UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

☒ **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2021

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from __________ to __________

Commission File Number 001-14015

Applied Energetics, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**77-0262908**
(State or Other Jurisdiction of Incorporation or Organization)	(IRS Employer Identification Number)
9070 S. Rita Road, Suite 1500 Tucson, Arizona	**85747**
(Address of Principal Executive Offices)	(Zip Code)
Registrant's telephone number, including area code	**(520) 628-7415**

Securities registered pursuant to Section 12(b) of the Exchange Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Stock, $.001 par value	**AERG**	**OTCQB**

Securities registered pursuant to Section 12(g) of the Exchange Act:
None

(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company, or an emerging growth company. See the definition of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company' in Rule 12b-2 of the Exchange Act:

Large Accelerated Filer ☐ Accelerated Filer ☐ Non-Accelerated Filer ☐ Smaller reporting company ☒ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has fi led a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting fi rm that prepared or issued its audit report. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant, computed by reference to the last reported sales price at which the stock was sold on June 30, 2021 (the last day of the registrant's most recently completed second quarter) was approximately $81,178,513.

The number of outstanding shares of the registrant's Common Stock, $.001 par value, as of March 18, 2022 was 207,692,878.

APPLIED ENERGETICS, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2020
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PART I

ITEM 1. BUSINESS

Cautionary Note Concerning Forward-Looking Statements

Certain statements in this Form 10-K constitute forward-looking statements within the meaning of the Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements include all statements that do not relate solely to historical or current facts and can be identified by the use of forward-looking words such as “may,” “believe,” “will,” “expect,” “project,” “anticipate,” “estimates,” “plans,” “strategy,” “target,” “prospects” or “continue”, and words of similar meaning. These forward-looking statements are based on the current plans and expectations of our management and are subject to a number of uncertainties and risks that could significantly affect our current plans and expectations, as well as future results of operations and financial condition and may cause our actual results, performances or achievements to be materially different from any future results, performances or achievements expressed or implied by such forward-looking statements. This Form 10-K contains important information as to risk factors under Item 1A. Although we believe that the expectations reflected in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to have been correct. We do not assume any obligation to update these forward-looking statements to reflect actual results, changes in assumptions, or changes in other factors affecting such forward-looking statements.

Available Information

Applied Energetics, Inc. (“company,” “Applied Energetics,” “AERG,” “we,” “our” or “us”) makes available free of charge on its website at www.aergs.com its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practical after electronically filing or furnishing such material to the Securities and Exchange Commission (“SEC”).

This report may be read or copied at the SEC’s Public Reference Room at 100 F Street, NE, Room 1580, Washington, DC 20549 or at www.sec.gov. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330.

General

Applied Energetics, Inc. is a corporation organized and existing under the laws of the State of Delaware. Our headquarters are located at 9070 S. Rita Road, Suite 1500, Tucson, Arizona, 85747 and our telephone number is (520) 628-7415.

Applied Energetics specializes in the development and manufacture of advanced high-performance lasers, advanced optical systems, and integrated guided energy systems for defense, aerospace, national security, industrial, biomedical, and scientific markets worldwide.

Technology, Capabilities and Patents

Applied Energetics, Inc. is recognized as a global leader in developing the next generation optical sources exhibiting ever-increasing output energy, peak power and frequency agility while also providing decreased size, weight, and cost of these systems for customers. Applied Energetics utilizes patented, dual-use technologies to advance critical industries. Leveraging our proprietary fiber-based architecture and wavelength-and pulse-agility capability, our Ultrashort Pulse (“USP™”) technology can enable users to achieve specific effects across different use cases with an unmatched blend of size, weight and power attributes. While initially designed to meet the emerging needs and priorities for the national security community, our directed energy technology also has commercial applications in both the biomedical and advanced manufacturing industries.

The AERG scientific team is continuously innovating and expanding our patent portfolio to cover these technological breakthroughs and further enhance our suite of solutions for threat disruption for the Department of Defense, the intelligence community, and for commercial, medical and space applications with optical sources operating from the deep ultraviolet to the far infrared portions of the electromagnetic spectrum.

AERG has developed, successfully demonstrated and holds all crucial intellectual property rights to a dynamic directed energy technology called Laser Guided Energy ("LGE®") and Laser Induced Plasma Channel ("LIPC®"). LGE and LIPC are technologies that can be used in a new generation of high-tech directed energy systems. The Department of Defense (DOD) previously recognized only two key types of Directed Energy Weapon ("DEW") technologies, High Energy Lasers ("HEL"), and High-Power Microwave ("HPM"). Neither the HEL nor the HPM intellectual property portfolio is owned by a single entity. The DOD then designated a third DEW technology, LGE. Applied Energetics' LGE and LIPC technologies are wholly owned by Applied Energetics and patent protected with 26 current patents and an additional 11 Government Sensitive Patent Applications ("GSPA"). These GSPA's are held under secrecy orders of the US government and allow the company greatly extended protection rights. The company also has seven provisional patents, and we continue to file patent applications as we deem appropriate.

Applied Energetics technology is vastly different from conventional directed energy systems, i.e. HEL, and HPM. LGE uses Ultrashort Pulse (USP™) laser technology to combine the speed and precision of lasers with the overwhelming impact on targeted threats with high-voltage electricity. Applied Energetics' proprietary fiber-based architecture is a key differentiator for our technology. Compared with traditional continuous wave technology with larger footprints, AE's architecture enables orders of magnitude size-weight-power reductions on all deliverables, creating powerful, dual-use and agile systems that can fit a host of platforms while delivering very high intensity, ultrashort pulses of light to the required target. This unique directed energy solution allows extremely high peak power and energy, with target and effects tenability, and is effective against a wide variety of potential targets. A key element of LGE is its novel ability to offer selectable and tunable properties that can help protect non-combatants and combat zone infrastructure.

Applied Energetics' unique optical fiber-based laser architectures enable unmatched wavelength agility as well as pulse duration agility. Using innovative and highly specialized frequency shifting techniques, wavelengths can be custom tuned from the deep ultraviolet to the far Infrared. In addition, temporal outputs can be adjusted from continuous wave to sub-picoseconds. The technology enables the customer to adjust the lasers' operating parameters, ultimately creating more flexibility to change wavelength and pulse width. This feature allows for optimization of laser performance for defense or commercial applications.

Our proprietary USP laser technology provides a significantly more compact solution than current continuous wave laser platforms while still delivering high peak power. Continuous wave laser systems are typically used to heat a target and, during continuous illumination, this heat transfer leads to melting or charring of the material. Using continuous wave output powers that now exceed 100 kilowatts (1kW = 1000 watts), it can take anywhere from seconds to minutes to impact a target. By contrast, our team has delivered USP lasers to national security customers that exceed five terawatts (1 TW = 1 trillion watts) in peak power, with the difference being that this peak power from a USP laser is delivered in a pulse that is less than a trillionth of a second. During this short pulse duration, and having such a high peak intensity, near-instantaneous ablation of the surface of the threat takes place. The net result of our innovative USP approaches are highly effective lasers with mountable footprints that require only a fraction of the size and weight of other directed energy technologies.

As Applied Energetics looks toward the future, our corporate strategic roadmap builds upon the significant value of the company's USP capabilities and key intellectual property, including LGE and LIPC, to offer our prospective partners, co-developers and system integrators a variety of next-generation Ultrashort Pulse and frequency-agile optical sources, from the ultraviolet to the far infrared portion of the electromagnetic spectrum, to address numerous challenges within the military, medical device, and advanced manufacturing market sectors.

Business Development

We submitted multiple proposals to various government agencies in 2020 and 2021. Due to the closures of multiple agencies and work-from-home orders across various regions of the United States, reviews and funding decisions on these proposals were delayed longer than anticipated as resources were focused on other matters within the government. AERG has received multiple notices from government agencies stating that “the vast number of proposals received, and the challenges posed by the COVID-19 pandemic, have impacted the government’s evaluation timelines.” Several of the government agencies that have received and are reviewing our proposals started to open their facilities to limited off-site briefings starting on June 1, 2021. Since that date, AERG’s team has been invited to, and completed, multiple briefings focused on our capabilities and submissions. Effective August 2, 2021, the DOD reinstated a maximum telework position for their employees and contractors and reduced the on-site occupancy to less than 50% of the normal occupancy. As the Delta variant increased, the DOD maintained the maximum telework policy, and on September 9, 2021, reduced the maximum on-site occupancy to less than 40% of normal occupancy. Further restrictions were announced on January 6, 2022, due to the onslaught of the Omicron variant, with maximum occupancy of facilities dropping to 25%, and a majority of workers teleworking. These recent changes further hampered our ability to schedule on-site briefings for our proposals undergoing review. Beginning March 2022, the DOD has announced a loosening of these restrictions in certain circumstances. In any event, we intend to continue developing and submitting proposals and to be available to attend on-site briefings to the extent possible.

In addition to these review-based delays, the US federal budget for 2022 was not approved by Congress by the October 1, 2021, start of the U.S. federal government fiscal year. On September 21, 2021, the U.S. House of Representatives passed H.R. 5305, and on September 30, 2021, the U.S. Senate passed the same bill, a continuing resolution (CR) to extend federal government funding through December 3, 2021, and the President signed it into law (Public Law 117-43) on September 30, 2021, to avoid a government shutdown at the end of the fiscal year 2021. A second CR was signed into law on December 2, 2021, extending funded operations through February 18, 2022. And most recently, a third CR was signed on February 17, 2022, extending funding through March 11, 2022. The final appropriations bill was signed into law by President Biden on the night of March 11, 2022 and includes increases in areas of particular interest to the company.

Pursuant to our Master Services Agreement, Westpark Advisors, LLC assists the company in its comprehensive sales and marketing strategy for the greater Washington DC area and broader Department of Defense markets. Westpark Advisors focuses on the company’s next generation USP laser technologies, along with LGE and the company’s other novel laser technologies and provides business development, program management and strategy consulting services, including sales and marketing of the company’s product line. Westpark Advisors’ Managing Director, Patrick Williams provides full-time support to the company under this agreement. This agreement, which was originally executed as of July 16, 2018, was amended effective April 21, 2021, to grant Westpark Advisors options to purchase an additional 1,000,000 shares of AERG common stock, par value $0.001 per share, at an exercise price of $0.40 per share, in exchange for Westpark Advisors’ continued service to the company. The options vest over a period of three years from the date of the amendment. Otherwise, the other provisions of the agreement remain in force and unchanged.

Recent Developments

Upon the successful examination, and with no opposition, the United States Patent and Trademark Office (USPTO) officially entered the marks LGE® (Reg. No. 6,289,892) and LIPC® (Reg. No. 6,316,069) on March 9, 2021, and April 6, 2021, respectively, in the principal register. AERG has applications pending before the USPTO for USP, USPL, AERG and AE and anticipates allowance and/or registration within the next 12 months. The company also has seven provisional patents, and we continue to file patent applications as we deem appropriate.

The team at Applied Energetics continued to expand during the third and fourth quarters of 2021 and early 2022, with the addition of two new full-time employees (one, a laser technician and the other a junior scientist) and in-house counsel as well as retention of world-class contractors to strengthen our human resources, compliance, public relations, IT, and technical staff supporting the research and development in the laboratory. On February 22, 2022, we hired an Executive Administrative Assistant to assist the CEO and CLO with organizational administration.

Christopher Donaghey serves on Applied Energetics’ Board of Advisors, on which he has input into the strategic direction of the company and provides assistance in building lasting relationships in our defense markets. Effective January 3, 2022, we agreed with Mr. Donaghey to further extended the term of his service for an additional five years, adding an exclusivity requirement which prohibits Mr. Donaghey from providing the same advisory services to other companies in the directed energy space. The company issued Mr. Donaghey options to purchase up to 750,000 shares of its common stock on exchange for his agreement to extend his term and such exclusivity. The options are exercisable at a price of $2.40 per share and are subject to vesting at a rate of 20% per year beginning on May 12, 2024.

Chris Donaghey currently serves as the senior vice president and head of corporate development for Science Applications International Corporation ("SAIC"), a defense and government agency technology integrator. In his role on Applied Energetics' Board of Advisors, Mr. Donaghey provides input into the strategic direction of the Company and assistance in building relationships in the defense markets. Mr. Donaghey was originally appointed to the Board of Advisors, effective April 30, 2019, and effective May 12, 2021, we had agreed to extend the term of his service for an additional one-year term plus a one-year automatic renewal in exchange for 70,000 shares of AERG's common stock, and options to purchase an additional 200,000 shares at an exercise price of $0.61 per share, for each year of service. The shares and options are also subject to vesting over the term of his service.

Effective January 1, 2022, the board of directors of Applied Energetics appointed Mary P. O'Hara to serve as its General Counsel and Chief Legal Officer. The company and Ms. O'Hara entered into an Executive Employment Agreement, pursuant to which she is to serve for an initial term of three years, with automatic renewal for additional one-year periods thereafter unless either party terminates the agreement. The agreement calls for salary of $250,000 per year, plus standard benefits and eligibility for a bonus at the discretion of the board. The company has also granted Ms. O'Hara additional options to purchase up to 640,000 shares of its common stock under its 2018 Incentive Stock Plan, which vest over four years, at an exercise price of $2.40 per share. Ms. O'Hara has been in private law practice for twenty-nine years and has broad experience in all facets of securities, corporate and commercial law. Ms. O'Hara has represented the company for several years and is a member of its board of directors.

In May 2021, we moved into our new headquarters consisting of approximately 13,000 rentable square feet of office, laboratory and production space located at the University of Arizona Tech Park, a research and technology park owned and operated by the University of Arizona. This has enabled us to consolidate our offices and expand our R&D capacity with a Class 1000 (ISO Class 6) "clean room" and other turnkey laboratory and conference features. We have consolidated from our two previous locations and now have our management and scientific teams under one roof. We also held our 2021 Annual Meeting of Stockholders in the large University of Arizona Tech Park Conference Center, which provided the necessary equipment and refreshments. Attendees at the meeting received tours of the tech park grounds.

We entered into the Lease Agreement for the space, effective March 15, 2021, with Campus Research Corporation. The lease term began May 1, 2021, and ends on April 30, 2026. The base rent is $6.7626 per rentable square foot for year one, and escalates to $9.2009 in year two, $11.4806 in year three, $13.1740 in year four and $14.9306 in year five, plus certain operating expenses and taxes.

The space was previously occupied by a global provider of lasers and laser-based technology which vacated prior to the end of its lease term. Thus, we are benefiting from millions of dollars of capital investment made to the facilities by the vacating tenant, and the vacating tenant continues to pay a portion of the full market rent, with the company paying the balance in the amounts set forth above. This location, as an International Traffic in Arms Regulations (ITAR) and laser safety compliant facility totaling approximately 13,000 square feet, with its approximately 4,800 square-foot Class 1000 (ISO 6) cleanroom, provides us the needed capacity for research, product development and production activities.

We followed the guidelines set forth by the Small Business Administration on the Paycheck Protection Program loan, in the amount of $132,760 which we took out in 2020, partially using the proceeds for designated qualifying expenses, in particular, retaining employees. This qualified AERG for a waiver of a portion of the loan. Accordingly, on July 2, 2021, we received a letter from our bank, via the SBA, approving conversion of $80,593.55 of the loan to a grant. Since then, we have been repaying the balance of the loan in monthly installments at the 1% annual interest rate. As of December 31, 2021, $22,804 in principal and $1,385 in interest remained outstanding, and we expect to repay the remaining balance in April 2022.

Path Forward

Our goal with the AERG Strategic Plan is to increase the energy, peak power and frequency agility of fiber-based USP optical sources while decreasing the size, weight, power-consumption and cost of these systems. We are in the process of developing this breadth of very high peak power USP lasers and additional optical sources that have a very broad range of applicability for threat disruption for the Department of Defense, the intelligence community, and for commercial, biomedical, and space applications. Although the historical market for AERG's USP technology is the U.S. Government, derivatives of these USP technologies could provide future platforms for commercial additive and subtractive manufacturing and medical device and optical imaging markets, creating larger dual-use market for our products to address once testing, evaluation and integration have been completed in partnerships with the user community. During 2020, the AERG team was able to develop partnership and teaming arrangements with the three leading laser and optics institutes in the United States, namely, the University of Arizona, the University of Central Florida, and the University of Rochester Laboratory for Laser Energetics. Our desire is to work on programs jointly where the strengths of each organization can assist in escalating knowledge and delivery of systems to the government sponsors, and to train the next generation of scientists and engineers to work in the Directed Energy fields.

The ongoing Coronavirus (COVID-19) pandemic does present unique risks and uncertainties that may alter or otherwise affect our path forward. On January 8, 2022, the Pentagon decided to extend its max telework policy to occupancies of less than 25%, and officials increased the region's Health Protection Condition (HPCON) to threat level Charlie. The increase marked the highest health alert at the Pentagon since the end of 2020. In early March 2022, the Pentagon released these protections somewhat to threat level Bravo, returning to 50% occupancy in most workspaces and circumstances. Our management continues to monitor the possible effects of the COVID-19 on the execution of our plan of operations, our prospective contracts, and the availability of financing to fund our strategic and operational plans going forward. Despite these challenges, we have continued to execute our business development plans. During the past two fiscal years, we submitted multiple proposals and have been engaged in meetings on a daily and weekly basis with various agencies and departments both remotely and in person in Washington, DC and at various other government facilities. Dr. Quarles, our President and CEO, has traveled to DC on multiple occasions during the pandemic in 2020 and 2021 and remains very committed to pursuing this business even in these challenging times. The interest in our technology and applications remains high, and we continue to submit proposals for all appropriate opportunities and share our vision of the disruptive capabilities of USP™ optical sources for both near- and far-term threats and dual-use commercial applications.

Through our analysis of the market, and in discussions with potential customers, we would also conclude that customers are becoming more receptive and interested in directed energy technologies. According to the Department of Defense fiscal 2019 budget, its directed energy spending grew from approximately $500 million in 2017 to over $1 billion in 2019, an increase of 100%. The 2020 budget reflected directed energy spending of $1.2 billion, an additional increase of 20% over 2019, and from 2017 through 2020, the directed energy budget grew from approximately $500 million to approximately $1.2 billion, averaging approximately 40% per year. The government has allocated $1.4 billion for various directed energy programs in 2021, and market analysis and projections have estimated that this directed energy sector is anticipated to exceed $10.1 billion globally by 2026. The DOD budget for directed energy was essentially flat between 2021 and 2022, approaching $1.2 billion for each year. As a result, we continue to be optimistic about our future and the growing opportunities in directed energy applications. The AERG team anticipates a continuation of strong funding for the directed energy community. With our existing patent portfolio, and through further advancements of our technologies, we believe we have the substantial building blocks needed to become a significant and successful developer in our USP and LGE marketplaces.

Market for Our Technology

Directed Energy Systems

Directed energy systems involve the use of directed energy to incapacitate, damage, or destroy enemy equipment, facilities, and assets. Previous to LGE, the only two viable directed energy systems were High Energy Laser (HEL), which uses heat to burn targets and High Power Microwave (HPM) systems, that use electromagnetic energy at specific microwave and radio frequencies to disable electronic systems.

HEL and HPM directed energy technologies have been under development for decades with numerous DoD and other government contractors participating. The unique attributes of directed energy weapon systems —the ability to create precise effects against multiple targets near-instantaneously and at a very low cost per shot—have great potential to help the DoD in addressing future warfare requirements. The DoD invests research and development dollars into directed energy solutions to fill gaps identified by warfighters. For example, in future conflicts with capable enemies possessing large inventories of guided missiles, it may be operationally risky and cost-prohibitive for the U.S. military to continue to rely exclusively on a limited number of kinetic missile interceptors. Such a "missile competition" could allow an adversary to impose costs on U.S. forces by compelling them to intercept each incoming missile with far more expensive kinetic munitions. The DoD has made significant leaps in both performance and maturity as a result of many years of research with multiple threat-intercept technologies and has been directed by Congress in fiscal year 2022 to increase funding and evaluation of pulsed laser technology in future directed energy platforms.

Applied Energetics utilizes patented, dual-use technologies to advance critical industries. Leveraging our proprietary fiber-based architecture and wavelength- and pulse-agility capability, our ultrashort pulse technology enables users to achieve specific effects across different use cases with an unmatched blend of size, weight and power attributes. While initially designed to meet the emerging needs and priorities for the national security community, Applied Energetics' directed energy technology also has commercial applications in both the biomedical and advanced manufacturing industries.

Fiber Based Laser Architecture

Applied Energetics' proprietary fiber-based architecture is a key differentiator for our technology. Compared with traditional continuous wave technology with larger footprints, AE's architecture enables orders of magnitude size-weight-power reductions on all deliverables, creating powerful, dual-use and agile systems that can fit a host of platforms while delivering very high intensity, ultrashort pulses of light to the required target.

Using this unique architecture as a laser source for an integrated system can enable Applied Energetics to develop, integrate and deliver a suite of technologies that best meet the needs and requirements of its customers.

Wavelength- and Pulse- Agility

Applied Energetics' optical fiber-based laser architectures enable unmatched wavelength agility as well as pulse duration agility. Using innovative and highly specialized frequency shifting techniques, wavelengths can be custom tuned from the deep ultraviolet to the far infrared. In addition, temporal outputs can be adjusted from continuous wave to sub-picoseconds. The technology enables the customer to adjust the lasers' operating parameters, ultimately creating more flexibility to change wavelength and pulse width. This feature allows for optimization of laser performance for defense or commercial applications.

Competition

AERG's Ultrashort Pulse sources, including proprietary LIPC® based LGE® technology, are unique and can be integrated onto platforms being developed for use by the U.S. Government. Over the past several years, a handful of major defense contractors have received significant funding for directed energy systems development, manufacturing and integration, using continuous wave and microwave technologies. These contractors specialize in different directed energy system platforms to respond to a variety of threats. Applied Energetics believes that its pulsed laser systems can be a part of a layered defense solution alongside these other technologies. Although AERG competes against other directed energy systems for funding, the uniqueness of our technologies should continue to support their development into weapon platform programs. AERG believes that there is renewed U.S. Government interest in directed energy applications and believes that continued development of its USP capabilities and growing interest from all branches of the U.S. armed forces and other government agencies will lead to increases in government spending on directed energy in the coming years. Likewise, there are multiple new threats that must be addressed with unique and emerging technologies, and AERG is working diligently to rapidly advance development, demonstration, testing and engineering of the Advanced Ultrashort Pulse lasers throughout the spectrum from the ultraviolet to the far infrared. We believe that USP technologies can rapidly accelerate in magnitude, as a percentage of the federal budget, compared with other technologies over the next several years.

AERG's primary direct USP optical source competition are corporations and contractors supported by foreign governments who may be attempting to develop similar technologies. AERG believes that such foreign activity will create additional U.S. Government funding for both USP sources and LGE in order to maintain our country's lead in pulsed directed-energy systems. Other companies with directed energy capabilities, albeit in continuous wave, microwave and other areas within directed energy, are Raytheon Technologies, Lockheed Martin, Northrup Grumman, Boeing, BAE, nLight, General Atomics, Daylight Solutions and L3Harris Technologies.

Some of AERG's biggest commercial competitors are Trumpf (German), Coherent (US), Thales (France) and IPG (US), all of which are billion-dollar market class companies that have substantially more resources than AERG.

Employees

As of March 28, 2022, we had seven employees, and we retain another nine full- and part-time consultants and interns.

ITEM 1A. RISK FACTORS

Future results of operations of Applied Energetics involve a number of known and unknown risks and uncertainties. Factors that could affect future operating results and cash flows and cause actual results to vary materially from historical results include, but are not limited to those risks set forth below:

Risk Related to Our Company

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern, which may hinder our ability to obtain future financing.

In their report accompanying our financial statements, our independent registered public accounting firm stated that our financial statements for the year ended December 31, 2021 were prepared assuming that we would continue as a going concern, and that they have substantial doubt as to our ability to continue as a going concern. Our auditors have noted that our recurring losses and negative cash flow from operations and the concern that we may incur additional losses due to the reduction in government contract activity raise substantial doubt about our ability to continue as a going concern.

Our business has generated little or no revenues during the past two fiscal years and had a net operating loss during each period.

For the fiscal years ended December 31, 2021 and 2020, we had revenues of $0 and $175,920, respectively, and we had net losses of $5,425,453 and $3,230,494, respectively. We can give no assurances that our planned operations will generate revenues in the future or whether any such revenues will result in profitability.

We may need additional financing to fund our operations going forward. If we are unable to obtain additional financing on acceptable terms, we may need to modify or curtail our development plans and operations.

As of December 31, 2021, we had $3,662,615 of available cash and cash equivalents and working capital of $2,290,259. Our cash position is sufficient for the next several months, but we may need to raise additional capital in order to fund our operations beyond that. We must allocate funds toward SEC compliance as well as International Traffic in Arms Regulations (ITAR) and other federal regulatory compliance. We also need funds for our general and administrative expenses, including salaries, accounting fees, other professional fees and other miscellaneous expenses. Our failure to secure sufficient financing could render us unable to pay accounting and other fees required to continue to fulfill our SEC reporting obligations. Also, we have incurred a five-year lease obligation for our new facility and will have moving, computer networking and other expenses related thereto. We also may require additional funding for research and development before we are able to commercialize our technology. During the fiscal year, we achieved our capital raising goal, and a portion of the funds for research and development may come from government contracts or sub-contracts with larger contractors. However, we may need to raise additional funds to supplement these contracts even if we are able to secure them.

Our operating plans and capital requirements are subject to change based on how we determine to proceed with respect to development programs and if we pursue any strategic alternatives. Additional funds may be raised through the issuance of equity securities, but such financing may not be available on terms acceptable to us if at all. Any equity financing would cause the percentage ownership by our current stockholders to be diluted, which dilution may be substantial. Also, any additional equity securities issued may have rights, preferences or privileges senior to those of existing stockholders. If such financing is not available when required or is not available on acceptable terms, we may be required to modify or curtail our operations, which could cause investors to lose the entire amount of their investment.

The ongoing global pandemic has caused unpredictability in capital markets. If this uncertainty continues, it could make it more difficult for companies, including ours, to access capital. It is currently difficult to estimate with any certainty how long the pandemic and resulting curtailment of business will continue, and its effect on capital markets and our ability to raise funds in the future is, accordingly, difficult to quantify.

Risk Related to Our Business Activities

We may be unable to adequately protect our intellectual property rights, which could affect our ability to sustain the value of such assets.

Protecting our intellectual property rights is critical to our ability to maintain the value of our intellectual property portfolio. We hold a number of United States patents and patent applications, as well as trademarks, and registrations which are necessary and contribute significantly to the preservation of our competitive position in the market. We can offer no assurance that any of these patents or future patent applications and other intellectual property will not be challenged, invalidated or circumvented by third parties. In some instances, we may seek to augment our technology base by licensing the proprietary intellectual property of others, but we may be unable to obtain necessary licenses on commercially reasonable terms. We have entered into confidentiality and invention assignment agreements with employees and consultants and entered into nondisclosure agreements with suppliers and appropriate customers so as to limit access to and disclosure of our proprietary information. These measures may not suffice to deter misappropriation or independent third-party development of similar technologies. Based on our current financial condition, we may not have the funds available to enforce and protect our intellectual properties.

We may face claims of infringement of proprietary rights.

There is a risk that a third party may claim our products and technologies infringe on their proprietary rights. Whether or not our products infringe on proprietary rights of third parties, infringement or invalidity claims may be asserted or prosecuted against us and we could incur significant expense in defending them. If any claims or actions are asserted against us, we may not have the funds necessary to defend against such claims. Our failure to do so could adversely affect the value of our intellectual property.

Management has broad discretion over the selection of our prospective business and business opportunities

Any person who invests in our securities will do so without an opportunity to evaluate the specific merits or risks of our prospective business and business opportunities. As a result, investors will be entirely dependent on the broad discretion and judgment of management in connection with the selection of a prospective business. The business decisions made by our management may not be successful.

We depend on the recruitment and retention of qualified personnel, and failure to attract and retain such personnel could seriously harm our business.

Due to the specialized nature of our businesses, our future performance is highly dependent upon the continued services of our key engineering and scientific personnel. Our prospects for obtaining government contracts or significant commercial contracts depend upon our ability to attract and retain qualified engineering, scientific and manufacturing personnel for our operations. Competition for personnel is intense, and we may not be successful in attracting or retaining qualified personnel. Our failure to compete for these personnel could seriously harm our business, results of operations and financial condition. Additionally, since the majority of our business involves technologies that are classified due to national security reasons, we must hire U.S. Citizens who have the ability to obtain a security clearance. This further reduces our potential labor pool.

Our future success will depend on our ability to develop and commercialize technologies and applications that address the needs of our markets.

Both our defense and commercial markets are characterized by rapidly changing technologies and evolving industry standards. Accordingly, our future performance depends on a number of factors, including our ability to identify emerging technological trends in our target markets; develop and maintain competitive products; enhance our products by improving performance and adding innovative features that differentiate our products from those of our competitors; develop and manufacture and bring products to market on-time and on-budget; and enter into suitable arrangements for volume production of mature products.

We believe that, in order to be competitive in the future, we will need to continue to develop and commercialize technologies and products, which will require the investment of financial and engineering resources. Due to the design complexity of our products, we may in the future experience delays in completing development and introduction on a commercial scale of new products. Any delays could result in increased costs of development, deflect resources from other projects or incur loss of contracts.

In addition, there can be no assurance that the market for our technologies and products will develop or continue to expand as we currently anticipate. The failure of our technology to gain market acceptance could significantly reduce any ability to generate revenue and harm our business. Furthermore, we cannot be sure that our competitors will not develop competing or differing technologies which gain market acceptance in advance of our products. The possibility that our competitors might develop new technology or products might cause our existing technology and products to become obsolete or create significant price competition. If we fail in our new product development and commercialization efforts or our products fail to achieve market acceptance more rapidly than our competitors, our revenue will decline and our business, financial condition and results of operations will be negatively affected.

We heavily depend on key personnel, for the successful execution of our business plan. The loss of one or more key members of our management team could have a material adverse effect on our business prospects.

We are highly dependent upon Gregory J. Quarles, our Chief Executive Officer, and Stephen McCahon, our Chief Scientist. We depend on Drs. Quarles's and McCahon's decades of expertise for the development of our technology. We also depend upon their global visibility and outreach as well as our directors' networks of contacts and experience to recruit key talent to the Company. We do not have key-man insurance on any of these individuals. Loss of the services of these key members of our management team, or of our Board of Directors' ability to identify and hire key talent, could have a material adverse effect on our business prospects, financial condition and results of operations.

If we are unable to hire additional qualified personnel, our business prospects may suffer.

Our success and achievement of our business plans depend upon our ability to recruit, hire, train and retain additional highly qualified technical and managerial personnel. Competition for qualified employees among high technology companies is intense, and any inability to attract, retain and motivate additional highly skilled employees required for the implementation of our business plans and activities could strongly impact our business. Our inability to attract and retain the necessary technical and managerial personnel and scientific, regulatory and other consultants and advisors could materially damage our business prospects, financial condition and results of operations.

The market for our technology has a limited number of potential customers.

Given the highly specialized nature of our technology, the potential market for our products is limited to a relative few potential customers who tend to allocate significant budgeted amounts to selected projects. Currently, we are marketing our technology and focusing our research and development on the defense sector, in which demand is ultimately determined primarily by the US federal defense budget and the needs and priorities of the Department of Defense and its various agencies. The potential customers in this area are defense agencies for direct contacts and major defense contractors for subcontracts. Thus the demand for our products depends on their needs for our technology and selecting us for research and development. Although we intend to diversify into other applications for our technology and markets, we cannot be certain that opportunities in those markets will present themselves when we are ready, or that we will otherwise be able, to do so.

Risks Related to Our Securities

We are subject to the penny stock rules adopted by the Securities and Exchange Commission that require brokers to provide extensive disclosure to their customers prior to executing trades in penny stocks. These disclosure requirements, coupled with our status as a former shell company, may cause a reduction in the trading activity of our common stock, and make it difficult for our stockholders to sell their securities.

Rule 3a51-1 of the Securities Exchange Act of 1934 establishes the definition of a "penny stock," for purposes relevant to us, as any equity security that has a minimum bid price of less than $5.00 per share or with an exercise price of less than $5.00 per share, subject to a limited number of exceptions which are not available to us. This classification would severely and adversely affect any market liquidity for our common stock.

For any transaction involving a penny stock, unless exempt, the penny stock rules require that a broker or dealer approve a person's account for transactions in penny stocks and the broker or dealer receive from the investor a written agreement to the transaction setting forth the identity and quantity of the penny stock to be purchased. In order to approve a person's account for transactions in penny stocks, the broker or dealer must obtain financial information and investment experience and objectives of the person and make a reasonable determination that the transactions in penny stocks are suitable for that person and that that person has sufficient knowledge and experience in financial matters to be capable of evaluating the risks of transactions in penny stocks.

The broker or dealer must also deliver, prior to any transaction in a penny stock, a disclosure schedule prepared by the SEC relating to the penny stock market, which, in highlight form, sets forth:

- The basis on which the broker or dealer made the suitability determination; and

- That the broker or dealer received a signed, written agreement from the investor prior to the transaction

Disclosure also has to be made about the risks of investing in penny stocks in both public offerings and in secondary trading and commission payable to both the broker-dealer and the registered representative, current quotations for the securities and the rights and remedies available to an investor in cases of fraud in penny stock transactions. Finally, monthly statements have to be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks.

Because of these regulations and restrictions, broker-dealers may not wish to engage in the above-referenced necessary paperwork and disclosures and/or may encounter difficulties in their attempt to sell shares of our common stock, which may affect the ability of selling stockholders or other holders to sell their shares in any secondary market and have the effect of reducing the level of trading activity in any secondary market. These additional sales practice and disclosure requirements could impede the sale of our common stock. In addition, the liquidity for our common stock may decrease, with a corresponding decrease in the price of our common stock. Our common stock, in all probability, will be subject to such penny stock rules and other restrictions for the foreseeable future and our stockholders will, in all likelihood, find it difficult to sell their shares of common stock.

Because we are a former shell company, our stockholders face restrictions on their reliance on rule 144 to sell their shares.

Historically, the SEC staff has taken the position that rule 144 is not available for the resale of securities initially issued by companies that are, or previously were, shell companies, like AERG. The SEC has codified and expanded this position in the amendments discussed above by prohibiting the use of rule 144 for resale of securities issued by any shell companies (other than business combination related shell companies) or any issuer that has been at any time previously a shell company. The SEC has provided an important exception to this prohibition, however, if the following conditions are met:

- the issuer of the securities that was formerly a shell company has ceased to be a shell company;
- the issuer of the securities is subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act;
- the issuer of the securities has filed all Exchange Act reports and material required to be filed, as applicable, during the preceding 12 months (or such shorter period that the issuer was required to file such reports and materials), other than Current Reports on Form 8-K; and
- at least one year has elapsed from the time that the issuer filed current comprehensive disclosure with the SEC reflecting its status as an entity that is not a shell company.

We expect that we will be able to meet all of these requirements in the future, but unknown future events and circumstances could change that outcome. As a result, pursuant to rule 144, stockholders who receive our restricted securities in a private placement or a business combination may not be able to sell our shares without registration for up to one year after we have completed the private placement or business combination.

A large number of shares of our common stock could be sold in the market in the near future, which could depress our stock price.

As of March 26, 2022, we had outstanding approximately 207,562,461 shares of common stock. Approximately 100 million of our shares are currently freely trading without restriction under the Securities Act of 1933, as amended. The remaining shares have been held by their holders for over one year and are thus eligible for sale under Rule 144(k) of the Securities Act. Sale of these shares into the market could depress our stock price.

Provisions of our corporate charter documents could delay or prevent change of control.

Our Certificate of Incorporation authorizes our Board of Directors to issue up to 2,000,000 shares of “blank check” preferred stock without stockholder approval, in one or more series and to fix the dividend rights, terms, conversion rights, voting rights, redemption rights and terms, liquidation preferences, and any other rights, preferences, privileges, and restrictions applicable to each new series of preferred stock. In addition, our Certificate of Incorporation divides our board of directors into three classes, serving staggered three-year terms. At least two annual meetings, instead of one, will be required to effect a change in a majority of our board of directors. The designation of preferred stock in the future and the classification of our Board of Directors, could make it difficult for third parties to gain control of our company, prevent or substantially delay a change in control, discourage bids for our common stock at a premium, or otherwise adversely affect the market price of our common stock. Moreover, the holders of our outstanding Series A Preferred Stock have a right to put their shares to the company for an amount equal to the liquidation preference of approximately $340,000 plus unpaid dividends (approximately $295,000 as of December 31, 2021), in the event of a change of control. Such right could hinder our ability to sell our assets or merge with another company.

The redemption and dividend provisions of our outstanding preferred stock are onerous due to our current financial condition.

The company has redeemed substantially all of its outstanding preferred stock. At December 31, 2021, 13,602 shares were outstanding with a liquidation preference of approximately $340,000 and unpaid dividends of $295,000. As of February 1, 2022, the liquidation preference of our outstanding preferred stock plus unpaid dividends thereon was approximately $635,000. If an event occurs that would require us to redeem the preferred stock, we may not have the required cash to do so.

In addition, our annual dividend payment on the preferred stock is approximately $34,000, which will further deplete our cash. We have not paid the dividends commencing with the quarterly dividend due August 1, 2013, and, as a result, the dividend rate has increased to 10% per annum and will remain at that level until such failure no longer continues. These terms may also make it more difficult for us to sell equity securities or complete an acquisition.

The COVID-19 pandemic is slowing the process of applying for and awarding government contracts and could impair our ability to expand our research and development capacity or raise additional funding if needed.

The ongoing global pandemic has caused disruption in certain government contracting processes and procedures and made travel and other necessities for securing such contracts more difficult. In addition, to the extent that any of our personnel or consultants are affected by the virus, this could cause delays or disruption in our research and development program and affect our ability to execute our plan of operations. The pandemic has also caused unpredictability in capital markets. If this uncertainty continues, it could make it more difficult for companies, including ours, to access capital. It is currently difficult to estimate with any certainty how long the pandemic and resulting will continue, and its effect on capital markets and our ability to raise funds in the future is, accordingly, difficult to quantify.

Any issuance of additional securities in conjunction with a business or financing opportunity which will result in a dilution of present stockholders' ownership

Our certificate of incorporation authorizes the issuance of 500,000,000 shares of common stock. As of March 10, 2022, we have approximately 207,692,878 shares issued and outstanding. If funding opportunities present themselves on favorable terms, we may issue additional shares to fund our business or in connection with our pursuit of new business opportunities and new business operations. To the extent that additional shares of common stock are issued, our stockholders would experience dilution of their respective ownership interests. If we issue shares of common stock in connection with our intent to pursue new business opportunities, a change in control of our company could occur. The issuance of additional shares of common stock may also adversely affect the market price of our common stock, particularly given the historically low trading volume in the market for our common stock.

ITEM 2. PROPERTIES

Effective March 15, 2021, we entered into a Lease Agreement with Campus Research Corporation, for approximately 13,000 rentable square feet of office, laboratory and production space located at the University of Arizona Science and Technology Park at 9070 South Rita Road, Tucson, AZ. The company has consolidated its offices and expanded its R&D capacity by leasing this space which is outfitted with a Class 1000 (ISO Class 6) "clean room" and other turnkey laboratory and conference features.

The lease term began May 1, 2021, and ends on April 30, 2026. The base rent is $6.7626 per rentable square foot for year one, and escalates to $9.2009 in year two, $11.4806 in year three, $13.1740 in year four and $14.9306 in year five, plus certain operating expenses and taxes.

These facilities are adequate for our current and expected level of operations.

Our aggregate rent expense, including common area maintenance costs, was approximately $155,000 and $49,000 for 2021 and 2020, respectively.

See Note 7 to our 2021 Consolidated Financial Statements, which is incorporated herein by reference for information with respect to our lease commitments on December 31, 2021.

ITEM 3. LEGAL PROCEEDINGS

On July 3, 2019, Gusrae, Kaplan & Nusbaum and its partner, Ryan Whalen filed a complaint in the United States District Court for the Southern District of New York against the company, its directors, officers, attorneys and a consultant. The action alleged libel, securities fraud and related claims. The company filed a motion to dismiss the complaint on October 24, 2019. On December 13, 2019, Gusrae Kaplan and Mr. Whalen filed an opposition to the company's motion. On January 10, 2020, the company filed a reply brief. The United States District Court has not ruled on the motion. On August 5, 2021, the plaintiffs filed a Notice of Voluntary Dismissal of the action without prejudice.

On January 15, 2021, the company filed a complaint in the United States District Court, Southern District of New York, against Gusrae, Kaplan & Nusbaum and Ryan Whalen for malpractice and breach of New York Rules of Professional Conduct by both parties as former counsel to the company. On May 28, 2021, Gusrae, Kaplan & Nusbaum and Mr. Whalen filed a motion to dismiss the complaint. On June 25, 2021, the company filed an opposition to the motion. On July 13, 2021, Gusrae Kaplan & Nusbaum and Mr. Whalen filed their reply brief. The United States District Court has not yet ruled on the motion.

On September 7, 2021, Gusrae Kaplan & Nusbaum and its partner Ryan Whalen filed a complaint in the New York Supreme Court against the company, its directors, officers, attorneys and a consultant, alleging a single claim for defamation per se based on the same conduct underlying their claim of libel in their voluntarily dismissed federal court action. The company filed a motion to dismiss the complaint on October 29, 2021, which motion included a request for sanctions for filing a frivolous complaint. Gusrae Kaplan & Nusbaum and Mr. Whalen filed their opposition to the company's motion to dismiss on January 13, 2022. The company filed its reply brief on February 17, 2022. The court has not yet ruled on the motion. On March 9, 2022, the company received notice that the court had scheduled oral arguments on the motion to dismiss for May 23, 2022.

As with any litigation, the company cannot predict the outcome with certainty, but the company expects to provide further updates on the status of the litigation as circumstances warrant.

The company may, from time to time, be involved in legal proceedings arising from the normal course of business.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES

Market Information and Holders

Our common stock is currently quoted for trading on the OTCQB Market, trading under the symbol "AERG". On March 30, 2022, the closing price of our common stock on the OTCQB Market was $2.40. Over-the-counter market quotations, such as on the OTCQB, reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not necessarily represent actual transactions.

As of March 30, 2022, there were approximately 389 holders of record of Applied Energetics' common stock.

Unregistered Sale of Securities and Use of Proceeds

The company has reported all information pertaining to all issuances of equity securities sold during the period covered by this Annual Report on Form 10-K in previously filed report on Forms 10-Q and 8-K.

Dividends

Dividends on our Preferred Stock are payable quarterly on the first day of February, May, August and November, in cash or shares of Common Stock. We paid dividends via the issuance shares of Common Stock on our 6.5% Series A Convertible Preferred Stock in 2011. We paid cash dividends on our 6.5% Series A Convertible Preferred Stock in 2012 and February and May 2013. The company has not paid the dividends commencing with the quarterly dividend due August 1, 2013. Dividend due as of December 31, 2021 and February 28, 2022 were approximately $295,000 and $298,000, respectively. Our Board of Directors suspended the declaration of the dividend, commencing with the dividend payable as of February 1, 2015 because we did not have a surplus (as such term is defined in the Delaware General Corporation Law) as of December 31, 2014. The Board anticipates continuing such suspension until such time as we have a surplus, or net profit, for a fiscal year.

Equity Compensation Plan Information

See Item 12.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following management discussion and analysis ("MD&A") together with the risk factors set forth in Item 1A and with our audited Consolidated Financial Statements and Notes thereto included elsewhere herein.

Overview

Applied Energetics, Inc., specializes in the development and manufacture of advanced high-performance lasers, high voltage electronics, advanced optical systems, and integrated guided energy systems for prospective defense, national security, industrial, and scientific customers worldwide.

Gregory J. Quarles serves as our President and Chief Executive officer and, pursuant to a consulting agreement with an LLC wholly owned by him, Dr. Stephen W. McCahon serves as our Chief Scientist. AERG has continued to expand its technical capabilities with the addition of employees, consultants and contractors, and agreements with several of the leading laser and optics universities in the country. The team at Applied Energetics continued to expand during the third and fourth quarters of 2021 and early 2022, with the addition of two new full-time employees (one, a laser technician and the other a junior scientist and in-house counsel as well as retention of world-class contractors to strengthen our human resources, compliance, public relations, IT, and technical staff supporting the research and development in the laboratory.

AERG owns intellectual property that is integral and necessary for the development of Ultrashort Pulse ("USP™") Lasers, Laser Guided Energy ("LGE®") and Direct Discharge Electrical products for military and commercial applications. AERG currently owns 26 patents and an additional 11 Government Sensitive Patent Applications ("GSPA"). These GSPA's are held under secrecy orders of the US government and allow the company greatly extended protection rights, including having no expiration date until such time as they are no longer classified after that they will have the normal 20-year patent protection. The company also has seven provisional patents, and we continue to file patent applications as we deem appropriate.

We submitted multiple proposals to various government agencies in 2020 and 2021. Due to the closures of multiple agencies and work-from-home orders across various regions of the United States, reviews and funding decisions on these proposals were delayed longer than anticipated as resources were focused on other matters within the government. AERG has received multiple notices from government agencies stating that "the vast number of proposals received, and the challenges posed by the COVID-19 pandemic have impacted the Government's evaluation timelines." Several of the government agencies that have received and are reviewing our proposals started to open their facilities to limited off-site briefings starting on June 1, 2021. Since that date, AERG's team has been invited to, and completed, multiple briefings focused on our capabilities and our submissions. This positive action by the agencies could be impacted by the new Delta variant (B.1.617.2) of the SARS-CoV-2 strain. The Federal government is currently evaluating the possibility of reducing staff sizes in the offices and closing off all external visitors unless the meetings are deemed critical by the agency. Effective August 2, 2021, the DOD re-enforced a maximum telework position for their employees and contractors and reduced the on-site occupancy to less than 50% of the normal occupancy. As the Delta variant increased, the DOD maintained the maximum telework policy and on September 9, 2021 reduced the maximum on-site occupancy to less than 40% of normal work occupancy. Further restrictions were announced on January 6, 2022, with maximum occupancy of facilities dropping to 25%, and a majority of workers teleworking, but in March 2022, the DOD has announced that occupancy is back to 50% except in certain circumstances. These recent changes have again further hampered the ability of the AERG team to schedule on-site briefings for our proposals undergoing review.

In addition to these review-based delays, the US federal budget for 2022 was not approved by Congress by the October 1, 2021, start of the U.S. federal government fiscal year. On September 21, 2021, the U.S. House of Representatives passed H.R. 5305, and on September 30, 2021, the U.S. Senate passed the same bill, a continuing resolution (CR) to extend federal government funding through December 3, 2021, and the President signed it into law (Public Law 117-43) on September 30, 2021 to avoid a government shutdown at the end of the fiscal year 2021. A second CR was signed into law on December 2, 2021, extending funded operations through February 18, 2022. And most recently, a third CR was signed on February 17, 2022, extending funding through March 11, 2022. The final appropriations bill was signed into law by President Biden on the night of March 11, 2022, and includes increases in areas of particular interest to the company.

In May 2021, we moved into our new headquarters consisting of approximately 13,000 rentable square feet of office, laboratory and production space located at the University of Arizona Tech Park, a research and technology park owned and operated by the University of Arizona. This has enabled us to consolidate our offices and expand our R&D capacity with a Class 1000 (ISO Class 6) "clean room" and other turnkey laboratory and conference features. We have consolidated from our two previous locations and now have our management and scientific teams under one roof. We also hosted our 2021 Annual Meeting of Stockholders in the large University of Arizona Tech Park Conference Center, which provided the necessary equipment and refreshments. Attendees at the meeting received tours of the tech park grounds. We entered into the Lease Agreement for the space, effective March 15, 2021, with Campus Research Corporation. The lease term began May 1, 2021, and ends on April 30, 2026. The base rent is $6.7626 per rentable square foot for year one, and escalates to $9.2009 in year two, $11.4806 in year three, $13.1740 in year four and $14.9306 in year five, plus certain operating expenses and taxes.

On April 28, 2020, AERG was awarded a loan for $132,760 through the Small Business Administration (SBA) Paycheck Protection Program (PPP). The terms of this loan were twenty-four months with a 1% annual interest rate. These funds were issued to cover payroll costs over 8 weeks of May and June 2020. Through the utilization of this PPP loan, AERG was able to keep all employees fully engaged during these two months of the pandemic. Having followed the guidelines set forth by the SBA on the PPP program, we received a waiver which allowed for the conversion of $80,593.55 of the loan to a grant. Since then, we have been repaying the balance of the loan in monthly installments at the 1% annual interest rate. As of December 31, 2021, $22,804 in principal and $1,385 in interest remained outstanding, and we expect to repay the remaining balance in April 2022.

Strategic Plan and Analysis

Our goal with the AERG Strategic Plan is to increase the energy, peak power and frequency agility of USP optical sources while decreasing the size, weight, and cost of these systems. We are in the process of developing this breadth of very high peak power USP lasers and additional optical sources that have a very broad range of applicability for threat disruption for the Department of Defense, the intelligence community, and for commercial, biomedical, space and national intelligence applications. Although the historical market for AERG's USP technology is the U.S. Government, derivatives of these USP technologies could provide future platforms for commercial additive and subtractive manufacturing and medical device and imaging markets, creating larger dual-use market for our products to address once testing, evaluation and integration have been completed in partnerships with the user community. During 2020, the AERG team was able to develop partnership and teaming arrangements with the three leading laser and optics institutes in the United States, namely, the University of Arizona, the University of Central Florida, and the University of Rochester Laboratory for Laser Energetics. Our desire is to work on programs jointly where the strengths of each organization can assist in escalating knowledge and delivery of systems to the government sponsors, and to train the next generation of scientists and engineers to work in the Directed Energy fields.

The Coronavirus (COVID-19) pandemic continues to present risks and uncertainties that may alter or otherwise affect our path forward. Although the virus seemed to be waning in the fall of 2021, the onslaught of the Omicron variant brought about a new wave that saw the seven-day moving average of new cases peak at around 466,000 during the winter of 2021-22. This variant, which presented with less severe symptoms on average than those before it, seems now to have receded. However, it is impossible to be certain whether a new variant will arise, its level of infectiousness and severity, and how it will affect commerce and our economy. Accordingly, our management continues to monitor the possible effects of the virus on the execution of our plan of operations, our prospective contracts, and the availability of financing to fund our strategic and operational plans going forward. We attempt to follow the most current advice and guidance to minimize the risk of infection to our employees and follow any applicable federal guidelines.

Despite the challenges posed by COVID-19, we have continued to execute our business development plans, further our research and development program and submit proposals for grants and contracts. During the past two fiscal years, we submitted multiple proposals and have been engaged in meetings on a daily and weekly basis with various agencies and departments both remotely and in person in Washington, DC and at various other government facilities. Dr. Quarles, our President and CEO, has traveled to DC on multiple occasions during the pandemic in 2020 and 2021 and currently in 2022 and remains committed to pursuing this business even in these challenging times. The interest in our technology and applications remains high, and we continue to submit proposals for all appropriate opportunities and share our vision of the disruptive capabilities of USP optical sources for both near- and far-term threats and dual-use commercial applications.

Through our analysis of the market, and in discussions with potential customers, we would also conclude that customers are becoming more receptive and interested in directed energy technologies. According to the Department of Defense fiscal 2019 budget, its directed energy spending grew from approximately $500 million in 2017 to over $1 billion in 2019, an increase of 100%. The 2020 budget reflected directed energy spending of $1.2 billion, an additional increase of 20% over 2019, and from 2017 through 2020, the directed energy budget grew from approximately $500 million to approximately $1.2 billion, averaging approximately 40% per year. The government has allocated $1.4 billion for various directed energy programs in 2021, and it has been anticipated to exceed $10.1 billion by 2026. The DOD budget for directed energy was essentially flat between 2021 and 2022, approaching $1.2 billion for each year. As a result, we continue to be even more optimistic about our future and the growing opportunities in directed energy applications. The AERG team anticipates a continuation of strong funding for the Directed Energy community. With our existing patent portfolio, and through further advancements of our technologies, we believe we have the substantial building blocks needed to become a significant and successful developer in our USP™ and LGE® marketplaces.

Critical Accounting Policies

Use of Estimates

The preparation of consolidated financial statements in conformity with United States generally accepted accounting principles requires management to make estimates, judgments and assumptions that affect the amounts reported in the financial statements and accompanying notes. Management bases its assumptions on historical experiences and on various other inputs and estimates that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. In addition, management considers the basis and methodology used in developing and selecting these estimates, the trends in and amounts of these estimates, specific matters affecting the amount of and changes in these estimates, and any other relevant matters related to these estimates, including significant issues concerning accounting principles and financial statement presentation. Such estimates and assumptions could change in the future as more information becomes known which could impact the amounts reported and disclosed herein.

Share-Based Payments

Stock-based compensation cost is measured at grant date, based on the fair value of the award and is recognized as an expense over the requisite service period.

The fair value of each option grant is estimated at the date of grant using the Black-Scholes-Merton option valuation model. We make the following assumptions relative to this model: (i) the annual dividend yield is zero as we do not pay dividends on our common stock, (ii) the weighted-average expected life is based on a midpoint scenario, where the expected life is determined to be half of the time from grant to expiration, regardless of vesting, (iii) the risk free interest rate is based on the U.S. Treasury security rate for the expected life, and (iv) the volatility is based on the level of fluctuations in our historical share price for a period equal to the weighted-average expected life. We estimate forfeitures when recognizing compensation expense and adjust this estimate over the requisite service period should actual forfeitures differ from such estimates. Changes in estimated forfeitures are recognized through a cumulative adjustment, which is recognized in the period of change and which impacts the amount of unamortized compensation expense to be recognized in future periods.

Income Taxes

Deferred tax assets and liabilities are recognized currently for the future tax consequences attributable to the temporary differences between the financial statement carrying amounts of assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets if it is more likely than not that such assets will not be realized.

Results of Operations

Our consolidated financial information for the years ending December 31, 2021, and 2020 is as follows:

	2021	2020
Revenue	$ -	$ 175,920
Cost of revenue	-	(153,630)
Gross profit	-	22,290
Operating Expenses:		
General and administrative	(4,903,081)	(4,698,624)
Selling and marketing	(317,350)	(296,461)
Research and development	(281,896)	(266,864)
Total operating expenses	(5,502,327)	(5,261,949)
Other income/(expense):		
Other income	81,218	15,832
Gain on settlement	-	3,206,000
Interest (expense)	(4,344)	(1,212,667)
Other income/(expense)	76,874	2,009,165
Loss before provision for income taxes	(5,425,453)	(3,230,494)
Provision for income taxes	-	-
Net loss	$ (5,425,453)	$ (3,230,494)

Revenue

Revenue decreased approximately $176,000 to $0 for the year ended December 31, 2021, compared to $176,000 for the year ended December 31, 2020, primarily due to the completion of an STTR phase I project during 2020.

Cost of Revenue

Cost of revenue decreased approximately $154,000 to $0 for year ended December 31, 2021, compared to $154,000 for year ended December 31, 2020, primarily due to the completion of an STTR phase I project.

General and Administrative

General and administrative expenses increased approximately $204,000 to $4,903,000 for the year ended December 31, 2021, compared to $4,699,000 for the year ended December 31, 2020, primarily due to the $154,000 in applied project costs in 2020, increases in building costs by $278,000, wages and employee benefits of $90,000, supplies and insurance of $22,000, travel of $14,000, partially offset by a decrease in consulting and professional services by approximately $356,000.

Selling and Marketing

Selling and Marketing expenses increased approximately $21,000 to $317,000 for the year ended December 31, 2021, compared to $296,000 for the year ended December 31, 2020, primarily due to the continuation of business development activities through our Master Services Agreement with Westpark Advisors as well as the addition of other consultants in this field.

Research and Development

Research and development expenses increased approximately $15,000 to $282,000 for the year ended December 31, 2021, compared to $267,000 the year ended December 31, 2020, primarily due to the additional labor being performed on our Internal Research and Development project, partially offset by the allocation of part of management’s pay from research and development to consulting expense.

Other Expense

Other income/(expense) decreased approximately $1,932,000 to $77,000 for the year ended December 31, 2021, compared to $2,009,000 for the year ended December 31. 2020, primarily due to the company receiving $3,206,000 in a litigation settlement during 2020. Interest expense decreased by approximately $1,208,000 to $4,000 for the year ended December 31, 2021, compared to $1,213,000 for the year ended December 31, 2020 primarily due to the amortization of the note’s payable beneficial conversion feature. Other income increased approximately $65,000 to $81,000 for the year ended 2021, compared to $16,000 for the year ended December 31, 2020 primarily due the CARES Act PPP Loan forgiveness for $81,000.

Net Loss

Our operations in 2021 resulted in a net loss of approximately $5,425,000, a decrease of approximately $2,195,000 compared to the approximately $3,230,000 net loss for 2020 primarily due to the receipt of a ligation settlement, a decrease in consulting and professional services and applied project costs, partially offset by an increase due to the recognition of a beneficial conversion feature, increases in employee wages and benefits, building costs and supplies and insurance, selling and marketing. Our net loss attributable to common stockholders per common share – basic and diluted decreased to approximately ($0.03) per share.

Trend Discussion

There are obvious costs associated with restarting the corporation and acquiring the skilled leadership and manpower to execute on new product development, as is visible in the higher year-over-year expenses recognized in this Result of Operations. It appears with early 2021 contract booking and the combination of the government slow-down due to COVID-19 impacts that it is too early to determine if efforts to obtain new business under our Teaming and Consulting Agreements could be successful for the next fiscal year. The AERG team has expanded teaming arrangements in 2021, with agreements signed with the three most prominent optics and laser universities in the United States. This should provide greater visibility to government agencies looking for submissions with university/industry partnerships and research alignment.

Liquidity and Capital Resources

Going Concern

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. For the year ended December 31, 2021, the company incurred a net loss of approximately $5,425,000, had negative cash flows from operations of approximately $3,214,000 and may incur additional future losses due to the reduction in Government contract activity. At December 31, 2021, the Company had total current assets of approximately $3,706,000 and total current liabilities of approximately $1,416,000 resulting in working capital of approximately $2,290,000. At December 31, 2021, the Company had cash of approximately $3,663,000.

Based on the Company’s current business plan, it believes its cash balance as of the date of this filing will be sufficient to meet its anticipated cash requirements for the next twelve months. However, there can be no assurance that the current business plan will be achievable. Such conditions raise substantial doubts about the Company’s ability to continue as a going concern for one year from the date the financial statements are issued.

The company’s existence is dependent upon management’s ability to develop profitable operations. Management is devoting substantially all of its efforts to developing its business and raising capital and there can be no assurance that the company’s efforts will be successful. No assurance can be given that management’s actions will result in profitable operations or the resolution of its liquidity problems. The accompanying consolidated financial statements do not include any adjustments that might result should the company be unable to continue as a going concern. The ongoing COVID-19 pandemic contributes to this uncertainty.

In order to improve the company's liquidity, the company's management is actively pursuing additional equity financing through discussions with investment bankers and private investors. There can be no assurance that the company will be successful in its effort to secure additional equity financing.

The financial statements do not include any adjustments relating to the recoverability of assets and the amount or classification of liabilities that might be necessary should the company be unable to continue as a going concern.

As of December 31, 2021, we had approximately $3,663,000 cash and cash equivalents, an increase of approximately $339,000 from December 31, 2020. In 2021, we used approximately $3,214,000 in operating activities, comprised primarily of our net loss of $5,425,000, a decrease in prepaid expenses and deposits of $60,000, an increase in accounts payable of $43,000, an increase in accrued interest of $1,000, an increase in accrued expenses of $21,000, partially offset by non-cash stock-based compensation expense of $1,237,000, amortization of future compensation payable of $833,000, amortization of prepaid assets of $157,000 and depreciation and amortization of $20,000.

We had approximately $3,760,000 provided by financing activities comprised of $5,299,000 provided from the proceeds from the issuance of common stock and $108,000 provided from the proceeds from the exercise of warrants, partially offset by the repayment on notes payable $1,647,000. All this resulted in a net cash inflow of approximately $3,760,000. There were no cash proceeds from the exercise of stock options during the year ended December 31, 2021.

As of March 30, 2022, our backlog (that is, workload remaining on signed contracts) was approximately $-0- to be completed within the next twelve months.

As of March 30, 2022, the company had a cash balance of $2,750,000.

Contractual Obligations:

The following table summarizes our contractual obligations and other commercial commitments as of December 31, 2021:

	Payment by Period		
	Total	**Less than 1 Year**	**1 to 5 Years**
Notes payable	$ 1,024,000	$ 1,024,000	$ -
Due to affiliate	50,000	50,000	-
Leases	583,000	76,000	507,000
Total	**$ 1,657,000**	**$ 1,150,000**	**$ 507,000**

The above table does not include the dividends on our Series A Preferred Stock. Assuming that there is no conversion of the outstanding shares of Series A Preferred Stock into shares of common stock, the dividends are approximately $34,000 each year (approximately $9,000 each quarter).

Leases

In March 2021, the Company signed a five-year lease for a 11,000 square foot laboratory/office space in Tucson. The lease term commences May 1, 2021 and ends on April 30, 2026. The base rent is $6.7626 per rentable square foot for year one, and escalates to $9.2009 in year two, $11.4806 in year three, $13.1740 in year four and $14.9306 in year five, plus certain operating expenses and taxes.

Preferred Stock

The Series A Preferred Stock has a liquidation preference of $25.00 per share. The Series A Preferred Stock bears dividends at an initial rate of 6.5% of the liquidation preference per share per annum, which accrues from the date of issuance, and is payable quarterly. We have not paid dividends commencing with the quarterly dividend due August 1, 2013 and, as a result, the dividend rate has increased to 10% per annum and will remain at that level until such failure is cured. Dividends due as of December 31, 2021, and February 28, 2022, were approximately $295,000 and $298,000, respectively.

The holders of the Series A Preferred Stock have a right to put the stock to the company for an aggregate amount equal to the liquidation preference (approximately $340,000) plus unpaid dividends of $295,000, as of December 31, 2021, in the event of a change in control. Dividends are payable in: (i) cash, (ii) shares of our common stock (valued for such purpose at 95% of the weighted average of the last sales prices of our common stock for each of the trading days in the ten trading day period ending on the third trading day prior to the applicable dividend payment date), provided that the issuance and/or resale of all such shares of our common stock are then covered by an effective registration statement or (iii) any combination of the foregoing. As of December 31, 2021, there were 13,602 shares of Series A Preferred Stock outstanding.

Recent Accounting Pronouncements

Refer to Note 2 of Notes to Consolidated Financial Statements for a discussion of recent accounting standards and pronouncements.

Off-Balance Sheet Arrangements

As of December 31, 2021, we had no significant off-balance sheet arrangements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

In the normal course of business, our financial position is subject to a variety of risks, such as the ability to collect our accounts receivable and the recoverability of the carrying values of our long-term assets. We do not presently enter into any transactions involving derivative financial instruments for risk management or other purposes.

Our available cash balances are deposited in bank demand deposit accounts. Substantially all of our cash flows are derived from our operations within the United States and today we are not subject to market risk associated with changes in foreign exchange rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements, the related notes and the Report of Independent Registered Public Accounting Firms thereon, are included in Applied Energetics' 2021 Consolidated Financial Statements and are filed as a part of this report on page F-1 following the signatures.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive and Principal Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2021. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its chief executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well-designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation our Chief Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were not effective as of December 31, 2021.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) or 15d-15(f) under the Exchange Act. Internal control over financial reporting is a process designed by, or under the supervision of, our chief executive and principal financial officers and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the company's assets;

- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of the management and directors of the company; and

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management, including our Chief Executive and Principal Financial Officer ("CEO/PFO"), has conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2021, based on the framework established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO Framework). This assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of those controls. Based on our assessment under the criteria described above, the CEO/PFO has concluded that our internal control over financial reporting was not effective as of December 31, 2021.

This Annual Report on Form 10-K does not include an attestation report of our registered public accounting firm regarding internal controls over financial reporting. Management's report was not subject to attestation by our registered public accounting firm pursuant to the SEC rules that permit smaller reporting companies to provide only management attestation in annual report on Form 10-K.

Changes in Internal Control Over Financial Reporting

There has been no change in Applied Energetics' internal control over financial reporting for the quarter ended December 31, 2021, that materially affected, or is reasonably likely to materially affect our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Not Applicable

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

Not Applicable

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following is information with respect to our executive officers and directors:

Name	Age	Principal Position	Director, Term expiring in
Bradford T. Adamczyk	53	Director and Executive Chairman	Three years
Gregory J Quarles	60	Director, President, Chief Executive Officer, and Principal Financial Officer	Three years
Jonathan R. Barcklow	38	Director, Vice President and Secretary	Two years
John E. Schultz Jr.	68	Director	Less than one year
Mary P. O'Hara	55	Director, General Counsel and Chief Legal Officer	Three years
Stephen W. McCahon	62	Chief Scientist and Consultant	N/A

Messrs. Adamczyk and Barcklow joined the board in March 2018. Mr. Schultz joined the board in November 2018. Dr. Quarles joined the board in May 2019. Ms. O'Hara joined the board in August 2021. Dr. McCahon was retained as a consultant effective May 2019 and serves in such capacity as our Chief Scientist.

Bradford T. Adamczyk: Mr. Adamczyk was elected as the Company's Chairman in May 2019 and Executive Chairman in November 2022. He served as Principal Executive Officer from August 6, 2018, until becoming Chairman and was elected as a Company director on March 8, 2018. Mr. Adamczyk has over 25 years of experience in investments and financial analysis. He founded MoriahStone Investment Management in 2013. MoriahStone Investment Management specializes in both public equities and small-cap private companies. He has also served on the board of advisors of BroVo Spirits, LLC since 2014, becoming its Chairman in 2018. Prior to founding MoriahStone, he was a senior securities analyst at Columbus Circle Investors in Stamford, CT, where he focused on technology investments. Mr. Adamczyk started his financial career at Morgan Stanley after receiving his MBA from the University of Michigan. He received his undergraduate degree from Western Michigan University, graduating Magna Cum Laude.

Gregory J Quarles: Dr. Quarles was elected as the Company's Chief Executive Officer and as a Company director effective May 4, 2019. In January 2021, the Board also elected him as President of the Company. Prior to that time, he had served on the Company's Scientific Advisory Board since March 18, 2017. Before joining Applied Energetics, Dr. Quarles spent the previous six years with The Optical Society of America ("OSA") in Washington D.C., both as a member of the Board and the Executive Committee and more recently as the Chief Scientific Officer. His responsibilities at OSA encompassed a broad range of scientific, technical and engineering infrastructure, and included content development for the OSA meetings portfolio, along with many other related projects, highlighted by his reports to Congress. Moreover, Dr. Quarles had been personally involved through OSA in the establishment of many crucial partnerships involving major R&D laboratories and global agencies worldwide. This involvement included being a long-standing member of the U.S. Department of Commerce, Bureau of Industry and Security, and Sensors and Instrumentation Technical Advisory Committee. In addition to his executive leadership, Dr. Quarles is a well-respected member of the laser development community globally with over 30 years of experience since the award of his Ph.D. from Oklahoma State University. He is a Fellow in both the SPIE and the IEEE Photonics Society and received the Memorial D.S. Rozhdestvensky Medal from the Russian Optical Society (2015). In 2016, he joined the Oklahoma State University CAS Hall of Fame, and in 1996 received the R&D 100 Award for the Ce:LiSAF Laser System.

Jonathan R. Barcklow: Mr. Barcklow was elected as the Company's Vice President and Secretary on November 12, 2018, and was elected as a Company director on March 8, 2018. Mr. Barcklow has over 15 years of experience in advisory and management consulting services in federal defense and civilian agencies. He has spent his career in consulting services with both PriceWaterhouseCoopers and KPMG, LLP. Mr. Barcklow has worked at KPMG since 2010 and currently serves as the Managing Director within KPMG's Federal Management Consulting group leading their Defense Mission Services portfolio. In leading this $30M portfolio, Mr. Barcklow is responsible for every facet of the businesses operations, management, profitability and growth planning and oversees a diverse workforce of 150 professionals Over his career, Mr. Barcklow has been a consultant for a number of federal agencies, including the Department of Veterans Affairs, Department of Homeland Security, Federal Emergency Management Agency, National Science Foundation, Department of the Navy, US Marine Corp, US Air Force, Defense Logistics Agency, Office of the Secretary of Defense, and the Deputy Chief Management Office. His portfolio primarily focused on large-scale strategic transformations, technology and innovation, including big data, advanced analytics, AI and machine learning, blockchain, and Internet of Things (IoT) within DoD entities. Additionally, Mr. Barcklow helped drive the initial recapitalization efforts of Applied Energetics in 2018 and developed the initial 12-month execution plan for the Company's turnaround. Mr. Barcklow graduated from the University of Virginia.

John E. Schultz Jr. Mr. Schultz was elected as a Company director on November 11, 2018. Mr. Schultz has had a long affiliation with Wall Street, having founded CSG Spectra, Inc., a risk analytics firm, in 1984. He also founded Oak Tree Asset Management Ltd. in 2000, where he actively trades securities in managed LLC's. Mr. Schultz's strong networks have emphasized outside-the-box investment opportunities and early-stage new frontier private equity investment deals. Mr. Schultz has an intimate knowledge of Applied Energetics, including its history and financials and has in the past served as a consultant to the Company. Mr. Schultz is a graduate of California State University at Long Beach.

Mary P. O'Hara Ms. O'Hara was appointed to the Board of Directors on August 20, 2021, upon the board's decision to expand its number to five members. She has been in private law practice for over thirty years and has broad experience in all facets of securities, corporate and commercial law. She is currently affiliated with the law firm of Masur, Griffitts, Avidor, LLP and has represented the Company for several years. Previously, she was a partner at Hodgson Russ LLP and an associate at Fulbright & Jaworski LLP (now known as Norton Rose Fulbright) and Mayer Brown & Platt, LLP (now known as Mayer Brown LLP). Ms. O'Hara has a J.D. from New York University School of Law and B.A. in Economics, magna cum laude, from the University of New Mexico.

Stephen W. McCahon Dr. Stephen McCahon has been a scientific researcher, technology developer, and entrepreneur for over 30 years. He has co-authored more than 50 scientific publications and has more than 30 patents issued, patents pending, or invention disclosures in preparation for patent submission. He was a Member of the Research Staff in the Optical Physics Department at the Hughes Research Laboratory in Malibu, California from 1986 to 1996 performing basic research in the area of optical physics and non-linear optical materials. In 1996, Dr. McCahon moved to Raytheon (Hughes) Missile Systems Co, in Tucson, AZ during which time as was significantly responsible for the successful creation and development of the Directed Energy Weapons Product Line and served as its Chief Scientist. He left Raytheon in 2002 to co-found Applied Energetics Inc. in Tucson, AZ to develop Directed Energy Weapons for the DoD including very high energy and average power USP laser sources and Laser Guided Energy Technologies. In April 2010 Dr. McCahon left Applied Energetics to form Applied Optical Sciences where he developed technologies related to the application of optical physics to a broad range of areas, including photonics and USP laser development. Dr. McCahon is a graduate the University of Southern California (BSEE, MSEE) holds a Ph.D., Photonics, Inter-disciplinary Physics and Electrical Engineering from the University of Iowa. Since February 2016, he has served as a consultant to the Applied Energetics Board of Directors. In 2019 Applied Energetics purchased his company Applied Optical Sciences and integrated it into Applied Energetics where Dr. McCahon currently serves as its Chief Scientist.

Directors Qualifications, Experience and Skills

Our directors bring to our Board a wealth of executive leadership experience and technical knowledge derived from their service, respectively, as senior executives, founders of industry and legal or financial professionals. Our board members have demonstrated strong business acumen and an ability to exercise sound judgment and has a reputation for integrity, honesty and adherence to ethical standards. When considering whether directors and nominees have the experience, qualifications, attributes and skills, taken as a whole, to enable the Board of Directors to satisfy its oversight responsibilities effectively in light of the Company's business and structure, the Corporate Governance and Nominating Committee and the Board of Directors focused primarily on the information discussed in each of the Directors' individual biographies set forth above and the specific individual qualifications, experience and skills as described below:

- Mr. Adamczyk's qualifications as a director include his expertise in corporate finance and his experience working with companies to overcome near-term financial or strategic challenges. Mr. Adamczyk was part of the team that led the 2018 proxy of AERG, establishing a new company board and management team and recapitalizing the Company to pursue the development of its technology and IP portfolio. He, along with the others in this group, continues his work to establish a foundation of good corporate governance and transparency.

- Dr. Quarles's qualifications as a director include his experience as director and senior executive in the laser industry with primary focus on the defense and aerospace sector. He currently, or has in the past, served on eight different boards that span the materials, security, defense, optics and photonics industries.

- Mr. Barcklow's qualifications as a director include his experience in management consulting and his knowledge of the defense industry and government contracting. Mr. Barcklow was part of the team that led the 2018 proxy, establishing a new company board and management team and recapitalizing the company to pursue the development of its technology and IP portfolio. He, along with the others in this group, continues his work to establish a foundation of good corporate governance and transparency.

- Mr. Schultz's qualifications as a director include his expertise in the equity investment industry and has been a friend of Applied Energetics since its public inception in 2004, and has an intimate knowledge of the company's background, including its history and financials. Mr. Schultz and his entity Oak Tree Asset Management were part of the team that led the 2018 proxy, establishing a new company board and management team and recapitalizing the company to pursue the development of its technology and IP portfolio. He, along with the others in this group, continues his work to establish a foundation of good corporate governance and transparency.

- Ms. O'Hara's qualifications as a director include her many years of experience in securities, corporate and commercial law and the business and financial knowledge she has acquired over those years as well.

Section 16(A) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires certain officers and directors of Applied Energetics, and any persons who own more than ten percent of the common stock outstanding to file forms reporting their initial beneficial ownership of shares and subsequent changes in that ownership with the SEC. Officers and directors of Applied Energetics, and greater than ten percent beneficial owners are also required to furnish us with copies of all such Section 16(a) forms they file. None of our officers or directors failed to file any Section 16(a) forms.

Code of Ethics

Applied Energetics has adopted a Code of Business Conduct and Ethics that applies to all of Applied Energetics' employees and directors, including its chief executive officer, principal financial officer and principal accounting officer. Applied Energetics' Code of Business Conduct and Ethics covers all areas of professional conduct including, but not limited to, conflicts of interest, disclosure obligations, insider trading, confidential information, as well as compliance with all laws, rules and regulations applicable to Applied Energetics' business.

Our Code of Ethics and Business Conduct is available upon request made to us in writing at the following address, and will be provided without charge:

Applied Energetics, Inc.
Attention: Compliance Officer
9070 S. Rita Road, Suite 1500
Tucson, AZ 85747

Committees of the Board of Directors

The members of the board of directors continue to evaluate the need and utility of establishing one or more committees of the Board of Directors and to review relevant legal or regulatory requirements with respect thereto. At present all functions that would be fulfilled by committees are being fulfilled by the entire board, and the board believes that currently no committees are necessary or legally required.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following table discloses the compensation for the persons who served as our President and Chief Executive Officer (and Principal Financial Officer), Executive Chairman and Vice President and Secretary for the years ended December 31, 2021 and 2020, Gregory J Quarles had been our Chief Executive Officer from May 6, 2019 to present and was elected President as of January 2021. Messrs. Adamczyk and Barcklow also receive compensation as directors as set forth under Director Compensation below.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Stock Awards ($)	All Other Compensation (1)	Total
Bradford T. Adamczyk,	2021	$ -	$ -	$ -	$	$ -
Executive Chairman	2020	$	$ -	$	$	$ -
Gregory J Quarles, President	2021	$ 304,167	$ 112,700	$ -	$ 4,990	$ 421,857
and Chief Executive Officer	2020	$ 250,000	$ 79,000	$	$ 62,683	$ 391,683
Jonathan R. Barcklow,	2021	$ -	$ -	$ -	$ -	$
Vice President and Secretary	2020	$ -	$ -	$ -	$ -	$ -
Stephen McCahon,	2021	$ 250,000	$	$ -	$ -	$ 250,000
Chief Scientist	2020	$ 220,833	$ -	$ -	$ -	$ 220,833

(1) In 2021, Dr. Quarles' all other compensation was for group term life insurance and in 2020, Dr. Quarles' all other compensation was for group term life insurance and tax gross up.

Director Compensation

The following table discloses our director compensation for the years ended December 31, 2021 and 2020:

Name	Year	Fees Earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)(1)e	All Other compensation ($)	Total ($)
Bradford T. Adamczyk,	2021	$ 148,000	$ -	$ -	$ -	$ 148,333
Executive Chairman	2020	$ 135,000	$ -	$ -	$ -	$ 135,000
Jonathan R. Barcklow,	2021	$ 59,083	$ -	$ -	$ -	$ 59,083
Vice President and Secretary	2020	$ 46,000	$ -	$ -	$ -	$ 46,000
John E Schultz, Jr.	2021	$ 75,000	$ -	$ -	$ -	$ 77,500
	2020	$ 75,000	$ -	$ -	$ -	$ 75,000
Mary P. O'Hara,	2021	$ -	$ -	$ 215,877	$ -	$ 215,877
General Counsel and CLO	2020	$ -	$ -	$ -	$ -	$ -

(1) In August 2021, Ms. O'Hara was granted 360,000 shares under options to purchase common stock.

Board Considerations in Determining Salaries

During the fourth quarter of 2020, our Board of Directors retained Innovative Compensation and Benefits Concepts, LLC and its principal, Robert B. Jones, to gather the necessary data, including review of relevant company information, the level of work contributed by each director, and compensation levels among peer companies, and render two separate reports with recommendations on appropriate compensation levels for each member of our Board of Directors as well as our current and possible future executive officers. The Board considered these recommendations carefully before implementing the Board compensation and the amendments to Dr. Quarles's Executive Employment Agreement. The Board periodically solicits input from Mr. Jones in making compensation decisions.

The various levels of compensation among members of the Board of Directors reflect the number of hours dedicated by each director and special assignments and projects undertaken by each on behalf of the company. Mr. Adamczyk's compensation as Executive Chairman consists of a board retainer of $150,000, and he receives an additional $65,000 for his assumption of capital and corporate finance and investor relations duties. Mr. Schultz's compensation consists of a board retainer of $75,000, and he receives an additional $15,000 for his service intending to legal affairs, accounting and information technology for the company. Mr. Barcklow's compensation consists of a board retainer of $75,000, and he receives an additional $35,000 for his service as Secretary, marketing and information technology.

Employment Agreements for Named Executive Officers and Chief Scientist

As of April 18, 2019, we entered into an Executive Employment Agreement with Dr. Gregory J Quarles setting forth the terms of his service as Chief Executive Officer. The agreement is for a term of three years and is renewable thereafter for sequential one-year periods. The agreement may be terminated by the company for “cause” or by Quarles for “Good Reason” both of which terms are defined in the agreement. The agreement may also be terminated, without cause or Good Reason, by either party upon sixty days’ written notice to the other.

The agreement calls for (i) a cash salary of $250,000 per annum, payable monthly, and eligibility for a discretionary bonus within 60 days of the end of each year, and (ii) options to purchase up to 5,000,000 shares of our common stock at an exercise price of $0.35 per share. These options were issued pursuant to a grant agreement, dated as of April 18, 2019 and vest immediately with respect to 500,000 shares and in semi-annual installments with respect to the remaining 4,500,000 shares. The agreement also provides for Quarles to retain 2,000,000 options previously granted to him under a Consultant Stock Option Agreement in 2017, for his services on the Scientific Advisory Board, which are subject to vesting based on achievement of performance milestones. Dr. Quarles forfeited options to purchase an additional 1,500,000 shares under another prior option agreement. Under the agreement, Dr. Quarles also is to receive health and life insurance as well as other standard benefits. The agreement also requires the company to reimburse certain out-of-pocket expenses and to compensate Quarles in the event that it requires him to resign from certain boards on which he serves.

In the event of a termination of the agreement by Quarles with Good Reason, or by us without cause, we must pay him any unpaid base compensation due as of the termination date as well as any pro rata unpaid bonus and any unpaid expenses. Any unvested options will vest upon such termination. In such event, we must continue to pay Dr. Quarles his monthly base compensation and any health and life insurance benefits until he has secured full-time employment, but not to exceed a period of three months from the termination date.

In the event that we terminate the agreement for cause or he terminates without Good Reason, he will receive base compensation and expense reimbursement through the date of termination but will forfeit any unvested equity compensation.

This agreement was amended December 15, 2020, increasing Dr. Quarles’ salary to $300,000 per year effective January 1, 2021, and again on November 30, 2021, increasing his salary to $350,000 per year effective January 1, 2022.

Stephen W. McCahon serves as our Chief Scientist, pursuant to a Consulting Agreement, dated as of May 24, 2019 (the “SWM Consulting Agreement”), of which he is the principal. The SMW Consulting Agreement provides for a combination of cash and equity compensation for which Dr. McCahon leads Applied Energetics’ scientific efforts including: leading the scientific team, developing new intellectual property, assisting with business development, transferring legacy knowledge to new team members, recruiting and training talent, working with executives on corporate strategy, assisting in budget development for R&D, meeting with clients on technical concepts, attending conferences, and producing thought leadership for the Company. Dr. McCahon works closely with Dr. Quarles on the Company’s research and development activities and in the proposal and fulfilment of research and development contracts for branches of the Department of Defense, agencies of the federal government and other defense contractors and in other internal research and development activities relating to lasers and advanced optical sources.

The SWM Consulting Agreement provides for Mr. McCahon’s service to the Company for compensation consisting partly of cash of $180,000 for the first year and $250,000 during each of the second and third years of the term. Under the SWM Consulting Agreement, the Company also repurchased 5,000,000 shares if its common stock, issued to Dr. McCahon in 2016 under a prior Consulting Agreement, at a price of $0.06 per share based on the Company share price at the time of the SWM Consulting Agreement. 5,000,000 of an additional 15,000,000 shares held by Dr. McCahon are subject to a lock-up and released pro rata each month during the term of the agreement which may be accelerated in the event of termination other than for cause or a change in control. The term of the SWM Consulting Agreement began on June 1, 2019, and extends for a period of 36 months thereafter. Dr. McCahon is entitled to continue receiving cash compensation for three months following the date of any termination without cause by the Company.

Also, effective May 24, 2019, and in connection with the entry into the SWM Consulting Agreement, the Company entered into an Asset Purchase Agreement with Applied Optical Sciences, Inc. (“AOS”), an Arizona corporation of which Stephen W. McCahon is the majority stockholder. The Asset Purchase Agreement provided for purchase of specified assets from AOS, including principally intellectual property, contracts and equipment in exchange for consideration consisting of (i) cash in the amount of $2,500,000.00, payable in the form of a Promissory Note, secured by the assets, and (ii) warrants to purchase up to 2,500,000 shares of Applied Energetics’ common stock at an exercise price of $0.06 per share. The Promissory Note was amended in February 2021 to extend the maturity date by six months and restructure the payment to time up to the adjusted maturity date. The amendment also called for waiver of any late payment penalties for the first two payments.

Dr. McCahon is a significant stockholder of the Company. See “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.”

Outstanding Equity Awards at Fiscal Year-End

The following table discloses unexercised options held by the named executives at December 31, 2021:

	Option Awards			
Name	**Number of Securities Underlying Unexercised Options Exercisable (#)**	**Number of Securities Underlying Unexercised Options Unexercisable (#)**	**Option Exercise Price**	**Option Expiration Date**
Gregory J. Quarles	2,000,000(1)	-	$ 0.05	03/28/2022
	4,250,000(2)	750,000	$ 0.35	04/18/2029
Jonathan R. Barcklow	5,000,000(3)	-	$ 0.07	11/12/2028

(1) This option was previously granted to Dr. Quarles under a Consultant Stock Option Agreement in 2017, for his services on the Scientific Advisory Board, which vested immediately with respect to 500,000 shares, up to an additional 250,000 shares upon achievement of the first $1 million in revenue, up to an additional 250,000 shares upon achievement of the next $2 million in revenues and up to an additional 1 million shares upon achievement of the next $5 million in revenues.

(2) These options vest immediately with respect to 500,000 shares and in six semi-annual installments of 750,000 shares with respect to the remaining 4,500,000 shares.

(3) The option granted to Mr. Barcklow vested immediately as to 1,800,000 shares and 200,000 shares per month thereafter through February of 2020. The two-part vesting schedule was first calculated monthly based on a start date of March 2018 when he became a director of the company. Additionally, with respect to 2,500,000 shares, the company must achieve certain milestones in the 20-day moving average share price of its common stock for the options to be exercisable. This option will be exercisable in the amount of 1,500,000 shares upon the 20-day moving average share price reaching $0.15 per share, 1,000,000 shares at $0.25 per share and 500,000 shares at $0.50 per share. A portion of Mr. Barcklow’s board compensation reflects his services as Vice President and Secretary, but he does receive director compensation for his board service as set forth under Director Compensation.

In addition to the foregoing, as of December 31, 2021, Bradford T. Adamczyk, director and Chairman of the Board, held options to purchase up to 5,000,000 shares of common stock, and John Schultz, a director, held options to purchase up to 2,500,000 shares of common stock, each at an exercise price of $0.07 per share and both of which expire on November 12, 2028. Details regarding these options are set forth in Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters below.

Payments upon Termination or Change-In-Control

There are no termination or change in control agreements in place that would require payments.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION:

During the fiscal year ended December 31, 2021, none of our executive officers served on the Board of Directors or the Compensation Committee of any other company whose executive officers also serve on our Board of Directors or our Compensation Committee.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS:

The following table sets forth information regarding the beneficial ownership of our Common Stock, based on information provided by the persons named below in publicly available filings, as of March 29, 2022:

- each of our directors and executive officers;
- all directors and executive officers of ours as a group; and
- each person who is known by us to beneficially own more than five percent of the outstanding shares of our Common Stock.

Unless otherwise indicated, the address of each beneficial owner is in care of Applied Energetics, 9070 South Rita Road, Suite 1500, Tucson, Arizona 85747. Unless otherwise indicated, the company believes that all persons named in the following table have sole voting and investment power with respect to all shares of common stock that they beneficially own.

For purposes of this table, a person is deemed to be the beneficial owner of the securities if that person has the right to acquire such securities within 60 days of March 29, 2022 upon the exercise of options or warrants. In determining the percentage ownership of the persons in the table below, we assumed in each case that the person exercised all options which are currently held by that person and which are exercisable within such 60-day period, but that options and warrants held by all other persons were not exercised, and based the percentage ownership on 207,692,878 shares outstanding on March 29, 2022.

Name of Beneficial Owner	Number of Shares Beneficially Owned (1)	Percentage of Shares Beneficially Owned (1)
Bradford T Adamczyk	7,235,081(2)	3.4%
Gregory J Quarles	7,000,000(3)	3.3%
Jonathan R Barcklow	6,000,000(4)	2.8%
John E Schultz Jr	4,372,624(5)	2.1%
Stephen W. McCahon	14,677,861(6)	7.0%
Mary P O'Hara	143,333(7)	*
Kevin T McFadden	12,100,000(8)	5.8%
All directors and executive officers as a group (6 persons)	39,428,899	18.6%

*Less than one percent.

(1) Computed based upon the total number of shares of common stock, restricted shares of common stock and shares of common stock underlying options or warrants held by that person that are exercisable within 60 days of the Record Date.

(2) Based on information contained in a Form 4, filed with the SEC on May 20, 2020. Includes 1,563,593 shares held by Moriah Stone Global L.P., which is controlled by Mr. Adamczyk. Also includes 5,000,000 shares underlying options. 3,500,000 of which are held in the name of the Adamczyk Family 2021 LLC.

(3) Based on information contained in a Form 3, filed with the SEC on May 20, 2020. Dr. Quarles has options to purchase up to 7,000,000 shares. Options to purchase up to 2,000,000 shares of common stock are vested as to 500,000 shares, the remaining 1,500,000 being subject to the Company achieving milestones for their vesting. Options to purchase up to 5,000,000 shares are vested as to 2,750,000 shares, with the remaining 2,250,000 vesting in three six-month installments of 750,000 shares each beginning April 18, 2022.

(4) Based on information contained in a Form 4, filed with the SEC on December 21, 2018. Includes 5,000,000 shares underlying options.

(5) Based on information contained in a Form 3, filed with the SEC on February 14, 2019. Includes 500,000 shares held by Oak Tree Asset Management Ltd., which is controlled by Mr. Schultz, and 770,322 shares held by Mary Schultz, Mr. Schultz's wife. Also includes 2,500,000 shares underlying options.

(6) Based on information known by the company and Dr. McCahon's Schedule 13D filed with the SEC on February 18, 2022.

(7) Based on information contained in a Form 4, filed with the SEC on January 6, 2022. Includes 1,000,000 shares underlying options.

(8) Based on information known by the company and Mr. McFadden's Schedule 13G, filed with the SEC on September 29, 2020. Includes a warrant to purchase 125,000 shares of common stock. Mr. McFadden's address is 21 Tow Path Lane South, Richmond, VA 23221.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table details information regarding our existing equity compensation plans as of December 31, 2021:

Equity Compensation Plan Information

Plan category	Number of securities to be issued upon exercise of outstanding options and rights	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	21,065,000	$ 0.21	28,935,000
Equity compensation plans not approved by security holders			
Total	21,065,000	$ 0.21	28,935,000

Effective November 12, 2018, the board of directors of Applied Energetics, Inc. adopted the 2018 Incentive Stock Plan. On October 30, 2019 the shareholders voted to approve and adopt the plan. The plan provides for the allocation and issuance of stock, restricted stock purchase offers and options (both incentive stock options and non-qualified stock options) to officers, directors, employees and consultants of the company. The board reserved a total of 50,000,000 for possible issuance under the plan.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Transactions with Related Parties

Except as disclosed herein, no director, executive officer, stockholder holding at least 5% of shares of our common stock, or any family member thereof, had any material interest, direct or indirect, in any transaction, or proposed transaction since the year ended December 31, 2021.

Contractual Relationships with Related Parties

Mary P. O'Hara, through her law firm, Masur Griffitts Avidor, LLP, serves as counsel to the Company, and provides securities, corporate, commercial and general legal services. The firm bills the Company monthly for such services, and such fees average approximately $22,000 per month.

Although the Company has not yet adopted formal policies and procedures with respect to related party transactions, the Board evaluates any such situation as it arises. In the case of Ms. O'Hara's service as counsel as well as a board member, in accordance with Rule 1.7 of the New York Lawyer's Rules of Professional Conduct and Note [35] thereto, the Board and Ms. O'Hara considered (i) the likelihood of a conflict of interest arising from her service, the potential intensity of any such conflict, the effect of her resignation if necessary, and the possibility of the Company obtaining legal advice from another attorney in such a conflict situation; and (ii) the risk that matters discussed at board meetings while she is present in the capacity of director might not be protected by the attorney-client privilege. Ms. O'Hara provided disclosure to the Board of the risks and possible conflicts involved with the relationship and recommended that the Board seek guidance from other counsel with respect to the reasonableness of the relationship. The Board then took such advice with respect to such matters as it deemed appropriate, including obtaining a memorandum from separate counsel regarding the above matters, and concluded that Ms. O'Hara's service on the Board posed no significant risk of such conflicts and that alternate counsel would be available in the event such a conflict did arise.

Dr. Stephen W. McCahon holds in excess of 5% of our common stock and serves as our Chief Scientist pursuant to a Consulting Agreement with SWM Consulting LLC of which he is the principal. For a description of this Consulting Agreement, see "Directors and Executive Officers – Chief Scientist" above. See also, "Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters."

Review, Approval or Ratification of Transactions with Related Persons

Pursuant to Company policy, all officers and directors of the Company who have, or whose immediate family members have, any direct or indirect financial or other participation in any business that supplies goods or services to Applied Energetics, are required to notify our Board of Directors, who will review the proposed transaction and take such action as it sees fit, including, if necessary, formal approval by the Board.

Pre-Approval Policies and Procedures

Consistent with the SEC requirements regarding auditor independence, our Board of Directors must pre-approve all audit and permissible non-audit services provided by our independent registered public accounting firm. Under the policy, the Board must approve non-audit services prior to the commencement of the specified service. Our independent registered public accounting firm, RBSM LLP, have verified to our Board that they have not performed, and will not perform any prohibited non-audit service.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES:

The following is a summary of the fees billed to the company by its independent registered Public Accounting firm for the years ended December 31, 2021 and December 31, 2020.

	2021	2020
Audit fees	$ 49,500	$ 44,500
Audit related fees	-	-
All other fees	42,500	5,000
Tax fees	6,000	6,000
	$ 98,000	$ 55,500

Fees for audit services include fees associated with the annual audit of the company and its subsidiaries, the review of our quarterly reports on Form 10-Q. Tax fees include tax compliance, tax advice, research and development credits and tax planning related to federal and state tax matters.

Pre-Approval Policies and Procedures

Consistent with the SEC requirements regarding auditor independence, our Board of Directors must pre-approve all audit and permissible non-audit services provided by our independent registered public accounting firm. Under the policy, the Board must approve non-audit services prior to the commencement of the specified service. Our independent registered public accounting firm, RBSM LLP, have verified to our Board that they have not performed, and will not perform any prohibited non-audit service.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed or incorporated by reference as part of this report:

(a) (1) The Consolidated Financial Statements of Applied Energetics, Inc. are filed as part of this report on page F-1 following the signatures.

Exhibits:

EXHIBIT NUMBER	DESCRIPTION
2.1	Amended and Restated Plan and Agreement of Merger entered into as of March 17, 2004, by and among U.S. Home & Garden, Inc. ("USHG"), Ionatron Acquisition Corp., a wholly-owned subsidiary of USHG, Robert Kassel (for purposes of Sections 5.9, 6.2(d), 6.2(j), 9.4 and 10.10 only), Fred Heiden (for purposes of Section 9.4 only), and Ionatron, Inc. and Robert Howard, Stephen W. McCahon, Thomas C. Dearmin and Joseph C. Hayden (incorporated by reference to the comparable exhibit filed with the Registrant's Form 8-K filed with the SEC on March 24, 2004).
3.1	Certificate of Incorporation, as amended, (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-KSB for the fiscal year ended June 30, 1995).
3.2	Certificate of Amendment of Certificate of Incorporation of the Registrant filed with the Secretary of State of the State of Delaware on April 29, 2004 (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-Q for the quarterly period ended March 31, 2004).
3.3	Certificate of Elimination of the 10% Series A Convertible Preferred Stock of the Registrant (incorporated by reference to the comparable exhibit filed with the Registrant's Form 8-K filed with the SEC on October 28, 2005).
3.4	Certificate of Designation of the 6.5% Series A Redeemable Convertible Preferred Stock of the Registrant (incorporated by reference to the comparable exhibit filed with the Registrant's 8-K filed with the SEC on October 28, 2005).
3.5	Certificate of Ownership and Merger of Applied Energetics, Inc. into Ionatron, Inc. (incorporated by reference to the comparable exhibit filed with the Registrant's Form 8-K filed with the SEC on February 20, 2008).
3.6	Amended and Restated By-laws of the Registrant (incorporated by reference to Exhibit 3 of the Registrant's Form 10-Q for the Quarter ended June 30, 2007.
3.7	Certificate of Amendment to Certificate of Incorporation filed with the Secretary of State of the State of Delaware on September 10, 2007.
4.1	Form of certificate evidencing Common Stock, $.001 par value, of the Registrant (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-1 (Registration No. 333-38483)).
10.1	2018 Incentive Stock Plan (Previously filed).
10.2	Consulting and Advisory Services Agreement, effective as of February 15, 2019, by and between the Registrant and WCC Ventures, LLC (incorporated by reference to Exhibit 99 to Form 8-K filed with the SEC on February 22, 2019).
10.3	Advisory Board Agreement by and between registrant and Christopher Donaghey (Previously filed).
10.4	Executive Employment Agreement, dated as of April 18,2019, by and between the Registrant and Gregory J. Quarles (previously filed).
10.5	Scientific Advisory Board Agreement, by and between the Registrant and Charles Hale (Previously filed.)
10.6	Consulting Agreement, by and between the Registrant and SWM Consulting, LLC (incorporated by reference to comparable exhibit filed with the Registrant's Form 8-K filed with the SEC on May 31, 2019)
10.7	Asset Purchase Agreement, by and between the Registrant and Applied Optical Sciences, Inc. LLC (incorporated by reference to comparable exhibit filed with the Registrant's Form 8-K filed with the SEC on May 31, 2019)
10.8	Contract/Order for Supplied and Services with the Department of the Army, dated as of March 3, 2020. (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-K for the year ended December 31, 2019)
10.9	Lease Agreement, by and between the Registrant and Campus Research Corporation (incorporated by reference to Exhibit 10.1 in the Registrant's Form 8-K filed with the SEC on March 17, 2021.
21	Subsidiaries (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-K for the year ended December 31, 2006)
23.1	Consent of RBSM LLP
31.1	Certification of Chief Executive Officer and Principal Financial Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Chief Executive Officer and Principal Financial Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
99.1	Compensation Committee Charter (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-K for the year ended December 31, 2010)
99.2	Corporate Governance and Nominating Committee Charter (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-K for the year ended December 31, 2009)
99.3	Audit Committee Charter (incorporated by reference to the comparable exhibit filed with the Registrant's Form 10-K for the year ended December 31, 2009
101.INS	XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized on the 30th day of March, 2022.

APPLIED ENERGETICS, INC.

By **/s/ Gregory J Quarles**
Gregory J Quarles, President and
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on the 30th day of March, 2022 by the following persons on behalf of the registrant and in the capacities indicated.

Name	Title
/s/ Bradford T. Adamczyk Bradford T. Adamczyk	Director, Executive Chairman
/s/ Gregory J. Quarles Gregory J. Quarles	Director, President, Chief Executive Officer and Principal Financial Officer
/s/ Jonathan R. Barcklow Jonathan R. Barcklow	Director, Vice President and Secretary
/s/ John E. Schultz Jr. John E. Schultz Jr.	Director
/s/ Mary P. O’Hara Mary P. O’Hara	Director, General Counsel and Chief Legal Officer

APPLIED ENERGETICS, INC.

FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2021 and 2020
INDEX

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
Applied Energetics, Inc. and Subsidiary

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Applied Energetics, Inc. and Subsidiary (collectively, the “company”) as of December 31, 2021 and 2020, and the related consolidated statements of operations, changes in stockholders’ equity and cash flows for each of the two years in the period ended December 31, 2021, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

The Company’s Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the company has suffered recurring losses from operations, will require additional capital to fund its current operating plan, that raises substantial doubt about the company’s ability to continue as a going concern. Management’s plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the company’s management. Our responsibility is to express an opinion on the company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the company’s internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements, and (2) involved our especially challenging, subjective, or complex judgments.

We determined that there are no critical audit matters.

/s/ RBSM LLP

We have served as the company’s auditor since 2016.
Las Vegas, NV
March 30, 2022
PCAOB ID Number 587

APPLIED ENERGETICS, INC.
CONSOLIDATED BALANCE SHEETS

	DECEMBER 31, 2021	DECEMBER 31, 2020
ASSETS		
Current assets		
Cash and cash equivalents	$ 3,662,615	$ 3,323,290
Other receivable	-	2,880
Other assets	43,391	39,352
Total current assets	3,706,006	3,365,522
Long-term assets		
Security deposit	17,004	-
Property and equipment - net	206,810	19,466
Deferred compensation	416,666	1,250,001
Right of Use Asset - Operating	544,670	-
Total Long-term assets	1,185,150	1,269,467
TOTAL ASSETS	$ 4,891,156	$ 4,634,989
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities		
Accounts payable	$ 195,381	$ 152,445
Notes payable	1,000,000	1,547,695
Notes payable CARES Act PPP Loan	24,189	-
Due to related parties	50,000	50,000
Operating Lease Liability - current	76,227	-
Accrued expenses	21,870	938
Accrued dividends	48,079	48,079
Total current liabilities	1,415,747	1,799,157
Long-term liabilities Operating Lease Liability - non-current	507,188	-
Long-term notes payable	-	1,000,000
Long-term notes payable CARES Act PPP Loan	-	133,462
Total long-term liabilities	507,188	1,133,462
Total liabilities	1,922,935	2,932,619
Stockholders' equity		
Series A convertible preferred stock, $.001 par value, 2,000,000 shares authorized and 13,602 shares issued and outstanding at December 31, 2021 and at December 31, 2020 (Liquidation preference $340,050 and $340,050, respectively)	14	14
Common stock, $.001 par value, 500,000,000 shares authorized; 207,562,461 and 190,529,320 shares issued and outstanding at December 31, 2021 and at December 31, 2020, respectively	207,562	190,529
Additional paid-in capital	100,452,862	93,778,591
Accumulated deficit	(97,692,217)	(92,266,764)
Total stockholders' equity	2,968,221	1,702,370
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 4,891,156	$ 4,634,989

The accompanying notes are an integral part of these consolidated financial statements.

APPLIED ENERGETICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	FOR THE YEARS ENDED DECEMBER 31,	
	2021	2020
Revenue	$ -	$ 175,920
Cost of revenue	-	(153,630)
Gross profit	-	22,290
Operating expenses:		
General and administrative	4,903,081	4,698,624
Selling and marketing	317,350	296,461
Research and development	281,896	266,864
Total operating expenses	5,502,327	5,261,949
Operating loss	(5,502,327)	(5,239,659)
Other income/(expense)		
Other income	81,218	15,832
Gain on settlement	-	3,206,000
Interest expense	(4,344)	(1,212,667)
Total other income/(expense)	76,874	2,009,165
Loss before provision for income taxes	(5,425,453)	(3,230,494)
Provision for income taxes	-	-
Net loss	(5,425,453)	(3,230,494)
Preferred stock dividends	(34,005)	(34,005)
Net loss attributable to common stockholders	$ (5,459,458)	$ (3,264,499)
Net loss attributable to common stockholders per common share – basic and diluted	$ (0.03)	$ (0.02)
Weighted average number of common shares outstanding, basic and diluted	200,854,103	193,505,618

The accompanying notes are an integral part of these consolidated financial statements.

APPLIED ENERGETICS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020

	Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Equity
Balance as of December 31, 2019	13,602	$ 14	206,569,062	$ 206,569	$ 85,907,523	$ (89,036,271)	$ (2,922,165)
Stock-based compensation expense					1,487,701		1,487,701
Restricted stock agreement-based non-cash compensation			18,750	19	13,106		13,125
Common stock issued on exercise of stock option and warrant			1,075,000	1,075	74,175		75,250
Sale of common stock			5,480,334	5,480	1,638,620		1,644,100
Cancellation of common stock	-	-	(11,000,000)	(11,000)	11,000	-	-
Accrual of payment in anticipation of settlement			(25,000,000)	(25,000)	(1,475,000)		(1,500,000)
Stock issuance to pay off convertible notes and accrued interest	-	-	18,386,174	18,386	5,497,466	-	5,515,852
Purchase and cancellation of common stock	-	-	(5,000,000)	(5,000)	(295,000)	-	(300,000
Recognize beneficial conversion feature	-	-	-	-	919,000	-	919,000
Net loss for the year ended December 31, 2020	-	-	-	-	-	(3,230,494)	(3,230,494)
Balance as of December 31, 2020	13,602	$ 14	190,529,320	$ 190,529	$ 93,778,591	$ (92,266,764)	$ 1,702,369
RSU restricted stock			31,250	31	4,519		4,550
Stock-based compensation					1,232,256		1,232,256
Common stock issued on cashless exercise of options and warrants			4,082,637	4,084	(4,084)		-
Common stock issued on exercise of options and warrants			1,650,010	1,650	106,350		108,000
Common stock issued on exercised of convertible note			158,329	158	47,340		47,498
Sale of common stock			11,110,915	11,110	5,287,890		5,299,000
Net loss for the year ended December 31, 2021	-	-	-	-	-	(5,425,453)	(5,425,453)
Balance as of December 31, 2021	13,602	$ 14	207,562,461	$ 207,562	$ 100,452,862	$ (97,692,217)	$ 2,968,221

The accompanying notes are an integral part of these consolidated financial statements.

APPLIED ENERGETICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	FOR THE YEARS ENDED DECEMBER 31,	
	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (5,425,453)	$ (3,230,494)
Adjustments to reconcile net loss to net cash used in operating activities:		
Noncash stock based compensation expense	1,236,806	1,500,825
Gain on settlement of accrued compensation	-	(206,000)
Common Stock issued for interest expenses	-	229,296
Amortization of beneficial conversion feature	-	919,000
Depreciation and amortization	20,024	17,102
PPP loan forgiveness	(81,550)	-
Amortization of future compensation payable	833,333	833,333
Amortization of prepaid assets	156,562	149,856
Changes in assets and liabilities:		
Accounts receivable	-	9,888
Other receivable	2,880	-
Inventory	-	5,930)
Prepaids and deposits	(60,395)	(44,275)
ROU liabilities	38,745	-
Accounts payable	42,936	(232,341)
Accrued interest	1,386	(89,755)
Accrued expenses and compensation	20,932	(22,649)
Net cash used in operating activities	(3,213,794)	(160,284)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of equipment	(207,367)	-
Net cash used by investing activities	(207,367)	-
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from sale of common stock	5,299,000	1,644,100
Purchase and cancellation of stock	-	(1,300,000)
Repayment of insurance premium loan	-	(108,064)
Repayment on note payable	(1,646,513)	(1,372,887)
Proceeds from note payable	-	4,324,000
Proceeds from SBA loan		132,760
Proceeds from the exercise of stock options and warrants	108,000	75,250
Net cash provided by financing activities	3,760,487	3,395,159
Net increase in cash and cash equivalents	339,325	3,234,875
Cash and cash equivalents, beginning of year	3,323,290	88,415
Cash and cash equivalents, end of year	$ 3,662,615	$ 3,323,290
Supplemental Cash Flow Information		
Cash paid for interest	$ 1,421	$ 53,976
Cash paid for taxes	$ -	$ -
Schedule of Non-Cash Information		
Insurance financing for prepaid insurance	$ 117,209	$ 108,064
Implementation of ASC 842	$ 617,569	$ -
Forgiveness of PPP loan	$ 81,550	$ -
Equipment investing in accounts payable	$ 64,107	$ -
Common stock issued for repayment of convertible notes	$ 47,498	$ 5,253,614
Beneficial conversion feature on notes payable	$ -	$ 919,000
Long term investment utilized for cancellation of shares	$ -	$ 500,000

The accompanying notes are an integral part of these consolidated financial statements.

NOTE 1 - ORGANIZATION OF BUSINESS, GOING CONCERN AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The consolidated financial statements include the accounts of Applied Energetics, Inc. and its wholly owned subsidiary North Star Power Engineering, Inc. ("North Star") (collectively, "company," "Applied Energetics," "AERG", "we," "our" or "us"). All intercompany balances and transactions have been eliminated.

Going Concern

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. For the year ended December 31, 2021, the company incurred a net loss of approximately $5,425,000, had negative cash flows from operations of approximately $3,214,000 and may incur additional future losses due to the reduction in Government contract activity. At December 31, 2021, the company had total current assets of approximately $3,706,000 and total current liabilities of approximately $1,416,000 resulting in working capital of approximately $2,290,000. At December 31, 2021, the company had cash of approximately $3,663,000.

As of December 31, 2021, the company had cash of approximately $3,663,000. Based on the company's current business plan, it believes its cash balance as of the date of this filing will be sufficient to meet its anticipated cash requirements for the next twelve months. However, there can be no assurance that the current business plan will be achievable. Such conditions raise substantial doubts about the company's ability to continue as a going concern for one year from the date the financial statements are issued.

The company's existence is dependent upon management's ability to develop profitable operations. Management is devoting substantially all of its efforts to developing its business and raising capital and there can be no assurance that the company's efforts will be successful. No assurance can be given that management's actions will result in profitable operations or the resolution of its liquidity problems. The accompanying consolidated financial statements do not include any adjustments that might result should the company be unable to continue as a going concern. The ongoing COVID-19 pandemic contributes to this uncertainty.

In order to improve the company's liquidity, the company's management is actively pursuing additional equity financing through discussions with investment bankers and private investors. There can be no assurance that the company will be successful in its effort to secure additional equity financing.

The financial statements do not include any adjustments relating to the recoverability of assets and the amount or classification of liabilities that might be necessary should the company be unable to continue as a going concern.

Applied Energetics, Inc. is a corporation organized and existing under the laws of the State of Delaware. Our executive office and laboratory space are located at 9070 S. Rita Road, Suite 1500, Tucson, Arizona, 85747, and our telephone number is (520) 628-7415.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates, judgments and assumptions that affect the amounts reported in the financial statements and accompanying notes. Management bases its assumptions on historical experiences and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. In addition, management considers the basis and methodology used in developing and selecting these estimates, the trends in and amounts of these estimates, specific matters affecting the amount of and changes in these estimates, and any other relevant matters related to these estimates, including significant issues concerning accounting principles and financial statement presentation. Such estimates and assumptions could change in the future as more information becomes known which could impact the amounts reported and disclosed herein. Significant estimates include revenue recognition, carrying amounts of long-lived assets, valuation assumptions for share-based payments, evaluation of debt modification accounting, effective borrowing rate determinations, analysis of fair value transferred upon debt extinguishment, valuation and calculation of measurements of income tax assets and liabilities and valuation of debt discount related to beneficial conversion features.

Net Loss Attributable to Common Stockholders

Basic loss per common share is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period before giving effect to stock options, stock warrants, restricted stock units and convertible securities outstanding, which are considered to be dilutive common stock equivalents. Diluted net loss per common share is calculated based on the weighted average number of common and potentially dilutive shares outstanding during the period after giving effect to dilutive common stock equivalents. Contingently issuable shares are included in the computation of basic loss per share when issuance of the shares is no longer contingent. The number of warrants, options, restricted stock units and our Series A Convertible Preferred Stock, which were not included in the computation of earnings per share because the effect was antidilutive, was 30,343,602 and 35,612,091 for the years ended December 31, 2021 and 2020, respectively.

Fair Value of Current Assets and Liabilities

The carrying amount of accounts payable approximate fair value due to the short maturity of these instruments.

Cash and Cash Equivalents

Cash equivalents are investments in money market funds or securities with an initial maturity of three months or less. We maintain our cash balances at a commercial bank, and, at times, balances exceed FDIC limits. As of December 31, 2021, $3,412,615 of our cash balance was uninsured.

Income Taxes

Deferred tax assets and liabilities are recognized currently for the future tax consequences attributable to the temporary differences between the financial statement carrying amounts of assets and liabilities and their respective tax basis. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which those temporary differences are expected to be recovered or settled. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets if it is more likely than not that such assets will not be realized. Our valuation allowance is currently 100% of our assets.

We consider all available evidence, both positive and negative, to determine whether, based on the weight of that evidence, a valuation allowance is needed for some portion or all of a net deferred tax asset. Judgment is used in considering the relative impact of negative and positive evidence. In arriving at these judgments, the weight given to the potential effect of negative and positive evidence is commensurate with the extent to which it can be objectively verified. We record a valuation allowance to reduce our deferred tax assets and review the amount of such allowance annually. When we determine certain deferred tax assets are more likely than not to be utilized, we will reduce our valuation allowance accordingly.

Revenue Recognition

The company recognizes revenue in accordance with ASC Topic 606 – Revenue from Contracts with Customers (“ASC 606”) to depict the transfer of control to the company’s customers in an amount reflecting the consideration the company expects to be entitled. The company determines revenue recognition through the following steps:

i. Identification of the contract, or contracts, with a customer

ii. Identification of the performance obligations in the contract

iii. Determination of the transaction price

iv. Allocation of the transaction price to the performance obligations in the contract

v. Recognition of revenue, when, or as, the company satisfied the performance obligation

The company generated revenue from its customer by preparing a technical report. The company’s single performance obligation was to deliver the final technical report detailing the findings of the company’s investigations. The fee for the report was fixed.

Share-Based Payments

Employee stock-based compensation cost is measured at grant date, based on the fair value of the award, and is recognized as an expense over the requisite service period. The fair value of each option grant is estimated at the date of grant using the Black-Scholes-Merton option valuation model. We make the following assumptions relative to this model: (i) the annual dividend yield is zero as we do not pay dividends on common stock, (ii) the weighted-average expected life is based on a midpoint scenario, where the expected life is determined to be half of the time from grant to expiration, regardless of vesting, (iii) the risk free interest rate is based on the U.S. Treasury security rate for the expected life, and (iv) the volatility is based on the level of fluctuations in our historical share price for a period equal to the weighted-average expected life. We estimate forfeitures when recognizing compensation expense and adjust this estimate over the requisite service period should actual forfeitures differ from such estimates. Changes in estimated forfeitures are recognized through a cumulative adjustment, which is recognized in the period of change, and which impacts the amount of unamortized compensation expense to be recognized in future periods.

Significant Concentrations and Risks

We maintain cash balances at a commercial bank, and, at times, balances exceed FDIC limits. As of December 31, 2021, $3,412,615 of our cash balance was uninsured.

NOTE 2 – NEW ACCOUNTING STANDARDS

The company has reviewed all issued accounting pronouncements and plans to adopt those that are applicable to it. The company does not expect the adoption of any other pronouncements to have an impact on its results of operations or financial position.

In December 2019, the FASB issued amended guidance in the form of ASU No. 2019-12, “Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.” This ASU is intended to simplify various aspects related to accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and clarifying certain aspects of the current guidance to promote consistency among reporting entities. ASU 2019-12 is effective for annual periods beginning after December 15, 2020, and interim periods within those annual periods, with early adoption permitted. An entity that elects early adoption must adopt all the amendments in the same period. Most amendments within this ASU are required to be applied on a prospective basis, while certain amendments must be applied on a retrospective or modified retrospective basis. The company has evaluated the impact of this new standard and notes the guidance will not have a material impact on our financial statements.

On August 5, 2020, the FASB issued ASU No. 2020-06 which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity, including convertible instruments and contracts on an entity’s own equity. ASU 2020-06 simplifies the guidance in U.S. GAAP on the issuer’s accounting for convertible debt instruments. Such guidance includes multiple disparate sets of classification, measurement, and derecognition requirements whose interactions are complex. ASU 2020-06 is effective for annual periods beginning after December 15, 2021, and interim periods within those annual periods, with early adoption permitted. An entity that elects early adoption must adopt all the amendments in the same period. Most amendments within this ASU are required to be applied on a prospective basis, while certain amendments must be applied on a retrospective or modified retrospective basis. The company is in the initial stage of evaluating the impact of this new standard however it does not believe the guidance will have a material impact on our financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). This standard requires all leases that have a term of over 12 months to be recognized on the balance sheet with the liability for lease payments and the corresponding right-of-use asset initially measured at the present value of amounts expected to be paid over the term. Recognition of the costs of these leases on the income statement will be dependent upon their classification as either an operating or a financing lease. Costs of an operating lease will continue to be recognized as a single operating expense on a straight-line basis over the lease term. Costs for a financing lease will be disaggregated and recognized as both an operating expense (for the amortization of the right-of-use asset) and interest expense (for interest on the lease liability). The company has adopted this standard beginning July 1, 2020, and the company now applies it on a modified retrospective basis to leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. For the year ended December 31, 2021, the company had one lease to which the standard applies. The adoption of the new standard resulted in the recognition of a right-of-use asset and lease liability of $617,569 and $617,569, respectively. At December 31, 2021, the right-of-use asset and lease liability were valued at $544,670 and $583,415, respectively

NOTE 3 – NOTES PAYABLE

On May 24, 2019, the company entered into an Asset Purchase Agreement (the “APA”) with Applied Optical Sciences, LLC (“AOS”) to acquire certain assets. As consideration for the APA, the company entered into a promissory note issued to the shareholders of AOS for $2,500,000. The note is non-interest bearing and shall be repaid in equal installments. The company made the first three payments of $500,000 on February 10, 2021, May 24, 2021, and November 19, 2021, respectively. In accordance with the terms of the note, $500,000 is due on May 24, 2022 and the remaining $500,000 is due on November 24, 2022. The Promissory Note may be prepaid at any time (in whole or in part). Upon inception, the company recorded a debt discount in the amount of $2,500,000 in relation to the transaction which is being amortized over the life of the loan as compensation expense. During the year ended December 31, 2021, the company made payments in the amount of $1,500,000, in the aggregate, for this promissory note. As of December 31, 2021, and December 31, 2020, the note is not in default.

Paycheck Protection Program

On April 28, 2020, the company entered into a loan agreement with Alliance Bank of Arizona, N.A. for a loan in the amount of $132,760 pursuant to the Paycheck Protection Program (the "PPP") under the Coronavirus Aid, Relief, and Economic Security Act enacted on March 27, 2020 (the "CARES Act"). This loan is evidenced by a promissory note dated April 27, 2020, and matures two years from the disbursement date. This loan bears interest at a rate of 1.00% per annum, with the first nine months of interest deferred. Principal and interest are payable monthly commencing nine months after the disbursement date and may be prepaid by the company at any time prior to maturity with no prepayment penalties. This loan contains customary events of default relating to, among other things, payment defaults or breaches of the terms of the loan. Upon the occurrence of an event of default, the lender may require immediate repayment of all amounts outstanding under the note.

Under the terms of the PPP, up to the entire amount of principal and accrued interest may be forgiven to the extent loan proceeds are used for qualifying expenses as described in the CARES Act and applicable implementing guidance issued by the U.S. Small Business Administration ("SBA") under the PPP. The company partially used the loan amount for designated qualifying expenses and received notice from the SBA on June 30, 2021, that the company would not be required to repay $81,550 in proceeds. As a result, the company received partial forgiveness of the PPP amounting to $80,594 in principal and $956 in interest which is reflected within PPP forgiveness and other income on the statements of operations. Additionally, the company made five payments during the year ended December 31, 2021, for a total of $29,306. As of December 31, 2021, $22,804 in principal and $1,385 in interest were outstanding and continue to accrue interest at 1% per annum. The loan is due to be repaid on April 20, 2022.

Premium Financing

On March 25, 2021, the company entered into an agreement with Oakwood D&O Insurance to provide financing in an amount of $156,279 for the insurance premium associated with two D&O policies. Both policies commenced March 12, 2021, and provided coverage for the next 12 months, expiring March 12, 2022. The loan bears interest at a fixed rate of 6.5% per annum and required the company to prepay $39,070 during the last three months of the term. On April 12, 2021, the company commenced monthly principal and interest payments of $13,024 on the remaining nine months due of $117,209, for the remaining nine months. The last payment was made on December 31, 2021. As of December 31, 2021, the outstanding balance on the note was $0.

During the year ended December 31, 2021, the company converted $47,498 of notes payable into 158,329 shares of common stock.

The following reconciles notes payable as of December 31, 2021 and December 31, 2020:

	December 31, 2021	December 31, 2020
Beginning balance	$ 2,681,157	$ 4,967,890
Notes payable	117,209	4,456,760
Accrued interest	1,385	297,849
Transfer from prepaid	-	108,064
Initial beneficial conversion feature	-	(919,000)
Amortize beneficial conversion feature	-	919,000
Payments on notes payable	(1,646,513)	(1,480,951)
Repayment of interest	-	(152,603)
Extinguishment of Debt	(81,550)	-
Converted into common stock	(47,498)	(5,515,852)
Total	1,024,190	2,681,157
Less-Notes payable - current	1,024,190	(1,547,695)
Notes payable - non-current	$ -	$ 1,133,462

Future principal payments for the company's Notes as of December 31, 2021 are as follows:

2022	$ 1,024,190
Thereafter	-
Total	$ 1,024,190

The company's note payable balance of $1,204,190 is due within the next twelve months, in accordance with the terms of note payable. Of the remaining $1,204,190, $1,000,000 consists of two remaining payments of $500,000, due on May 24, 2022 and November 24, 2022, which is the remaining balance on the note payable that the company assumed as part of the agreement to acquire Applied Optical Sciences. In accordance with the terms of note payable, the company made the first three payments of $500,000 on February 10, 2021, May 24, 2021, and November 19, 2021.

Subsequent to the year ended December 31, 2021, the company entered into a $175,434.65 financing agreement to finance its Directors and Officers insurance premiums.

NOTE 4 – DEFERRED COMPENSATION

On May 24, 2019, the company entered into the APA with AOS to acquire certain assets. As consideration for the APA, the company entered into a promissory note issued to the shareholders of AOS for $2,500,000. The company also recorded a debt discount, which is reported on the balance sheet as deferred compensation, in the amount of $2,500,000 in relation to the transaction which is being amortized over the life of the loan as compensation expense. The amortization of deferred compensation for the year ended December 31, 2021, and 2020 was $833,333 and $833,333, respectively. As of December 31, 2021, and 2020, the remaining deferred compensation to be amortized was $416,667 and $1,250,000, respectively.

NOTE 5 – DUE TO RELATED PARTIES

It has come to the board's attention that on July 31, 2018, our now deceased CEO deposited $50,000 into the company's account. Although it has been suggested that the funds may have been intended for use toward Mr. Dearmin's healthcare, the board does not know for certain what the purpose of the funds were or the nature of any intended investment. Accordingly, the board is investigating the appropriate disposition of the funds which will likely be to the estate of Mr. Dearmin. Until such a determination is made, the board does not intend to use these funds for any corporate purpose. For reporting purposes, the company has treated the deposit as a due to related party.

NOTE 6 – STOCKHOLDERS' DEFICIT

Authorized Capital Stock

The company's authorized capital stock consists of 500,000,000 shares of common stock at a par value of $.001 per share and 2,000,000 shares of preferred stock at a par value of $.001 per share.

In January 2020, the company received $603,000 from five non-affiliated individuals based on subscription agreements with the company for which the company issued 2,010,000 shares of its common stock.

In January 2020, the company issued 25,000 shares upon exercise of a warrant by a non-affiliated warrant holder at an exercise price of $0.07 per share.

In February 2020, the company received $510,000 from a non-affiliated individual based on a subscription agreement with the company for which the company issued 1,700,000 shares of its common stock.

In April 2020, the company received $11,000 from an individual based on a warrant exercise for which the company issued 150,000 shares of its common stock.

In April 2020, the company received $63,000 from an individual based on an option exercise for which the company issued 900,000 shares of its common stock.

In April 2020, the company received $531,000, in the aggregate, from an individuals based on subscription agreements with the company for which the company issued 1,770,333 shares of its common stock.

During the year ended December 31, 2021, the company issued 4,054,665 shares of common stock in a private placement to accredited investors for $0.75 per share or $3,041,000 of net cash proceeds, in the aggregate.

During the year ended December 31, 2021, the company issued 7,056,250 shares of common stock in a private placement to accredited investors for $0.32 per share or $2,258,000 of net cash proceeds, in the aggregate.

During the year ended December 31, 2021, the company issued 158,329 shares of common stock upon the conversion of $47,498 of convertible notes (see Note 3).

During the year ended December 31, 2021, the company issued 31,250 shares of common stock in relation to a restricted stock agreement with a value of $4,550.

During the year ended December 31, 2021, the company issued 800,000 shares of common stock upon the exercise of 800,000 warrants at an exercise price of $0.07 a share.

During the year ended December 31, 2021, the company issued 250,000 shares of common stock upon the exercise of 250,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 50,000 shares of common stock upon the exercise of 50,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 100,000 shares of common stock upon the exercise of 100,000 warrants at an exercise price of $0.07 a share.

During the year ended December 31, 2021, the company issued 200,000 shares of common stock upon the exercise of 200,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 125,000 shares of common stock upon the exercise of 125,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 60,000 shares of common stock upon the exercise of 60,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 65,000 shares of common stock upon the exercise of 65,000 warrants at an exercise price of $0.06 a share.

During the year ended December 31, 2021, the company issued 1,005,682 shares of common stock upon the exercise of 1,090,910 options at an exercise price of $0.05 a share. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 259,741 shares of common stock upon the exercise of 500,000 options at an exercise price of $0.37 a share. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 475,000 shares of common stock with an exercise of 500,000 options. 25,000 shares of common stock were withheld with the exercise. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 482,143 shares of common stock with an exercise of 500,000 options. 17,857 shares of common stock were withheld with the exercise. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 728,814 shares of common stock with an exercise of 750,000 options. 21,186 shares of common stock were withheld with the exercise. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 400,158 shares of common stock with an exercise of 409,090 options. 8,932 shares of common stock were withheld with the exercise. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company issued 731,109 shares of common stock with an exercise of 750,000 options. 18,891 shares of common stock were withheld with the exercise. This exercise was performed on a cashless basis.

During the year ended December 31, 2021, the company recognized stock-based compensation in the amount of $1,236,806.

Preferred Stock

As of December 31, 2021, and 2020 there were 13,602 and 13,602 shares of Series A Redeemable Convertible Preferred Stock (the “Series A Preferred Stock”) outstanding, respectively. The company has not paid the dividends commencing with the quarterly dividend due August 1, 2013. Dividend arrearages as of December 31, 2021, including previously accrued dividends included in our balance sheet are approximately $295,000. Our Board of Directors suspended the declaration of the dividend, commencing with the dividend payable as of February 1, 2015, since we did not have a surplus (as such term is defined in the Delaware general corporation Law) as of December 31, 2014, until such time as we have a surplus or net profits for a fiscal year.

Our Series A Preferred Stock has a liquidation preference of $25.00 per Share. The Series A Preferred Stock bears dividends at the rate of 6.5% of the liquidation preference per share per annum, which accrues from the date of issuance, and is payable quarterly. Dividends may be paid in: (i) cash, (ii) shares of our common stock (valued for such purpose at 95% of the weighted average of the last sales prices of our common stock for each of the trading days in the ten trading day period ending on the third trading day prior to the applicable dividend payment date), provided that the issuance and/or resale of all such shares of our common stock are then covered by an effective registration statement and the company’s common stock is listed on a U.S. national securities exchange or the Nasdaq Stock Market at the time of issuance or (iii) any combination of the foregoing. If the company fails to make a dividend payment within five business days following a dividend payment date, the dividend rate shall immediately and automatically increase by 1% from 6.5% of the liquidation preference per offered share of Series A preferred stock to 7.5% of such liquidation preference. If a payment default shall occur on two consecutive dividend payment dates, the dividend rate shall immediately and automatically increase to 10% of the liquidation preference for as long as such payment default continues and shall immediately and automatically return to the Initial dividend rate at such time as the payment default is no longer continuing.

Each share of Series A Preferred Stock is convertible at any time at the option of the holder into a number of shares of common stock equal to the liquidation preference (plus any unpaid dividends for periods prior to the dividend payment date immediately preceding the date of conversion by the holder) divided by the conversion price (initially $12.00 per share, subject to adjustment in the event of a stock dividend or split, reorganization, recapitalization or similar event.) If the closing sale price of the common stock is greater than 140% of the conversion price on 20 out of 30 trading days, the company may redeem the Series A Preferred Stock in whole or in part at any time through October 31, 2010, upon at least 30 days' notice, at a redemption price, payable in cash, equal to 100% of the liquidation preference of the shares to be redeemed, plus unpaid dividends thereon to, but excluding, the redemption date, subject to certain conditions. In addition, beginning November 1, 2010, the company may redeem the Series A Preferred Stock in whole or in part, upon at least 30 days' notice, at a redemption price, payable in cash, equal to 100% of the liquidation preference of the Series A Preferred Stock to be redeemed, plus unpaid dividends thereon to, but excluding, the redemption date, under certain conditions.

If a change of control occurs, each holder of shares of Series A Convertible Preferred Stock that are outstanding immediately prior to the change of control shall have the right to require the corporation to purchase, out of legally available funds, any outstanding shares of Series A Convertible Preferred Stock at the defined purchase price. The purchase price is defined as: per share of Preferred Stock, 101% of the liquidation preference thereof, plus all unpaid and accumulated dividends, if any, to the date of purchase thereof. The purchase price is payable, at the corporation's option, (x) in cash, (y) in shares of the common stock at a discount of 5% from the fair market value of Common Stock on the Purchase Date (i.e. valued at a 95% discount of the Common Stock on the Purchase Date), or (z) any combination thereof.

If the Corporation pays all or a portion of the Purchase Price in Common Stock, no fractional shares of Common Stock will be issued; instead, the company will round the applicable number of shares of Common Stock up to the nearest whole number of shares; provided that the Corporation may pay the Purchase Price (or a portion thereof), whether in cash or in shares of Common Stock, only if the Corporation has funds legally available for such payment and may pay the Purchase Price (or a portion thereof) in shares of its Common Stock only if (i) the Common Stock is listed on a U.S. national securities exchange or the Nasdaq Stock Market at the time of issuance and (ii) a shelf registration statement covering the issuance by the Corporation and/or resales of the Common Stock issuable as payment of the Purchase Price is effective on the Payment Date unless such shares are eligible for immediate resale in the public market by non-affiliates of the Corporation.

Dividends on our Preferred Stock are payable quarterly on the first day of February, May, August and November, in cash or shares of Common Stock, at our discretion.

Share-Based Payments

Effective November 12, 2018, the Board of Directors of Applied Energetics, Inc. adopted the 2018 Incentive Stock Plan. The plan provides for the allocation and issuance of stock, restricted stock purchase offers and options (both incentive stock options and non-qualified stock options) to officers, directors, employees and consultants of the company. The board reserved a total of 50,000,000 shares for possible issuance under the plan.

We have, from time to time, also granted non-plan options to certain officers, directors, employees and consultants. Total stock-based compensation expense for grants to officers, employees and consultants was $1,232,256 and $1,501,000 for the year ended December 31, 2021, and 2020, respectively, which was charged to general and administrative expense.

The $1,236,806 stock-based compensation for the year ended December 31, 2021, was comprised of $520,819 option expense and $669,000 was the amortization of 5,000,000 shares of stock valued at $0.4014 over three years for the acquisition of assets of Applied Optical Sciences. Additionally, stock-based compensation for the year ended December 31, 2021, was comprised of 140,000 shares under a restricted stock agreement the Company entered into in May of 2021. The restricted stock awards were valued at $84,000 of which $46,987 was recognized in 2021. The shares vest annually over two years with the first installment one year from the agreement; provide, however, if either party terminates the agreement at any time prior to the last date of it ending, then the shares will best, pro rata, for each month served since the most recent prior annual vesting date.

The company recognized no related income tax benefit because our deferred tax assets are fully offset by a valuation allowance.

The company issued 140,000 shares through restricted stock grants year ended December 31, 2021, and 2020. The company renewed a consulting agreement, extending services for an additional term of two sequential one-year periods. As compensation for the renewal, Mr. Donaghey is to receive for each year of service during the renewal term 70,000 shares of AERG common stock and options to purchase 200,000 shares of common stock at an exercise price of $0.61 per share, reflecting the fair market value of the common stock on the date of grant. 50% of the options vest on the first anniversary of the renewal, and the other 50% vest on the second anniversary, 50% of the common stock vests immediately and the remaining 50% on the first anniversary of the agreement.

During the year ended December 31, 2021, the company issued 760,000 options to purchase common stock at an exercise price of $0.61 a share. The options vest over a period of three years from the date of the amendment.

During the year ended December 31, 2021, the company issued 1,000,000 options to purchase common stock at an exercise price of $0.19 a share. The options vest over a period of three years from the date of the amendment.

During the year ended December 31, 2021, the company issued 155,000 options to purchase common stock at an exercise price of $1.21 a share. The options vest over a period of three years from the date of the amendment.

The following table summarizes the activity of our stock options for the years ended December 31, 2020 and 2021:

	Shares	Weighted Average Exercise Price	Weighted Average Contractual Term Outstanding	Intrinsic Value
Outstanding at January 1, 2020	32,900,000	0.1428	**6.6**	$ 4,731,000
Granted	-	-		
Exercised	(900,000)	0.0700		
Forfeited or expired	-	-		
Outstanding at December 31, 2020	32,000,000	$ 0.1419	**5.6**	$ 6,054,000
Granted	1,915,000	$ 0.7806		
Exercised	(4,500,000)	$ 0.0856		
Forfeited or expired	(1,000,000)	$ 0.3700		
Outstanding at December 31, 2021	28,415,000	$ 0.1859	**5.84**	$ 60,640,900
Outstanding and exercisable at December 31, 2021	23,128,888	$ 0.1291	**5.84**	$ 50,673,665

We determine the fair value of option grant share-based awards at their grant date, using a Black-Scholes- Merton Option-Pricing Model applying the assumptions in the following table:

	For the year ended December 31,	
	2021	**2020**
Expected life (years)	2-3	N/A
Dividend yield	0%	N/A
Expected volatility	128-130%	N/A
Risk free interest rates	.05-.07	N/A

As of December 31, 2021, there was approximately $764,000 of unrecognized compensation cost related to unvested stock options granted and outstanding, net of estimated forfeitures. The cost is expected to be recognized on a weighted average basis over a period of approximately one year.

As of December 31, 2021, and December 31, 2020, the company recorded $223,000 and $892,000, respectively, in unrecognized stock-based compensation related to a lockup agreement on 5,000,000 shares of common stock in the acquisition of assets of AOS valued at $0.4014 per share, representing the closing price on the date of the contract which is amortized over 36 months. $669,000 and $669,000 was amortized for the year ended December 31, 2021, and 2020, respectively.

Additionally, stock-based compensation for the year ended December 31, 2021, was comprised of 140,000 shares under a restricted stock agreement the Company entered into in May of 2021. The restricted stock awards were valued at $84,000 of which $46,987 was recognized in 2021. The shares vest annually over two years with the first installment one year from the agreement; provide, however, if either party terminates the agreement at any time prior to the last date of it ending, then the shares will best, pro rata, for each month served since the most recent prior annual vesting date

The fair value of restricted stock and restricted stock units was estimated using the closing price of our common stock on the date of award and fully recognized upon vesting. Restricted stock activity for the year ended December 31, 2021 was as follows:

	Restricted Stock Outstanding	
	Shares	**Weighted Average Fair Value per Share at Grant Date**
Outstanding at December 31, 2019	-	
Granted – restricted stock units and awards	75.000	0.35
Granted – performance based stock units	-	-
Canceled	-	-
Vested and converted to shares	-	-
Outstanding at December 31, 2020	75,000	0.35
Granted – restricted stock units and awards	140,000	0.61
Granted – performance based stock units	-	
Canceled	-	
Vested and converted to shares	-	
Outstanding at December 31, 2021	215,000	0.52

We determine the fair value of warrant grant share-based awards at their grant date, using a Black-Scholes- Merton Option-Pricing Model applying the assumptions in the following table:

	For the year ended December 31, 2021	For the year ended December 31, 2020
Expected life (years)	N/A	1.0
Dividend yield	N/A	0%
Expected volatility	N/A	125.19%
Risk free interest rates	N/A	0.14%
Weighted average fair value of warrants at grant date	$ N/A	.308

	Warrant Activity Shares	Warrant Activity Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)
Outstanding at January 1, 2020	3,675,000	$ 0.0632	6.96
Granted	50,000	0.0500	
Exercised	(175,000)	0.0700	
Forfeited or expired	-	-	
Outstanding at December 31, 2020	3,550,000	$ 0.0627	6.17
Granted	-	-	-
Exercised	(1,650,000)	0.0652	
Forfeited or expired	(125,000)	0.0599	
Outstanding at December 31, 2021	1,775,000	$ 0.0599	7.43
Outstanding and exercisable at December 31, 2021	1,775,000	0.0599	7.43

	Warrants Outstanding			Warrants Exercisable	
Range of Exercise Prices	Shares Outstanding	Weighted Avg. Remaining Contractual Life in Years	Weighted Avg. Exercise Price	Shares Exercisable	Weighted Avg. Exercise Price
$0.05 - $0.07	1,775,000	7.43	$ 0.0599	1,775,000	$ 0.0599
	1,775,000	7.43	$ 0.0599	1,775,000	$ 0.0599

NOTE 7 – COMMITMENTS AND CONTINGENCIES

Operating Leases

In May 2016, we moved and entered into a month-to-month lease agreement to lease office space in Tucson, Arizona. In May 2019, we acquired Applied Optical Sciences and assumed the month-to-month lease for office and laboratory space also in Tucson, Arizona.

Rent expense was approximately $155,000 and $49,000 for 2021 and 2020, respectively.

In March 2021, we signed a five-year lease for a 13,000 square foot laboratory/office space here in Tucson. The lease term begins May 1, 2021, and ends on April 30, 2026. The base rent is $6.7626 per rentable square foot for year one, and escalates to $9.2009 in year two, $11.4806 in year three, $13.1740 in year four and $14.9306 in year five, plus certain operating expenses and taxes.

At December 31, 2021, we had approximately $112,000 in future minimum lease payments due in less than a year. The below table presents the future minimum lease payments due reconciled to lease liabilities.

		Operating Lease
For the fiscal years ending December 31, 2021:		
2022	$	112,141
2023		143,325
2024		168,577
2025		191,779
Thereafter		66,536
Total undiscounted lease payments		682,358
Present value discount, less interest		98,942
Lease Liability	$	583,416

Guarantees

We agree to indemnify our officers and directors for certain events or occurrences arising as a result of the officers or directors serving in such capacity. The maximum amount of future payments that we could be required to make under these indemnification agreements is unlimited. However, we maintain a director’s and officer’s liability insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid. As a result, we believe the estimated fair value of these indemnification agreements is minimal because of our insurance coverage and we have not recognized any liabilities for these agreements as of December 31, 2021, and 2020.

Litigation

As previously reported, on July 3, 2018, we commenced a lawsuit in the Court of Chancery of the State of Delaware against the company's former director and principal executive officer George Farley ("Farley") and AnneMarieCo LLC ("AMC"). The parties settled the lawsuit via a written settlement agreement dated September 24, 2020. Under the agreement, 20,000,000 of the 25,000,000 shares originally issued to Farley (20,000,000 of which were transferred to AMC) were invalidated, the remaining 5,000,000 shares being deemed valid under Section 205 of the Delaware General Corporation Law. The agreement calls for the company to repurchase the remaining 5,000,000 shares at a price of $0.30 per share for an aggregate purchase price of $1,500,000. The agreement also provided for the release and return to the company of funds in the amount of $582,377.26, plus interest, securing the bond posted by the company in connection with the preliminary injunction issued in the litigation. The agreement also contains standard mutual general release and confidentiality provisions. Approximately, $206,000 accrued compensation was forgone as per settlement agreement was shown as gain on settlement.

In a related matter, on February 8, 2019, the company filed a complaint against Stein Riso Mantel McDonough, LLP ("Stein Riso"), its former counsel, in the United States District Court for the Southern District of New York. The parties settled the lawsuit via a written settlement agreement dated October 2, 2020. Pursuant to the agreement, Stein Riso paid the company three million dollars ($3,000,000) and returned to the company ten million (10,000,000) shares of the company's common stock, par value $0.001 per share. Stein Riso entered into the Settlement Agreement without any admission of liability. The parties filed a Stipulation of Dismissal with Prejudice as to all claims asserted or which could have been asserted in the lawsuit. The agreement also contains standard mutual general release and confidentiality provisions.

On July 3, 2019, Gusrae, Kaplan & Nusbaum and its partner, Ryan Whalen filed a complaint in the United States District Court for the Southern District of New York against the company, its directors, officers, attorneys and a consultant. The action alleged libel, securities fraud and related claims. The company filed a motion to dismiss the complaint on October 24, 2019. On December 13, 2019, Gusrae Kaplan and Mr. Whalen filed an opposition to the company's motion. On January 10, 2020, the company filed a reply brief. The United States District Court has not ruled on the motion. On August 5, 2021, the plaintiffs filed a Notice of Voluntary Dismissal of the action without prejudice.

On June 15, 2020, Grace A.C. Dearmin, as the Administrator of the Estate of Thomas Carr Dearmin, filed a cross-complaint against the company and company directors Jonathan Barcklow and Bradford Adamczyk, alleging causes of action against them for Breach of Contract and Conversion. The causes of action against the company allege that the company's board of directors voted to compensate its former CEO and director, Thomas Dearmin, as reflected in board meeting minutes dated May 11, 2018, and June 25, 2018, but failed to pay compensation owed to Mr. Dearmin. These causes of action further allege that, if incentive milestones of the company's stock price were reached, Mr. Dearmin's estate is owed up to 5 million shares of company common stock, or the current monetary value of that stock. On November 17, 2020, the company, Mr. Barcklow and Mr. Adamczyk filed motions to dismiss the cross-complaint against them on substantive and jurisdictional grounds. On February 8, 2021, the court granted the motion to dismiss on personal jurisdiction grounds as to the company, Mr. Barcklow and Mr. Adamczyk.

On January 15, 2021, the company filed a complaint in the United States District Court, Southern District of New York, against Gusrae, Kaplan & Nusbaum and Ryan Whalen for malpractice and breach of New York Rules of Professional Conduct by both parties as former counsel to the company. On May 28, 2021, Gusrae, Kaplan & Nusbaum and Mr. Whalen filed a motion to dismiss the complaint. On June 25, 2021, the company filed an opposition to the motion. On July 13, 2021, Gusrae Kaplan & Nusbaum and Mr. Whalen filed their reply brief. The United States District Court has not yet ruled on the motion.

On September 7, 2021, Gusrae Kaplan & Nusbaum and its partner Ryan Whalen filed a complaint in the New York Supreme Court against the company, its directors, officers, attorneys and a consultant, alleging a single claim for defamation per se based on the same conduct underlying their claim of libel in their voluntarily dismissed federal court action. The company filed a motion to dismiss the complaint on October 29, 2021, which motion included a request for sanctions for filing a frivolous complaint. Gusrae Kaplan & Nusbaum and Mr. Whalen filed their opposition to the company's motion to dismiss on January 13, 2022. The company filed its reply brief on February 17, 2022. On March 9, 2022, the company received notice that the court had scheduled oral arguments on the motion to dismiss for May 23, 2022.

As with any litigation, the company cannot predict the outcome with certainty, but the company expects to provide further updates on the status of the litigation as circumstances warrant.

We may, from time to time, be involved in legal proceedings arising from the normal course of business.

NOTE 8 – INCOME TAXES

An analysis of the difference between the expected federal income tax for the years ended December 31, 2021, and 2020, and the effective income tax rate is as follows:

	2021	2020
Noncurrent deferred tax assets (liabilities):		
Deferred Tax Assets	$	$
Accrued Compensation	1,895,848	1,380,954.94
Fixed assets and intangibles	(114,167)	(70,473.82)
Net Operating Loss Carryforwards and Credits	15,070,176	14,378,365
Total Deferred Tax Assets	$ 16,851,857	$ 15,688,846
Valuation allowance	(16,851,857)	(15,688,846)
Net deferred tax / (liabilities)	$ -	$ -

Tax effects of temporary differences at December 31, 2021 and December 31, 2020 are as follows:

	2021		2020	
Taxes calculated at federal rate	$ (1,139,345)	21.0%	$ (634,101)	21.0%
State income tax, net of federal benefit	(195,688)	3.6%	(90,903)	3.8%
Change in Valuation Allowance	1,163,011	-21.4%	463,091	-21.7%
Expiration of tax attributes	139,331	-2.6%	161,254	-3.1%
Prior period adjustment	48,152	-0.9%	(49,105)	0.0%
Permanent Items	(15,460)	0.3%	149,763	0.0%
Provision (benefit) for taxes	$ (0)	0.0%	$ (0)	0.0%

Deferred tax assets and liabilities are computed by applying the federal and state income tax rates in effect to the gross amounts of temporary differences and other tax attributes, such as net operating loss carry-forwards. In assessing if the deferred tax assets will be realized, the company considers whether it is more likely than not that some or all of these deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period in which these deductible temporary differences reverse. During the year ended December 31, 2021, the deferred tax assets and the valuation allowance increased by $1,163,011 mainly as a result of current year tax loss.

As of December 31, 2021, we have cumulative federal and Arizona net operating loss carryforwards of approximately $67.2 million and $9.6 million, respectively, which can be used to offset future income subject to taxes. Of the $67.2 million, of Federal net operating loss carryforwards, $57.8 begin to expire in 2021. The remaining balance of $9.4 million is limited in annual usage of 80% of current years taxable income but do not have an expiration. Arizona net operating loss carryforwards began to expire in 2021. In addition, there are federal net operating loss carryforwards of approximately $27.0 million from USHG related to pre-merger losses. We also have pre-merger federal capital loss carryforwards of approximately $520,000.

As of December 31, 2021, we had cumulative unused research and development tax credits of approximately $239,000 and $340,000, which can be used to reduce future federal and Arizona income taxes, respectively. As of December 31, 2021, we have cumulative unused federal minimum tax credit carryforwards from USHG of approximately $244,000. The federal minimum tax credit carryforwards are not subject to expiration under current federal tax law.

Utilization of our USHG pre-merger net operating loss carryforwards and tax credits is subject to substantial annual limitations due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such an annual limitation could result in the expiration of the net operating loss carryforwards and tax credit carryforwards before utilization.

We have unrecognized tax benefits attributable to losses and minimum tax credit carryforwards that were incurred by USHG prior to the merger in March 2004 as follows:

Balance at December 31, 2019	$ 9,635,824
Additions related to prior year tax positions	-
Additions related to current year tax positions	-
Reductions related to prior year tax positions and settlements	
Balance at December 31, 2020	$ 9,635,824
Additions related to prior year tax positions	-
Additions related to current year tax positions	-
Reductions related to prior year tax positions and settlements	-
Balance at December 31, 2021	$ 9,635,824

These benefits are not recognized as a result of uncertainty regarding the utilization of the loss carryforwards and minimum tax credits. If in the future we utilize the attributes and resolve the uncertainty in our favor, the full amount will favorably impact our effective income tax rate.

The company considers the U.S. and Arizona to be major tax jurisdictions. As of December 31, 2020, for federal tax purposes the tax years 2019-2021 and for Arizona the tax years 2016 through 2021 remain open to examination. The company currently does not expect any material changes to unrecognized tax positions within the next twelve months.

We recognize interest and penalties related to unrecognized tax benefits in income tax expense. As of December 31, 2021, and 2020, we had no accrued interest or penalties related to our unrecognized tax benefits.

NOTE 9 – SUBSEQUENT EVENT

The company’s management has evaluated subsequent events occurring after December 31, 2021, the date of our most recent balance sheet, through the date our financial statements were issued.

In January 2022, we issued two options totaling 1,390,000 shares, each with a life of 10 years and an exercise price of $2.40.

Subsequent to year end, the Company issued 130,416 shares of common stock in relation to a 2019 compensation agreement.

Subsequent to the year ended December 31, 2021, the company entered into a $175,434.65 financing agreement to finance its Directors and Officers insurance premiums.

Exhibit 23.1

RBSM LLP
Accountants & Advisors

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in Applied Energetics, Inc.'s Registrations Statements as follows:

(1) Registration Statements on Form S-3 (File nos. 333-260037, 333-259413, and 333-256976)
(2) Registration Statements on Form S-8 (File nos. 333-261581)

of our report dated March 30, 2022, with respect to our audits of the consolidated financial statements of Applied Energetics, Inc., as of December 31, 2021 and 2020 and for the years ended December 31, 2021 and 2020, which report is included in this Annual Report on Form 10-K of Applied Energetics, Inc., for the year ended December 31, 2021.

/s/ RBSM LLP

Las Vegas, Nevada

March 30, 2022

EXHIBIT 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE
AND PRINCIPAL ACCOUNTING OFFICER
PURSUANT TO RULE 15d-14
OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED
AS ADOPTED PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory J Quarles, the President, Chief Executive Officer, and Principal Financial Officer of Applied Energetics, Inc., certify that:

1. I have reviewed this report on Form 10-K of Applied Energetics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal controls over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Gregory J Quarles

Gregory J Quarles
President and Chief Executive Officer
(and Principal Financial Officer)

Date: March 30, 2022

EXHIBIT 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE
AND PRINCIPAL ACCOUNTING OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the filing by Applied Energetics, Inc. (the "company") of its Annual Report on Form 10-K for the annual period ended December 31, 2021 (the "Report") I, Gregory J Quarles, President, Chief Executive Officer, and Principal Financial Officer of the company, certify pursuant to 18 U.S.C. Section. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 that:

(i) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operation of the company.

This certificate is being made for the exclusive purpose of compliance by the chief executive officer of Applied Energetics, Inc. with the requirements of Section 906 of the Sarbanes-Oxley Act of 2002, and may not be used for any other purposes. A signed original of this written statement required by Section 906 has been provided to Applied Energetics, Inc. and will be retained by Applied Energetics, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

/s/ Gregory J Quarles

Gregory J Quarles
President and Chief Executive Officer
(and Principal Financial Officer)

Date: March 30, 2022