

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

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2023

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 001-36216

IDEAL POWER INC.
(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction of
incorporation or organization)

14-1999058
(I.R.S. Employer Identification No.)

5508 Highway 290 West, Suite 120
Austin, Texas 78735
(Address and zip code of principal executive offices)

(512) 264-1542
(Registrant's telephone number, including area code)

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|-------------------|---|
| Common Stock, par value \$0.001 per share | IPWR | The Nasdaq Capital Market |

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

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 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 such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company.

Large accelerated filer
Non-accelerated filer

Accelerated filer
Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark whether 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 filed 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 firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately \$69.5 million as of June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, based upon the last sales price reported for such date on The Nasdaq Capital Market. For purposes of the foregoing calculation, all directors and executive officers of the registrant and holders of more than 10% of the registrant's common equity are assumed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 28, 2024, the issuer had 7,371,699 shares of common stock, par value \$0.001, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required by Part III of this Annual Report on Form 10-K is incorporated herein by reference from the registrant's definitive proxy statement relating to the 2024 annual meeting of stockholders, which shall be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended December 31, 2023.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND
OTHER INFORMATION CONTAINED IN THIS REPORT**

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the provisions of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historical or current facts. You can find many (but not all) of these statements by looking for words such as “approximates,” “believes,” “hopes,” “expects,” “anticipates,” “estimates,” “projects,” “intends,” “plans,” “would,” “should,” “could,” “may” or other similar expressions in this report. In particular, these include statements relating to future actions, prospective products, applications, customers, technologies, future performance or results of anticipated products, expenses, and financial results. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or projections. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- our history of losses;
- our ability to generate revenue;
- our limited operating history;
- the size and growth of markets for our technology;
- regulatory developments that may affect our business;
- our ability to successfully develop new products and the expected performance of those products;
- the performance of third-party consultants and service providers whom we have and will continue to rely on to assist us in development and commercialization of our B-TRAN™ and related packaging and drive circuitry;
- the rate and degree of market acceptance for our B-TRAN™ and current and future B-TRAN™ products;
- the time required for third parties to redesign, test and certify their products incorporating our B-TRAN™;
- our ability to successfully commercialize our B-TRAN™ technology;
- our ability to secure strategic partnerships with semiconductor fabricators and others related to our B-TRAN™ technology;
- our ability to obtain, maintain, defend and enforce intellectual property rights protecting our technology;
- the success of our efforts to manage cash spending, particularly prior to the commercialization of our B-TRAN™ technology at scale;
- general economic conditions and events, including inflation, and the impact they may have on us and our potential partners and licensees;
- our dependence on the global supply chain and the impacts of supply chain disruptions;
- our ability to obtain adequate financing in the future, if and when we need it;
- the impact of global health pandemic on our business, financial conduction and results of operations;
- our success at managing the risks involved in the foregoing items; and
- other factors discussed in this report.

The forward-looking statements are based upon management’s beliefs and assumptions and are made as of the date of this report. We undertake no obligation to publicly update or revise any forward-looking statements included in this report, except as required by applicable law. You should not place undue reliance on these forward-looking statements.

PART I

ITEM 1: BUSINESS

Our Company

Ideal Power Inc. was formed in Texas on May 17, 2007 and converted to a Delaware corporation on July 15, 2013. Unless otherwise stated or the context otherwise requires, the terms “Ideal Power,” “we,” “us,” “our” and the “Company” refer to Ideal Power Inc.

We are solely focused on the further development and commercialization of our Bidirectional bipolar junction TRANSistor (“B-TRAN™”) solid-state switch technology.

To date, operations have been funded primarily through the sale of common stock and we have generated \$3.7 million in grant revenue for bidirectional power switch development. Grant revenue was \$37,388 and \$203,269, respectively, in the years ended December 31, 2023 and 2022, respectively. We may pursue additional research and development grants, if and when available, to further develop and/or improve our technology.

We are in the process of commercializing our B-TRAN™ technology and launched our first two commercial products, the SymCool™ Power Module and SymCool™ IQ Intelligent Power Module, in 2023. We generated \$161,483 in commercial revenue in the year ended December 31, 2023.

Product Launches

In early 2023, we launched our first commercial product, the SymCool™ Power Module. This multi-die B-TRAN™ module is designed to meet the very low conduction loss needs of the solid-state circuit breaker (“SSCB”) market. We commenced shipment of SymCool™ Power Modules to fulfill customer orders in early 2024.

In late 2023, we launched our second commercial product, the SymCool™ IQ Intelligent Power Module (“IPM”). The SymCool™ IQ IPM builds on the bidirectional B-TRAN™ multi-die packaging design of our SymCool™ Power Module and adds an integrated intelligent driver optimized for bidirectional operation. This product targets several markets including renewable energy, energy storage, electric vehicle (“EV”) charging and other industrial applications. We expect initial sales of this product in late 2024.

Development Agreement

During the fourth quarter of 2022, we announced, and began Phase 1 of, a product development agreement with Stellantis, a top 10 global automaker, for a custom B-TRAN™ power module for use in the automaker’s EV drivetrain inverters in its next generation EV platform. In Phase 1 of the program, we provided packaged B-TRAN™ devices, test kits and technical data to Stellantis for their evaluation. During the third quarter of 2023, we secured, and began Phase 2 of, this program. In Phase 2 of the program, we collaborated with Stellantis and the program partners, including both the program’s packaging company and the organization building the initial drivetrain inverter, to supply B-TRAN™ devices for integration into the custom power module and inverter designs. Also, as part of Phase 2, we provided Stellantis a comprehensive test plan for the testing required to achieve certification to automotive standards for B-TRAN™. The test plan was subsequently approved as submitted. In early 2024, we successfully completed Phase 2 of the program. Phase 3 builds on the completion of all Phase 1 and 2 deliverables and therefore transitions to Stellantis’ production team. We are currently finalizing the scope of work for the next phase of the program with Stellantis. This phase is expected to include the extensive testing of the custom B-TRAN™ module to meet automotive certification standards enabling B-TRAN™ to be the core of the powertrain inverter for the automaker’s next-generation EVs. The objective of this phase is the completion and certification of a production-ready B-TRAN™-based module and is targeted for 2025. We recorded all of the revenue under Phase 1 and \$61,483 of the revenue under Phase 2 in the year ended December 31, 2023. We will record the remaining Phase 2 revenue in the first quarter of 2024.

March 2024 Offering

In March 2024, we issued and sold 1,366,668 shares of our common stock at a price of \$7.50 per share and 633,332 pre-funded warrants to purchase shares of our common stock at a price of \$7.499 per pre-funded warrant in an underwritten public offering (the “March 2024 Offering”). The pre-funded warrants have an exercise price of \$0.001 per share. The underwriter has a 30-day option to purchase up to an additional 300,000 shares of our common stock at the offering price, less the underwriting discounts and commissions. The estimated net proceeds to us from the March 2024 Offering are \$13.6 million or \$15.7 million if the underwriter exercises its option to purchase additional shares in full. We intend to use the net proceeds from the March 2024 Offering to fund further commercialization and development of our B-TRAN™ technology and general corporate and working capital purposes.

Test and Evaluation Agreements

Since the middle of 2021, we announced several test and evaluation agreements with prospective customers, including a second top 10 global automaker, a top 10 global provider of power conversion solutions to the solar industry, two global diverse power management market leaders, a tier 1 automotive supplier and a global power conversion supplier. These companies, along with other current and future participants in our test and evaluation program, intend to test and evaluate the B-TRAN™ for use in their applications. We expect to incorporate the feedback from these customers into our future commercial products. We began B-TRAN™ customer shipments to program participants in mid-2023.

Industry Background

A semiconductor material is a substance that is characterized for “conducting” electricity easily, while at the same time, working as an insulator to prevent the flow of electricity. By using semiconductors, it becomes possible to perform rectification for the uni-directional flow of electricity, amplification for increasing electrical signals, and switching to open and close the flow of electricity.

Power semiconductors possess a structure that is different from regular semiconductors, enabling them to handle high voltages and large currents without damage. Failures may occur due to a rise in temperatures resulting from heat generated from handling large amounts of power. Therefore, methods have been developed to reduce the amount of power semiconductor loss, which is the cause of the heat generation, while also effectively releasing the generated heat to the outside.

Power semiconductors are mostly used in power conversion such as in changing voltages and frequencies, as well as changing direct current (“DC”) to alternating current (“AC”) and AC to DC. Power semiconductors play an indispensable role in accurately driving motors from low to high speeds, controlling the voltage and flow of electricity in electric and hybrid electric vehicles, supplying power grids with power generated from solar cells or wind turbines with less power loss, and providing a stable source of electricity to various home appliances and electrical equipment. In recent years, there has been a greater demand for energy-savings and power consumption reductions and growing demand for renewable energy and electric vehicles and, as a result, the need for power semiconductors that minimize power loss has been increasing.

Power semiconductors are solid-state devices that act as a switch without any mechanical movement. Solid-state devices are completely made from a solid material, typically silicon, and their flow of charges is confined within this solid material. The term solid-state is often used to show a difference from the earlier technologies of vacuum and gas-discharge tube devices and also to exclude the conventional electro-mechanical devices such as relays, switches, hard drives and other devices with moving parts. Solid-state devices are typically smaller, lighter and faster acting than electro-mechanical devices.

The global power semiconductor market may be categorized by component, material, end-use and geography. Based on component, the market includes power metal-oxide semiconductor field-effect transistors (“MOSFETs”), thyristors, rectifiers, bipolar junction transistors, insulated gate bipolar transistors (“IGBTs”) and power diodes. With respect to material, the power semiconductor market is split several ways into silicon, germanium, silicon carbide and gallium nitride.

The end-use market is classified into automotive, industrial, renewable energy, telecommunication, consumer electronics, aerospace and defense, healthcare and others. Among these, automotive electronics accounts for significant consumption of power semiconductors. The number of semiconductors in vehicles has surged in recent years with the rising adoption of electric vehicles and hybrid electric vehicles. Further, the advent of drive-by-wire or x-by-wire technologies have led to a rise in number of electric components in vehicles over mechanical vehicle parts. This rise helps reduce vehicle weight which is directly related to improved fuel efficiency and reduced vehicular emissions. The heavy consumption of power semiconductors across several end-use markets such as industrial, automotive, consumer electronics and renewable energy is a key growth driver of the power semiconductor market.

The telecommunications market is also a significant end-user of power semiconductors. This segment displays demand for radio frequency power amplifiers and IGBTs among others. With the launch of 5G, the demand for power semiconductors has increased.

Geographically, Asia Pacific accounts for the leading consumption of power semiconductors among other key regions. The region is also one of the leading exporters of power semiconductors in the world. The growth in the region is mainly attributed to China, which is the leading automotive and passenger vehicle market in the world. China is currently the leading consumer of power semiconductors. Furthermore, demand for power semiconductors is increasing from renewable energy sectors in the region.

Europe and North America are also leading consumers of power semiconductors among others in the global market.

Leading players in the global power semiconductor market include Infineon Technologies AG, Texas Instruments, ON Semiconductor, Fuji Electric Co. Ltd., ST Microelectronics N.V., Mitsubishi Electric Group, Semikron International GmbH, and Toshiba Corporation. While these companies are potential competitors, they are also potential licensees for our B-TRAN™ technology as there is not, to our knowledge, a high-efficiency bidirectional design available in the market. See “—Competition.”

Our Technology

To further improve the performance of bidirectional technologies and products, we identified the need for a true bidirectional power switch and applied for and, in 2012, received a grant from the U.S. Department of Energy’s Advanced Research Projects Agency-Energy (“ARPA-E”) to develop a bidirectional solid-state power switch. At the outset, our efforts under the ARPA-E grant were focused on the development of, including the manufacturing process development for, a bidirectional insulated gate bipolar transistor (“BD-IGBT”). Although work on BD-IGBTs had previously been done by others in research labs, it was a technology that had not yet been commercialized.

A bidirectional circuit incorporates multiple IGBTs, which are power switches used in the process to convert power from one current form to another. IGBTs switch current in only one direction and require the use of a blocking diode to prevent current from flowing back through the device. To enable a product to perform bidirectional power conversion, for each IGBT and diode used in a circuit, a second IGBT and diode must also be utilized. These additional components add voltage drops that affect the electrical efficiency of end-use products and generate heat that must be dissipated. To eliminate the need to utilize four devices to create one bidirectional switch and to improve the performance of bidirectional switching, a true bidirectional switch is necessary. While we initially focused on the development of a BD-IGBT under the ARPA-E grant, we shifted our focus under the grant to the development of a new, highly efficient power switch called a bidirectional bipolar junction transistor, or B-TRAN™, that will allow product manufacturers to substitute one B-TRAN™ for two pairs of IGBTs and diodes used in bidirectional circuits in their products and, more importantly, be a potential replacement for conventional power switches, such as IGBTs, in the broader power semiconductor market. The B-TRAN™ leverages many of the same processing steps we had developed for the BD-IGBT while also providing certain key advantages including patentability, reduced component count and higher efficiency compared to a BD-IGBT.

Based on discrete B-TRAN™ device and SymCool™ power module testing, we believe that the B-TRAN™ can significantly improve electrical efficiency in power converters and many other power conversion applications. Compared to conventional power switches, such as IGBTs, B-TRAN™ can reduce power losses by 50% or more depending on the application. This higher efficiency will substantially reduce the heat generated by the operation of products utilizing this technology. As a result, products incorporating B-TRANs™ will have lower thermal management requirements. This in turn requires a significantly smaller surface area for heat dissipation which will enable increased power density, or power per pound, and potentially result in smaller original equipment manufacturer, or OEM, products. In addition, B-TRAN™’s symmetric bidirectional operation reduces the number of components by 75% as compared to a conventional bidirectional switch utilizing IGBTs and diodes. This highly efficient and, we believe, unique symmetric operation should provide a strong competitive advantage in bidirectional applications which are growing at rapid rates due to the electrification of transportation, the shift to renewable energy coupled with energy storage and utility grid modernization.

The results from our testing of discrete B-TRAN™ devices and SymCool™ power modules is consistent with third-party simulations that predicted significant performance and efficiency improvements over conventional power switches such as silicon-controlled rectifiers (“SCRs”), IGBTs and MOSFETs. We have also qualified a high-volume production foundry that successfully fabricated B-TRAN™ wafers, validating the ability to make B-TRAN™ semiconductor power switches using conventional silicon semiconductor fabrication equipment and processes. Test results measured B-TRAN™ electrical losses at less than 50% that of conventional power switches such as silicon IGBTs.

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As part of the B-TRAN™ development and commercialization process and in partnership with our semiconductor fabrication partners, we continue with additional B-TRAN™ wafer runs, incorporating the results of prior runs and subsequent testing into the B-TRAN™ wafer fabrication. With the double-sided transistor behavior and low conduction losses validated and upgrades and improvements in the manufacturing process implemented, we began shipping multiple packaged B-TRAN™ devices, a device driver, and a power test board housed in a safety enclosure to the large companies in our test and evaluation program in mid-2023. Feedback from potential customers in the test and evaluation program will be incorporated into future B-TRAN™ products. In early 2024, we commenced shipments of our SymCool™ power module to fulfill customer orders.

The primary raw material used in the fabrication of B-TRAN™ devices is silicon wafers. Silicon is abundant and the production of silicon wafers is a large, global business with most manufacturers in Europe and Asia.

Business Strategy and Target Markets

We utilize a strategic partnership model focused on leveraging the existing silicon processing infrastructure, allowing us to focus on the further development and commercialization of our B-TRAN™ technology.

Target markets for current and future B-TRAN™-based products include, but are not limited to, electric and hybrid electric vehicles, electric vehicle charging, renewable energy and energy storage system power converters, uninterruptible power supplies (“UPS”) for data centers, industrial motor drives, solid-state circuit breakers, distribution and transmission switches and controls and other industrial and military markets. These markets typically utilize IGBTs for power switching in their applications. According to Mordor Intelligence, the power electronics market was \$29.2 billion in 2022 and is forecasted to grow to \$37.7 billion by 2028. We are initially targeting large and growing segments of the IGBT market, such as solid-state circuit breakers, electric and hybrid electric vehicles, electric vehicle charging, renewable energy and energy storage. We believe that B-TRAN™ provides a competitive advantage in several IGBT markets due to its higher expected efficiency and inherent bidirectionality, the growth in bidirectional applications such as electric vehicles and energy storage, and as it seems the IGBT has almost reached its technological limit. We began to commercialize our B-TRAN™ technology in 2021 as we reached agreements with several potential customers and partners to participate in our B-TRAN™ test and evaluation program. We delivered multiple packaged B-TRAN™ devices, a device driver, and a power test board housed in a safety enclosure to the large companies in our test and evaluation program in mid-2023. See “Test and Evaluation Agreements” above. In late 2022, we entered into our first product development agreement and, in 2023, we launched our first two commercial products. See “Development Agreement” and “Product Launches” above.

Intellectual Property

We rely on a combination of patents, trade secrets, laws that protect intellectual property, confidentiality procedures and contractual restrictions with our employees and others to establish and protect our intellectual property rights. As of December 31, 2023, we had 45 U.S. and 35 foreign issued patents as well as 38 additional pending U.S. and international patent applications on our B-TRAN™ technology. Our first B-TRAN™ patent issued in 2015 and our patents generally have a 20-year life from the date of initial filing prior to expiration. We expect to continue to build our patent estate for our B-TRAN™ technology and other technological developments that broaden the scope of our technology platform. In addition, we treat the proprietary dual-sided wafer fabrication process we developed to produce B-TRAN™ wafers as a trade secret.

License Agreements

In 2015, we entered into a licensing agreement which expires in February 2033. Per the agreement, we have an exclusive royalty-free license associated with semiconductor power switches which enhances our intellectual property portfolio. We pay \$100,000 annually under this agreement.

In 2023, we amended a 2021 license agreement which expires in February 2034. Per the agreement, we have an exclusive royalty-free license associated with semiconductor drive circuitry which enhances our intellectual property portfolio. We pay \$50,000 annually under this agreement. At inception, we recorded an intangible asset and other long-term liability of \$451,557 for the estimated present value of future payments under this licensing agreement.

At December 31, 2023, the corresponding long-term liability for the estimated present value of future payments under these licensing agreements was \$1,125,173. We are accruing interest for future payments related to these agreements.

Competition

We compete against well-established incumbent power semiconductor device suppliers, including companies that already operate at a large scale in the single-sided (unidirectional) power switch market with IGBTs and MOSFETs, including silicon carbide MOSFETs. Many of these suppliers are now selling modules that utilize multiple conventional power switches to form a bidirectional circuit. We continue to monitor the competitive landscape for offerings or potential offerings based on new technologies with inherent bidirectionality. Many, if not all of our competitors, have greater financial resources, more comprehensive product offerings, broader market presence, longer standing relationships with business partners, longer operating histories, greater manufacturing capabilities, stronger brand recognition, and greater marketing resources than we have. To date, we are not aware of any offerings or potential offerings based on a true high efficiency bidirectional design other than potential products based on our B-TRAN™ technology.

Power semiconductor device providers typically compete based on voltage, current and frequency capabilities with the larger providers offering a broad range of standard products, including discrete devices and modules. Smaller providers generally take a niche approach focused on a unique or customized device capability. Customers for these devices are typically looking for demonstrable product or system level improvements in efficiency and/or power density for their applications. Power semiconductor device providers utilize direct and indirect sales teams focused on capturing customer design wins.

Government Approval and Regulation

Government approval is not required for us to license our B-TRAN™ technology or sell B-TRAN™ devices or products. However, government support for semiconductors and certain of our potential target markets including electric and hybrid electric vehicles, electric vehicle charging infrastructure, renewable energy, grid storage and improved grid resiliency may impact the size and growth rate of semiconductors and these potential target markets. There has been a trend in both the United States and abroad to support the adoption of electric vehicles and renewable energy due to increased concern regarding the effects of climate change. For example, the Biden administration has announced several initiatives related to EVs. The Bipartisan Infrastructure Law will invest \$7.5 billion to build a national network of 500,000 EV chargers so that charging EVs is predictable, reliable and accessible; more than \$7 billion to ensure domestic manufacturers have the critical minerals and other components necessary to make batteries; and over \$10 billion for clean transit and school buses. In addition, the Inflation Reduction Act provides incentives for buyers of new and used EVs, credits to help manufacturers retool existing facilities and build new manufacturing in the United States, and grants to deploy zero emission heavy-duty vehicles. The CHIPS and Science Act will make critical investments in building domestic capacity for the semiconductors necessary for electric vehicles and will establish a technology, innovation, and partnerships directorate at the National Science Foundation to focus on fields like semiconductors and advanced computing, advanced communications technology, advanced energy technologies, quantum information technologies, and biotechnology. Government support for semiconductors and our potential target markets could have a material and positive impact on our business if our B-TRAN™ technology is successfully commercialized, particularly in these markets.

Employees

As of February 28, 2024, we had 11 full-time employees. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good.

Available Information

Our Internet address is www.idealpower.com and our investor relations website is located at ir.idealpower.com. We make available free of charge on our investor relations website under the heading “SEC Filings” our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports and our Proxy Statement as soon as reasonably practicable after such materials are electronically filed with (or furnished to) the SEC. These reports are also available free of charge via EDGAR through the Securities and Exchange Commission’s (“SEC”) website (www.sec.gov) as soon as reasonably practicable after such materials are electronically filed with (or furnished to) the SEC. We also make available on our website, our corporate governance documents, including our code of conduct and ethics. Information contained on our website (or any other website referred to in this Annual Report on Form 10-K) is not incorporated by reference into this Annual Report on Form 10-K.

ITEM 1A: RISK FACTORS

We are subject to various risks that may materially harm our business, prospects, financial condition and results of operations. An investment in our common stock is speculative and involves a high degree of risk. In evaluating an investment in shares of our common stock, you should carefully consider the risks described below, together with the other information included in this report.

The risks described below are not the only risks we face. If any of the events described in the following risk factors actually occurs, or if additional risks and uncertainties later materialize that are not currently known to us or that we currently deem immaterial, then our business, prospects, results of operations and financial condition could be materially adversely affected. In that event, the trading price of our common stock could decline, and you may lose all or part of your investment in our shares. The risks discussed below include forward-looking statements, and our actual results may differ substantially from those discussed herein.

Risks Related to the Company

We lack an established operating history on which to evaluate our business and determine if we will be able to execute our business plan. We have also incurred losses in prior periods, expect to incur losses in the future, currently generate limited commercial revenue and we may not achieve or maintain profitability in the future.

We have a limited operating history that makes it difficult to evaluate our business. Our focus is on the development and commercialization of our B-TRAN™ technology. We cannot say with certainty when we will successfully commercialize our B-TRAN™ technology, if ever, and thus we may not generate significant commercial revenue in the near future, or ever.

Since inception, we have sustained approximately \$97.0 million in net losses and we had net losses for the years ended December 31, 2023 and 2022 of approximately \$10.0 million and \$7.2 million, respectively. We expect to incur losses and negative cash flows from operating activities at least until such time as we have commercialized our B-TRAN™ technology and developed a substantial and stable revenue base. We cannot assure you that we can develop a substantial and stable revenue base or achieve or sustain profitability in the future.

We have been funding operations primarily through the sale of common stock. We currently generate limited commercial revenue, and, in order to fund our operations until we are profitable, we may need to raise additional funds and such funds may not be available on commercially acceptable terms, if at all. If we are unable to raise funds on acceptable terms if and as needed, we may not be able to execute our business plan and generate sustainable revenue. This may seriously harm our business, financial condition and results of operations. In the event we are not able to continue operations, you will likely suffer a complete loss of your investment in our securities.

Product development and commercialization is an inherently uncertain process, and we may encounter unanticipated development and/or commercialization challenges and may not be able to meet our product design and/or commercialization milestones.

Prototype and product development and testing may be subject to unanticipated and significant delays, expenses and technical or other problems. We cannot guarantee that we will successfully achieve our milestones within our planned timeframe or ever. We have developed and tested discrete B-TRAN™ devices and SymCool™ power modules. We cannot predict whether future prototypes of, or actual, B-TRAN™ products will achieve results consistent with our expectations, third-party simulations or the expectations of our potential customers and/or licensees. A prototype or product could cost significantly more than expected or the prototype or product design fabrication process could uncover problems that are not consistent with our expectations. Prototypes of B-TRAN™ devices and new product introductions are a material part of our business plan, and if they are not proven to be successful, our business and prospects would be harmed. In addition, for both testing and commercialization purposes, the B-TRAN™ needs to be packaged and paired with an efficient double-sided driver. Driver development is subject to similar risks as the B-TRAN™ prototype and product development including being subject to unanticipated and significant delays, expenses and technical or other problems.

More generally, the commercialization of products using our technology and designs may also be adversely affected by many factors not within our control, including:

- the willingness of market participants to try new products incorporating our technology and the perceptions of these market participants of the safety, reliability, functionality and cost effectiveness of these products;
- the emergence of newer, possibly more effective technologies;
- the cost and availability of the raw materials and components needed to manufacture and use products incorporating our technology; and
- the adoption of new regulatory or industry standards that may adversely affect the use or cost of products incorporating our technology.

Accordingly, we cannot predict that products incorporating our technology will be accepted on a scale sufficient to support the development of mass markets for them.

Our semiconductor fabrication partners may be unable to successfully and cost-effectively develop and implement new process steps necessary for bidirectional semiconductor device fabrication at scale.

While the fabrication of B-TRAN™ wafers uses conventional equipment and process steps, there is heightened risk in the fabrication process due to the handling and processing of both sides of the wafer and achieving the required front to back alignment of the features. Two-sided wafer processing and handling is necessary as the B-TRAN™, unlike conventional power semiconductor devices, is a two-sided bidirectional device. In addition, the cost to manufacture a B-TRAN™ will be impacted by the number of process steps, the processing time and the size of the wafer. B-TRAN™ fabrication currently utilizes smaller 6-inch diameter wafers resulting in fewer die per wafer. As a result, the cost per die is higher than if larger diameter wafers were utilized. For example, if an 8-inch wafer was used it would have almost two and one half times the area and produce almost two and one half times as many die as a 6-inch wafer, resulting in a lower cost per die. If we, in partnership with our semiconductor fabrication partners, are unable to successfully and cost-effectively develop and implement new process steps necessary for bidirectional semiconductor device fabrication at scale or encounter unforeseen issues in transitioning to larger diameter wafers, our business, financial condition and results of operations would be materially and adversely affected.

There are a limited number of semiconductor fabrication development facilities in the United States and abroad. Furthermore, from time to time there has been insufficient fabrication capacity for, and shortages of, certain semiconductor devices and related electronic components. Disruptions to the supply chain for semiconductors and related electronic components could delay our critical development and commercialization activities and/or result in significantly higher costs for us for semiconductor components and/or semiconductor foundry and related services. This risk is magnified for us as a small company as we are at a disadvantage relative to larger, more established companies in securing semiconductor fabrication capacity as we do not have longstanding relationships with semiconductor foundries and, as a new technology, it will take time to scale to the volume necessary to attract and retain certain semiconductor foundries. There are also a limited number of well-capitalized semiconductor fabricators working with the smaller diameter wafers currently utilized by us for development and production. Our inability to engage such partners in a cost-effective manner, the loss of any fabrication partner once engaged or industry supply chain disruptions may materially delay our development efforts and may have a materially adverse effect on our business, financial condition and results of operations.

We, or our potential future licensees, must achieve design wins to obtain customers, although design wins achieved may not necessarily result in substantial sales or licensing revenue to us.

We anticipate that our current and future designs will typically be integrated into systems by our current and potential customers. This may result in the need to customize our designs, generally the packaging and/or driver rather than the B-TRAN™ die, for certain applications or customers. We will need to work with semiconductor partners and/or manufacturers early in their design cycles to ensure that our designs will meet the requirements of their systems. Manufacturers typically choose one or two vendors to provide the components for use in their systems. Selection as one of these vendors is called a design win. It is critical that we, or our licensees, achieve these design wins in order to obtain customers and generate sales and/or licensing revenue. We currently have a test and evaluation program whereby program participants test our B-TRAN™ technology for use in their applications. We can provide no assurance that participation by a potential customer in our test and evaluation program will result in a design win.

We believe that equipment manufacturers often select their suppliers based on factors including long-term relationships and end user demand. Accordingly, we may have difficulty achieving design wins from equipment manufacturers as our products are, and new products will be, new entrants into the market. Our efforts to achieve design wins or assist our potential future licensees in achieving design wins may be time consuming and expensive and may not be successful. If we or our potential future licensees are not successful in achieving design wins, or if we or our potential future licensees do achieve design wins but the customers' systems that utilize our designs are not successful, our business, financial condition, and results of operations could be materially and adversely impacted.

Even if we, or our potential future licensees, achieve design wins, the timing of generation of sales and/or licensing revenue will be dependent on the customer's product design cycle. There may be significant time between when we, or our potential future licensees, achieve design wins and when we generate initial sales and/or licensing revenue from these design wins. Significant delays in our customers' product design cycles, or long product design cycles by these customers, could materially and adversely affect our business, financial condition and result of operations.

Once a manufacturer chooses a component for use in a particular system, it is likely to retain that component for the life of that system. In addition, the sales cycle into certain of our target markets, such as the automotive market, are typically very long. Our future growth could experience material and prolonged adverse effects if we fail to achieve design wins or if the design wins do not result in substantial revenue for us within a reasonable timeframe.

We previously received grant funds from the United States for the development of a bidirectional switch. In certain instances, the United States may obtain title to inventions related to this effort. If we were to lose title to those inventions, we may have to pay to license them from the United States in order to manufacture the inventions. If we were unable to license those inventions from the United States, it could slow down our product development.

In conjunction with the ARPA-E grant we received from the Department of Energy, we granted to the United States a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States inventions related to a bidirectional switch and made within the scope of the grant. If we failed to disclose to the Department of Energy an invention made with grant funds that we disclosed to patent counsel or for publication, or if we elect not to retain title to the invention, the United States may request that title to the subject invention be transferred to it.

We also granted "march-in-rights" to the United States in connection with any bidirectional switch inventions in which we choose not to retain title, if those inventions were made under the ARPA-E grant. Pursuant to the march-in-rights, the United States has the right to require us, any person to whom we have assigned our rights, or any exclusive licensee to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant upon terms that are reasonable. If the license is not granted as requested, the United States has the right to grant the license if it determines that we have not achieved practical application of the invention in the field of use, the action is necessary to alleviate health or safety needs, the action is necessary to meet requirements for public use specified by Federal regulations and such requirements have not been satisfied, or the action is necessary because an agreement to manufacture the invention in the United States has not been obtained or waived or because any such agreement has been breached.

If we lost title to the United States as a result of any of these events, we would have to pay to license the inventions, if needed, from the United States to manufacture the applicable bidirectional switch. If we were unable to license those inventions from the United States, it could materially and adversely impact our business, financial condition and results of operations.

As we continue to grow and to develop our intellectual property, we could attract threats from patent monetization firms or competitors alleging infringement or competitors could infringe upon our intellectual property. We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights.

As we continue to grow and to develop our intellectual property, we could attract threats from patent monetization firms or competitors alleging infringement of intellectual property rights. In that event, we may incur significant costs to defend against such a claim even if the claim proves to have no merit. In addition, some of our future competitors will be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. If we do not prevail in this type of litigation, we may be required to: pay monetary damages; stop commercial activities relating to our technology; obtain one or more licenses in order to secure the rights to manufacturing or marketing certain future products incorporating our technology; or attempt to compete in the market with substantially similar products. Uncertainties resulting from the initiation and continuation of any litigation could limit our ability to continue some or all of our operations. We may face significant expenses and liability in connection with the protection of our intellectual property and, if we are unable to successfully protect our rights or resolve intellectual property conflicts with others, our business or financial condition could be adversely affected.

Our success depends in large part on our proprietary technology for which we seek protection under patent, copyright, trademark and trade secret laws in the United States and abroad. Such protection is also maintained in part using proprietary information and inventions agreements and non-disclosure agreements. The agreements we use in an effort to protect our intellectual property, confidential information, and other unpatented proprietary information may be ineffective or insufficient to prevent unauthorized use or disclosure of such trade secrets and information. A party to one of these agreements may breach the agreement and we may not have adequate remedies for such breach. As a result, our trade secrets, confidential information, and other unpatented proprietary rights and information may become known to others, including our competitors. Using third-party manufacturers, both domestically and abroad, may increase the risk of misappropriation of our trade secrets, confidential information and other unpatented proprietary information. Protection of our technology is important to us so that we may offer our future customers proprietary products unavailable from our competitors, and so that we may prevent our competitors from using technology that we have developed or exclusively licensed. If we are unable to effectively protect our intellectual property, our business and competitive position may be adversely affected.

We may license our technology in the future; however the terms of any such agreements may not prove to be advantageous to us. If the license agreements we may enter into do not prove to be advantageous to us, our business and results of operations will be adversely affected.

Although we are initially employing a product sales strategy for products incorporating our B-TRAN™ technology, we also expect to employ a licensing strategy for the production and potentially the sale of our B-TRAN™ products in certain instances. However, we may not be able to secure license agreements with semiconductor fabrication partners or other strategic partners at all or on terms that are advantageous to us. Furthermore, the timing and volume of revenue earned from license agreements will be outside of our control. If the license agreements we may enter into in the future do not prove to be advantageous to us, our business and results of operations will be adversely affected.

Future revenue may rely on the marketing and sales efforts of third parties whom we do not control.

The marketing and sale of our future products to end user customers may be conducted by us, distributors, sales representatives, future licensees of our technology or likely a combination thereof. Consequently, the commercial success of our products may depend, to a great extent, on the efforts of others. We may not be able to identify, maintain or establish appropriate relationships in the future. We can give no assurance that any such third parties will focus adequate resources on selling our products or will be successful in selling them. In addition, these third parties may require customization of our designs or other concessions that could reduce the potential profitability of these relationships. Failure to develop favorable licensing relationships in our target markets may adversely affect our commercialization schedule and, to the extent we enter into such relationships, the failure of our licensees to focus adequate resources on selling our products or be successful in selling them or to meet their monetary obligations to us may adversely affect our financial condition and results of operations.

A material part of our success depends on our ability to manage third-party resources. Our failure to properly select, manage and retain qualified third-party resources could materially and adversely affect our results of operations and relations with our partners and future customers.

Our development efforts are highly dependent on third-party resources for semiconductor expertise and manufacturing. These third-party resources include experts in power semiconductor switches and drivers, semiconductor fabrication suppliers, and other resources within the power switch ecosystem. The loss of one or more of our third-party resources could have a material adverse effect on the timing of our development and/or commercialization efforts which could, in turn, result in our business and results of operations being adversely affected. We also rely on our semiconductor fabrication partners and packaging firms to develop commercial devices and modules. There can be no assurance that these manufacturing partners will provide devices and/or modules in a timely and cost-efficient manner, provide quality devices and/or modules or otherwise meet our needs and expectations. Our ability to manage such relationships and timely replace such partners, if necessary, is critical to our success. The loss of and our failure to timely replace third-party resources, fabrication partners and other suppliers within the power switch ecosystem, should that become necessary, could materially and adversely affect our results of operations and relations with our partners and future customers. See also “—Our semiconductor fabrication partners may be unable to successfully and cost-effectively develop and implement new process steps necessary for bidirectional semiconductor device fabrication at scale.”

Supply chain disruptions could interrupt product manufacturing and global logistics and increase product costs.

We currently rely upon the facilities of our semiconductor fabricator and packaging partners in the United States and abroad to support our development and production as well as vendors throughout the United States and abroad to supply silicon wafers and other materials and processing and engineering capabilities and expertise. In recent years, there have been global industry-wide logistics challenges, including those caused by COVID-19 outbreaks. While these logistics challenges have caused some disruption in our business, these disruptions were manageable and their impact on us was not significant. Future facility closures and/or disruptions may occur if additional pandemic breakouts or geopolitical events occur in areas where we rely on third parties.

We and certain of our suppliers also rely on international shipping to transport wafers, circuit boards and other electronic components to us and our other suppliers. During the COVID-19 outbreak, international shipping to the U.S. was disrupted and delayed due to congestion in west coast ports and other causes. Future delays in shipping may cause us or our suppliers to have to use more expensive air freight or other more costly methods. In addition, global inflation has contributed to already higher incremental freight and component costs and such inflation may continue to result in higher costs. Logistics delays could result in delays to critical development and commercialization activities. Further, failure to adequately fabricate and timely ship our products to customers could lead to delays in their testing and evaluation and/or adoption of our technology, lost potential revenue, failure to meet customer demand and strained relationships with customers.

We may need additional financing to execute our business plan and fund operations, which additional financing may not be available on commercially reasonable terms or at all.

We have and, prior to profitable commercialization at scale, may continue to rely on raising funds from investors and/or other sources to support our research and development activities and execute our business plan. Macro-economic conditions in the United States and abroad, like those currently in effect, may result in a tightening of the credit markets and/or less capital available for small public companies, which may make it more difficult for us to raise capital on commercially reasonable terms or at all. If we are unable to raise funds on acceptable terms if and as needed, we may be forced to curtail our operations or even cease operating altogether. Therefore, unfavorable macroeconomic conditions, particularly in the United States, including as a result of inflation, and any recession or slowed economic growth, could have an outsized negative impact on us. This may seriously harm our business, financial condition and results of operations.

A failure to obtain additional government grants could have a material adverse effect on our development efforts and our ability to fund operations and execute on our business plan.

We expect to fund a portion of our development efforts with funds received under government grants. However, we may not be awarded any such grants in the future, any such grant awards may be insufficient to fund a meaningful portion of our development spending and/or the timing of the receipt of any such award or awards may not coincide with the planned timing of our development efforts. Grants are subject to long procurement cycles, typically 6 to 12 months, and there may not be open grant solicitations for topics relevant to our B-TRAN™ technology. Grant topics are typically identified 1 to 2 years prior to the opening of the grant solicitation and the windows to submit proposals are discrete time periods. Further, the award of grants is a subjective process and government agencies often do not provide detailed feedback on why a grant was not received.

A factor that could negatively impact our ability to obtain government grants is that our technology is in the early stages of commercialization. If, in the future, grant agencies determine that our technological readiness is not sufficiently advanced for a funded demonstration incorporating B-TRAN™ or potential partners determine that our technological readiness is not sufficient to partner with us on grant proposals, we may be unable to obtain additional government grants. Overall, there is a high degree of uncertainty in obtaining grants and we can provide no assurance that we will be able to obtain additional government grants to offset a significant, or any, portion of our development spending. If we do not obtain additional grants or our efforts to obtain additional grants take longer than expected to be successful, we will need to rely on other means to fund our development.

We are highly dependent on the services of key members of our management and technical teams. Our inability to retain these individuals could impede our business plan and growth strategies, which could have a negative impact on our business and the value of your investment.

Our ability to implement our business plan depends, to a critical extent, on the continued efforts and services of key members of our management and technical teams. If we unexpectedly lose the services of any of these persons during this important time in the development and commercialization of our B-TRAN™ technology, the loss may result in a delay in the implementation of our business plan and plan of operations. We can give no assurance that we could find satisfactory replacements for these individuals within a reasonable time or on terms that would not be unduly expensive or burdensome to us. We do not currently carry a key-man life insurance policy that would assist us in recouping our costs in the event of the death or disability of any of these persons.

In addition, as a small team we will need additional commercial and semiconductor expertise to successfully develop products and further commercialize our technology. We can give no assurance that we will be able to identify and secure the necessary expertise at the appropriate time or at all.

Our operating results for any quarterly reporting period may fluctuate significantly depending on the timing and pace of our development spending and costs to commercialize our technology.

Our research and development costs may vary significantly from quarter to quarter depending on the current phase of development and commercialization of our technology and the timing of semiconductor fabrication, commercial production and revenue generation and negotiations with potential strategic partners. We also may intentionally accelerate our development and/or commercialization costs or may be faced with unexpected delays or challenges with development and/or commercialization that could significantly impact our operating results. Significant adverse fluctuations in our research and development spending and other operating costs from period to period could adversely affect the market price for our common stock.

New technologies in the power semiconductor switch industry may supplant our technology in this market, which would harm our business and operations, and we may not be able to compete effectively in this industry and with any such new technologies.

The power semiconductor switch industry is subject to significant technological change. Our future success will depend on the cutting-edge relevance of our technology, and thereafter on our ability to appropriately respond to changing technologies and changes in function of products and product quality. If new technologies supplant our technology, our business would be adversely affected and we will have to revise our plan of operation.

We or our potential licensees could be competing against large power semiconductor device suppliers with substantially greater resources than us, financial and otherwise. These competitors may also have more comprehensive product lines, broader market presence, longer standing relationships with customers, longer operating histories, greater manufacturing and/or product development capabilities, stronger brand recognition, and greater marketing resources than we and/or our licensees have. If any of these competitors develop products to compete with our technology, we may not be able to successfully commercialize our technology and our technology may not result in sufficient product revenue and/or sufficient, or any, licensing revenue.

We may not be able to use some or all of our net operating loss carryforwards to offset future income.

We have net operating loss carryforwards due to prior period losses generated before January 1, 2024 which if not utilized will begin to expire in 2031 for net operating loss carryforwards prior to 2018 and which do not expire for net operating loss carryforwards for 2018 and thereafter. If we are unable to generate sufficient taxable income to utilize our net operating loss carryforwards, pre-2018 carryforwards could expire unused and be unavailable to offset future income tax liabilities.

In addition, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, a corporation that undergoes an “ownership change” (generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period) is subject to limitation on its ability to utilize its pre-change net operating loss and credit carry-forwards, or net operating losses, to offset future taxable income. We may have experienced one or more ownership changes under these Sections in connection with our initial public offering and one or more subsequent financings. However, we do not anticipate performing a complete analysis of the limitation on the annual use of the net operating loss and tax credit carryforwards until such time we project we will be able to utilize these tax attributes. In addition, future changes in our stock ownership, which may be outside of our control, may trigger an ownership change, as may future equity offerings or acquisitions that have equity as a component of the purchase price. If an ownership change has occurred or does occur in the future, our ability to utilize our net operating losses to offset income if we attain profitability may be limited.

Risks Related to Owning Our Common Stock

The public market for our common stock may be volatile. This may affect the ability of our investors to sell their shares as well as the price at which they sell their shares.

The market price for our shares has experienced significant price and volume fluctuations. We cannot predict whether the price of our common stock will rise or fall. Our stock price may be significantly affected by factors such as, among others:

- variations in the volume of trading activity;
- actual or anticipated fluctuations in our liquidity, financial condition and operating results;
- quarterly and yearly operating results compared to market expectations;
- quarterly and yearly operating results of other companies in our industry compared to market expectations;
- general trends in markets we expect to serve;
- competition from existing products or new products that may emerge;
- future announcements concerning our business or our competitors' businesses;
- additions or departures of key management or other technical personnel;
- the public's reaction to our press releases, other public announcements and filings with the SEC;
- issuances or sales, or expected issuances or sales, of our capital stock;
- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- litigation involving us, our general industry or both; and
- changes in state or federal regulations affecting us and our industry.

Furthermore, in recent years the stock market has experienced extreme price and volume fluctuations that are unrelated or disproportionate to the operating performance of the affected companies. Such broad market fluctuations may adversely affect the market price of our common stock. In addition, price volatility may be greater if the public float and trading volume of our common stock is low. As a result, you may suffer a loss on your investment.

We have the right to issue, and have in the past issued, shares of preferred stock. If we were to issue additional preferred stock, it may have rights, preferences and privileges that may adversely affect the common stock.

We are authorized to issue 10,000,000 shares of "blank check" preferred stock, with such rights, preferences and privileges as may be determined from time-to-time by our Board of Directors ("Board"). Our Board is empowered, without stockholder approval, to issue preferred stock in one or more series, and to fix for any series the dividend rights, dissolution or liquidation preferences, redemption prices, conversion rights, voting rights, and other rights, preferences and privileges for the preferred stock. The issuance of shares of preferred stock, depending on the rights, preferences and privileges attributable to the preferred stock, could reduce the voting rights and powers of our common stock and the portion of our assets allocated for distribution to common stockholders in a liquidation event, and could also result in dilution in the book value per share of our common stock. The preferred stock could also be utilized, under certain circumstances, as a method for raising additional capital or discouraging, delaying or preventing a change in control of the Company, to the detriment of the investors in our common stock. We cannot assure you that we will not, under certain circumstances, issue shares of our preferred stock. At December 31, 2023, we had no shares of preferred stock outstanding.

We have not paid dividends in the past and have no immediate plans to pay dividends.

We plan to reinvest all of our earnings, to the extent we have earnings, in order to market our products and to cover operating costs and to otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. As a result, only appreciation in the price of our common stock, which may never occur, will provide a return to stockholders. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our common stock.

Shares eligible for future sale, including warrants and options exercisable into shares of our common stock, may cause dilution to our existing stockholders and may adversely affect the market for our common stock.

Sales of substantial amounts of our common stock in the public market, or the perception that these sales could occur, could cause the market price of our common stock to decline. These sales could also make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate.

At February 28, 2024, we had 6,005,031 shares of common stock outstanding and 253,828 pre-funded warrants with an exercise price of \$0.001 that are included in our computation of basic earnings per share. Shares beneficially owned by our affiliates, if any, and employees are subject to volume and other restrictions under Rules 144 and 701 under the Securities Act, various vesting agreements, our insider trading policy and/or any applicable 10b5-1 trading plan. Shares that are not beneficially owned by our affiliates and employees generally can be freely sold in the public market, potentially subject in some cases to restrictions under Rule 144.

At February 28, 2024, we had 1,640,274 potentially dilutive shares outstanding, exclusive of pre-funded warrants to purchase shares of common stock that are considered outstanding common shares and included in our computation of basic earnings per share, and we may grant additional options, restricted stock units, performance stock units, other stock-based awards and/or warrants in the future. The holders of vested options or warrants, including pre-funded warrants, may exercise their options and/or warrants and sell a large number of shares. Any sale of a substantial number of shares of our common stock may have a material adverse effect on the market price of our common stock.

Raising additional capital, if necessary, may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies.

We may seek additional capital through a combination of public and private equity offerings, debt financings, strategic partnerships and licensing arrangements. To the extent that we raise additional capital through the sale or issuance of equity, warrants or convertible debt securities, the ownership interest of our existing stockholders will be diluted, and the terms of such securities may include liquidation or other preferences that adversely affect your rights as a stockholder. If we raise capital through debt financing, it may involve agreements that include covenants limiting or restricting our ability to take certain actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through strategic partnerships or licensing agreements with third parties, we may have to relinquish valuable rights to our technologies, or grant licenses on terms that are not favorable to us. If we are unable to raise additional funds if and when needed, we may be required to delay, limit, reduce or terminate our development and commercialization efforts.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable.

Our certificate of incorporation (as amended and restated to date, our “certificate”) and our bylaws (as amended and restated to date, our “bylaws”) and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our certificate and bylaws:

- authorize our Board to issue preferred stock without stockholder approval and to designate the rights, preferences and privileges of each class; if issued, such preferred stock would increase the number of outstanding shares of our capital stock and could include terms that may deter an acquisition of us;
- limit who may call stockholder meetings;
- do not permit stockholders to act by written consent;
- do not provide for cumulative voting rights; and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

If securities or industry analysts do not publish or do not continue to publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock may be influenced by the research and reports that industry or securities analysts publish about us or our business. In 2023, one securities analyst published reports on us. If this analyst ceases coverage of our company or fails to publish reports on us regularly and/or one or more other analysts do not initiate coverage on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. In addition, if one or more analysts issues an adverse opinion regarding our stock, our stock price would likely decline.

ITEM 1B: UNRESOLVED STAFF COMMENTS

None.

ITEM 1C: CYBERSECURITY

Our Board oversees our cybersecurity program. Our cybersecurity program is managed by our Chief Financial Officer in collaboration with a third-party service provider. During the year ended December 31, 2023, we experienced no material cybersecurity incidents. We utilize a multi-layer approach to identifying and managing cybersecurity risks including anti-virus and content filtering, weekly patch management, network firewall monitoring, utilization of a virtual private network, off-site server and email back-ups, endpoint threat detection and threat hunting, multi-factor authentication and security hardening. In the year ended December 31, 2023, we performed an annual cybersecurity assessment, conducted by our third-party service provider, to evaluate the robustness of our cybersecurity. To date, to our knowledge no external entity has successfully breached our system. If a breach were to be discovered, our Chief Financial Officer would inform our Chief Executive Officer, who would then communicate the information to our Board.

ITEM 2: PROPERTIES

Our principal office is located at 5508 Highway 290 West, Suite 120, Austin, Texas 78735. We lease 4,070 square feet of office and laboratory space. The lease commenced on June 1, 2021 and, as of December 31, 2023, the remaining term of the lease is 32 months.

ITEM 3: LEGAL PROCEEDINGS

We may be subject to litigation from time to time in the ordinary course of business. We are not currently party to any legal proceedings.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5: MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is listed on the Nasdaq Capital Market under the symbol “IPWR.” As of March 28, 2024, we had 22 shareholders of record.

Dividends

We have not paid any cash dividends on our common stock since our inception and do not anticipate paying any cash dividends in the foreseeable future. We plan to retain our earnings, if any, to provide funds for the expansion of our business. The payment of future dividends, if any, will be at the discretion of our Board and will depend on our financial condition, results of operations, capital requirements, restrictions contained in future financing agreements, provisions of applicable law and any other factors our Board deems relevant.

Performance Graph

As a smaller reporting company, we are not required to provide this information.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Issuer

None.

ITEM 6: [Reserved]

ITEM 7: MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the audited financial statements and related notes included elsewhere in this Annual Report on Form 10-K. In addition to historical information, this discussion and analysis here and throughout this Form 10-K contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

Ideal Power is located in Austin, Texas. We are solely focused on the further development and commercialization of our B-TRAN™ solid-state switch technology.

To date, operations have been funded primarily through the sale of common stock and we have generated \$3.7 million in grant revenue for bidirectional power switch development. Grant revenue was \$37,388 and \$203,269, respectively, in the years ended December 31, 2023 and 2022, respectively. We may pursue additional research and development grants, if and when available, to further develop and/or improve our technology.

We are in the process of commercializing our B-TRAN™ technology and launched our first two commercial products, the SymCool™ Power Module and SymCool™ IQ Intelligent Power Module, in 2023. We generated \$161,483 in commercial revenue in the year ended December 31, 2023.

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Product Launches

In early 2023, we launched our first commercial product, the SymCool™ Power Module. This multi-die B-TRAN™ module is designed to meet the very low conduction loss needs of the solid-state circuit breaker market. We commenced shipment of SymCool™ Power Modules to fulfill customer orders in early 2024.

In late 2023, we launched our second commercial product, the SymCool™ IQ Intelligent Power Module. The SymCool™ IQ IPM builds on the bidirectional B-TRAN™ multi-die packaging design of our SymCool™ Power Module and adds an integrated intelligent driver optimized for bidirectional operation. This product targets several markets including renewable energy, energy storage, EV charging and other industrial applications. We expect initial sales of this product in late 2024.

Development Agreement

During the fourth quarter of 2022, we announced, and began Phase 1 of, a product development agreement with Stellantis, a top 10 global automaker, for a custom B-TRAN™ power module for use in the automaker's EV drivetrain inverters in its next generation EV platform. In Phase 1 of the program, we provided packaged B-TRAN™ devices, test kits and technical data to Stellantis for their evaluation. During the third quarter of 2023, we secured, and began Phase 2 of, this program. In Phase 2 of the program, we collaborated with Stellantis and the program partners, including both the program's packaging company and the organization building the initial drivetrain inverter, to supply B-TRAN™ devices for integration into the custom power module and inverter designs. Also, as part of Phase 2, we provided Stellantis a comprehensive test plan for the testing required to achieve certification to automotive standards for B-TRAN™. The test plan was subsequently approved as submitted. In early 2024, we successfully completed Phase 2 of the program. Phase 3 builds on the completion of all Phase 1 and 2 deliverables and therefore transitions to Stellantis' production team. We are currently finalizing the scope of work for the next phase of the program with Stellantis. This phase is expected to include the extensive testing of the custom B-TRAN™ module to meet automotive certification standards enabling B-TRAN™ to be the core of the powertrain inverter for the automaker's next-generation EVs. The objective of this phase is the completion and certification of a production-ready B-TRAN™-based module and is targeted for 2025. We recorded all of the revenue under Phase 1 and \$61,483 of the revenue under Phase 2 in year ended December 31, 2023. We will record the remaining Phase 2 revenue in the first quarter of 2024.

Test and Evaluation Agreements

Since the middle of 2021, we announced several test and evaluation agreements with prospective customers, including a second top 10 global automaker, a top 10 global provider of power conversion solutions to the solar industry, two global diverse power management market leaders, a tier 1 automotive supplier and a global power conversion supplier. These companies, along with other current and future participants in our test and evaluation program, intend to test and evaluate the B-TRAN™ for use in their applications. We expect to incorporate the feedback from these customers into our future commercial products. We began B-TRAN™ customer shipments to program participants in mid-2023.

Trends, Events and Uncertainties

Research and Development

Research and development of new technologies is, by its nature, unpredictable. We cannot assure you that our research and development will be successful, our technology will be adopted, that we will ever earn revenues sufficient to support our operations or that we will ever be profitable. Furthermore, since we have no committed source of financing, we cannot assure you that we will be able to raise additional capital if and when we need it to continue our operations. If we cannot raise funds if and when we need them, we may be required to severely curtail, or even to cease, our operations.

March 2024 Offering

In March 2024, we issued and sold 1,366,668 shares of our common stock at a price of \$7.50 per share and 633,332 pre-funded warrants to purchase shares of our common stock at a price of \$7.499 per pre-funded warrant in an underwritten public offering. The pre-funded warrants have an exercise price of \$0.001 per share. The underwriter has a 30-day option to purchase up to an additional 300,000 shares of our common stock at the offering price, less the underwriting discounts and commissions. The estimated net proceeds to us from the March 2024 Offering are \$13.6 million or \$15.7 million if the underwriter exercises its option to purchase additional shares in full. We intend to use the net proceeds from the March 2024 Offering to fund further commercialization and development of our B-TRAN™ technology and general corporate and working capital purposes.

Critical Accounting Estimates

The following discussion and analysis of our financial condition and results of operations is based upon our financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Certain accounting estimates are particularly important to the understanding of our financial position and results of operations and require the application of significant judgment by our management. As a result, they are subject to an inherent degree of uncertainty. In applying these policies, we use our judgment to determine the appropriate assumptions to be used in the determination of certain estimates. Those estimates may be based on our historical operations, our future business plans and projected financial results, the terms of existing contracts, our observance of trends in the industry, information provided by our customers and/or information available from other outside sources, as appropriate. Please see Footnote 2 to our financial statements for a summary of our significant accounting policies.

Stock-Based Compensation. We apply FASB ASC 718, “Stock Compensation,” when recording stock-based compensation. Grants to non-employees are also accounted for under ASC 718. The fair value of each stock option award is estimated on the date of grant using the commonly used Black-Scholes option valuation model. The assumptions used in the Black-Scholes model are as follows:

Grant Price — The grant price is determined based on the closing share price on the date of grant.

Risk-free interest rate — The risk-free interest rate is based on the implied yield available on US Treasury securities at the time of grant with an equivalent term of the expected life of the award.

Expected lives — As permitted by SAB 107, due to our insufficient history of option activity, we utilize the simplified approach to estimate the options’ expected term, calculated as the midpoint between the vesting period and the contractual life of the award.

Expected volatility — Volatility is estimated based on the historical volatilities of comparable companies.

Expected dividend yield — Dividend yield is based on current yield at the grant date or the average dividend yield over the historical period. We have never declared or paid dividends and have no plans to do so in the foreseeable future.

The fair value for performance stock units, which contain market conditions, is estimated on the date of grant using a Monte Carlo analysis utilizing the same expected volatility assumption as utilized in the Black-Scholes model for stock options.

Intangible Assets. Our intangible assets are composed of patents and trademarks, which are recorded at cost, and other intangible assets, which are recorded at cost plus the estimated present value of all future payments associated with the other intangible assets. We capitalize third-party legal costs and filing fees, if any, associated with obtaining patents, trademarks or other intangible assets. Once the patent asset has been placed in service, we amortize these costs over the shorter of the asset’s legal life, generally 20 years from the initial filing date, or its estimated economic life using the straight-line method. Trademarks are not amortized as they have an indefinite useful life. For the other intangible assets, we amortize the asset over the 17-year term of the underlying agreements.

Impairment of Long-Lived Assets. The long-lived assets, consisting of property and equipment and intangible assets, held and used by us are reviewed for impairment no less frequently than annually or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In the event that facts and circumstances indicate that the cost of any long-lived assets may be impaired, an evaluation of recoverability is performed. We determined that there was no impairment in the value of long-lived assets during the year ended December 31, 2023 and immaterial impairments in the value of long-lived assets during the year ended December 31, 2022.

Income Taxes. We account for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before we are able to realize their benefits, or that future deductibility is uncertain. Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position.

We have concluded that it is more likely than not that we will not have sufficient foreseeable taxable income within the carryforward period as applicable and permitted by current law to allow for the utilization of certain of the deductible amounts generating the deferred tax assets; therefore, a full valuation allowance has been established to reduce the net deferred tax assets to zero at December 31, 2023 and 2022.

Results of Operations

Comparison of the year ended December 31, 2023 to the year ended December 31, 2022

Commercial Revenue. We began to commercialize our B-TRAN™ technology in 2023. For the year ended December 31, 2023, we recognized commercial revenue of \$161,483. Our commercial revenue consisted of development revenue (see Development Agreement above) including the sale of packaged B-TRAN™ devices. In the year ended December 31, 2022, we did not recognize any commercial revenue as we were still focused on the development of our B-TRAN™ technology. We expect to recognize modest commercial revenue from both product sales and development agreements in 2024.

Grant Revenue. Grant revenue decreased by \$165,881 to \$37,388 in the year ended December 31, 2023 from \$203,269 in the year ended December 31, 2022 due to the completion of our \$1.2 million subcontract with Diversified Technologies, Inc. (“DTI”) to supply B-TRAN™ devices as part of a contract awarded to DTI by the United States Naval Sea Systems Command for the development and demonstration of a B-TRAN™ enabled high efficiency direct current solid-state circuit breaker. We do not have any active government programs although we are pursuing additional government funding opportunities that may result in additional grant revenue in the future.

Cost of Commercial Revenue. Cost of commercial revenue was \$123,225 for the year ended December 31, 2023. In the year ended December 31, 2022, we did not recognize any cost of commercial revenue as we were still focused on the development of our B-TRAN™ technology.

Cost of Grant Revenue. Cost of grant revenue decreased by \$165,881 to \$37,288 for the year ended December 31, 2023 from \$203,269 for the year ended December 31, 2022 due to the completion of our subcontract with DTI. The cost of grant revenue is equal to the associated grant revenue resulting in no gross profit. We expect no gross profit from other grants that we are pursuing, or may pursue, in 2024.

Gross Profit. Gross profit was \$38,258 in the year ended December 31, 2023 compared to \$0 in the year ended December 31, 2022. While we may recognize a gross profit in 2024 from development agreements, we do not expect to recognize a positive gross profit from product sales in 2024 due to the higher costs associated with initial low volume production.

Research and Development Expenses. Research and development expenses increased by \$2,376,435, or 71%, to \$5,743,211 in the year ended December 31, 2023 from \$3,366,776 in the year ended December 31, 2022. The increase was due to higher stock-based compensation expense of \$959,561, wafer fabrication runs of \$902,810, engineering services, primarily packaging costs, of \$324,455 and personnel costs of \$275,420, partly offset by lower other B-TRAN™ spending of \$85,811. We expect higher research and development expenses in 2024 as we further develop our B-TRAN™ technology and related drive circuitry.

General and Administrative Expenses. General and administrative expenses increased by \$409,531, or 13%, to \$3,533,383 in the year ended December 31, 2023 from \$3,123,852 in the year ended December 31, 2022. The increase was due primarily to higher stock-based compensation expense of \$309,530, personnel costs of \$147,063 and other costs of \$3,594, partly offset by lower Board fees and expenses of \$50,656. We expect relatively flat to slightly higher general and administrative expenses, exclusive of stock-based compensation, in 2024.

Sales and Marketing Expenses. Sales and marketing expenses increased by \$261,421, or 31%, to \$1,113,752 in the year ended December 31, 2023 from \$852,331 in the year ended December 31, 2022. The increase was due primarily to higher personnel costs of \$191,480 and stock-based compensation expense of \$76,486, slightly offset by lower other costs of \$6,545. We expect higher sales and marketing expenses in 2024 as we expand our engagement with prospective customers and support the roll-out of our SymCool™ and SymCool™ IQ products.

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Loss from Operations. Our loss from operations for the year ended December 31, 2023 was \$10,352,088 or 41% higher than the \$7,342,959 loss from operations for the year ended December 31, 2022, driven by the factors discussed above.

Interest Income, Net. Interest income, net increased by \$244,459 to \$398,068 for the year ended December 31, 2023 from \$153,609 for the year ended December 31, 2022 due to the impact of higher interest rates on our money market account in 2023.

Net Loss. Our net loss increased by \$2,764,670 or 38%, to \$9,954,020 for the year ended December 31, 2023 from a net loss of \$7,189,350 for the year ended December 31, 2022 for the reasons discussed above.

Liquidity and Capital Resources

In 2023, we generated commercial revenue of \$161,483 and grant revenue of \$37,388. In 2024, we expect modest commercial revenue from product sales and product development agreements. While we do not have any active government programs, we are pursuing government funding opportunities that may result in additional grant revenue in the future. We have incurred losses since our inception. We have funded our operations to date primarily through the sale of common stock.

As of December 31, 2023 and 2022, we had cash and cash equivalents of \$8,474,835 and \$16,345,623, respectively. Our net working capital and long-term debt at December 31, 2023 were \$8,178,282 and \$0, respectively.

We believe that our cash and cash equivalents on hand will be sufficient to meet our ongoing liquidity needs for at least the next 12 months. Additional future financing may be necessary to fund our operations and there can be no assurance that, if needed, we will be able to secure additional debt or equity financing on terms acceptable to us or at all. Although we believe we have adequate sources of liquidity over the long term, the success of our operations, the global economic outlook, and the pace of sustainable growth in our markets could each impact our business and liquidity.

Operating activities in the year ended December 31, 2023 resulted in cash outflows of \$7,131,578, which were due to the net loss for the period of \$9,954,020, partly offset by other non-cash items including stock-based compensation of \$2,321,380, depreciation and amortization of \$271,746 and amortization of right of use asset of \$62,150 and favorable balance sheet timing of \$167,116.

Operating activities in the year ended December 31, 2022 resulted in cash outflows of \$6,383,914, which were due to the net loss for the period of \$7,189,350 and unfavorable balance sheet timing of \$516,931, partly offset by non-cash items including stock-based compensation of \$975,801, depreciation and amortization of \$187,077, stock issued for services of \$100,100, amortization of right of use asset of \$58,452 and the write-off of long-lived assets of \$937.

We expect an increase in cash outflows from operating activities in 2024 as we further commercialize our B-TRAN™ technology.

Investing activities in the years ended December 31, 2023 and 2022 resulted in cash outflows of \$522,946 and \$312,740, respectively. For the year ended December 31, 2023, cash outflows for the acquisition of intangible assets were \$282,121 and capital expenditures were \$240,825. For the year ended December 31, 2022, cash outflows for the acquisition of intangible assets were \$130,089 and capital expenditures were \$182,651. Our capital expenditures in both years were primarily for lab testing equipment.

Financing activities in the years ended December 31, 2023 and 2022 resulted in cash outflows of \$216,264 and \$127,872, respectively, for the payment of withholding taxes on the vesting of restricted stock units.

March 2024 Offering

In March 2024, we issued and sold 1,366,668 shares of our common stock at a price of \$7.50 per share and 633,332 pre-funded warrants to purchase shares of our common stock at a price of \$7.499 per pre-funded warrant in an underwritten public offering. The pre-funded warrants have an exercise price of \$0.001 per share. The underwriter has a 30-day option to purchase up to an additional 300,000 shares of our common stock at the offering price, less the underwriting discounts and commissions. The estimated net proceeds to us from the March 2024 Offering are \$13.6 million or \$15.7 million if the underwriter exercises its option to purchase additional shares in full. We intend to use the net proceeds from the March 2024 Offering to fund further commercialization and development of our B-TRAN™ technology and general corporate and working capital purposes.

Contractual Obligations and CommitmentsLease

In March 2021, we entered into a lease agreement for 4,070 square feet of office and laboratory space located in Austin, Texas. The commencement of the lease occurred on June 1, 2021 and the initial term of the lease was 63 months. The actual base rent in the first year of the lease was \$56,471 and was net of \$18,824 in abated rent over the first three months of the lease term. The annual base rent in the second year of the lease is \$77,330 and increases by \$2,035 in each succeeding year of the lease. In addition, we are required to pay our proportionate share of operating costs for the building under this triple net lease. The lease contains a 5-year fair market renewal option. It does not contain a termination option. We recognized a right of use asset of \$339,882 and a corresponding lease liability for this lease upon lease commencement.

Future minimum payments under the lease are as follows:

For the Year Ended December 31,

| | | |
|------------------------|----|----------------|
| 2024 | \$ | 80,552 |
| 2025 | | 82,587 |
| 2026 | | 56,132 |
| Total lease payments | | 219,271 |
| Less: imputed interest | | (16,284) |
| Total lease liability | \$ | <u>202,987</u> |

Licensing Agreements

In 2015, we entered into a licensing agreement which expires in February 2033. Per the agreement, we have an exclusive royalty-free license associated with semiconductor power switches which enhances our intellectual property portfolio. We pay \$100,000 annually under this agreement.

In 2023, we amended a 2021 license agreement which expires in February 2034. Per the agreement, we have an exclusive royalty-free license associated with semiconductor drive circuitry which enhances our intellectual property portfolio. We pay \$50,000 annually under this agreement. At inception, we recorded an intangible asset and other long-term liability of \$451,557 for the estimated present value of future payments under this licensing agreement.

At December 31, 2023, the corresponding long-term liability for the estimated present value of future payments under these licensing agreements was \$1,125,173. We are accruing interest for future payments related to these agreements.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, we are not required to provide this information.

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Ideal Power, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Ideal Power, Inc. (the “Company”) as of December 31, 2023 and 2022, and the related statements of operations, stockholders’ equity and cash flows for each of the two years in the period ended December 31, 2023, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These 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 audit. 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 audit 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 audit, 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 audit 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 audit 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 audit provides a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below 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. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Carrying Value of Intangible Assets

As described in Note 2 to the financial statements, the Company’s intangible asset, net balance was \$2.6 million as of December 31, 2023. The Company capitalizes third-party legal costs and filing fees, if any, associated with obtaining patents or other intangible assets. Once the patent asset has been placed in service, the Company amortizes these costs over the shorter of the asset’s legal or estimated economic life using the straight-line method. The Company also evaluates for potential impairment of long-lived assets, including intangible assets composed of patents, no less frequently than annually or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

The principal considerations for our determination that performing procedures relating to the carrying value of intangible assets is a critical audit matter are the significant amount of judgment by management in developing the assumptions of future economic benefit in an impairment analysis, which in turn led to significant auditor judgment, subjectivity and effort in performing audit procedures and evaluating audit evidence relating to the analysis.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the financial statements. These procedures included, among others, reviewing current and forecasted operating conditions for indication of impairment. We also reviewed board minutes, news, and industry reports for indications of impairment. Last, we obtained an understanding of potential future customers indicating future recoverability.

/s/ BPM LLP

We have served as the Company’s auditor since 2013.

San Jose, California
April 1, 2024

IDEAL POWER INC.

Balance Sheets

| | December 31, | |
|--|----------------------|----------------------|
| | 2023 | 2022 |
| ASSETS | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 8,474,835 | \$ 16,345,623 |
| Accounts receivable, net | 70,000 | 65,936 |
| Inventory | 81,450 | — |
| Prepayments and other current assets | 482,890 | 491,365 |
| Total current assets | <u>9,109,175</u> | <u>16,902,924</u> |
| Property and equipment, net | 359,225 | 200,103 |
| Intangible assets, net | 2,580,066 | 2,036,431 |
| Right of use asset | 186,570 | 248,720 |
| Other assets | 13,034 | 11,189 |
| Total assets | <u>\$ 12,248,070</u> | <u>\$ 19,399,367</u> |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current liabilities: | | |
| Accounts payable | \$ 405,098 | \$ 130,503 |
| Accrued expenses | 455,112 | 254,218 |
| Current portion of lease liability | 70,683 | 64,597 |
| Total current liabilities | <u>930,893</u> | <u>449,318</u> |
| Long-term lease liability | 132,304 | 202,987 |
| Other long-term liabilities | 1,125,173 | 838,458 |
| Total liabilities | <u>2,188,370</u> | <u>1,490,763</u> |
| Commitments and contingencies (Note 8) | | |
| Stockholders' equity: | | |
| Preferred stock, \$0.001 par value; 10,000,000 shares authorized; 0 shares issued and outstanding at December 31, 2023 and 2022 | — | — |
| Common stock, \$0.001 par value; 50,000,000 shares authorized; 5,998,018 shares issued and 5,996,697 shares outstanding at December 31, 2023 and 5,926,001 shares issued and 5,924,680 shares outstanding at December 31, 2022 | 5,998 | 5,926 |
| Additional paid-in capital | 107,116,362 | 105,011,318 |
| Treasury stock, at cost; 1,321 shares at December 31, 2023 and 2022, respectively | (13,210) | (13,210) |
| Accumulated deficit | (97,049,450) | (87,095,430) |
| Total stockholders' equity | <u>10,059,700</u> | <u>17,908,604</u> |
| Total liabilities and stockholders' equity | <u>\$ 12,248,070</u> | <u>\$ 19,399,367</u> |

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

IDEAL POWER INC.
Statements of Operations

| | For the Year Ended December 31, | |
|---|--|-----------------------|
| | 2023 | 2022 |
| Commercial revenue | \$ 161,483 | \$ — |
| Grant revenue | 37,388 | 203,269 |
| Total revenue | <u>198,871</u> | <u>203,269</u> |
| Cost of commercial revenue | 123,225 | — |
| Cost of grant revenue | 37,388 | 203,269 |
| Total cost of revenue | <u>160,613</u> | <u>203,269</u> |
| Gross profit | <u>38,258</u> | <u>—</u> |
| Operating expenses: | | |
| Research and development | 5,743,211 | 3,366,776 |
| General and administrative | 3,533,383 | 3,123,852 |
| Sales and marketing | 1,113,752 | 852,331 |
| Total operating expenses | <u>10,390,346</u> | <u>7,342,959</u> |
| Loss from operations | (10,352,088) | (7,342,959) |
| Interest income, net | 398,068 | 153,609 |
| Net loss | <u>\$ (9,954,020)</u> | <u>\$ (7,189,350)</u> |
| Net loss per share – basic and diluted | <u>\$ (1.61)</u> | <u>\$ (1.17)</u> |
| Weighted average number of shares outstanding – basic and diluted | <u>6,190,746</u> | <u>6,157,866</u> |

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

IDEAL POWER INC.

Statement of Stockholders' Equity
For the Years Ended December 31, 2023 and 2022

| | Common Stock | | Additional Paid-In Capital | Treasury Stock | | Accumulated Deficit | Total Stockholders' Equity |
|---|--------------|----------|----------------------------------|----------------|-------------|------------------------|----------------------------------|
| | Shares | Amount | | Shares | Amount | | |
| Balances at December 31, 2021 | 5,893,767 | \$ 5,894 | \$ 104,063,321 | 1,321 | \$ (13,210) | \$ (79,906,080) | \$ 24,149,925 |
| Exercise of options | 1,351 | 1 | (1) | — | — | — | — |
| Stock issued for services | 10,000 | 10 | 100,090 | — | — | — | 100,100 |
| Vesting of restricted stock units | 20,883 | 21 | (127,893) | — | — | — | (127,872) |
| Stock-based compensation | — | — | 975,801 | — | — | — | 975,801 |
| Net loss for the year ended December 31, 2022 | — | — | — | — | — | (7,189,350) | (7,189,350) |
| Balances at December 31, 2022 | 5,926,001 | 5,926 | 105,011,318 | 1,321 | (13,210) | (87,095,430) | 17,908,604 |
| Vesting of restricted stock units | 72,017 | 72 | (216,336) | — | — | — | (216,264) |
| Stock-based compensation | — | — | 2,321,380 | — | — | — | 2,321,380 |
| Net loss for the year ended December 31, 2023 | — | — | — | — | — | (9,954,020) | (9,954,020) |
| Balances at December 31, 2023 | 5,998,018 | \$ 5,998 | \$ 107,116,362 | 1,321 | \$ (13,210) | \$ (97,049,450) | \$ 10,059,700 |

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

IDEAL POWER INC.**Statements of Cash Flows**

| | For the Year Ended December 31, | |
|---|--|----------------------|
| | 2023 | 2022 |
| Cash flows from operating activities: | | |
| Net loss | \$ (9,954,020) | \$ (7,189,350) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 271,746 | 187,077 |
| Amortization of right of use asset | 62,150 | 58,452 |
| Write-off of long-lived assets | — | 937 |
| Stock-based compensation | 2,321,380 | 975,801 |
| Stock issued for services | — | 100,100 |
| Decrease (increase) in operating assets: | | |
| Accounts receivable | (4,064) | 167,326 |
| Inventory | (81,450) | — |
| Prepaid expenses and other assets | 6,630 | (447,465) |
| Increase (decrease) in operating liabilities: | | |
| Accounts payable | 274,595 | 3 |
| Accrued expenses and other liabilities | 36,052 | (177,931) |
| Lease liability | (64,597) | (58,864) |
| Net cash used in operating activities | <u>(7,131,578)</u> | <u>(6,383,914)</u> |
| Cash flows from investing activities: | | |
| Purchase of property and equipment | (240,825) | (182,651) |
| Acquisition of intangible assets | (282,121) | (130,089) |
| Net cash used in investing activities | <u>(522,946)</u> | <u>(312,740)</u> |
| Cash flows from financing activities: | | |
| Payment of taxes upon vesting of restricted stock units | (216,264) | (127,872) |
| Net cash used in financing activities | <u>(216,264)</u> | <u>(127,872)</u> |
| Net decrease in cash and cash equivalents | (7,870,788) | (6,824,526) |
| Cash and cash equivalents at beginning of year | 16,345,623 | 23,170,149 |
| Cash and cash equivalents at end of year | <u>\$ 8,474,835</u> | <u>\$ 16,345,623</u> |

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

Ideal Power Inc.**Notes to Financial Statements****Note 1 — Organization and Description of Business**

Ideal Power Inc. (the “Company”) was incorporated in Texas on May 17, 2007 under the name Ideal Power Converters, Inc. The Company changed its name to Ideal Power Inc. on July 8, 2013 and re-incorporated in Delaware on July 15, 2013. With headquarters in Austin, Texas, the Company is focused on the further development and commercialization of its Bidirectional bipolar junction TRANsistor (B-TRAN™) solid-state switch technology.

Since its inception, the Company has financed its research and development efforts and operations primarily through the sale of common stock. The Company’s continued operations are dependent upon, among other things, its ability to obtain adequate sources of funding through future revenues, follow-on stock offerings, issuances of warrants, debt financing, co-development agreements, government grants, sale or licensing of developed intellectual property or other alternatives.

Note 2 — Summary of Significant Accounting PoliciesBasis of Presentation

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Accounts Receivable

Trade accounts receivable are stated net of a provision for credit losses. The provision for credit losses represents an estimate of the lifetime expected credit losses inherent in trade receivables as of the balance sheet date. The Company assesses the adequacy of the provision for credit losses on a quarterly basis based on historical information and current economic conditions and forecasts. Subsequent changes in the provision for credit losses are recorded in current earnings and reversal of previous losses are permitted under the current guidance. While the Company believes it has exercised prudent judgment and applied reasonable assumptions, there can be no assurance that in the future, changes in economic conditions or other factors will not cause changes in the financial health of its customers. If the financial health of customers deteriorates, the timing and level of payments received could be impacted and therefore, could result in a change to the Company’s estimated losses.

Trade accounts receivable at December 31, 2023 relate to a product development agreement with Stellantis, a top 10 global automaker, for a custom B-TRAN™ power module for use in electric vehicle (“EV”) drivetrain inverters in Stellantis’ next generation EV platform. At December 31, 2023, the provision for credit losses was \$0.

Property and Equipment

Property and equipment are stated at historical cost less accumulated depreciation and amortization. Major additions and improvements are capitalized while maintenance and repairs that do not improve or extend the useful life of the respective asset are expensed. Depreciation and amortization of property and equipment is computed using the straight-line method over their estimated useful lives. Leasehold improvements are amortized over the shorter of the life of the asset or the related leases. Estimated useful lives of the principal classes of assets are as follows:

| | Shorter of lease term or useful life (in years) |
|--------------------------------------|---|
| Leasehold improvements | |
| Machinery and equipment | 5 |
| Furniture, fixtures and IT equipment | 3 – 5 |

Intangible Assets

The Company's intangible assets are composed of patents and trademarks, which are recorded at cost, and other intangible assets, which are recorded at cost plus the estimated present value of all future payments associated with the other intangible assets. The Company capitalizes third-party legal costs and filing fees, if any, associated with obtaining patents, trademarks or other intangible assets. Once the patent asset has been placed in service, the Company amortizes these costs over the shorter of the asset's legal life, generally 20 years from the initial filing date, or its estimated economic life using the straight-line method. Trademarks are not amortized as trademarks have an indefinite useful life. For the other intangible assets, the Company amortizes the assets over the 11-year and 17-year terms of the underlying agreements.

Impairment of Long-Lived Assets

The long-lived assets, consisting of property and equipment and intangible assets, held and used by the Company are reviewed for impairment no less frequently than annually or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In the event that facts and circumstances indicate that the cost of any long-lived assets may be impaired, an evaluation of recoverability is performed. Management has determined that there was an impairment in the value of long-lived assets in the amount of \$937 during the year ended December 31, 2022. There were no impairments in the value of long-lived assets during the year ended December 31, 2023.

Fair Value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Assets and liabilities measured at fair value are categorized based on whether or not the inputs are observable in the market and the degree that the inputs are observable. The categorization of financial assets and liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The three levels of inputs used to establish fair value are the following:

- Level 1 — Quoted prices in active markets for identical assets or liabilities;
- Level 2 — Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities

The Company's financial instruments primarily consist of cash and cash equivalents, accounts payable and long-term liabilities. As of the balance sheet dates, the estimated fair values of the financial instruments were not materially different from their carrying values as presented on the balance sheets. This is primarily attributed to the short-term nature of these instruments.

In 2015, the Company recorded a long-term liability for the estimated present value of future payments under licensing agreements. In 2021, the Company recorded an adjustment to increase the long-term liability due to an increase in the future payments due under these licensing agreements. In 2023, the Company recorded a long-term liability for the estimated present value of future payments under a separate licensing agreement. The Company determined the discount rate to estimate the present value of the future payments based on the applicable treasury rates. The Company's long-term liability is classified within Level 3. See Note 5 and Note 8 for more details regarding the licensing agreements. The Company did not identify any other assets and liabilities that are required to be presented in the balance sheets at fair value.

Revenue Recognition

The Company recognizes revenue and related cost of revenue in accordance with Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) 606, “Revenue from Contracts with Customers” and, as applicable, with the guidance issued by the FASB in June 2018 for the recipients of grants.

In 2023, the Company recognized commercial revenue and grant revenue. Government contracts, including grants, are agreements that generally provide the Company with cost reimbursement for certain types of development activities over a contractually defined period. Grant revenue is recognized in the period during which the Company incurs the related costs, provided that the Company has incurred the cost in accordance with the specifications and work plans determined between the Company and the government entity. Commercial revenue relates to either the development agreements with customers or product sales. Commercial revenue under development agreements is generally recognized upon the completion of contractual deliverables. Commercial revenue from product sales is generally recognized upon shipment of products.

For the year ended December 31, 2023, the Company recognized \$161,483 of commercial revenue and \$37,388 of grant revenue. For the year ended December 31, 2022, the Company recognized no commercial revenue and \$203,269 of grant revenue. The Company did not have any active government contracts, including grants, at December 31, 2023.

Research and Development

Research and development costs are presented as a line item under operating expenses and are expensed as incurred. Research and development costs include costs to further develop the Company’s B-TRAN™ technology and related products and include, but are not limited to, the cost of engineering personnel, wafer fabrication, contract labor, driver design and fabrication, device packaging, product development, testing and other engineering services, stock-based compensation for engineering personnel, consulting and materials and supplies.

Income Taxes

The Company accounts for income taxes using an asset and liability approach which allows for the recognition and measurement of deferred tax assets based upon the likelihood of realization of tax benefits in future years. Under the asset and liability approach, deferred taxes are provided for the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. A valuation allowance is provided for deferred tax assets if it is more likely than not these items will either expire before the Company is able to realize their benefits, or that future deductibility is uncertain. At December 31, 2023 and 2022, the Company established a full reserve against all deferred tax assets.

Tax benefits from an uncertain tax position are recognized only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50 percent likelihood of being realized upon ultimate resolution.

Net Loss Per Share

The Company applies FASB ASC 260, “Earnings per Share.” Basic earnings (loss) per share is computed by dividing earnings (loss) available to common stockholders by the weighted-average number of common shares outstanding. Diluted earnings (loss) per share is computed similar to basic earnings (loss) per share except that the denominator is increased to include additional common shares available upon exercise of equity awards and warrants using the treasury stock method. In periods with a net loss, no common share equivalents are included because their effect would be anti-dilutive.

In accordance with ASC 260, shares issuable for little or no cash consideration are considered outstanding common shares and included in the computation of basic earnings per share. As such, the Company includes pre-funded warrants to purchase shares of common stock in its computation of earnings per share. The pre-funded warrants were issued in November 2019 with an exercise price of \$0.001. See Note 11.

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At December 31, 2023 and 2022, potentially dilutive shares outstanding amounted to 1,597,898 and 1,598,034 shares, respectively, and exclude pre-funded warrants to purchase shares of common stock.

Stock Based Compensation

The Company applies FASB ASC 718, “Stock Compensation,” when recording stock-based compensation. Grants to non-employees are also accounted for under ASC 718. The fair value of each stock option award is estimated on the date of grant using the Black-Scholes option valuation model. The fair value of each performance stock unit award is estimated on the date of grant using a Monte Carlo simulation.

The Company issues common stock upon exercise of equity awards and warrants.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents. The Company maintains its cash with a major financial institution located in the United States. Balances are insured by the Federal Deposit Insurance Corporation up to \$250,000. The Company maintains balances in excess of federally insured limits. The Company has not experienced losses in such accounts and believes it is not exposed to significant credit risk regarding its cash and cash equivalents.

Recent Accounting Pronouncements

Management does not believe that any recently issued, but not yet effective, accounting standards, if adopted, would have a material impact on the Company’s financial statements.

Note 3 — Prepayments and Other Current Assets

Prepayments and other current assets consisted of the following:

| | <u>December 31,</u> | |
|---|---------------------|-------------------|
| | <u>2023</u> | <u>2022</u> |
| Prepaid insurance | \$ 204,572 | \$ 213,357 |
| Prepaid semiconductor fabrication costs | 88,150 | 110,319 |
| Prepaid software | 64,082 | 71,141 |
| Prepaid inventory | 58,200 | — |
| Prepaid consulting | — | 32,000 |
| Prepaid engineering services | — | 26,000 |
| Other | 67,886 | 38,548 |
| | <u>\$ 482,890</u> | <u>\$ 491,365</u> |

Note 4 — Property and Equipment

Property and equipment, net consisted of the following:

| | <u>December 31,</u> | |
|--|---------------------|-------------------|
| | <u>2023</u> | <u>2022</u> |
| Machinery and equipment | \$ 392,395 | \$ 233,431 |
| Building leasehold improvements | 10,245 | 10,245 |
| Furniture, fixtures, software and IT equipment | 175,593 | 98,793 |
| | <u>578,233</u> | <u>342,469</u> |
| Accumulated depreciation and amortization | (219,008) | (142,366) |
| | <u>\$ 359,225</u> | <u>\$ 200,103</u> |

Depreciation expense amounted to \$81,703 and \$37,769 for the years ended December 31, 2023 and 2022, respectively. During the year ended December 31, 2023, the Company wrote-off \$5,061 in fully depreciated property and equipment. During the year ended December 31, 2022, the Company wrote-off \$937 in property and equipment.

Note 5 — Intangible Assets

Intangible assets, net consisted of the following:

| | December 31, | |
|--|--------------|--------------|
| | 2023 | 2022 |
| Patents | \$ 1,530,257 | \$ 1,263,930 |
| Trademarks | 15,794 | — |
| Other intangible assets | 1,843,036 | 1,391,479 |
| | 3,389,087 | 2,655,409 |
| Accumulated amortization - patents | (272,872) | (211,078) |
| Accumulated amortization – other intangible assets | (536,149) | (407,900) |
| | \$ 2,580,066 | \$ 2,036,431 |

At December 31, 2023 and 2022, the Company had capitalized \$460,890 and \$341,610, respectively, for costs related to patents that have not been awarded. Costs related to patents that have not been awarded are not amortized until patent issuance. As further discussed in Note 8, the Company entered into a license agreement in April 2023 and capitalized \$451,557 in other intangible assets related to this agreement.

Amortization expense amounted to \$190,043 and \$149,308 for the years ended December 31, 2023 and 2022, respectively. Amortization expense for the succeeding five years and thereafter is \$206,181 (2024-2028) and \$1,072,477 (thereafter).

Note 6 — Accrued Expenses

Accrued expenses consisted of the following:

| | December 31, | |
|---------------------------|--------------|------------|
| | 2023 | 2022 |
| Accrued compensation | \$ 185,494 | \$ 70,261 |
| Accrued Board fees | 62,500 | 62,500 |
| Accrued professional fees | 79,156 | 53,300 |
| Accrued licensing fees | 100,000 | 50,000 |
| Accrued taxes | — | — |
| Other | 27,962 | 18,157 |
| | \$ 455,112 | \$ 254,218 |

Note 7 — Lease

In March 2021, the Company entered into a lease agreement for 4,070 square feet of office and laboratory space located in Austin, Texas. The commencement of the lease occurred on June 1, 2021 and the initial term of the lease was 63 months. The actual base rent in the first year of the lease was \$56,471 and was net of \$18,824 in abated rent over the first three months of the lease term. The annual base rent in the second year of the lease is \$77,330 and increases by \$2,035 in each succeeding year of the lease. In addition, the Company is required to pay its proportionate share of operating costs for the building under this triple net lease. The lease contains a 5-year fair market renewal option. It does not contain a termination option. The Company recognized a right of use asset of \$339,882 and a corresponding lease liability for this lease upon lease commencement.

For purposes of calculating the right of use asset and lease liability included in the Company's financial statements, the Company estimated its incremental borrowing rate at 6% per annum.

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Future minimum payments under the lease are as follows:

For the Year Ended December 31,

| | | |
|--|----|----------|
| 2024 | \$ | 80,552 |
| 2025 | | 82,587 |
| 2026 | | 56,132 |
| Total lease payments | | 219,271 |
| Less: imputed interest | | (16,284) |
| Total lease liability | | 202,987 |
| Less: current portion of lease liability | | (70,683) |
| Long-term lease liability | \$ | 132,304 |

For the year ended December 31, 2023, operating cash outflows for lease payments totaled \$78,517 and the operating lease cost, recognized on a straight-line basis, totaled \$76,070. For the year ended December 31, 2022, operating cash outflows for lease payments totaled \$76,482 and the operating lease cost, recognized on a straight-line basis, totaled \$76,070. At December 31, 2023, the remaining lease term was 32 months.

Note 8 — Commitments and Contingencies

Licensing Agreements

In 2015, the Company entered into a licensing agreement which expires in February 2033. Per the agreement, the Company has an exclusive royalty-free license associated with semiconductor power switches which enhances its intellectual property portfolio. The Company pays \$100,000 annually under this agreement.

In 2023, the Company amended a 2021 license agreement which expires in February 2034. Per the agreement, the Company has an exclusive royalty-free license associated with semiconductor drive circuitry which enhances its intellectual property portfolio. The Company pays \$50,000 annually under this agreement. At inception, the Company recorded an intangible asset and other long-term liability of \$451,557 for the estimated present value of future payments under this licensing agreement.

The Company is accruing interest for future payments related to these agreements.

Legal Proceedings

The Company may be subject to litigation from time to time in the ordinary course of business. The Company is not currently party to any legal proceedings.

Indemnification Obligations

The employment agreements of Company executives include an indemnification provision whereby the Company shall indemnify and defend, at the Company's expense, its executives so as long as an executive's actions were taken in good faith and in furtherance of Company's business and within the scope of executive's duties and authority.

Note 9 — Equity

All shares of common stock have a par value of \$0.001. Each holder of common stock is entitled to one vote per share outstanding.

Stock Issuances

In 2022, the Company issued 10,000 unregistered shares of common stock, valued at \$100,100 at the time of issuance, to a third-party vendor as compensation for services performed.

Note 10 — Equity Incentive Plan

In May 2013, the Company adopted the 2013 Equity Incentive Plan (as amended and restated, the “Plan”) and reserved shares of common stock for issuance under the Plan, which was last amended in June 2023. The plan is administered by the Compensation Committee of the Company’s Board of Directors (the “Board”). At December 31, 2023, there were 504,549 shares of common stock available for issuance under the Plan.

During the year ended December 31, 2023, the Company granted 12,000 stock options to employees, 27,550 restricted stock units to Board members and 60,200 restricted stock units to employees under the Plan. During the year ended December 31, 2023, the Company granted no awards to executives under the Plan. The estimated fair value of these equity grants, calculated using the Black-Scholes option valuation model for the stock options, was \$915,789, of which \$363,563 was recognized in the respective department expenses in the statement of operations for the year ended December 31, 2023.

During the year ended December 31, 2022, the Company granted 31,062 stock options to Board members, 57,500 restricted stock units and 97,500 performance stock units to executives and 30,000 stock options, 59,500 restricted stock units and 16,500 performance stock units to employees under the Plan. The estimated fair value of these equity grants, calculated using the Black-Scholes option valuation model for the stock options and a Monte Carlo simulation model for the performance stock units, which contain market conditions, was \$2,688,111, of which \$320,722 was recognized in the respective department expenses in the statement of operations for the year ended December 31, 2022.

As permitted by SAB 107, management utilizes the simplified approach to estimate the expected term of stock options, which represents the period of time that options granted are expected to be outstanding. The risk-free interest rate for periods within the contractual life of the option is based on the U.S. treasury yield in effect at the time of grant. The volatility is estimated based on the historical volatilities of comparable companies. The Company has never declared or paid dividends and has no plans to do so in the foreseeable future.

The assumptions used in the Black-Scholes model are as follows:

| | For the year ended December 31, | |
|---------------------------------|--|--------------|
| | 2023 | 2022 |
| Average risk-free interest rate | 4.13% | 2.67% |
| Expected dividend yield | —% | — |
| Expected life (in years) | 6.00 | 5.25 to 6.00 |
| Expected volatility | 90% | 90% |

During the year ended December 31, 2022, the Company utilized the same expected volatility in both the Black-Scholes model for stock options and the Monte Carlo simulation for performance stock units.

A summary of the Company’s stock option activity and related information is as follows:

| | 2023 | | | 2022 | | |
|----------------------------|----------------------|--|---|----------------------|--|---|
| | Stock Options | Weighted Average Exercise Price | Weighted Average Remaining Life (in years) | Stock Options | Weighted Average Exercise Price | Weighted Average Remaining Life (in years) |
| Outstanding at January 1 | 513,948 | \$ 7.59 | 6.6 | 492,886 | \$ 7.35 | 7.6 |
| Granted | 12,000 | \$ 11.96 | | 61,062 | \$ 11.09 | |
| Exercised | — | \$ — | | (3,750) | \$ 5.36 | |
| Forfeited / Expired | — | \$ — | | (36,250) | \$ 10.45 | |
| Outstanding at December 31 | <u>525,948</u> | <u>\$ 7.69</u> | <u>5.7</u> | <u>513,948</u> | <u>\$ 7.59</u> | <u>6.6</u> |
| Exercisable at December 31 | <u>475,287</u> | <u>\$ 7.18</u> | <u>5.4</u> | <u>443,284</u> | <u>\$ 6.78</u> | <u>6.2</u> |

The following table sets forth additional information about stock options outstanding at December 31, 2023:

| Range of Exercise Prices | Options Outstanding | Weighted Average Remaining Life (in years) | Weighted Average Exercise Price | Options Exercisable |
|--------------------------|---------------------|--|---------------------------------|---------------------|
| \$1.99 – \$2.85 | 181,557 | 4.3 | \$ 2.52 | 181,557 |
| \$4.25 – \$9.31 | 176,736 | 6.5 | \$ 7.33 | 176,736 |
| \$10.41 – \$17.25 | 163,302 | 6.4 | \$ 12.75 | 112,641 |
| \$31.50 – \$79.40 | 4,353 | 2.6 | \$ 48.50 | 4,353 |
| | <u>525,948</u> | | | <u>475,287</u> |

Stock options granted under the Plan have ten-year terms and generally vest immediately or annually over a three-year vesting period except for option grants to independent directors that generally vest quarterly over a one-year vesting period.

The estimated aggregate pretax intrinsic value (the difference between the Company’s stock price on the last day of the year ended December 31, 2023 and the exercise prices, multiplied by the number of in-the-money options) is \$1.1 million for both outstanding and vested options. This amount changes based on the fair value of the Company’s stock.

A summary of the Company’s restricted stock unit (“RSU”) and performance stock unit (“PSU”) activity is as follows:

| | 2023 | | 2022 | |
|----------------------------|----------------|----------------|----------------|----------------|
| | RSUs | PSUs | RSUs | PSUs |
| Outstanding at January 1 | 183,666 | 114,000 | 100,000 | — |
| Granted | 87,750 | — | 117,000 | 114,000 |
| Vested | (99,886) | — | (33,334) | — |
| Outstanding at December 31 | <u>171,530</u> | <u>114,000</u> | <u>183,666</u> | <u>114,000</u> |

In the year ended December 31, 2023, 99,886 restricted stock units vested of which 27,869 restricted stock units were forfeited to cover employee and executive payroll tax withholding obligations. In the year ended December 31, 2022, 33,334 restricted stock units vested of which 12,451 restricted stock units were forfeited to cover the executives’ payroll tax withholding obligations. The payment of the taxes on the vesting of the restricted stock units is shown as a financing activity on the statement of cash flow.

As of December 31, 2023, there was \$1,868,240 of unrecognized compensation cost related to non-vested share-based compensation arrangements. That cost is expected to be recognized over a weighted average period of 1.0 years.

Note 11 — Warrants

At December 31, 2023 and 2022, there were 786,420 warrants outstanding at a weighted average exercise price of \$5.19 and 253,828 pre-funded warrants outstanding at a weighted average exercise price of \$0.001.

All warrants were exercisable at December 31, 2023 although warrants may generally be exercised only to the extent that the total number of shares of common stock then beneficially owned by these shareholders does not exceed 4.99% (or, at the investor’s election, 9.99%) of the outstanding shares of the Company’s stock.

The weighted average remaining life, excluding the 253,828 pre-funded warrants with no expiration date, of the outstanding warrants is 1.2 years.

The estimated aggregate pre-tax intrinsic value (the difference between the Company’s stock price on the last day of the year ended December 31, 2023 and the exercise prices, multiplied by the number of in-the-money warrants) is \$4.4 million.

Note 12 — Income Taxes

Income taxes are disproportionate to income due to net operating loss carryforwards, which are fully reserved. As of December 31, 2023, the Company has federal net operating loss carryforwards of approximately \$70 million. The federal net operating loss carryforward for years prior to 2018 expire from 2031 through 2038. Federal net operating loss carryforwards for year 2018 and thereafter do not expire.

Pursuant to Internal Revenue Code Sections 382 and 383, use of the Company's net operating loss and credit carryforwards may be limited if a cumulative change in ownership of more than 50% occurs within any three-year period since the last ownership change. The Company may have had one or more changes in control under these Sections. However, the Company does not anticipate performing a complete analysis of the limitation on the annual use of the net operating loss and tax credit carryforwards until the time that it projects it will be able to utilize these tax attributes.

Management has concluded that it is more likely than not that the Company will not have sufficient foreseeable taxable income within the carryforward period as applicable and permitted by current law to allow for the utilization of certain of the deductible amounts generating the deferred tax assets; therefore, a full valuation allowance has been established to reduce the net deferred tax assets to zero at December 31, 2023 and 2022.

The following is a summary of the significant components of the Company's net deferred income tax assets and liabilities as of December 31, 2023 and 2022:

| | For the Year Ended December 31, | |
|--|--|---------------|
| | 2023 | 2022 |
| Current deferred income tax assets: | | |
| Accrued compensation and other | \$ 31,000 | \$ 11,000 |
| Less: valuation allowance | (31,000) | (11,000) |
| | <u>\$ —</u> | <u>\$ —</u> |
| Non-current deferred income tax assets and (liabilities): | | |
| Net operating loss | \$ 14,686,000 | \$ 13,642,000 |
| Research and development credit | 18,000 | 18,000 |
| Research and experimental costs | 1,207,000 | 595,000 |
| Warrants issued for services | 45,000 | 45,000 |
| Depreciation and amortization | 227,000 | 135,000 |
| Exercise of options and warrants | (36,000) | (36,000) |
| Stock based compensation | 1,718,000 | 1,149,000 |
| Intangibles and other | (787,000) | (633,000) |
| Less: valuation allowance | (17,078,000) | (14,915,000) |
| Net non-current deferred tax assets | <u>\$ —</u> | <u>\$ —</u> |

The Company has applied the provisions of FASB ASC 740, *Income Tax*, which clarifies the accounting for uncertainty in tax positions. FASB ASC 740 requires the recognition of the impact of a tax position in the financial statements if that position is more likely than not of being sustained on a tax return upon examination by the relevant taxing authority, based on the technical merits of the position. At December 31, 2023 and 2022, the Company had no unrecognized tax benefits.

The Company recognizes interest and penalties related to income tax matters in interest expense and operating expenses, respectively. As of December 31, 2023 and 2022, the Company has no accrued interest and penalties related to uncertain tax positions.

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The Company is subject to tax in the United States (“U.S.”) and files tax returns in the U.S. federal and certain state jurisdictions. The Company is generally no longer subject to U.S. federal, state and local income tax examinations by tax authorities for all tax years since inception due to the carryover of unused net operating losses and tax credits. The Company currently is not under examination by any tax authority.

The reconciliation between the statutory income tax rate and the effective tax rate is as follows:

| | For the Year Ended December 31, | |
|-----------------------------------|------------------------------------|-------|
| | 2023 | 2022 |
| Statutory federal income tax rate | (21)% | (21)% |
| Valuation allowance | 21 | 21 |
| | —% | —% |

Note 13 — Subsequent Event

In March 2024, the Company issued and sold 1,366,668 shares of its common stock at a price of \$7.50 per share and 633,332 pre-funded warrants to purchase shares of common stock at a price of \$7.499 per pre-funded warrant in an underwritten public offering (the “March 2024 Offering”). The pre-funded warrants have an exercise price of \$0.001 per share. The underwriter has a 30-day option to purchase up to an additional 300,000 shares of common stock at the offering price, less the underwriting discounts and commissions. The estimated net proceeds to the Company from the March 2024 Offering are \$13.6 million as of April 1, 2024.

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

Not applicable.

ITEM 9A: CONTROLS AND PROCEDURES

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer (“CEO”), our principal executive officer, and our Chief Financial Officer (“CFO”), our principal financial and accounting officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. The evaluation was undertaken in consultation with our accounting personnel. Based on that evaluation, our CEO and CFO concluded that, as of December 31, 2023, our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms.

Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Internal control over financial reporting is a process designed by, or under the supervision of, our CEO and CFO and effected by our Board, 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. Our management, under the supervision and with the participation of our CEO and CFO, conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations (COSO). Our management engaged a third-party firm to assist them in the testing and assessment of our internal controls over financial reporting. Based on such evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2023.

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This Annual Report does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation requirements by our independent registered public accounting firm pursuant to rules of the SEC that permit us to provide only management's report in this Annual Report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rule 13a-15(d) or 15d-15(d) of the Act during the three months ended December 31, 2023 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including our CEO and CFO, do not expect that our disclosure controls or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of control effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

ITEM 9B: OTHER INFORMATION

None.

ITEM 9C: DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

None.

PART III

ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated herein by reference from our definitive proxy statement relating to the 2024 annual meeting of stockholders to be filed no later than 120 days after the end of our fiscal year ended December 31, 2023.

ITEM 11: EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference from our definitive proxy statement relating to the 2024 annual meeting of stockholders to be filed no later than 120 days after the end of our fiscal year ended December 31, 2023.

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

The information required by this item is incorporated by reference from our definitive proxy statement relating to the 2024 annual meeting of stockholders to be filed no later than 120 days after the end of our fiscal year ended December 31, 2023.

ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference from our definitive proxy statement relating to the 2024 annual meeting of stockholders to be filed no later than 120 days after the end of our fiscal year ended December 31, 2023.

ITEM 14: PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference from our definitive proxy statement relating to the 2024 annual meeting of stockholders to be filed no later than 120 days after the end of our fiscal year ended December 31, 2023.

PART IV

ITEM 15: EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed with Report

(1) *Financial Statements.*

[Report of Independent Registered Accounting Firm](#) (PCAOB ID: 207)

[24](#)

[Balance Sheets as of December 31, 2023 and 2022](#)

[25](#)

[Statements of Operations for the years ended December 31, 2023 and 2022](#)

[26](#)

[Statement of Stockholders' Equity for the years ended December 31, 2023 and 2022](#)

[27](#)

[Statements of Cash Flows for the years ended December 31, 2023 and 2022](#)

[28](#)

(2) *Schedules.*

All financial statement schedules have been omitted because they are not required, are not applicable or the information is included in the consolidated financial statements or related notes thereto.

(3) *Exhibits.*

The following exhibits are filed as part of this Annual Report on Form 10-K or incorporated by reference, as indicated:

EXHIBIT INDEX

| Exhibit No. | Description of Document |
|-------------|---|
| 3.1 | Delaware Certificate of Conversion including Certificate of Incorporation of Ideal Power Inc. (1) |
| 3.2 | Certificate of Amendment of the Certificate of Incorporation of Ideal Power Inc. (2) |
| 3.3 | Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock (3) |
| 3.4 | Second Amended and Restated Bylaws of Ideal Power Inc. (4) |
| 4.1 | Specimen Common Stock Certificate (5) |
| 4.2 | Form of Series A Common Stock Purchase Warrant (6) |
| 4.3 | Form of Series B Pre-Funded Common Stock Warrant (7) |
| 4.4 | Form of Series C Common Stock Purchase Warrant (8) |
| 4.5 | Description of Registrant's Securities (9) |
| 10.1 | Ideal Power Inc. Amended and Restated 2013 Equity Incentive Plan (10) + |
| 10.2 | Second Revised and Restated Employment Agreement between the Company and R. Daniel Brdar dated April 8, 2020 (11) + |
| 10.3 | Employment Agreement between the registrant and Timothy W. Burns dated September 16, 2014 (12) + |
| 10.4 | Registration Rights Agreement, dated November 13, 2019, by and between Ideal Power Inc. and each purchaser identified on the signature pages thereto (13) |
| 23.1 | Consent of BPM LLP, Independent Registered Public Accounting Firm* |
| 31.1 | Certification of Principal Executive Officer, pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002* |
| 31.2 | Certification of Principal Financial and Accounting Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002* |
| 32.1 | Certification of Principal Executive Officer and Principal Financial and Accounting Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002** |
| 97 | Incentive Compensation Recovery Policy* |
| 101.INS | Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document* |
| 101.SCH | Inline XBRL Taxonomy Extension Schema* |
| 101.CAL | Inline XBRL Taxonomy Extension Calculation Linkbase* |
| 101.DEF | Inline XBRL Taxonomy Extension Definition Linkbase* |
| 101.LAB | Inline XBRL Taxonomy Extension Label Linkbase* |
| 101.PRE | Inline XBRL Taxonomy Extension Presentation Linkbase* |
| 104 | Cover Page Interactive Data File (embedded within the Inline XBRL document and contained in Exhibit 101). |

* Filed herewith

** Furnished herewith

+ Indicates a management contract or compensatory agreement

- (1) Incorporated by reference to Exhibit 3.1 to the registrant's registration statement on Form S-1, file no. 333-190414, originally filed with the Securities and Exchange Commission on August 6, 2013, as amended.
- (2) Incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on August 20, 2019.
- (3) Incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 27, 2017.
- (4) Incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 17, 2022.

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- (5) Incorporated by reference to Exhibit 4.1 to the registrant's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 14, 2021.
- (6) Incorporated by reference to Exhibit 4.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 13, 2019.
- (7) Incorporated by reference to Exhibit 4.2 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 13, 2019.
- (8) Incorporated by reference to Exhibit 4.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on August 3, 2020.
- (9) Incorporated by reference to Exhibit 4.5 to the registrant's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 30, 2020.
- (10) Incorporated by reference to Exhibit 10.1 the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 16, 2023.
- (11) Incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on April 14, 2020.
- (12) Incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on September 19, 2014.
- (13) Incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 13, 2019.

ITEM 16: FORM 10-K SUMMARY

None.

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, in the City of Austin, State of Texas, on this 1st day of April 2024.

IDEAL POWER INC.

By: /s/ R. Daniel Brdar
R. Daniel Brdar,
Chief Executive Officer

By: /s/ Timothy Burns
Timothy Burns,
Chief Financial Officer

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

Dated: April 1, 2024 /s/ R. Daniel Brdar
R. Daniel Brdar,
Chief Executive Officer
(principal executive officer),
President and Director

Dated: April 1, 2024 /s/ Timothy Burns
Timothy Burns,
Chief Financial Officer
(principal financial and accounting officer),
Secretary and Treasurer

Dated: April 1, 2024 /s/ Michael Turmelle
Michael C. Turmelle, Chairman of the Board

Dated: April 1, 2024 /s/ Drue Freeman
Drue Freeman, Director

Dated: April 1, 2024 /s/ Greg Knight
Greg Knight, Director

Dated: April 1, 2024 /s/ Ted Lesster
Ted Lesster, Director

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in Registration Statements on Form S-8 (Nos. 333-261024, 333-239270, 333-205627 and 333-201337) and Form S-3 (Nos. 333-269060, 333-250844, 333-248466, 333-235500 and 333-217088) of Ideal Power Inc. of our report dated April 1, 2024 relating to the financial statements, which appears in this Annual Report on Form 10-K.

/s/ BPM LLP

April 1, 2024
San Jose, California

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002**

I, R. Daniel Brdar, certify that:

1. I have reviewed this annual report on Form 10-K of Ideal Power 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 15-d-15(e)) and internal control 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. The registrant's other certifying officer(s) and 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.

Date: April 1, 2024

/s/ R. Daniel Brdar

R. Daniel Brdar

Chief Executive Officer (Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302(a) OF THE SARBANES-OXLEY ACT OF 2002**

I, Timothy W. Burns, certify that:

1. I have reviewed this annual report on Form 10-K of Ideal Power 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 15-d-15(e)) and internal control 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. The registrant's other certifying officer(s) and 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.

Date: April 1, 2024

/s/ Timothy W. Burns

Timothy W. Burns

Chief Financial Officer (Principal Financial and Accounting Officer)

**CERTIFICATION 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 annual report of Ideal Power Inc. (the "Company") on Form 10-K for the year ended December 31, 2023 as filed with the Securities and Exchange Commission (the "Report"), we, R. Daniel Brdar, Chief Executive Officer (Principal Executive Officer) and Timothy W. Burns, Chief Financial Officer (Principal Financial and Accounting Officer) of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of our knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

Date: April 1, 2024

/s/ R. Daniel Brdar

R. Daniel Brdar
Chief Executive Officer (Principal Executive Officer)

/s/ Timothy W. Burns

Timothy W. Burns
Chief Financial Officer (Principal Financial and Accounting Officer)



Incentive Compensation Recovery Policy (Adopted September 14, 2023)

1. Purpose

The purpose of the Ideal Power Inc. Incentive Compensation Recovery Policy (this “**Policy**”) is to provide for the recovery of certain Incentive-Based Compensation in the event of an Accounting Restatement. This Policy is intended to comply with, and to be administered and interpreted consistent with, Section 10D of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), Rule 10D-1 promulgated under the Exchange Act (“**Rule 10D-1**”), and Listing Rule 5608 adopted by the Nasdaq Stock Market LLC (“**Nasdaq**”) (the “**Listing Standards**”). Unless otherwise defined in this Policy, capitalized terms shall have the meanings set forth in Section 10 below.

2. Policy for Recovery of Erroneously Awarded Compensation

In the event of an Accounting Restatement, the Company will recover reasonably promptly the amount of any Erroneously Awarded Compensation Received by an Executive Officer during the Recovery Period.

3. Administration

- 3.1. This Policy shall be administered by the Compensation Committee, except that the Board may determine to act as the administrator or designate another committee of the Board to act as the administrator with respect to any portion of this Policy other than Section 3.3 (the “**Administrator**”). The Administrator is authorized to interpret and construe this Policy and to make all determinations necessary, appropriate, or advisable for the administration of this Policy.
- 3.2. The Administrator is authorized to take appropriate steps to implement this Policy and may effect recovery hereunder by: (i) requiring payment to the Company, (ii) set-off, (iii) reducing compensation, or (iv) such other means or combination of means as the Administrator determines to be appropriate.
- 3.3. The Company need not recover Erroneously Awarded Compensation if and to the extent that the Compensation Committee determines that such recovery is impracticable and not required under Rule 10D-1 and the Listing Standards because: (i) the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered after making a reasonable attempt to recover, (ii) recovery would violate home country law adopted prior to November 28, 2022, after obtaining the opinion of home country counsel acceptable to Nasdaq, or (iii) recovery would likely cause an otherwise tax-qualified broad-based retirement plan to fail the requirements of Section 401(a)(13) or Section 411(a) of the Internal Revenue Code of 1986, as amended, and regulations thereunder.



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3.4. Any determinations made by the Administrator under this Policy shall be final and binding on all affected individuals and need not be uniform with respect to each individual covered by this Policy.

4. Other Recovery Rights; Company Claims

Any right of recovery pursuant to this Policy is in addition to, and not in lieu of, any other remedies or rights of recovery that may be available to the Company under applicable law or pursuant to the terms of any other compensation recovery policy of the Company that may be in effect from time to time, including in any employment agreement, plan or award agreement, or similar agreement and any other legal remedies available to the Company. Nothing contained in this Policy and no recovery hereunder shall limit any claims, damages, or other legal remedies the Company may have against an individual arising out of or resulting from any actions or omissions by such individual.

5. Reporting and Disclosure

The Company shall file all disclosures with respect to this Policy in accordance with the requirements of federal securities laws.

6. Indemnification Prohibition

Notwithstanding the terms of any indemnification or insurance policy or any contractual arrangement that may be interpreted to the contrary, the Company shall not indemnify any individual with respect to amount(s) recovered under this Policy or claims relating to the enforcement of this Policy, including any payment or reimbursement for the cost of third-party insurance purchased by such individual to fund potential clawback obligations hereunder.

7. Amendment; Termination

The Board or the Compensation Committee may amend or terminate this Policy from time to time in its discretion as it deems appropriate and shall amend this policy as it deems necessary to comply with applicable law or any rules or standards adopted by a national securities exchange or association on which the Company's securities are listed; provided, however, that no amendment or termination of this Policy shall be effective to the extent it would cause the Company to violate any federal securities laws, Securities and Exchange Commission rule or the rules or standards of any national securities exchange or association on which the Company's securities are listed.



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8. Successors

This Policy shall be binding and enforceable against all individuals who are or were Executive Officers and their beneficiaries, heirs, executors, administrators, or other legal representatives.

9. Effective Date

This Policy is effective only for Incentive-Based Compensation Received by an Executive Officer on or after the Effective Date.

10. Definitions. For purposes of this Policy, the following terms shall have the meanings set forth below:

- 10.1. “**Accounting Restatement**” means an accounting restatement of the Company’s financial statements due to the Company’s material noncompliance with any financial reporting requirement under the securities laws, including any accounting restatement required to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period.
- 10.2. “**Administrator**” has the meaning set forth in Section 3.1 hereof.
- 10.3. “**Board**” means the Company’s Board of Directors.
- 10.4. “**Company**” means Ideal Power Inc., a Delaware corporation, and its affiliates.
- 10.5. “**Committee**” means the Compensation Committee of the Board.
- 10.6. “**Effective Date**” means July 16, 2023.
- 10.7. “**Erroneously Awarded Compensation**” means the amount, as determined by the Administrator, of Incentive-Based Compensation received by an Executive Officer that exceeds the amount of Incentive-Based Compensation that would have been received by the Executive Officer had it been determined based on the restated amounts. For Incentive-Based Compensation based on stock price or total shareholder return (“**TSR**”) the Administrator will determine the amount based on a reasonable estimate of the effect of the Accounting Restatement on the stock price or TSR upon which the Incentive-Based Compensation was received, and the Company will maintain documentation of the determination of that reasonable estimate and provide the documentation to Nasdaq. In all cases, the amount to be recovered will be calculated without regard to any taxes paid by the Executive Officer with respect of the Erroneously Awarded Compensation.



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- 10.8. “Executive Officers”** means the Company’s current and former executive officers as determined by the Administrator in accordance with Rule 10D-1 and the Listing Standards. Generally, Executive Officers include any executive officer designated by the Board as an “officer” under Rule 16a-1(f) under the Exchange Act.
- 10.9. “Financial Reporting Measure”** means (i) any measure that is determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements and any measure derived wholly or in part from such a measure, and (ii) any measure based wholly or in part on the Company’s stock price or total shareholder return. A Financial Reporting Measure need not be presented within the Company’s financial statements or included in a filing with the Securities and Exchange Commission.
- 10.10. “Incentive-Based Compensation”** means any compensation granted, earned, or vested based in whole or in part on the Company’s attainment of a Financial Reporting Measure that was Received by an individual (i) on or after the Effective Date and after such individual began service as an Executive Officer, (ii) who served as an Executive Officer at any time during the performance period for the Incentive-Based Compensation and (iii) while the Company had a listed class of securities on a national securities exchange or association.
- 10.11.** Incentive-Based Compensation is deemed to be “**Received**” in the Company’s fiscal period during which the Financial Reporting Measure specified in the Incentive-Based Compensation award is attained, even if the payment or grant of such Incentive-Based Compensation occurs after the end of that period.
- 10.12. “Recovery Period”** means the three completed fiscal years immediately preceding the date that the Company is required to prepare the applicable Accounting Restatement and any “transition period” as described under Rule 10D-1 and the Listing Standards. For purposes of this Policy, the “**date that the Company is required to prepare the applicable Accounting Restatement**” is the earlier to occur of (i) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement, or (ii) the date a court, regulator, or other legally authorized body directs the Company to prepare an Accounting Restatement.

