillouin Energy's capitalization to date has so far enabled.

Brillouin has been very fortunate over many years to receive the support of investors with perception, vision and an interest in the impact that Brillouin will have on humanity and our planet when we are successful. There are also numerous investors in Brillouin who have invested purely on an economic return basis, recognizing the tremendous potential upside on their Brillouin investment. Regardless of your motivation, we sincerely thank all of you for your financial support to date as well as your vision and encouragement. We simply could not have done our work to get here without your support.

It is important to note that we have another very dedicated group of investors in Brillouin, which is our entire Brillouin team of extremely talented technicians, engineers and scientists. Every single member of our team is, without doubt, underpaid for their talents and the work they do for Brillouin and our shareholders every day. Brillouin, under the technical and operating leadership of Robert Godes and Bob George, has attracted and retained this very talented and determined

core team of experts who believe in our cause and are determined to help see Brillouin and our technology through to success. We all owe our technical team a tremendous debt of gratitude for their unwavering investment of their time, energy, brilliance and determination in Brillouin every day. Thank you, Team Brillouin!

## **– The Brillouin Bottomline – Recent Technical Progress Means The Next \$2 Million In Funding Changes EVERYTHING**

**We are very excited to report that based on our most recent technical progress, we have now reached a point where we are clear about how to achieve our critical 2X Net COP Milestone, which will enable the *beginnings of real commercial market traction*, as we have identified above. More specifically:**

- The next \$2M in funding is very likely to enable the beginning of Brillouin Energy achieving “Unicorn” Status (as that term is used in the venture capital community), within the next year, which will be a tremendous uplift in value from where we stand today.
- All of the technical progress that we accomplished in the past year has put us in the position to finally establish the framework of the key 2X Net COP Milestone, and beyond.
- Reaching this Milestone will usher in a whole new era of commercial interest in our technology and our company from OEMs and their customers.
- In the past several months the acceleration of our technical progress has further increased to reach an inflexion point where we clearly now know how to solve all of our remaining engineering challenges – our roadmap is set, we know we can do this, and we are moving full speed ahead.
- All of this has brought us to the point where we have boiled down the critical use of proceeds that we need to finish accomplishing the goal to just \$2M.
- Quite frankly this is not a lot of money to raise, and any existing or new investor can make a real difference in helping the company reach that status, thus benefitting from the tremendous value uplift of Unicorn Status to come.
- Finally (and as a sweetener), based on our very latest technical development, we are now further confident that before we even achieve our 2X Net COP Milestone, we will also clearly demonstrate the most contested aspect of our original technical Hypothesis. This scientific demonstration will produce incontrovertible data that can be produced at any lab with our equipment. This will leave no quarter for physicists wishing to downplay or dismiss the capabilities of our technology to potential investors, or any other strategic partners.

- Altogether, this is extremely exciting news, because it will change EVERYTHING at Brillouin Energy!

The bottomlines are that we have now assembled the technical knowledge and capabilities we need. We have mapped out both our engineering plans and our spending plans, tied together in painstaking detail, to achieve the goal. Taking all this into consideration, Brillouin's technical leadership team, headed by our Founder Robert Godes, now feels strongly that if we close the next \$2M of funding at this time, we have better than 90% odds of success of achieving the 2X Net COP milestone within the next 10-12 months. After all our years of technical work in this very challenging field, to be so close and in such clear sight of this incredible Milestone is aspirational!

Each week our engineering team continues to dial in improvements to our material science, our electronic Q-Pulse controls and our manufacturing processes step by step. The resulting efficacy of our heat generation process keeps getting better every week now, reducing the remaining technical development, and therefore funding, distance to the goal line.

Because all added funding is *increasingly* accretive, our plans for technical growth are intertwined directly with our immediate funding level. They go together. The speed of our technical progress varies somewhat, but fundamentally our results continue to show that the more and sooner that money is invested, the more our technical progress *accelerates* as we get closer to the Milestone. Every incremental dollar invested makes a greater difference and is *increasingly* accretive to shareholder value.

We know these are intrepid statements to make. While we cannot provide or promise an ultimate guarantee of this success, we are highly confident that if we close \$2M in short order, we will indeed achieve this goal within 10-12 months, and possibly less. We mean it. We are that close. In all cases these next funds will continue to be raised within the terms of our current Series C Preferred Stock Round.

Naturally our immediate funding plans are as follows: We are seeking to raise the next \$2M of funding as quickly as possible. We are already gathering commitments. Every size investor can make a real difference here, and investment sooner is better than investment later, as it enables us to accelerate sooner. This will "accelerate the acceleration" of the engineering technical progress already underway.

Successfully accomplishing our 2X Net COP objective changes EVERYTHING for Brillouin. It cannot be overstated how revolutionary this will be for our company, our investors, and for the world at large. We will not engage in hyperbole here, but to prove that LENR is real and quickly commercializable will be completely game changing. The opportunities (and valuation) for Brillouin will be almost incomprehensibly different from where we stand today.

## **Strong Financial and Impact Reasons to Invest in Brillouin**

The timing of this Update coincides with a particularly opportune time to invest in Brillouin Energy Corp from a purely [financial investing perspective](#). We are on the cusp of world-

changing breakthroughs with our HHT technology which will quickly lead to commercialization and licensing revenue in a number of extremely large global markets.

Our situation is akin to that of companies such as Microsoft, Apple, Google, Facebook and Amazon in their very early days. Those companies each identified, created and ultimately dominated huge markets that were not even conceived of by most people before they came to be. Each of their successes is so obvious in retrospect. But almost no one saw what they would ultimately become when they were first starting out.

With all due respect, someday in the not-too-distant future, people will look back at Brillouin and our position in LENR the same way, and say “If only I had invested then...” Having read this Update, you are among the fortunate few to have the opportunity to avoid that fate if you choose to invest now. We would be doing you a disservice if we did not state it this clearly! This is a very rare opportunity to invest in a company that is about to change the world. We know these are very bold statements, but from a purely financial perspective, you don’t want to miss this opportunity.

Additionally, looking at Brillouin from an [impact investing perspective](#), the returns are in addition to and even greater than the tremendous financial returns above. Global-scale additional impacts will be created in the many areas including:

- Climate Change – Slowed, Stopped and Ultimately Reversed with the help of Brillouin HHT’s [Cheap, Clean, Safe, Highly Scalable and Resilient, On-Demand Power](#)
- Clean Commercial and residential boiler, water and space heating markets
- Clean Electricity generation markets without solar and wind power’s intermittency (their inability to be “dispatchable”) and associated costs and issues
- Clean Process heat for numerous industrial applications
- Clean Hydrogen generation by electrolysis for transportation fuels including aviation, rail and marine markets
- Carbon Capture markets powered by abundant clean, cheap LENR energy
- Particulate and chemical air pollution reduction/elimination from fossil fuels of all forms with clean, cheap LENR energy
- Water Desalination for agriculture and other needs with clean, cheap LENR energy
- LENR Microgrid applications for resilience and remote power needs, which are critical to creating the resilient grid safety solutions of the future
- The ability to effectively shrink supply chains being pressured by pandemic conditions, which require microgrid power options at every level in order to do so
- Large reduction of solar photovoltaic rare earth mining and disposal as well as mitigation of associated land-use issues with clean, cheap LENR energy

### **[All Funding Commitments Are Appreciated](#)** **[– Funding Now is Strongly Encouraged –](#)**

We strongly encourage interested investors to consider funding any or all of this next \$2M of our Series C Round now, versus waiting for any reason. This is a huge Milestone in the making, and



is not a joke. Funding now will accelerate and ensure success for you from the accretive ROI perspective described above.

A number of investors have already begun to discuss further or new investment in Brillouin, and this Update is sure to galvanize further interest. The progress we have made recently is creating increasing technical and investment momentum. Each builds upon the other, and we are quite intentionally supporting that dynamic through this Update, as it is best for everyone involved.

With this latest momentum, we have soft-circled a small portion of this \$2M, which is beginning to fund. Quick support for the remaining balance will enable Brillouin to continue our important work from the strongest possible position, to assure the fastest and greatest results and corresponding ROI.

We also have received interest in contingent funding from some parties, meaning they will commit to a portion of the \$2M raise if we can circle the full \$2M by combining with other commitments to close the entire amount at the same time. These pending commitments should be viewed as what they are - more reasons to join in and push this over the goal line all at once. It is possible that we will end up over-subscribing this target. In such case, our confidence level will only further grow. If you are interested, please contact the CFO below.

With the distance to the technical goal line decreasing each week, and our ongoing fundraising receipts coming in, knowing where to set the trigger on such contingent funding is a moving target. We will continue to keep interested parties posted to assure that a funding breakthrough to exceed the \$2M total mark is made as quickly as possible.

These are challenging times for fund raising, but we are successfully putting together this raise from investors who recognize the uniqueness and fortuitous timing of this very large opportunity. The time is now for investing in Brillouin, not in spite of, but rather, because of, the many challenges the world is facing.

## **Closing Out The Brillouin Series C Round, And Future Plans**

Our next \$2M raised is expected to enable Brillouin to reach the 2X Net COP threshold that will fundamentally change our company's near and long-term commercial prospects, trajectory and valuation. With such a fundamental change in valuation, it is likely that we will move to protect existing shareholders from undue dilution by closing our Series C Round. This determination will be made as we monitor our technical progress over the balance of 2020. In the meantime, discussions regarding investments beyond our currently identified \$2M need will be considered, but as we continue to close in on our key technical 2X Net COP milestone for beginning commercial viability, we will need to be mindful of unnecessary dilution of prior investors as we make decisions in this regard.

As we near the Net 2X COP Milestone, we anticipate the recent growing interest in commercial licenses of our HHT technology becoming a reality. Depending on the details of how that next stage unfolds, we will likely use contractual license revenue payments, commitments and growth projections to underpin our plan for our next level of expansion. This next level will focus solely

on funding of our planned prototype manufacturing plant, from which the first commercial HHT products will be manufactured in quantities to meet beta-test requirements for initial license agreements.

There is a good chance that license revenue will pay for a substantial amount, if not all the scaling costs of our next stage prototype production facility. Depending on any remaining need for capital, we may then move to a Series D Round. The timing, magnitude and valuation of a possible Series D Round will depend largely on how those commercial licensing developments go. In any event, upon achieving the technical accomplishments that we fully expect to with our current funding plan, the valuation for our next raise will be dramatically higher.

This is part and parcel of what we mean when we say that achieving the 2X Net COP Milestone changes EVERYTHING for Brillouin. In fact, one of our existing strategic partners has already made it clear that with the 2X Net COP Milestone in hand, it is “game over” as far as being assured of Tens of \$Millions of funding for a D Round, if we choose to pursue that path directly with them on a ‘first right of refusal basis’.

## **In Summary – Why Brillouin’s Success Matters Today**

Recent global events, from the COVID-19 pandemic to the many faces and impacts of inequality at home and in countries around the world, have shined a very bright light on what happens when global problems are ignored or are not effectively addressed in a timely manner. They get worse, and at an accelerating rate. Investing in socially favorable, effective and economically sustainable solutions that are scalable around the globe is the only way to address such problems. Climate Change is another such global problem. Ignoring it or not fully addressing it at global scale will only make things worse, and at an accelerating rate. Worse still, Climate Change is not a problem that can be turned back from over the course of a few years. Its steadily increasing impact as well as solutions to it will take decades to play out. Climate Change is already a crisis, inflicting tens to hundreds of billions of dollars of damage and untold suffering and death on humans and other species globally each year. It will soon be an existential crisis.

Brillouin is on the cusp of commercialization of what has long been considered the Holy Grail of energy generation due to its almost unfathomable promise of cheap, clean, safe, scalable, reliable, on-demand power – dare we say it – “Cold Fusion”. We have worked diligently for over eleven years to get here. We are scientists and physicists and engineers and business professionals, with many decades of experience. We know what we’re doing, and we know how to measure what we’re doing. We are not mistaken about our results or our recent progress.

We thank everyone for your support to-date. We respectfully ask that you continue to support us financially now on what promises to be the most exciting leg of this entire LENR journey. It is, and we are, very real. Our HHT technology will be absolutely pivotal in addressing global Climate Change, the one truly existential crisis of all of our lifetimes.

## And Last, But Not Least – Our Brillouin Motto and Team

*“Those who say it can’t be done should get out of the way of those doing it”*

This is our Team at our lab in Berkeley  
(before social distancing)

We thank you for your support  
as we continue to develop the  
breakthrough Green Energy technology  
that will dramatically reduce  
- and ultimately enable reversal of -  
global carbon emissions



Please feel free to contact us with any questions you may have regarding this Update. Please feel free to further share this Update with any colleagues you have who you believe may also be interested in this possibility. We look forward to speaking with you.

Best Regards,

David Firshein  
Chief Financial Officer  
Brillouin Energy Corp.  
Mobile: +1-415-419-6429  
Email: [dnf@brillouinenergy.com](mailto:dnf@brillouinenergy.com)

Attachments:

- Rippel Technical Recommendation Letter
- 1-Page Brillouin Simple Overview