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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended **September 30, 2022**

OR

☐ **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: 001-37960

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

Delaware	**33-0479020**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
249 E. Gardena Blvd., Gardena, California	**90248**
(Address of principal executive offices)	(Zip Code)

(310) 830-9153
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

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 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.05 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large Accelerated Filer ☐	Accelerated Filer ☐
Non-Accelerated Filer ☒	Smaller Reporting Company ☒
	Emerging Growth Company ☐

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

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

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 $0.0001 per share	POLA	The NASDAQ Stock Market, LLC

The number of shares outstanding of the Registrant's common stock, $0.0001 par value, as of November 14, 2022 was 12,949,550.

TABLE OF CONTENTS

FORWARD LOOKING AND CAUTIONARY STATEMENTS

All statements included or incorporated by reference in this Quarterly Report on Form 10-Q, other than statements or characterizations of historical fact, are forward-looking statements within the meaning 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. Examples of forward-looking statements include, but are not limited to, statements concerning projected net sales, costs and expenses and gross margins; our accounting estimates, assumptions and judgments; the demand for our products; the effect and consequences of the novel coronavirus, or COVID-19, pandemic on matters including U.S., local and foreign economies, wars and international conflicts including the current military actions involving the Russian Federation and Ukraine, our business operations, the ability of financing and the health and productivity of our employees; the competitive nature of and anticipated growth in our industry; production capacity and goals; our ability to consummate acquisitions and integrate their operations successfully; and our prospective needs for additional capital. These forward-looking statements are based on our current expectations, estimates, approximations and projections about our industry and business, management's beliefs, and certain assumptions made by us, all of which are subject to change. Forward-looking statements can often be identified by words such as "anticipates," "expects," "intends," "plans," "predicts," "believes," "seeks," "estimates," "may," "will," "should," "would," "could," "potential," "continue," "ongoing," similar expressions and variations or negatives of these words. These statements are not guarantees of future performance and are subject to risks, uncertainties and assumptions that are difficult to predict. Therefore, our actual results could differ materially and adversely from those expressed in any forward-looking statements as a result of various factors, some of which are listed under "Risk Factors" in Part II, Item 1A, and in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part I, Item 2 of this Quarterly Report on Form 10-Q. These forward-looking statements speak only as of the date of this Quarterly Report on Form 10-Q. We undertake no obligation to revise or update publicly any forward-looking statement for any reason, except as otherwise required by law.

FINANCIAL PRESENTATION

All dollar amounts in this Quarterly Report on Form 10-Q are presented in thousands, except share and per share data and where otherwise noted.

PART I – FINANCIAL INFORMATION

ITEM 1. Condensed Financial Statements

POLAR POWER, INC.
CONDENSED BALANCE SHEETS
(in thousands, except share and per share data)

	September 30, 2022 (Unaudited)	December 31, 2021
ASSETS		
Current assets		
Cash and cash equivalents	$ 363	$ 5,101
Accounts receivable	1,216	4,243
Inventories	15,625	9,017
Prepaid expenses	4,328	4,006
Employee retention credit receivable	2,000	2,000
Income taxes receivable	787	787
Total current assets	24,319	25,154
Other assets:		
Operating lease right-of-use assets, net	411	914
Property and equipment, net	657	1,019
Deposits	93	93
Total assets	$ 25,480	$ 27,180
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 425	$ 328
Customer deposits	3,569	897
Accrued liabilities and other current liabilities	1,179	1,206
Current portion of operating lease liabilities	453	721
Current portion of notes payable	248	242
Total current liabilities	5,874	3,394
Notes payable, net of current portion	81	268
Operating lease liabilities, net of current portion	-	268
Total liabilities	5,955	3,930
Commitments and Contingencies		
Stockholders' Equity		
Preferred stock, $0.0001 par value, 5,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.0001 par value, 50,000,000 shares authorized, 12,967,027 shares issued and 12,949,550 shares outstanding on September 30, 2022, and 12,805,680 shares issued and 12,788,203 shares outstanding on December 31, 2021.	1	1
Additional paid-in capital	37,331	36,816
Accumulated deficit	(17,767)	(13,527)
Treasury Stock, at cost (17,477 shares)	(40)	(40)
Total stockholders' equity	19,525	23,250
Total liabilities and stockholders' equity	$ 25,480	$ 27,180

See Accompanying Notes to the Condensed Financial Statements

POLAR POWER, INC.
UNAUDITED CONDENSED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)

	Three Months Ended September 30, 2022	Three Months Ended September 30, 2021	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Net Sales	$ 1,707	$ 4,136	$ 9,690	$ 12,273
Cost of Sales	1,954	3,170	7,971	10,398
Gross profit (loss)	(247)	966	1,719	1,875
Operating Expenses				
Sales and marketing	328	372	1,134	1,119
Research and development	319	533	1,145	1,485
General and administrative	1,482	823	3,648	2,796
Total operating expenses	2,129	1,728	5,927	5,400
Loss from operations	(2,376)	(762)	(4,208)	(3,525)
Other income (expenses)				
Interest expense and finance costs	(12)	(14)	(39)	(46)
Gain on forgiveness of PPP loan payable	—	1,715	—	1,715
Other income (expense), net	7	3	7	29
Total other income (expenses), net	(5)	1,704	(32)	1,698
Net income (loss)	$ (2,381)	$ 942	$ (4,240)	$ (1,827)
Net income (loss) per share – basic	$ (0.19)	$ 0.07	$ (0.33)	$ (0.14)
Net income (loss) per share – diluted	$ (0.19)	$ 0.07	$ (0.33)	$ (0.14)
Weighted average shares outstanding, basic	12,848,466	12,788,203	12,967,027	12,697,683
Weighted average shares outstanding, diluted	12,848,466	12,807,361	12,967,027	12,697,683

See Accompanying Notes to the Condensed Financial Statements

POLAR POWER, INC.
UNAUDITED CONDENSED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share data)

Three months Ended September 30, 2022

	Common Stock		Additional paid-in	(Accumulated	Treasury	Total Stockholders'
	Number	Amount	capital	Deficit)	Stock	Equity
Balance, June 30, 2022 (unaudited)	12,805,680	$ 1	$ 36,816	$ (15,386)	$ (40)	$ 21,391
Stock-based compensation	161,347		515	—	—	515
Net loss	—	—	—	(2,381)	—	(2,381)
Balance, September 30, 2022 (unaudited)	12,967,027	$ 1	$ 37,331	$ (17,767)	(40)	$ 19,525

Nine months ended September 30, 2022

	Common Stock		Additional paid-in	(Accumulated	Treasury	Total Stockholders'
	Number	Amount	capital	Deficit)	Stock	Equity
Balance, December 31, 2021	12,805,680	$ 1	$ 36,816	$ (13,527)	$ (40)	$ 23,250
Stock-based compensation	161,347		515	—	—	515
Net loss	—	—	—	(4,240)	—	(4,240)
Balance, September 30, 2022 (unaudited)	12,967,027	$ 1	$ 37,331	$ (17,767)	$ (40)	$ 19,525

Three months Ended September 30, 2021

	Common Stock		Additional paid-in	(Accumulated	Treasury	Total Stockholders'
	Number	Amount	capital	Deficit)	Stock	Equity
Balance, June 30, 2021 (unaudited)	12,805,680	$ 1	$ 36,816	$ (14,882)	$ (40)	$ 21,895
Net income	—	—	—	942	—	942
Balance, September 30, 2021 (unaudited)	12,805,680	$ 1	$ 36,816	$ (13,940)	(40)	$ 22,837

Nine months ended September 30, 2021

	Common Stock		Additional paid-in	(Accumulated	Treasury	Total Stockholders'
	Number	Amount	capital	Deficit)	Stock	Equity
Balance, December 31, 2020	11,768,158	$ 1	$ 23,643	$ (12,113)	$ (40)	$ 11,491
Issuance of common stock for cash, net of offering costs	750,000	—	12,466	—	—	12,466
Common stock issued upon exercise of warrants	287,522	—	707	—	—	707
Net loss	—	—	—	(1,827)	—	(1,827)
Balance, September 30, 2021 (unaudited)	12,805,680	$ 1	$ 36,816	$ (13,940)	$ (40)	$ 22,837

See Accompanying Notes to the Condensed Financial Statements

POLAR POWER, INC.
UNAUDITED CONDENSED STATEMENTS OF CASH FLOW
(in thousands)

	Nine Months Ended September 30,	
	2022	**2021**
Cash flows from operating activities:		
Net loss	$ (4,240)	$ (1,827)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	387	420
Gain from forgiveness of PPP loan payable	—	(1,715)
Stock-based compensation to officers, employees and consultants	515	
Changes in operating assets and liabilities		
Accounts receivable	3,027	(2,330)
Inventories	(6,608)	496
Prepaid expenses	(322)	(3,758)
Income tax receivable	—	1,570
Operating lease right-of-use asset	503	484
Accounts payable	97	(102)
Customer deposits	2,672	260
Accrued expenses and other current liabilities	(27)	110
Operating lease liability	(536)	(498)
Net cash used in operating activities	(4,532)	(6,890)
Cash flows from investing activities:		
Acquisition of property and equipment	(25)	(14)
Net cash used in investing activities	(25)	(14)
Cash flows from financing activities:		
Proceeds from sale of common stock, net of offering costs	—	12,466
Proceeds from exercise of warrants	—	707
Repayment of notes payable	(181)	(209)
Net cash used in financing activities	(181)	12,964
Increase (decrease) in cash and cash equivalents	(4,738)	6,060
Cash and cash equivalents, beginning of period	5,101	1,646
Cash and cash equivalents, end of period	$ 363	$ 7,706

See Accompanying Notes to the Condensed Financial Statements

NOTE 1 – ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Company

Polar Power, Inc. was incorporated in the State of Washington as Polar Products, Inc. and in 1991 reincorporated in the State of California under the name Polar Power, Inc. In December 2016, Polar Power, Inc. reincorporated in the State of Delaware (the "Company"). The Company designs, manufactures and sells direct current, or DC, power systems to supply reliable and low-cost energy to off-grid, bad-grid and backup power, electric vehicle (EV) charging, and nano-grid applications. The Company's products integrate DC generator, proprietary electronic control systems, lithium batteries and solar photovoltaic (PV) technologies to provide low operating cost and emissions for telecommunications, defense, automotive, nano-grid, EV charging and industrial markets.

Liquidity

The accompanying financial statements have been prepared under the assumption that the Company will continue as a going concern. Such assumption contemplates the realization of assets and satisfaction of liabilities in the normal course of business. For the nine months ended September 30, 2022, the Company recorded a net loss of $4,240 and used cash in operations of $4,532. As of September 30, 2022, we had a cash balance of $363, with borrowing capacity of $2,920, stockholders' equity of $19,525 and a working capital of $18,445. Notwithstanding the net loss for the nine-month period ended September 30, 2022, management projects adequate cash flow from operations and available line of credit through September 30, 2023, sufficient to ensure continuation of the Company as a going concern for at least one year from the date the Company's September 30, 2022 financial statements are issued.

Historically, we have financed our operations through public and private sales of common stock, credit lines from financial institutions, and cash generated from operations to provide the Company the liquidity and capital resources to fund its operating expenses and capital expenditure requirements. The Company expects to continue investing in product development and sales and marketing activities and has taken action to improve our margins, and are continuing to build a strong back log. The long-term continuation of the Company's business plan is dependent upon the generation of sufficient revenues from its products to offset expenses. In the event that the Company does not generate sufficient cash flows from operations and is unable to obtain funding, the Company will be forced to delay, reduce, or eliminate some or all of its discretionary spending, which could adversely affect the Company's business prospects, ability to meet long-term liquidity needs or ability to continue operations.

Impact of COVID-19

The Company continues to monitor the COVID-19 pandemic and related guidance from international and domestic authorities, including federal, state and local public health authorities. COVID-19 has had, and is likely to continue to have, a material and substantial adverse impact on the Company's results of operations including, among others, an increase in employee absenteeism, a decrease in available and qualified employment candidates, and delays in sourcing of raw materials from suppliers. The Company's business is directly dependent upon, and correlates closely with, the marketing levels and ongoing business activities of its existing customers and suppliers. In the event of a widespread economic downturn caused by COVID-19, the Company could experience a further reduction in current projects, longer sales and collection cycles, deferral or delay of purchase commitments for its DC power systems, a reduction in its manufacturing functionality, higher than normal inventory levels, a reduction in the availability of qualified labor, and increased price competition, all of which could substantially adversely affect its net revenues and its ability to remain a going concern.

The extent of the impact of COVID-19 on its operational and financial performance will depend on certain developments, including potential resurgence of the outbreak, the impact on its customers and sales cycles, the impact on its customer, employee or industry events, the impact on inflation and the effect on the supply chain, all of which are uncertain and cannot be predicted.

Effects of Inflation

The impact of inflation and changing prices on our raw materials and components during the three and nine months ended September 30, 2022 has reduced profits due to previous order commitments with fixed price contracts. Rapid changes in the global economy may cause additional significant spikes in inflation which may have an impact in our financial condition during 2022 and beyond. Because some of our contracts are at a fixed price, we face the risk that cost overruns or inflation may exceed, erode or eliminate our expected profit margin, or cause us to record a loss on certain projects or make us less competitive in certain markets. We are taking actions to manage the potential impacts of these matters and we will continue to assess the actual and expected impacts and the need for further action.

Basis of Presentation of Unaudited Financial Information

The unaudited condensed financial statements of the Company for the three and nine months ended September 30, 2022 and 2021 have been prepared in accordance with accounting principles generally accepted in the U.S. ("GAAP") for interim financial information and pursuant to the requirements for reporting on Form 10-Q and Regulation S-K for scaled disclosures for smaller reporting companies. Accordingly, they do not include all the information and footnotes required by GAAP for complete financial statements. However, such information reflects all adjustments (consisting solely of normal recurring adjustments), which are, in the opinion of management, necessary for the fair presentation of the Company's financial position and results of operations. Results shown for interim periods are not necessarily indicative of the results to be obtained for a full fiscal year. The condensed balance sheet information as of December 31, 2021, was derived from the audited financial statements included in the Company's financial statements as of that date included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 31, 2022. These financial statements should be read in conjunction with that Annual Report.

Estimates

The preparation of financial statements in conformity with GAAP requires management to make 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 revenue and expenses during the reporting period. Material estimates relate to the assumptions made in determining reserves for uncollectible receivables, inventory reserves and returns, impairment analysis of long-term assets, valuation allowance on deferred tax assets, income tax accruals, accruals for potential liabilities and warranty reserves and assumptions made in valuing equity instruments issued for services. Actual results may differ from those estimates.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification ("ASC") 606, Revenue from Contracts with Customers ("ASC 606").

Substantially all of the Company's revenue is derived from product sales. The Company also generates revenues from engineering, tech support, and rental services. Product or service revenue is recognized when performance obligations under the terms of a contract are satisfied, which occurs for the Company upon shipment or delivery of products or services to its customers based on written sales terms, which is also when control is transferred. Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring the products or services to a customer. The Company regularly reviews its customers' financial positions to ensure that collectability is reasonably assured.

The Company also recognizes revenues from the rental of equipment. The Company's rental revenues have not been significant to date and have accounted for less than one percent of total revenues for the three and nine-month periods ended September 30, 2022 and 2021.

Disaggregation of Net Sales

The following table shows the Company's disaggregated net sales by product type:

	Three months ended September 30,	
	2022 (Unaudited)	2021 (Unaudited)
DC power systems	$ 1,659	$ 4,023
Engineering & Tech Support Services	28	52
Accessories	20	61
Total net sales	$ 1,707	$ 4,136

	Nine months ended September 30,	
	2022 (Unaudited)	2021 (Unaudited)
DC power systems	$ 9,474	$ 11,884
Engineering & Tech Support Services	105	222
Accessories	111	167
Total net sales	$ 9,690	$ 12,273

The following table shows the Company's disaggregated net sales by customer type:

	Three months ended September 30,	
	2022 (Unaudited)	2021 (Unaudited)
Telecom	$ 1,538	$ 3,524
Government/Military	2	373
Marine	140	30
Other (backup DC power to various industries)	27	209
Total net sales	$ 1,707	$ 4,136

	Nine months ended September 30,	
	2022 (Unaudited)	2021 (Unaudited)
Telecommunications	$ 9,435	$ 11,017
Government/Military	31	538
Marine	157	44
Other (backup DC power to various industries)	67	674
Total net sales	$ 9,690	$ 12,273

Inventories

Inventories are stated at the lower of cost or net realizable value, with cost determined on a first-in, first-out (“FIFO”) basis. As of September 30, 2022 and December 31, 2021, inventory has been reduced by cumulative write-downs totaling $3,133 and $3,500, respectively. If the Company’s estimates regarding net realizable value are inaccurate, including its estimates regarding its inventory, or changes in customer demand for the Company’s products in an unforeseen manner, the Company may experience additional write-downs of its inventory in the short-term.

As of September 30, 2022 and December 31, 2021, inventories consisted of the following:

	September 30, 2022 (unaudited)	December 31, 2021
Raw materials	$ 11,516	$ 6,607
Finished goods	4,109	2,410
Total Inventories	$ 15,625	$ 9,017

Product Warranties

The Company provides limited warranties for parts and labor at no cost to its customers within a specified time period after the sale. As of September 30, 2022 and December 31, 2021, the Company had accrued a liability for warranty reserve of $600 and $600, respectively, which are included in other accrued liabilities in the accompanying condensed balance sheets. The following is a tabular reconciliation of the product warranty liability, excluding the deferred revenue related to the Company’s warranty coverage:

Changes in estimates for warranties	September 30, 2022 (unaudited)	December 31, 2021
Balance at beginning of the period	$ 600	$ 600
Payments	(406)	(658)
Provision for warranties	406	658
Balance at end of the period	$ 600	$ 600

Stock-Based Compensation

The Company periodically issues stock-based compensation to officers, directors, employees and consultants for services rendered. Such issuances vest and expire according to terms established at the issuance date.

Stock-based payments to officers, directors, employees and consultants for acquiring goods and services from nonemployees, which include grants of employee stock options, are recognized in the financial statements based on their grant date fair values in accordance with ASC 718, *Compensation-Stock Compensation*. Stock option grants to officers, directors, employees and consultants, which are generally time vested, are measured at the grant date fair value and depending on the conditions associated with the vesting of the award, compensation cost is recognized on a straight-line or graded basis over the vesting period. Recognition of compensation expense for non-employees is in the same period and manner as if the Company had paid cash for the services. The fair value of stock options granted is estimated using the Black-Scholes option-pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life, and future dividends. The assumptions used in the Black-Scholes option pricing model could materially affect compensation expense recorded in future periods.

Financial Assets and Liabilities Measured at Fair Value

The Company uses various inputs in determining the fair value of its investments and measures these assets on a recurring basis. Financial assets recorded at fair value in the balance sheets are categorized by the level of objectivity associated with the inputs used to measure their fair value.

Authoritative guidance provided by the Financial Accounting Standards Board ("FASB") defines the following levels directly related to the amount of subjectivity associated with the inputs to fair valuation of these financial assets:

Level 1 Quoted prices in active markets for identical assets or liabilities.

Level 2 Inputs, other than the quoted prices in active markets, that is observable either directly or indirectly.

Level 3 Unobservable inputs based on the Company's assumptions.

The carrying amounts of financial assets and liabilities, such as cash and cash equivalents, accounts receivable and accounts payable, approximate their fair values because of the short maturity of these instruments. The carrying values of the line of credit, notes payable approximate their fair values due to the fact that the interest rates on these obligations are based on prevailing market interest rates.

Segments

The Company operates in one segment for the manufacture and distribution of its products. In accordance with the "Segment Reporting" Topic of the ASC, the Company's chief operating decision maker has been identified as the Chief Executive Officer and President, who reviews operating results to make decisions about allocating resources and assessing performance for the entire Company. Existing guidance, which is based on a management approach to segment reporting, establishes requirements to report selected segment information quarterly and to report annually entity-wide disclosures about products and services, major customers, and the countries in which the entity holds material assets and reports revenue. All material operating units qualify for aggregation under "Segment Reporting" due to their similar customer base and similarities in: economic characteristics; nature of products and services; and procurement, manufacturing and distribution processes. Since the Company operates in one segment, all financial information required by "Segment Reporting" can be found in the accompanying financial statements.

Concentrations

Cash. The Company maintains cash balances at four banks, with the majority held at one bank located in the U.S. At times, the amount on deposit exceeds the federally insured limits. Management believes that the financial institutions that hold the Company's cash are financially sound and, accordingly, minimal credit risk exists.

Cash denominated in Australian Dollars with a U.S. Dollar equivalent of $10 and $9 at September 30, 2022 and December 31, 2021, respectively, was held in an account at a financial institution located in Australia. Cash denominated in Romanian Leu with a U.S. Dollar equivalent of $19 and $23 at September 30, 2022 and December 31, 2021, respectively, was held in an account at a financial institution located in Romania.

Revenues. For the three months ended September 30, 2022, 87% of revenues were generated from the Company’s largest customer, a Tier-1 telecommunications wireless carrier in the U.S. For the three months ended September 30, 2021, 70% of revenues were generated from the Company’s largest customer, a Tier-1 telecommunications wireless carrier in the U.S. There was no other revenue from customers in excess of 10% of revenues in either period. For the three months ended September 30, 2022 and September 30, 2021, sales to telecommunications customers accounted for 90% and 92% of total revenues, respectively. For the three months ended September 30, 2022 and September 30, 2021, sales to international customers accounted for 7% and 12%, of total revenue, respectively.

For the nine months ended September 30, 2022, sales to the Company’s largest customer, a Tier-1 telecommunications wireless carrier in the U.S., accounted for 88% of total revenues. For the same period in 2021, sales to the Company’s largest customer, a Tier-1 telecommunications wireless carriers in the U.S., accounted for 67%. There was no other revenue from customers in excess of 10% of revenues in either period. For the nine months ended September 30, 2022 and September 30, 2021, sales to telecommunications customers accounted for 97% and 90% of total revenues, respectively. For the nine months ended September 30, 2022 and September 30, 2021, sales to international customers accounted for 2% and 10%, of total revenue, respectively.

Accounts receivable. At September 30, 2022, 96% of the Company’s accounts receivable were from the Company’s largest customer. At December 31, 2021, the Company’s two largest receivable accounts represented 74% and 15% of the Company’s total accounts receivable. There was no other customer that accounted for more than 10% of the Company’s accounts receivable as of September 30, 2022 or December 31, 2021.

Accounts payable. At September 30, 2022, accounts payable to the Company’s three largest vendors represented 32%, 26% and 10%, of the Company’s accounts payable. On December 31, 2021, the three largest accounts payable accounts to the Company’s vendors represented 16%, 9%, and 9%.

Net Loss Per Share

Basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding for the period. Diluted earnings per share is computed by dividing the net income applicable to common stockholders by the weighted average number of common shares outstanding plus the number of additional common shares that would have been outstanding if all dilutive potential common shares had been issued using the treasury stock method. Potential common shares are excluded from the computation when their effect is antidilutive. The dilutive effect of potentially dilutive securities is reflected in diluted net income per share if the exercise prices were lower than the average fair market value of common shares during the reporting period.

The following potentially dilutive shares were excluded from the shares used to calculate diluted earnings per share as their inclusion would be anti-dilutive:

	September 30, 2022 (Unaudited)	September 30, 2021 (Unaudited)
Options	140,000	140,000
Warrants	24,122	24,122
Total	164,122	164,122

Recent Accounting Pronouncements

In September 2016, the FASB issued ASU No. 2016-13, Credit Losses - Measurement of Credit Losses on Financial Instruments ("ASC 326"). The standard significantly changes how entities will measure credit losses for most financial assets, including accounts and notes receivables. The standard will replace today's "incurred loss" approach with an "expected loss" model, under which companies will recognize allowances based on expected rather than incurred losses. Entities will apply the standard's provisions as a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. ASU 2016-13 is effective for the Company beginning January 1, 2023, and early adoption is permitted. The adoption of ASU 2016-13 is not expected to have a material impact on the Company's financial position, results of operations, and cash flows.

In August 2020, the FASB issued ASU No. 2020-06 ("ASU 2020-06") "Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40)." ASU 2020-06 reduces the number of accounting models for convertible debt instruments by eliminating the cash conversion and beneficial conversion models. As a result, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. By removing those separation models, the effective interest rate of convertible debt instruments will be closer to the coupon interest rate. Further, the diluted net income per share calculation for convertible instruments will require the Company to use the if-converted method. For contracts in an entity's own equity, the type of contracts primarily affected by this update are freestanding and embedded features that are accounted for as derivatives under the current guidance due to a failure to meet the settlement conditions of the derivative scope exception. This update simplifies the related settlement assessment by removing the requirements to (i) consider whether the contract would be settled in registered shares, (ii) consider whether collateral is required to be posted, and (iii) assess shareholder rights. ASU 2020-06 is effective January 1, 2024, for the Company and the provisions of this update can be adopted using either the modified retrospective method or a fully retrospective method. Early adoption is permitted, but no earlier than January 1, 2021, including interim periods within that year. Effective January 1, 2021, the Company early adopted ASU 2020-06 and that adoption did not have an impact on its financial statements and the related disclosures.

In May 2021, the FASB issued ASU 2021-04 "Earnings Per Share (Topic 260), Debt—Modifications and Extinguishments (Subtopic 470-50), Compensation— Stock Compensation (Topic 718), and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815- 40) Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options" ("ASU 2021-04"). ASU 2021-04 provides guidance as to how an issuer should account for a modification of the terms or conditions or an exchange of a freestanding equity-classified written call option (i.e., a warrant) that remains classified after modification or exchange as an exchange of the original instrument for a new instrument. An issuer should measure the effect of a modification or exchange as the difference between the fair value of the modified or exchanged warrant and the fair value of that warrant immediately before modification or exchange and then apply a recognition model that comprises four categories of transactions and the corresponding accounting treatment for each category (equity issuance, debt origination, debt modification, and modifications unrelated to equity issuance and debt origination or modification). ASU 2021-04 is effective for all entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. An entity should apply the guidance provided in ASU 2021-04 prospectively to modifications or exchanges occurring on or after the effective date. The Company adopted ASU 2021-04 effective January 1, 2022. The adoption of ASU 2021-04 did not have any impact on the Company's financial statement presentation or disclosures.

The Company's management does not believe that there are other recently issued but not yet effective authoritative guidance, if currently adopted, would have a material impact on the Company's financial statement presentation or disclosures.

NOTE 2 – PROPERTY AND EQUIPMENT

Property and equipment consist of the following:

	September 30, 2022 (Unaudited)	December 31, 2021
Production tooling, jigs, fixtures	$ 71	$ 71
Shop equipment and machinery	3,371	3,350
Vehicles	181	180
Leasehold improvements	390	390
Office equipment	185	181
Software	106	106
Total property and equipment, cost	4,304	4,278
Less: accumulated depreciation and amortization	(3,647)	(3,259)
Property and equipment, net	$ 657	$ 1,019

Depreciation and amortization expense on property and equipment for the three months ended September 30, 2022 and 2021 was $124 and $134, respectively. During the three months ended September 30, 2022 and 2021, $119 and $129, respectively, of the depreciation expense was included in the balance of cost of sales.

Depreciation and amortization expense on property and equipment for the nine months ended September 30, 2022 and 2021 was $387 and $420, respectively. During the nine months ended September 30, 2022 and 2021, $374 and $402, respectively, of the depreciation expense was included in the balance of cost of sales.

NOTE 3 – NOTES PAYABLE

Notes payable consist of the following:

	September 30, 2022 (Unaudited)	December 31, 2021
Total Notes Payable for purchase of Equipment	$ 329	$ 510
Less Current Portion	248	242
Notes Payable, long term	$ 81	$ 268

The Company has entered into several financing agreements for the purchase of equipment in prior years. The terms of these financing arrangements are from 2 years to 5 years, with interest rates ranging from 1.9% to 6.9% per annum, secured by the purchased equipment. The aggregate monthly payments of principal and interest of the outstanding notes payable as of September 30, 2022 is approximately $22 and are due through 2024.

NOTE 4 – LINE OF CREDIT

Credit Facility

Effective September 30, 2020, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with Pinnacle Bank ("Pinnacle"). The Loan Agreement was amended by the First Modification to Loan and Security Agreement (the "First Modification") on October 7, 2020. During 2022, the Company did not draw any advances from the revolving credit facility. At September 30, 2022, there was no balance outstanding under the line of credit and the Company had availability under the line of credit in the amount of $2,920.

The Loan Agreement, as amended, provides for a revolving credit facility under which Pinnacle may make advances to the Company, subject to certain limitations and adjustments, of up to (a) 85% of the aggregate net face amount of the Company's accounts receivable and other contract rights and receivables, plus (b) the lesser of (i) 35% of the lower of cost or wholesale market value of certain inventory of the Company or (ii) $2,500. In no event shall the aggregate amount of the outstanding advances under the revolving credit facility be greater than $4,000. Interest accrues on the daily balance at a rate of 1.25% above the prime rate, but in no event less than 3.75% per annum. Interest on the portion of the daily balance consisting of advances against inventory accrues interest at a rate of 2.25% above the prime rate, but in no event less than 4.75% per annum.

After being amended by the First Modification, the Loan Agreement's initial term ended on September 30, 2022. On November 3, 2022, the Company executed the Second Modification to Loan and Security Agreement with Pinnacle for a two-year term with an expiration date of September 30, 2024. Pinnacle may terminate the Loan Agreement, as amended, at any time upon sixty days prior written notice and immediately upon the occurrence of an event of default. Under the Loan Agreement, as amended, the Company granted Pinnacle a security interest in all presently existing and thereafter acquired or arising assets of the Company. The Loan Agreement, as amended, also contains a financial covenant requiring the Company to attain an effective tangible net worth, as defined, which the Company attained as of September 30, 2022.

The Loan Agreement, as amended, obligates the Company to pay Pinnacle a yearly facility fee in an amount equal to 1.125% of the sum of the advance limit.

NOTE 5 – COMMON STOCK

In August 2022, the Company issued an aggregate of 161,347 shares of common stock to its officers, employees and consultants as part of the Company's Employee Retention Program and the Company's 2016 Omnibus Incentive Plan. The shares of common stock had an aggregate grant date fair value of $515 based on the closing price of the Company's common stock on the grant date of the awards.

During the three and nine-month periods ended September 30, 2022 and September 30, 2021, the Company had stock-based compensation expense of $515 and nil, respectively.

NOTE 6 – STOCK OPTIONS

The following table summarizes stock options:

	Number of Options	Weighted Average Exercise Price
Outstanding, December 31, 2021	140,000	$ 5.22
Granted	—	—
Exercised/Forfeited/Expired	—	—
Outstanding, September 30, 2022 (unaudited)	140,000	$ 5.22
Exercisable, September 30, 2022 (unaudited)	140,000	$ 5.22

At September 30, 2022 and December 31, 2021, the Company had total outstanding options exercisable into 140,000 shares of the Company's common stock. These options are fully vested, with exercise prices ranging from $4.84 to $5.60. Options exercisable into 30,000 shares expire in December 2027 and the remaining options exercisable into 110,000 shares expire in April 2028.

The outstanding options had no intrinsic value at September 30, 2022.

NOTE 7 – STOCK WARRANTS

The following table summarizes warrants:

	Number of Warrants		Weighted Average Exercise Price
Outstanding December 31, 2021	24,122	$	3.13
Issued	—		—
Exercised/Forfeited/Expired	—		—
Outstanding, September 30, 2022 (unaudited)	24,122	$	3.13
Exercisable, September 30, 2022 (unaudited)	24,122	$	3.13

At September 30, 2022 and December 31, 2021, the Company had outstanding warrants exercisable into 24,122 shares of the Company's common stock. The warrants were issued in connection with a July 2020 private placement of shares of the Company's common stock. The warrants have an exercise price of $3.13 per share and expire in July 2025.

The outstanding and exercisable warrants had no intrinsic value at September 30, 2022.

NOTE 8 – DISTRIBUTION AGREEMENT WITH A RELATED ENTITY

On March 1, 2014, the Company entered into a subcontractor installer agreement with Smartgen Solutions, Inc. ("Smartgen"), a related entity. During the three months ended September 30, 2022 and 2021, Smartgen performed nil and $15 in field services, respectively. Smartgen performed nil and $66 in field services for the nine months ended September 30, 2022 and 2021, respectively. The agreement with Smartgen was terminated effective January 31, 2022.

NOTE 9 – OPERATING LEASES

The Company has two operating lease agreements for its warehouse and office spaces both with a weighted average remaining lease terms at September 30, 2022 of approximately one year.

The components of rent expense and supplemental cash flow information related to leases for the period are as follows:

	Nine Months Ended September 30, 2022	Nine Months Ended September 30, 2021
Lease Cost		
Operating lease cost (of which $147 is included in general and administration and $902 is included in cost of sales in the Company's statement of operations for the nine months ended September 30, 2022, and for the same period in 2021, respectively)	$ 525	$ 525
Other Information		
Weighted average remaining lease term – operating leases (in years)	0.7	1.7
Average discount rate – operating leases	3.75%	3.75%

The supplemental balance sheet information related to leases for the period is as follows:

	At September 30, 2022	At September 30, 2021
Operating leases		
Long-term right-of-use assets, net of accumulated amortization of $2,406 and $1,749, respectively	$ 411	$ 1,079
Short-term operating lease liabilities	$ 453	$ 708
Long-term operating lease liabilities	—	454
Total operating lease liabilities	$ 453	$ 1,162

Maturities of the Company's lease liabilities are as follows (in thousands):

Year Ending	Operating Leases
2022 (remaining 3 months)	189
2023	280
Total lease payments	469
Less: Imputed interest/present value discount	(16)
Present value of lease liabilities	$ 453

Rent expense for the nine months ended September 30, 2022 and 2021 was $726 and $678, respectively.

NOTE 10 - EMPLOYEE RETENTION CREDITS

The Consolidated Appropriations Act, passed in December 2020, expanded the employee retention credit ("ERC") program through December 2021. The credits cover 70% of qualified wages, plus the cost to continue providing health benefits to our employees, subject to a $7 cap per employee per quarter. During the year ended December 31, 2021, the Company qualified for approximately $2,000 of ERC. As of September 30, 2022 and December 31, 2021, the balance of $2,000 is presented as employee retention credit receivable in the accompanying condensed balance sheets.

ITEM 2. Management's Discussion And Analysis Of Financial Condition And Results Of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes and other financial information included elsewhere in this Quarterly Report on Form 10-Q. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" and elsewhere in this report. Our historical results are not necessarily indicative of the results to be expected for any future period, and results for any interim period are not necessarily indicative of the results to be expected for the full year.

References to the "Company," "Polar," "our," "us" or "we" refer to Polar Power, Inc. All dollar amounts are presented in thousands, except share and per-share data and where otherwise noted.

Overview

We design, manufacture, and sell DC power generators, renewable energy and cooling systems for applications primarily in the telecommunications market and, to a lesser extent, in other markets, including military, electric vehicle, marine and industrial. We are continuously diversifying our customer base and are selling our products into non-telecommunication markets and applications at an increasing rate.

Within the various markets we service, our DC power systems provide reliable and low-cost DC power to service applications that do not have access to the utility grid (i.e., prime power and mobile applications) or have critical power needs and cannot be without power in the event of utility grid failure (i.e., back-up power applications).

We believe it's more efficient to build power systems around the DC generator because it's simpler to integrate with battery storage and solar photovoltaics which also operate on DC. Many applications in communications, water pumping, lighting, vehicle and vessel propulsion, security systems operate on DC power only. Many micro-grids and energy storage are DC based and use inverters to convert the DC to AC.

Serving these various markets, we offer the following configurations of our DC power systems, with output power ranging from 5 kW to 50 kW:

- ***Base power systems.*** These stationary systems integrate a DC generator and automated controls with remote monitoring, which are typically contained within an environmentally regulated enclosure.

- ***Hybrid power systems.*** These systems incorporate lithium-ion batteries (or other advanced battery chemistries) with our proprietary battery management system into our standard DC power systems.

- ***DC solar hybrid power systems.*** These stationary systems incorporate photovoltaic and other sources of renewable energy into our DC hybrid power systems.

- ***Mobile power systems.*** These are very light weight and compact power systems used for EV charging, robotics, communications, security.

Our DC power systems are available in diesel, natural gas, LPG / propane and renewable fuel formats, with diesel, natural gas and propane gas being the predominant formats.

During the three months ended September 30, 2022 and 2021, 90% and 92%, respectively, of our total net sales were within the telecommunications market. For the three months ended September 30, 2022, 87% of our total net sales were derived from our largest telecommunications customer. For the same period in 2021, 70% of our total net sales were derived from our largest telecommunications customer. There was no other revenue from customers in excess of 10% of total net sales in either period.

During the nine months ended September 30, 2022 and 2021, 97% and 90%, respectively, of our total net sales were within the telecommunications market. For the nine months ended September 30, 2022, 88% of our total net sales were derived from our largest telecommunications customer. For the same period in 2021, 67% of our total net sales were derived from our largest telecommunications customer. There was no other revenue from customers in excess of 10% of total net sales in either period.

Overseas sales to telecommunications customers are showing growth after long marketing investments. During the second quarter of 2022, we received purchase orders from a telecommunications customer in the South Pacific Islands in the amount of $6,279 for our DC power generators for off-grid applications to supply rural areas with broadband services. This order is part of a growing program to develop the telecommunications infrastructure in this region. We expect to complete shipments by the end of 2022.

We continue to work on diversifying our customer base and are selling into non-telecommunication markets and applications at an increasing rate and are focused on new markets for our DC power platform. As part of this diversification effort, we have been expanding the power range of our portfolio and in March 2022, we received EPA certification on our 4Y Toyota engine project aimed at expanding the power range to 35 kW on natural gas and LPG. Our EPA certification of 1KS and 4Y Toyota engines brings to the market clean fuel (non-diesel) engines with very low maintenance and lower operating costs. In many regions throughout the world, the cost of propane and LPG is much lower than the cost of diesel fuel so there is an economic incentive to lower carbon emissions.

The Toyota 1KS and 4Y engines were designed for 24/7 operation for heating, air-conditioning, and CHP applications in Japan. During the 1970s and 1980s Japan faced a problem with their electric grid supporting the rapid increase in HVAC usage. So instead of the electric grid providing the energy for the HVAC needs, these loads were moved over to the natural gas grid. To meet this application requirement, Toyota engines had to have long life (60,000+ hours) with very low maintenance. With the global increasing need for EV charging and HVAC, we see the need to shift some of this increasing energy demand to natural gas and propane/LPG. According to the US EIA, natural gas, coal, coke, fuel oil, provides 60.8% of the energy used by electric utilities in the US. Using natural gas and propane/LPG fuels for HVAC and EV charging shifts energy usage away from coal, coke, and fuel oil; thereby reducing emissions. Generating power locally reduces energy transmission losses, further reducing emissions.

Solar combined with the Toyota 1KS and 4Y engines along with our alternators and controls will offer clean and renewable energy for applications including HVAC, refrigeration, EV charging, peak power shaving, off grid power, and backing up the grid for home and business. We are actively pursuing these applications which we believe form the foundation for micro-grids.

We also continue to market our DC generators for the military, advanced mobility and marine markets as part of our ongoing customer diversification strategy. The military's increasing use of robotics, drones, and computerization in the field is driving the demand for battery charging with DC generators. Military sales are advantageous because of their long-term contracts and they tend to cover the cost of product development. Marine sales interest have increased significantly both domestically and overseas due to the increased performance in comfort and fuel economy. Also, there are increasing restrictions on the use of diesel and gasoline engines in many lakes and waterways making way for our natural gas and propane operated generators. Using natural gas and propane for home and office charging for electric vehicle and forklifts is still a market under development. Same is true for diesel mobile chargers for emergency roadside assistance.

The geopolitical uncertainty is driving nations and business to secure or harden their energy needs driving a more rapid pace toward energy efficiency and solar energy.

Impact of COVID-19

The COVID-19 pandemic has negatively impacted business and industries all over the world since March 2020. The pandemic continues to have a significant negative impact on our overall operations including revenues, productivity, gross margins and liquidity.

We continue to monitor the rapidly evolving COVID-19 pandemic and related guidance from international and domestic authorities, including federal, state and local public health authorities and may need to make changes to our business based on their recommendations. Covid-19 has caused significant disruptions in the supply chain including increasing cost and expenses of materials and services. Our business is directly dependent upon, and correlates closely with, the marketing levels and ongoing business activities of our existing customers and suppliers. In the event of a continued widespread economic downturn caused by COVID-19, we will likely experience a further reduction in current projects, longer sales and collection cycles, deferral or delay of purchase commitments for our DC power systems, a reduction in our manufacturing functionality, higher than normal inventory levels, a reduction in the availability of qualified labor, and increased price competition, all of which could substantially adversely affect our net revenues and our ability to remain a going concern.

The impacts of COVID-19 on our business, sources of revenues and the general economy, are currently not fully known. We will continue to actively monitor the situation and may take further actions that may alter our business operations as may be required by federal, state or local authorities or that we determine are in the best interests of our employees, customers, partners, suppliers and stockholders. It is not clear what the potential effects any such alterations or modifications may have on our business, including the effects on our customers and prospects, although we do anticipate it to negatively impact our financial results during fiscal year 2022 and perhaps beyond.

Market Trends and Uncertainties

The global economy, including the financial and credit markets, has recently experienced extreme volatility and disruptions, including increases in inflation rates, rising interest rates, severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, and uncertainty about economic stability. We anticipate these factors to continue for the remainder of fiscal 2022 potentially resulting in a negative impact on our overall operations including revenues, productivity, gross margins and liquidity.

We believe recent special military actions of the Russian Federation and its invasion of Ukraine have added considerable to our shipping costs due to diesel fuel costs. However, we believe the resulting geopolitical uncertainty should increase our military contracts.

We cannot reasonably estimate the financial impact of increased inflation or supply chain disruptions on our financial condition, results of operations or cash flows in the future.

Effects of Inflation

The impact of inflation and changing prices during the three and nine months ended September 30, 2022 has not been significant on the financial condition or results of operations of our company. Rapid changes in the global economy may cause significant spikes in inflation which may have an impact in our financial condition during 2022 and beyond. Because some of our contracts are at a fixed price, we face the risk that cost overruns or inflation may exceed, erode or eliminate our expected profit margin, or cause us to record a loss on certain projects. We are taking actions to manage the potential impacts of these matters and we will continue to assess the actual and expected impacts and the need for further action.

Recent Business Events

In September 2022, we renewed our master service agreement with our largest customer. The agreement included price adjustments to our products which we believe will help offset the effects of inflation and improve our margins. For the three and nine months ended September 30, 2022, 87% and 88%, respectively, of our total net sales were derived from our largest customer.

Our total backlog on September 30, 2022 was $13,614, of which our largest customer represents 38%. Our backlog also includes a $6.2 million order for our DC power generators to a customer in the South Pacific Islands. The order was received during the second quarter of 2022 and is expected to ship by the end of 2022.

Supply change constraints augmented by the COVID-19 pandemic and Russia's invasion of Ukraine extended delays in receiving parts and components to complete our DC generators during the second and third quarter of 2022. We experienced extended lead times and delays securing items such as diesel engines and small electronic components used in our products.

We also continue to work on diversifying our customer base and are selling into non-telecommunication markets and applications at an increasing rate. In March 2022, we received EPA certification on our 4Y Toyota engine project aimed at expanding the power range to 35 kW on natural gas and LPG. Polar's EPA certification of 1KS and 4Y Toyota engines brings to the market (non-diesel) engines with very low maintenance and high fuel efficiency. In addition to meeting the telecommunications need for larger and more compact generators our larger models have high interest from micro-grids, peak power shaving, and EV charging.

Our solar hybrid power systems, which integrate solar energy storage with natural gas/LPG (propane) powered generators, are ideal for off-grid (i.e., areas where wireless towers are not connected to an electrical grid) and bad-grid (i.e., areas where wireless towers are connected to an electrical grid that loses power more than eight hours) applications.

Our growing backlog and shipments have demonstrated that our customers are viable and moving forward with orders. The headwind to a more rapid sales growth is a labor and supply chain issue. We anticipate that our component suppliers will normalize their backlogs sometime during the 4^{th} quarter in 2023. In the meantime, our strategy will be to maintain large inventories of engines and electronic components to offset disruptions.

Critical Accounting Policies and Estimates

The preparation of the Company's financial statements in conformity with generally accepted accounting principles in the United States ("GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Some of those judgments can be subjective and complex, and therefore, actual results could differ materially from those estimates under different assumptions or conditions. Management bases its estimates on historical experience and on various assumptions that are believed to be reasonable in relation to the financial statements taken as a whole under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Management regularly evaluates the key factors and assumptions used to develop the estimates utilizing currently available information, changes in facts and circumstances, historical experience and reasonable assumptions. After such evaluations, if deemed appropriate, those estimates are adjusted accordingly. Actual results could differ from those estimates. Significant estimates include those related to assumptions used in reserves for uncollectible receivables, inventory reserves and returns, impairment analysis of long-term assets, valuation allowance on deferred tax assets, income tax accruals, accruals for potential liabilities and warrant reserves and assumptions made in valuing equity instruments issued for services. There were no changes to our critical accounting policies described in the financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, that impacted our condensed financial statements and related notes included herein.

Impact of New Accounting Pronouncements

See “Note 1 – Organization and Summary of Significant Accounting Policies – Recent Accounting Pronouncements” of the Notes to our condensed financial statements.

Financial Performance Summary and Outlook

Our net sales for the three months ended September 30, 2022 were $1,707, which represents a 59% decrease in net sales as compared to $4,136 for the three months ended September 30, 2021. We expect a significant rebound in the fourth quarter 2022 as critical components of raw materials are expected to arrive during the quarter. Our net sales for the nine months ended September 30, 2022 were $9,690, which represents a 21% decrease in net sales as compared to $12,273 for the same period in 2021.

Supply chain constraints affected timely delivery of raw materials required to complete our DC power systems. We anticipate a significant improvement in sourcing these materials during the fourth quarter of 2022 and expedite product deliveries to our customers before the end of this year.

Our sales backlog as of September 30, 2022 is $13,614. Our backlog includes orders of $5,198 from our U.S. telecommunications customers primarily to develop their 5G infrastructure and use our DC generators as primary backup power. Our international telecommunications customer in the South Pacific Islands added $6,279 to our backlog. These units will be used for off-grid applications to supply rural areas with broadband services as part of a growing program to develop the telecommunications infrastructure in this region.

Our immediate focus is to fulfill delayed orders to customers. We also anticipate that our sales will increase as we overcome supply chain and labor issues. We will continue to take proactive steps to manage our operations and mitigate the financial impacts of higher costs and supply chain issues; however, some of the factors are not within our control, and the duration and severity of supply chain issues in unknown and unpredictable.

See “Risk Factors” commencing on page 24 of this Quarterly Report on Form 10-Q for additional considerations.

Results of Operations

The tables presented below, which compare our results of operations from one period to another, present the results for each period, the change in those results from one period to another in both dollars and percentage change, and the results for each period as a percentage of net revenues. The columns present the following:

- The first two data columns in each table show the absolute results for each period presented.

- The columns entitled “Dollar Variance” and “Percentage Variance” shows the change in results, both in dollars and percentages. These two columns show favorable changes as a positive and unfavorable changes as negative. For example, when our net revenues increase from one period to the next, that change is shown as a positive number in both columns. Conversely, when expenses increase from one period to the next, that change is shown as a negative in both columns.

- The last two columns in each table show the results for each period as a percentage of net revenues.

Three Months Ended September 30, 2022 Compared to the Three Months Ended September 30, 2021

	Three Months Ended September 30,		Dollar Variance	Percentage Variance	Results as a Percentage of Net Sales for the Period Ended September 30,	
	2022 (unaudited)	2021 (unaudited)	Favorable (Unfavorable)	Favorable (Unfavorable)	2022	2021
Net sales	$ 1,707	$ 4,136	$ (2,429)	(59)%	100.0%	100.0%
Cost of sales	1,954	3,170	1,216	38%	114.5%	76.6%
Gross profit (loss)	(247)	966	(1,213)	126%	(14.5)%	23.4%
Sales and marketing expenses	328	372	44	12%	19.2%	9.0%
Research and development expenses	319	533	214	40%	18.7%	12.9%
General and Administrative expenses	1,482	823	(659)	(80)%	86.8%	19.9%
Total operating expenses	2,129	1,728	(401)	(23)%	124.7%	41.8%
Loss from operations	(2,376)	(762)	(1,614)	(212)%	(139.2)%	(18.4)%
Interest and finance costs	(12)	(14)	2	14%	(0.7)%	(0.4)%
Gain from PPP loan forgiveness	—	1,715	(1,715)	(100)%	0.0%	41.4%
Other income (expense), net	7	3	4	(133)%	0.4%	0.1%
Net loss	$ (2,381)	$ 942	$ (3,323)	353%	(139.5)%	(22.8)%

Net Sales. Net sales decreased $2,429, or 59%, to $1,707 for the three months ended September 30, 2022, as compared to $4,136 for the same period in 2021. The decrease in sales was primarily due to supply chain constraints which postponed product shipment to the fourth quarter of 2022. Sales to our largest telecommunication customer in the U.S. accounted for 87% of our total net sales during the three months ended September 30, 2022. For the same period in 2021, 70% of our total net sales were generated from our largest telecommunications customer. There was no other revenue from customers in excess of 10% of total net sales in either period.

Net sales to telecommunications customers in the U.S. accounted for 90% of our total net sales for the three months ended September 30, 2022, as compared to 92% for the same period in 2021. Our international sales represented 2% of our net sales for the three months ended September 30, 2022, as compared to 7% in international sales in the same period in 2021.

Cost of Sales. Cost of sales during the three months ended September 30, 2022 decreased by $1,216 or 38%, to $1,954, as compared to $3,170 during the same period in 2021. Cost of sales as a percentage of net sales during the three months ended September 30, 2022 increased to 114.5% as compared to 76.6% in the same period in 2021. The increase in cost of sales as a percentage of net sales was a result of a decrease in factory overhead absorption due to under-utilization of the production capacity as a result of delays caused by current supply chain constraints. We believe we will achieve significant reductions in the cost of sales as a percentage of net sales in future quarterly periods as supply chain constraints decrease and production increases to normal levels.

Gross Profit (Loss). We had a gross loss of $247 for the three months ended September 30, 2022, which is a decrease of $1,213, or 126%, as compared to gross profit of $966 during the same period in 2021. The increase in gross loss for the three months ended September 30, 2022 was primarily a result of a reduction in labor efficiencies in manufacturing caused by delays in production as a result of current supply chain constraints. Our gross loss as a percentage of net sales was (14.5)% for the quarter ended September 30, 2022, as compared to a gross profit as a percentage of net sales of 23.4% in the same period in 2021.

Sales and Marketing Expenses. During the three months ended September 30, 2022, sales and marketing expenses decreased by $44, or 12%, to $328, as compared to $372 during the same period in 2021. The decrease was attributable to a decrease in tradeshow expense due to a decrease in sales support staff. We expect to hire three to five additional sales support staff in the upcoming quarters.

Research and Development Expenses. During the three months ended September 30, 2022, research and development expenses decreased by $214 or 40%, to $319, as compared to $533 during the same period in 2021. The decrease was primarily due to a decrease in R&D support staff during the three months ended September 30, 2022 as compared to the same period in 2021. Our research and development efforts during the third quarter of 2022 primarily focused on product design and customization for our international customers. We plan to recruit additional engineers during the upcoming quarters to support our customer diversification efforts.

General and Administrative Expenses. General and administrative expenses increased by $659, or 80%, to $1,482 during the three months ended September 30, 2022, as compared to $823 during same period in 2021. The increase in general and administrative expenses during the three months ended September 30, 2022 was primarily due to $515 in stock-based compensation to officers, employees and consultants.

Interest and Finance Costs. Interest expense for the three months ended September 30, 2022 was $12, as compared to $14 during the same period in 2021. Our interest expense for the current period is primarily from interest expense paid on equipment financing and the minimum interest expense on our line of credit.

Net Profit (Loss). As a result of the factors identified above, we reported net loss of $2,381, or $(0.19) per basic and diluted share, for the three months ended September 30, 2022, as compared to net income of 942, or $0.07 per basic and diluted share, for the same period in 2021.

Nine Months Ended September 30, 2022 Compared to the Nine Months Ended September 30, 2021

	Nine Months Ended September 30,		Dollar Variance	Percentage Variance	Results as a Percentage of Net Sales for the Period Ended September 30,	
	2022 (unaudited)	**2021 (unaudited)**	**Favorable (Unfavorable)**	**Favorable (Unfavorable)**	**2022**	**2021**
Net sales	$ 9,690	$ 12,273	$ (2,583)	(21)%	100.0%	100.0%
Cost of sales	7,971	10,398	2,427	23%	82.3%	84.7%
Gross profit	1,719	1,875	(156)	8%	17.7%	15.3%
Sales and marketing expenses	1,134	1,119	(15)	(1)%	11.7%	9.1%
Research and development expenses	1,145	1,485	340	23%	11.8%	12.1%
General and Administrative expenses	3,648	2,796	(852)	(30)%	37.6%	22.8%
Total operating expenses	5,927	5,400	(527)	(10)%	61.2%	44.0%
Loss from operations	(4,208)	(3,525)	(683)	(19)%	(43.4)%	(28.7)%
Interest and finance costs	(39)	(46)	7	15%	(0.4)%	(0.4)%
Gain from PPP loan forgiveness	—	1,715	(1,715)	(100)%	0.0%	14.0%
Other income (expense), net	7	29	(22)	(76)%	0.1%	0.2%
Net loss	$ (4,240)	$ (1,827)	$ 2,413	(132)%	(43.8)%	(14.9)%

Net Sales. Net sales decreased $2,583, or 21%, to $9,690 for the nine months ended September 30, 2022, as compared to $12,273 for the same period in 2021. The decrease in net sales was primarily due to labor shortages caused by COVID-19 during the first quarter of 2022 and delays in receiving key components as a result of supply chain constraints during the second and third quarters of 2022.

Net Sales to our largest customer accounted for 88% of our total net sales during the nine months ended September 30, 2022. Sales to our largest customer for the nine months ended September 30, 2021, accounted for 67% of total net sales. There were no other customer with revenue in excess of 10% of our total net sales in either period.

For the nine months ended September 30, 2022 and September 30, 2021, net sales to international customers accounted for 2% and 10%, of total revenue, respectively.

Cost of Sales. Cost of sales during the nine months ended September 30, 2022 decreased by $2,427, or 23%, to $7,971, as compared to $10,398 during the same period in 2021. Cost of sales as a percentage of net sales during the nine months ended September 30, 2022 improved to 82.3%, as compared to 84.7% in the same period in 2021 as a result of improvements in overhead absorption and labor efficiencies when compared to the same period a year ago.

Gross Profit. Gross profit during the nine months ended September 30, 2022 decreased by $156, or 8%, to gross profit of $1,719, as compared to gross profit of $1,875 during the same period in 2021. The decrease in gross profit was attributable to a decrease in factory overhead absorption resulting from lower sales primarily during the third quarter of 2022. Our gross profit as a percentage of net sales was 17.7% for the nine months ended September 30, 2022, as compared to 15.3% in the same period in 2021. The increase in gross profit margin rate was attributable to improved labor efficiencies and utilization of our production facilities during the first two quarters of 2022 coupled with a 14% decrease in freight cost due to a decrease in inbound container shipments from abroad during 2022. Our gross profit was also positively affected by the usage of $358 in inventories previously written-down to complete products shipped during this nine-month period.

Sales and Marketing Expenses. During the nine months ended September 30, 2022, sales and marketing expenses increased by $15, or 1%, to $1,134, as compared to $1,119 during the same period in 2021. The increase was attributable to an increase in tradeshow expense due to a decrease in travel restrictions and other measures aimed to reducing the spread of COVID-19. We plan to expand our marketing efforts and hire additional sales support staff to support our diversification strategy and expand our customer base in all market segments.

Research and Development Expenses. During the nine months ended September 30, 2022, research and development expenses decreased by $340, or 23%, to $1,145, as compared to $1,485 during the same period in 2021. The decrease was primarily due to a decrease in R&D support staff during the nine months ended September 30, 2022, as compared to the same period in 2021. Our research and development efforts during 2022 focused on developing our new 27 kW power system, new software for our new 4Y Toyota engine control system., and on product design and customization for our international customers. We plan to recruit additional engineers during the upcoming quarters to support growth and our customer diversification efforts.

General and Administrative Expenses. General and administrative expenses increased by $852, or 30%, to $3,648 during the nine months ended September 30, 2022, as compared to $2,796 during same period in 2021. The increase in general and administrative expenses was as a result of an increase in general and administrative staff and a slight increase in legal and consulting fees, and $515 in stock-based compensation to officers, employees and consultants.

Interest and Finance Costs. Interest and finance costs for the nine months ended September 30, 2022 was $39, as compared to $46 during the same period in 2021, an decrease of $7. Our interest expense for the current period is primarily from interest expense paid on equipment financing and the minimum interest expense on our line of credit.

Net Loss. For the nine months ended September 30, 2022, we incurred net loss of $4,240, or $(0.33) per basic and diluted share, as compared to net loss of $1,827, or $(0.14) per basic and diluted share for the nine months ended September 30, 2021.

Liquidity and Capital Resources

Sources of Liquidity

For the nine months ended September 30, 2022, the Company recorded a net loss of $4,240 and used cash in operations of $4,532. As of September 30, 2022, we had a cash balance of $363, with borrowing capacity of $2,920, stockholders' equity of $19,525 and a working capital of $18,445. Notwithstanding the net loss for the nine-month period ended September 30, 2022, management projects adequate cash flow from operations and available line of credit through September 30, 2023, sufficient to ensure continuation of the Company as a going concern for at least one year from the date the Company's September 30, 2022 financial statements are issued.

During the nine months ended September 30, 2022, we funded our operations primarily from cash on hand. As of September 30, 2022, we had working capital of $18,445, as compared to working capital of $21,760 at December 31, 2021. This $3,315 decrease in working capital is primarily attributable to a $4,738 decrease in cash and cash equivalents resulting from net cash of $4,532 used in operating activities, net cash of $25 used in investing activities, and net cash of $181 used in financing activities.

On September 30, 2022 and December 31, 2021, our net trade receivables totaled $1,216 and $4,243, respectively. On September 30, 2022, $1,163 (96%) represented the largest open customer account balances, while $3,131 (74%) and $624 (15%) represented the two largest open customer account balances on December 31, 2021.

At December 31, 2021, we recognized $2,000 related to the employee retention credit ("ERC") for salaries and benefits expenses incurred during 2021 resulting in a refundable tax credit. The ERC assist business owners and their employees by providing an incentive to keep workers on the payroll and eligible businesses received a tax credit for a percentage of each eligible employee's wage.

Our available capital resources on September 30, 2022 consisted primarily of $363 in cash and cash equivalents, as compared to $5,101 as of December 31, 2021. We expect our future capital resources will consist primarily of cash on hand, cash generated by operations, if any, drawdowns on our credit facility with Pinnacle Bank and future debt or equity financings, if any.

Credit Facility

Effective September 30, 2020, we entered into a Loan and Security Agreement, or Loan Agreement, with Pinnacle. The Loan Agreement was amended by the First Modification to Loan and Security Agreement on October 7, 2020. The Loan Agreement's initial term ended on September 30, 2022. On November 3, 2022, we executed the Second Modification to Loan and Security Agreement with Pinnacle for a two-year term with an expiration date of September 30, 2024. The Loan Agreement, as amended, provides for a revolving credit facility under which Pinnacle may, in its sole discretion upon our request, make advances to us in an amount, subject to certain limitations and adjustments, of up to (a) 85% of the aggregate net face amount of our accounts receivable and other contract rights and receivables, plus (b) the lesser of (i) 35% of the lower of cost or wholesale market value of certain of our inventory or (ii) $2,500. In no event will the aggregate amount of the outstanding advances under the revolving credit facility be greater than $4,000.

Interest accrues on the daily balance at a rate of 1.25% above the prime rate, or the Standard Interest Rate, but in no event will the Standard Interest Rate be less than 3.75% per annum. Interest on the portion of the daily balance consisting of advances against inventory accrues interest at a rate of 2.25% above the prime rate per annum, or the Inventory Interest Rate, but in no event will the Inventory Interest Rate be less than 4.75% per annum. The Loan Agreement, as amended, also contains a financial covenant requiring us to attain an effective tangible net worth, defined as our total assets, excluding all intangible assets, less our total liabilities plus loans to us from our officers, stockholders or employees that have been subordinated to our obligations to Pinnacle, greater than $6,000 as determined by Pinnacle as of the end of each fiscal quarter.

We did not have an outstanding balance under the Loan Agreement, as amended, at September 30, 2022, and December 31, 2021. As of September 30, 2022, we had availability under the Loan Agreement, as amended, of $2,920 and we believe that we are in compliance with the terms and conditions of the Loan Agreement, as amended.

Cash Flow

The following table sets forth the significant sources and uses of cash for the nine-month periods set forth below:

	September 30, 2022 (Unaudited)	September 30, 2021 (Unaudited)
Net Cash Provided By (Used In)		
Operating Activities	$ (4,532)	$ (6,890)
Investing Activities	(25)	(14)
Financing Activities	(181)	12,964
Net increase (decrease) in cash	$ (4,738)	$ 6,060

Operating Activities

Net cash used in operating activities for the nine months ended September 30, 2022 was $4,532, as compared to net cash used in operating activities of $6,890 for the same period in 2021. This decrease in net cash used in 2022 was primarily due to a net loss of $4,240, an increase in stock-based compensation to officers, employees and consultants of $515, an increase in inventory of $6,608, a decrease in accounts receivable of $3,027, and an increase in customer deposits of $2,672.

Investing Activities

Net cash in investing activities for the nine months ended September 30, 2022 was $25, as compared to $14 for the same period in 2021. This use of cash was primarily for acquisitions of property and equipment.

Financing Activities

Net cash used in financing activities totaled $181 for the nine months ended September 30, 2022, as compared to $12,964 provided by financing activities during the same period in 2021. This use of cash was primarily repayment of equipment financing accounts. The decrease in cash provided by financing activities was due to proceeds received from the sale of 750,000 shares of our common stock in an underwritten public offering on February 10, 2021. We received net proceeds of approximately $12.5 million from the sale of the shares after deducting underwriting discounts and commissions and other offering expenses payable by us. In addition, we received net proceeds of $707 from the exercise of common stock warrants.

Backlog

As of September 30, 2022, we had a sales backlog of $13,614. The amount of backlog represents revenue that we anticipate recognizing in the future, as evidenced by purchase orders and other purchase commitments received from customers, but on which work has not yet been initiated or with respect to which work is currently in progress. Backlog at September 30, 2022 was comprised of the following elements: 98% in purchases of DC power systems by telecommunications customers and 2% in purchases by customers from other markets. We believe the majority of our backlog will be shipped within the next three to six months. However, there can be no assurance that we will be successful in fulfilling such orders and commitments in a timely manner or that we will ultimately recognize as revenue the amounts reflected in our backlog.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

ITEM 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on that evaluation, our principal executive officer and principal financial officer have concluded that as of September 30, 2022, our disclosure controls and procedures were effective at the reasonable assurance level. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three and nine months ended September 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. Legal Proceedings

From time to time, we may be involved in general commercial disputes arising in the ordinary course of our business. We are not currently involved in legal proceedings that could reasonably be expected to have material adverse effect on our business, prospects, financial condition or results of our operation.

ITEM 1A. Risk Factors

Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described below in addition to the other information contained in this Quarterly Report on Form 10-Q and in our other filings with the SEC, including subsequent reports on Forms 10-Q and 8-K. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. If any of these known or unknown risks or uncertainties actually occurs with material adverse effects on Polar Power, our business, financial condition, results of operations and/or liquidity could be seriously harmed. In that event, the market price for our common stock will likely decline, and you may lose all or part of your investment.

Risks Related to Our Business and Industry

The COVID-19 pandemic has had, and will likely continue to have, a significant negative impact on our business, sales, results of operations and financial condition.

The COVID-19 pandemic has had a widespread and detrimental effect on the global economy, particularly in the U.S., and actions over the past twelve months by public health and governmental authorities, businesses, other organizations and individuals to address the outbreak, including travel bans and restrictions, quarantines, shelter in place, stay at home or total lock-down orders and business limitations and shutdowns have materially negatively impacted, and could further materially adversely affect, our business, financial condition, results of operations and cash flows. The ultimate impact of the COVID-19 pandemic on our business and results of operations remains unknown and will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including the duration and potential resurgence of the COVID-19 pandemic, repeat or cyclical outbreaks and any additional preventative and protective actions that governments, or we or our customers, may direct, which may result in an extended period of continued business disruption and reduced operations. Any resulting financial impact cannot be reasonably estimated at this time, but we expect it will continue to have a material impact on our business, financial condition and results of operations.

The repercussions of the COVID-19 global pandemic has had and is likely to continue to have, a material and substantial adverse impact on our results of operations, including a decrease in our sales and delays in sourcing raw materials from suppliers. Our business is directly dependent upon, and correlates closely with, the marketing levels and ongoing business activities of our existing customers and suppliers. In the event of a continued economic downturn caused by the COVID-19 pandemic, we will likely experience a reduction in current projects, longer sales and collection cycles, deferral or delay of purchase commitments for our DC power systems, a reduction in our manufacturing productivity, higher than normal inventory levels, delay in receipt of raw materials, a reduction in the availability of qualified labor, cancellation of customer orders in our sales backlog and increased price competition, all of which could substantially adversely affect our results of operations including our earnings and cash flows.

In response to uncertainties associated with the COVID-19 pandemic, we have made certain modifications to our business, including modifications to employee work locations, cancellation of certain marketing events and the implementation of a cost reduction program to reduce overhead. During portions of 2022 we also implemented limited remote work policies for many employees, and the resources available to such employees may not enable them to maintain the same level of productivity and efficiency. Our increased reliance on remote access to our information systems also increases our exposures to potential cybersecurity breaches. We cannot provide any assurance that these actions, or any other mitigating actions we may take, will help mitigate the impact of the COVID-19 pandemic on us.

Furthermore, we cannot provide any assurance that our assumptions used to estimate our liquidity requirements will remain accurate due to the unprecedented nature of the disruption to our operations and the unpredictability of the COVID-19 global pandemic. As a consequence, our estimates of the duration of the pandemic and the severity of the impact on our future earnings and cash flows could change and have a material impact on our results of operations and financial condition. In the event of a sustained market deterioration and continued declines in net sales, we may need additional liquidity. We cannot provide any assurance that we will be able to obtain additional sources of financing or liquidity on acceptable terms, or at all.

The ultimate duration and impact of the COVID-19 pandemic on our business, results of operations, financial condition and cash flows is dependent on future developments, the duration of the COVID-19 pandemic, including repeat or cyclical outbreaks, additional “waves” or the spread of “variant” viruses and the related length of its impact on the global economy, which are uncertain and cannot be predicted at this time. Furthermore, the extent to which our mitigation efforts are successful, if at all, is not presently ascertainable. However, we expect that our results of operations, including revenues, in future periods will continue to be adversely impacted by the COVID-19 pandemic and its negative effects on global economic conditions and that, as a result of such effects, we may continue to be adversely affected even after the COVID-19 pandemic has materially subsided.

Terrorist attacks and threats of war may impact all aspects of our operations, revenues, costs and stock price in unpredictable ways.

The recent special military actions of the Russian Federation and its invasion of Ukraine and the resulting geopolitical uncertainty are likely to have a significant impact on the European Union, the United Kingdom and other countries, including the U.S. The threat that these military operations may expand beyond Ukraine may have a negative impact as well. Significant increases in the price of oil and natural gas have occurred and are likely to continue putting additional inflationary pressures on central banks, including Federal Reserve System (the “FRB”). It is expected that interest rate hikes already announced by the FRB will occur in 2022, but the amount, timing, and frequency of such increases are not fully known at this time. The Russian Federation has also threatened increased cyberattacks as part of its recent actions which could affect the Bank and its customers. Additionally, the United States and European nations have imposed very significant financial sanctions on the Russian Republic, including targeted sanctions on Russian banks and wealthy individuals as well as halting certification of the Nord Stream 2 gas pipeline. They have denied Russian banks access the Society for Worldwide Interbank Financial Telecommunications or SWIFT which is expected to slow international trade and make such transactions costlier to accomplish which could also negatively affect the Bank and its customers. In response to the Russian military actions, many businesses headquartered in the Eurozone and the United States have stopped doing business with Russia, which may negatively affect the profitability of those companies. The international turmoil has already had and may continue to have a negative impact on the stock market generally and, in turn, on our stock price. The full impact of the recent actions by the Russian Federation regarding Ukraine are not known at this time, but they could have a material adverse impact on our business, financial condition, results of operations, and stock price.

We have incurred significant losses in the past and we may incur losses in the future, which may hamper our operations and impede us from expanding our business.

We have incurred significant losses in the past. For the quarter ended September 30, 2022, we incurred net loss of approximately $2.4 million. For the years ended December 31, 2021 and 2020, we incurred consolidated net losses of approximately $1.4 million and $10.8 million, respectively. We may incur net and gross losses in the future. We expect to rely on cash on hand, cash, if any, generated from our operations, borrowing availability under our line of credit and proceeds from our future financing activities, if any, to fund all of the cash requirements of our business. Additional losses may hamper our operations and impede us from expanding our business.

We are dependent on, and derive substantially all of our revenue from, sales of our DC base power systems to one customer within the U.S. telecommunications market. Our efforts to expand our customer base, our product portfolio or markets within which we operate may not succeed and may reduce our revenue growth rate.

We derive substantially all our revenues from sales of our DC base power systems to one customer within the telecommunications market, AT&T. The volume of sales to them may vary significantly from year to year. Any factor adversely affecting sales of these power systems to this customer or to other customers within this market, including market acceptance, product competition, performance and reliability, reputation, price competition and economic and market conditions, could adversely affect our business and results of operations.

In addition, any unfavorable change in our business relationship with our Tier-1 telecommunications wireless carrier customers, or delays in customer implementation and deployment of our products, could have a material adverse effect on our results of operation and financial condition. Our plans to invest in the development of electric vehicle chargers, residential and commercial power products and higher capacity DC hybrid solar systems may not result in an anticipated growth in sales and may reduce our revenue growth rate.

Many of our DC power systems involve long design and sales cycles, which could have an adverse impact on our results of operations and financial performance.

The design and sales cycle for our DC power systems, from initial contact with our potential customer to the shipments of our product, may be lengthy. Customers generally consider a wide range of factors before making a purchase decision. Prior to purchasing our products, many of our customers often require a significant technical review, tests and evaluations over long periods of time (i.e., three to twenty-four months), assessments of competitive products and approval at a number of management levels within their organization. During the time our customers are evaluating our products, we may incur substantial sales and service, engineering and research and development expenses to customize our products to meet customer’s application needs. We may also expend significant management efforts, increase manufacturing capacity, order long-lead-time components or purchase significant amounts of components and other inventory prior to receiving an order. Even after this evaluation process, a potential customer may not purchase our products.

The product development time before a customer agrees to purchase our DC power systems can be considerable. Our process for developing an integrated solution may require use of significant engineering resources, including design, prototyping, modeling, testing and application engineering. The length of this cycle is influenced by many factors, including the difficulty of the technical specification and complexity of the design and the customer’s procurement processes. A significant period may elapse between our investment of time and resources in designing and developing a product for a customer and receipt of revenue from sales of that product. The length of this process, combined with unanticipated delays in the development cycles and the effects of COVID-19 on our ability to demonstrate our products to current and potential customers could materially affect our results of operations and financial conditions.

We do not have long-term commitments for significant revenues with most of our customers and may be unable to retain existing customers, attract new customers or replace departing customers with new customers that can provide comparable revenues and profits.

Because we generally do not obtain firm, long-term volume purchase commitments from our customers, most of our sales are derived from individual purchase orders. We remain dependent upon securing new purchase orders in the future in order to sustain and grow our revenues. Accordingly, there is no assurance that our revenues and business will grow in the future. Our failure to maintain and expand our customer relationships could materially and adversely affect our business and results of operations.

The current high concentration of our sales within the telecommunications market could result in a significant reduction in sales and negatively affect our profitability if demand for our DC power systems declines within this market before we are able to make significant inroads with our diversification of markets and customers.

Currently, we are predominately focused on the manufacturing, marketing and sales of DC power systems to telecommunications companies. We may be unable to shift our business focus away from these activities to other potential markets for our products. Accordingly, the emergence of new competing DC power products or lower-cost alternative technologies within the telecommunications market may reduce the demand for our products. A downturn in the demand for our DC power systems within this market could materially and adversely affect our sales and results of operations.

We face inventory risk and may be required to write-off inventory in the future.

We value inventories at the lower of cost or net realizable value. If the estimated net realizable value is determined to be less than the recorded cost of the inventory, a provision is made to reduce the carrying amount of the inventory item to the lower net realizable value determination. Determination of the net realizable value may be complex, and therefore, requires management to make assumptions and to apply a high degree of judgment. In order for management to make the appropriate determination of net realizable value, the following items are commonly considered: inventory turnover statistics, inventory quantities on hand in our facilities, unfilled customer order quantities, forecasted consumer demand, current prices, competitive pricing, seasonality factors, consumer trends and performance of similar products or accessories. Subsequent changes in facts or circumstances do not result in the reversal of previously recorded write-downs.

If our estimates regarding net realizable value are inaccurate, including our estimates regarding our inventory, or changes in customer demand for our products in an unforeseen manner, we may experience additional write-downs of our inventory.

The unavailability or shortage, or increase in the cost, of raw materials and components could have an adverse effect on our sales and profitability.

Our operations require raw materials, such as aluminum, copper, engines, electronics, and permanent magnets. Commodities such as aluminum and copper are known to have significant price volatility based on global economic conditions. An increase in global economic outlook may result in significant price increases in the cost of our raw materials. In addition, we use Neodymium permanent magnets in our alternators, for which there are a limited number of global suppliers that can meet our standards. Increase in manufacturing of electric vehicles worldwide can have an adverse effect on the cost or supply of these magnets. At our current production volumes, we are unable to secure large quantities of these commodities at fixed prices; however, we do have multiple sources of supply for our raw materials to meet our near term forecasted needs. Various factors could reduce the availability of raw materials and components and shortages may occur from time to time in the future. An increase in lead times for the supply of raw materials due to a global increase in demand for commodities or other reasons may significantly increase the timing of receipt of such materials and/or increase the material costs of our products. For example, as a result of the COVID-19 pandemic, we are currently experiencing both delays in sourcing, and price increases of, certain key components. As a result of these delays, our standard eight-week delivery time has increased to fourteen weeks. In addition, if production was interrupted due to unavailability or shortage of raw materials and we were not able to find alternate third-party suppliers or re-engineer our products to accommodate different components or materials, we could experience disruptions in manufacturing and operations including product shortages, higher freight costs and re-engineering costs. If our supply of raw materials or components continues to be disrupted or our lead times extended, our business, results of operations or financial condition could be materially adversely affected.

The markets within which we compete are highly competitive. Many of our competitors have greater financial and other resources than we do and one or more of these competitors could use their greater financial and other resources to gain market share at our expense.

If our business continues to develop as expected, we anticipate that we will grow our revenues in the near future. If, due to capital constraints or otherwise, we are unable to fulfill our existing backlog in a timely manner and/or procure and timely fulfill our anticipated future backlog, our customers and potential customers may decide to use competing DC power systems or continue the use of AC power systems. If we are unable to fulfill the demand for products and services in a timely manner, our customers and potential customers may choose to purchase products from our competitors. Some of our larger competitors may be willing to reduce prices and accept lower margins in order to compete with us. In addition, we could face new competition from large international or domestic companies with established industrial brands and distribution networks that enter our end markets. Demand for our products may also be affected by our ability to respond to changes in design and functionality, to respond to downward pricing pressure, and to provide shorter lead times for our products than our competitors. If we are unable to respond successfully to these competitive pressures, we could lose market share, which could have an adverse impact on our results. We cannot assure that we will be able to compete successfully in our markets or compete effectively against current and new competitors as our industry continues to evolve.

Rapid technological changes may prevent us from remaining current with our technological resources and maintaining competitive product and service offerings.

The markets in which we and our customers operate are characterized by rapid technological change, especially within the telecommunications market. Significant technological changes could render our existing and potential new products, services and technology obsolete. Our future success will depend, in large part, upon our ability to:

- effectively identify and develop leading energy efficient technologies;
- continue to develop our technical expertise;
- enhance our current products and services with new, improved and competitive technology; and
- respond to technological changes in a cost-effective and timely manner.

If we are unable to successfully respond to technological change or if we do not respond to it in a cost-effective and timely manner, then our business will be materially and adversely affected. We cannot assure you that we will be successful in responding to changing technology. In addition, technologies developed by others may render our products, services and technology uncompetitive or obsolete. Even if we do successfully respond to technological advances, the integration of new technology may require substantial time and expense, and we cannot assure you that we will succeed in adapting our products, services and technology in a timely and cost-effective manner.

If we are unable to continue to develop new and enhanced products and services that achieve market acceptance in a timely manner, our competitive position and operating results could be harmed.

Our future success will depend on our ability to continue to develop new and enhanced DC power systems and related products and services that achieve market acceptance in a timely and cost-effective manner. The markets in which we and our customers operate are characterized by frequent introductions of new and enhanced products and services, evolving industry standards and regulatory requirements, government incentives and changes in customer needs. The successful development and market acceptance of our products and services depends on a number of factors, including:

- the impact of the COVID-19 pandemic on the global markets;
- the changing requirements and preferences of the potential customers in our markets;
- the accurate prediction of market requirements, including regulatory issues;
- the timely completion and introduction of new products and services to avoid obsolescence;
- the quality, price and performance of new products and services;

- the availability, quality, price and performance of competing products and services;
- our customer service and support capabilities and responsiveness;
- the successful development of our relationships with existing and potential customers; and
- changes in industry standards.

We may experience financial or technical difficulties or limitations that could prevent us from introducing new or enhanced products or services. Furthermore, any of these new or enhanced products and services could contain problems that are discovered after they are introduced. We may need to significantly modify the design of these products and services to correct problems. Rapidly changing industry standards and customer preferences and requirements may impede market acceptance of our products and services.

Development and enhancement of our products and services will require significant additional investment and could strain our management, financial and operational resources. The lack of market acceptance of our products or services or our inability to generate sufficient revenues from this development or enhancement to offset their development costs could have a material adverse effect on our business. In addition, we may experience delays or other problems in releasing new products and services and enhancements, and any such delays or problems may cause customers to forego purchases of our products and services and to purchase those of our competitors.

We cannot provide assurance that products and services that we have recently developed or that we develop in the future will achieve market acceptance. If our new products and services fail to achieve market acceptance, or if we fail to develop new or enhanced products and services s that achieve market acceptance, our growth prospects, operating results and competitive position could be adversely affected.

Natural disasters and other events beyond our control could materially adversely affect us.

Natural disasters or other catastrophic events, including the COVID-19 pandemic, may cause damage or disruption to our operations, international commerce and the global economy, and thus could have a strong negative effect on us. Our business operations are subject to interruption by natural disasters, fire, power shortages, pandemics and other events beyond our control. Although we maintain crisis management and disaster response plans, such events could make it difficult or impossible for us to deliver our services to our customers and could decrease demand for our services.

We are dependent on relationships with our key material suppliers, and the partial or complete loss of one of these key suppliers, or the failure to find replacement suppliers or manufacturers in a timely manner, could adversely affect our business.

We have established relationships with third party engine suppliers and other key suppliers from which we source components for our power systems. We purchase standard configurations of engines for our DC power systems and are substantially dependent on timely supply from our key engine suppliers, Yanmar Engines Company (“Yanmar”) and Toyota Corporation (“Toyota”). Engines from Yanmar and Toyota represented 13% and nil of our total engines sold as a component of our DC power systems during the three months ended September 30, 2022, respectively, and represented approximately 80% and 11% of our total engines sold as components of our DC power systems during the same period in 2021, respectively. Engines from Yanmar and Toyota represented 68% and nil of our total engines sold as a component of our DC power systems during the nine months ended September 30, 2022, respectively, and represented approximately 83% and 5% of our total engines sold as components of our DC power systems during the same period in 2021, respectively. We also use engines from Isuzu, Perkins, Kubota and, to a lesser extent, Volvo Penta. In March 2022, we received EPA certification on our 4Y Toyota engine, which is a larger engine model for used on our 20 to 30 kW DC power systems. We do not have any long-term contracts or commitments with any of these suppliers. If any of these engine suppliers were to fail to provide emissions certified engines in a timely manner or fail to supply engines that meet our quality, quantity or cost requirements, or were to discontinue manufacturing any engines we source from them or discontinue providing any of these engines to us, or the supply chain is interrupted or delayed as a result of the COVID-19 pandemic or unprecedented event, and we were unable to obtain substitute sources in a timely manner or on terms acceptable to us, our ability to manufacture our products could be materially adversely affected.

Price increases in some of the key components in our DC power systems could materially and adversely affect our operating results and cash flows.

The prices of some of the key components of our DC power systems are subject to fluctuation due to market forces beyond our control, including changes in the costs of raw materials incorporated into these components. Such price increases occur from time to time due to spot shortages of commodities, increases in labor costs or longer-term shortages due to market forces. In particular, the prices of engines can fluctuate frequently and often significantly. We do not have any long-term contracts or commitments with our two key engine suppliers. Substantial increases in the prices of raw materials used in components which we source from our suppliers may result in increased prices charged by our suppliers. If we incur price increases from our suppliers for key components in our DC power systems, our production costs will increase. Given competitive market conditions, we may not be able to pass all or any of those cost increases on to our customers in the form of higher sales prices. To the extent our competitors do not suffer comparable component cost increases, we may have even greater difficulty passing along price increases and our competitive position may be harmed. As a result, increases in costs of key components may adversely affect our margins and otherwise adversely affect our operating results and cash flows.

A portion of our key components are sourced in foreign countries, exposing us to additional risks that may not exist in the U.S.

A portion of our key components, such as engines, magnets and cooling systems, are purchased from suppliers located overseas, primarily in Asia. Our international sourcing subjects us to a number of potential risks in addition to the risks associated with third-party sourcing generally. These risks include:

- inflation or changes in political and economic conditions;
- unstable regulatory environments;
- changes in import and export duties;
- currency rate fluctuations;
- trade restrictions;
- labor unrest;
- logistical and communications challenges; and
- other restraints and burdensome taxes.

These factors may have an adverse effect on our ability to source our purchased components overseas. In particular, if the U.S. dollar were to depreciate significantly against the currencies in which we purchase raw materials from foreign suppliers, our cost of goods sold could increase materially, which would adversely affect our results of operations.

The unavailability or shortage, or increase in the cost, of raw materials and components could have an adverse effect on our sales and profitability.

Our operations require raw materials, such as aluminum, copper and permanent magnets. Commodities such as aluminum and copper are known to have significant price volatility based on global economic conditions. An increase in global economic outlook may result in significant price increases in the cost of our raw materials. In addition, we use Neodymium permanent magnets in our alternators, for which there are a limited number of global suppliers that can meet our standards. Increase in manufacturing of electric vehicles worldwide can have an adverse effect on the cost or supply of these magnets. At our current production volumes, we are unable to secure large quantities of these commodities at fixed prices; however, we do have multiple sources of supply for our raw materials to meet our near term forecasted needs. Various factors could reduce the availability of raw materials and components and shortages may occur from time to time in the future. An increase in lead times for the supply of raw materials due to a global increase in demand for commodities outlined may significantly increase material costs of our products. If production was interrupted due to unavailability or shortage of raw materials and we were not able to find alternate third-party suppliers or re-engineer our products to accommodate different components or materials, we could experience disruptions in manufacturing and operations including product shortages, higher freight costs and re-engineering costs. If our supply of raw materials or components is disrupted or our lead times extended, our business, results of operations or financial condition could be materially adversely affected.

We manufacture and assemble a majority of our products at two facilities. Any prolonged disruption in the operations of this facility would result in a decline in our sales and profitability.

We manufacture and assemble our DC power systems at our two production facilities located in Gardena, California. Any prolonged disruption in the operations of our manufacturing and assembly facilities, whether due to the COVID-19 pandemic, equipment or information technology infrastructure failure, labor difficulties, destruction of or damage to one or both of these facilities as a result of an earthquake, fire, flood, other catastrophes, and other operational problems would result in a decline in our sales and profitability. In the event of a business interruption at our facilities, we may be unable to shift manufacturing and assembly capabilities to alternate locations, accept materials from suppliers or meet customer shipment needs, among other severe consequences. Such an event could have a material and adverse impact on our financial condition and results of our operations.

Our business operations are subject to substantial government regulation.

Our business operations are subject to certain federal, state, local and foreign laws and regulations. For example, our products, services and technologies are subject to regulations relating to building codes, public safety, electrical connections, security protocols, and local and state licensing requirements. The regulations to which we are subject may change, additional regulations may be imposed, or existing regulations may be applied in a manner that creates special requirements for the implementation and operation of our products or services that may significantly impact or even eliminate some of our revenues or markets. In addition, we may incur material costs or liabilities in complying with any such regulations. Furthermore, some of our customers must comply with numerous laws and regulations, which may affect their willingness and ability to purchase our products, services and technologies. Additionally, we are subject to laws, regulations and other governmental actions instituted in response to the COVID-19 pandemic.

The modification of existing laws and regulations or interpretations thereof or the adoption of future laws and regulations could adversely affect our business, cause us to modify or alter our methods of operations and increase our costs and the price of our products, services and technology. In addition, we cannot provide any assurance that we will be able, for financial or other reasons, to comply with all applicable laws and regulations. If we fail to comply with these laws and regulations, we could become subject to substantial penalties or restrictions that could materially and adversely affect our business.

Certain of our products are used in critical communications networks which may subject us to significant liability claims.

Because certain of our products for customers in the telecommunications industry are used in critical communications networks, we may be subject to significant liability claims if our products do not work properly. We warrant to our customers that our products will operate in accordance with our product specifications. If our products fail to conform to these specifications, our customers could require us to remedy the failure or could assert claims for damages. The provisions in our agreements with customers that are intended to limit our exposure to liability claims may not preclude all potential claims. In addition, any insurance policies we have may not adequately limit our exposure with respect to such claims. Liability claims could require us to spend significant time and money in litigation or to pay significant damages. Any such claims, whether or not successful, would be costly and time-consuming to defend, and could divert management's attention and seriously damage our reputation and our business.

We could be adversely affected by our failure to comply with the laws applicable to our foreign activities, including the U.S. Foreign Corrupt Practices Act and other similar worldwide anti-bribery laws.

The U.S. Foreign Corrupt Practices Act, or the FCPA, and similar anti-bribery laws in other jurisdictions prohibit U.S.-based companies and their intermediaries from making improper payments to non-U.S. officials for the purpose of obtaining or retaining business. We may pursue opportunities in certain parts of the world that experience government corruption, and in certain circumstances, compliance with anti-bribery laws may conflict with local customs and practices. Our policies mandate compliance with all applicable anti-bribery laws. Further, we require our partners, subcontractors, agents and others who work for us or on our behalf to comply with the FCPA and other anti-bribery laws. Although we have policies and procedures, and have conducted training, designed to ensure that we, our employees, our agents and others who work with us in foreign countries comply with the FCPA and other anti-bribery laws, there is no assurance that such policies, procedures or training will protect us against liability under the FCPA or other laws for actions taken by our agents, employees and intermediaries. If we are found to be liable for FCPA violations (either due to our own acts or inadvertence, or due to the acts or inadvertence of others), we could suffer from severe criminal or civil penalties or other sanctions, which could have a material adverse effect on our reputation, business, results of operations or cash flows. In addition, detecting, investigating and resolving actual or alleged FCPA violations is expensive and could consume significant time and attention of our senior management.

We are exposed to risks related to our international sales, and the failure to manage these risks could harm our business. If we fail to expand our business into international markets, our revenues and results of operations may be adversely affected.

In addition to our sales to customers within the U.S., we may become increasingly dependent on sales to customers outside the U.S. as we pursue expanding our business with customers worldwide. During the three and nine months ended September 30, 2022 and 2021, our sales to international customers accounted for 1% and 26%, respectively, of total revenue. We continue to expect that a significant portion of our future revenues will be from international sales to customers in less developed or developing countries. As a result, the occurrence of any international, political, economic, or geographic event could result in a significant decline in revenue. There are significant risks associated with conducting operations internationally, requiring significant financial commitments to support such operations. These operations present a number of challenges including oversight of daily operating practices in each location, handling employee benefits and employee behavior. In addition, compliance with complex foreign and U.S. laws and regulations that apply to our international operations increases our cost of doing business in international jurisdictions. These numerous and sometimes conflicting laws and regulations include internal control and disclosure rules, data privacy and filtering requirements, anti-corruption laws, such as the FCPA, and other local laws prohibiting corrupt payments to governmental officials, and anti-competition regulations, among others.

Violations of these laws and regulations could result in fines and penalties, criminal sanctions against us, our officers, or our employees, prohibitions on the conduct of our business and on our ability to offer our products and services in one or more countries, and could also materially affect our brand, our international expansion efforts, our ability to attract and retain employees, our business, and our operating results. Although we have implemented policies and procedures designed to ensure compliance with these laws and regulations, there can be no assurance that our employees, contractors, or agents will not violate our policies.

Some of the risks and challenges of doing business internationally include:

- the impact of the COVID-19 pandemic on the global markets and the power generation market with the international telecommunications markets;
- requirements or preferences for domestic products or solutions, which could reduce demand for our products;
- unexpected changes in regulatory requirements;
- imposition of tariffs and other barriers and restrictions;
- restrictions on the import or export of critical technology;
- management communication and integration problems resulting from cultural and geographic dispersion;
- the burden of complying with a variety of laws and regulations in various countries;
- difficulties in enforcing contracts;
- the uncertainty of protection for intellectual property rights in some countries;
- application of the income tax laws and regulations of multiple jurisdictions, including relatively low-rate and relatively high-rate jurisdictions, to our sales and other transactions, which results in additional complexity and uncertainty;
- tariffs and trade barriers, export regulations and other regulatory and contractual limitations on our ability to sell products;
- greater risk of a failure of foreign employees to comply with both U.S. and foreign laws, including export and antitrust regulations, the FCPA and any trade regulations ensuring fair trade practices;
- heightened risk of unfair or corrupt business practices in certain geographies and of improper or fraudulent sales arrangements that may impact financial results and result in restatements of, or irregularities in, financial statements;
- potentially adverse tax consequences, including multiple and possibly overlapping tax structures;
- general economic and geopolitical conditions, including war and acts of terrorism;
- lack of the availability of qualified third-party financing; and
- currency exchange controls.

While these factors and the impacts of these factors are difficult to predict, any one or more of them could adversely affect our business, financial condition and results of operations in the future.

Cyberattacks through security vulnerabilities could lead to disruption of business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security vulnerabilities may arise from our hardware, software, employees, contractors or policies we have deployed, which may result in external parties gaining access to our networks, data centers, cloud data centers, corporate computers, manufacturing systems, and/or access to accounts we have at our suppliers, vendors, and customers. External parties may gain access to our data or our customers' data or attack the networks causing denial of service or attempt to hold our data or systems in ransom. The vulnerability could be caused by inadequate account security practices such as failure to timely remove employee access when terminated. To mitigate these security issues, we have implemented measures throughout our organization, including firewalls, backups, encryption, employee information technology policies and user account policies. However, there can be no assurance these measures will be sufficient to avoid cyberattacks. If any of these types of security breaches were to occur and we were unable to protect sensitive data, our relationships with our business partners and customers could be materially damaged, our reputation could be materially harmed, and we could be exposed to a risk of litigation and possible significant liability.

Further, if we fail to adequately maintain our information technology infrastructure, we may have outages and data loss. Excessive outages may affect our ability to timely and efficiently deliver products to customers or develop new products. Such disruptions and data loss may adversely impact our ability to fulfill orders and interrupt other processes. Delayed sales or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

The State of California enacted the California Consumer Privacy Act of 2018, or CCPA, effective on January 1, 2020. Our and our business partners' or contractors' failure to fully comply with the CCPA and other laws could lead to significant fines and require onerous corrective action. In addition, data security breaches experienced by us or our business partners or contractors could result in the loss of trade secrets or other intellectual property, public disclosure of sensitive commercial data, and the exposure of personally identifiable information (including sensitive personal information) of our employees, customers, suppliers, contractors and others.

Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business. If any such unauthorized use or disclosure of, or access to, such personal information was to occur, our operations could be seriously disrupted, and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers and have an adverse impact on our business, financial condition and results of operations.

Risks Related to Our Intellectual Property

If we fail to adequately protect our intellectual property rights, we could lose important proprietary technology, which could materially and adversely affect our business.

Our success and ability to compete depends, in substantial part, upon our ability to develop and protect our proprietary technology and intellectual property rights to distinguish our products, services and technology from those of our competitors. The unauthorized use of our intellectual property rights and proprietary technology by others could materially harm our business.

Historically, we have relied primarily on a combination of trademark, copyright and trade secret laws, along with non-competition and confidentiality agreements, contractual provisions, licensing arrangements and proprietary software and manufacturing processes, to establish and protect our intellectual property rights. Although we hold several unregistered copyrights in our business, we believe that the success of our business depends more upon our proprietary technology, information, processes and know-how than on patents or trademark registrations. In addition, much of our proprietary information and technology may not be patentable; if we decided to apply for patents and/or trademarks in the future, we might not be successful in obtaining any such future patents or in registering any marks.

Despite our efforts to protect our intellectual property rights, existing laws afford only limited protection, and our actions may be inadequate to protect our rights or to prevent others from claiming violations of their proprietary rights. Unauthorized third parties may attempt to copy, reverse engineer or otherwise obtain, use or exploit aspects of our products and services, develop similar technology independently, or otherwise obtain and use information that we regard as proprietary. We cannot assure you that our competitors will not independently develop technology similar or superior to our technology or design around our intellectual property. In addition, the laws of some foreign countries may not protect our proprietary rights as fully or in the same manner as the laws of the U.S.

We may need to resort to litigation to enforce our intellectual property rights, to protect our trade secrets, and to determine the validity and scope of other companies' proprietary rights in the future. However, litigation could result in significant costs and in the diversion of management and financial resources. We cannot assure you that any such litigation will be successful or that we will prevail over counterclaims against us. Our failure to protect any of our important intellectual property rights or any litigation that we resort to in order to enforce those rights could materially and adversely affect our business.

If we face claims of intellectual property infringement by third parties, we could encounter expensive litigation, be liable for significant damages or incur restrictions on our ability to sell our products and services.

Although we are not aware of any present infringement of our products, services or technology on the intellectual property rights of others, we cannot be certain that our products, services and technologies do not or in the future will not infringe on the valid intellectual property rights held by third parties. In addition, we cannot assure you that third parties will not claim that we have infringed their intellectual property rights.

In recent years, there has been a significant amount of litigation in the U.S. involving patents and other intellectual property rights. In the future, we may be a party to litigation as a result of an alleged infringement of others' intellectual property. Successful infringement claims against us could result in substantial monetary liability, require us to enter into royalty or licensing arrangements, or otherwise materially disrupt the conduct of our business. In addition, even if we prevail on these claims, this litigation could be time-consuming and expensive to defend or settle and could result in the diversion of our time and attention and of operational resources, which could materially and adversely affect our business. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products and services that use the infringed intellectual property;

- obtain from the owner of the infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on commercially reasonable terms, or at all; or

- redesign the products and services that use the technology.

If we are forced to take any of these actions, our business may be seriously harmed. Although we carry general liability insurance, our insurance may not cover potential claims of this type or may not be adequate to indemnify us for all liability that may be imposed.

Risks Related to Our Common Stock

Our operating results can fluctuate significantly from period to period, which makes our operating results difficult to predict and can cause our operating results in any particular period to be less than comparable periods and expectations from time to time.

Our operating results have fluctuated significantly from quarter-to-quarter, period-to-period and year-to-year during our operating history and are likely to continue to fluctuate in the future due to a variety of factors, many of which are outside of our control. Certain factors that may affect our operating results include, without limitation, those set forth under "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies" in this Quarterly Report on Form 10-Q.

Because we have little or no control over many of these factors, our operating results are difficult to predict. Any adverse change in any of these factors could negatively affect our business and results of operations.

Our revenues, net income and other operating results are heavily dependent upon the size and timing of customer orders and projects, and the timing of the completion of those projects. The timing of our receipt of large individual orders, and of project completion, is difficult for us to predict. Because our operating expenses are based on anticipated revenues over the mid- and long-term and because a high percentage of our operating expenses are relatively fixed, a shortfall or delay in recognizing revenues can cause our operating results to vary significantly from quarter-to-quarter and can result in significant operating losses or declines in profit margins in any particular quarter. If our revenues fall below our expectations in any particular quarter, we may not be able, or it may not be prudent for us, to reduce our expenses rapidly in response to the revenue shortfall, which can result in us suffering significant operating losses or declines in profit margins in that quarter.

Due to these factors and the other risks discussed in this Quarterly Report on Form 10-Q, you should not rely on quarter-to-quarter, period-to-period or year-to-year comparisons of our results of operations as an indication of our future performance. Quarterly, period and annual comparisons of our operating results are not necessarily meaningful or indicative of future performance. As a result, it is likely that, from time to time, our results of operations or our revenue backlog could fall below historical levels or the expectations of public market analysts and investors, which could cause the trading price of our common stock to decline significantly.

Our Chairman, President and Chief Executive Officer owns a significant percentage of our common stock and will exercise significant influence over matters requiring stockholder approval, regardless of the wishes of other stockholders.

Our Chairman, President, Chief Executive Officer and Secretary, Arthur D. Sams, beneficially owns approximately 44% of our outstanding shares of common stock. Mr. Sams therefore has significant influence over management and significant control over matters requiring stockholder approval, including the annual election of directors and significant corporate transactions, such as a merger or other sale of our company or our assets, for the foreseeable future. This concentrated control may limit stockholders' ability to influence corporate matters and, as a result, we may take actions that our stockholders do not view as beneficial. As a result, the market price of our common stock could be adversely affected.

The price of our shares of common stock is volatile, and you could lose all or part of your investment.

The trading price of our shares of common stock is volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in the "Risk Factors" section and elsewhere in this Quarterly Report on Form 10-Q, these factors include, without limitation:

- competition from existing technologies and products or new technologies and products that may emerge;
- the loss of significant customers, including AT&T and Verizon Wireless;
- actual or anticipated variations in our quarterly operating results;

- failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- our cash position;
- announcement or expectation of additional financing efforts;
- issuances of debt or equity securities;
- our inability to successfully enter new markets or develop additional products;
- actual or anticipated fluctuations in our competitors' operating results or changes in their respective growth rates;
- sales of our shares of common stock by us, or our stockholders in the future;
- trading volume of our shares of common stock on the Nasdaq Capital Market;
- market conditions in our industry;
- overall performance of the equity markets and general political and economic conditions;
- introduction of new products or services by us or our competitors;
- additions or departures of key management, engineering or other personnel;
- publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities or industry analysts;
- changes in the market valuation of similar companies;
- disputes or other developments related to intellectual property and other proprietary rights;
- changes in accounting practices;
- significant lawsuits, including stockholder litigation; and
- other events or factors, many of which are beyond our control.

Furthermore, the public equity markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our shares of common stock.

A decline in the price of our common stock could affect our ability to raise further working capital, which could adversely impact our ability to continue operations.

A prolonged decline in the price of our common stock could result in a reduction in the liquidity of our common stock and a reduction in our ability to raise capital. We may attempt to acquire a significant portion of the funds we need in order to conduct our planned operations through the sale of equity securities; thus, a decline in the price of our common stock could be detrimental to our liquidity and our operations because the decline may adversely affect investors' desire to invest in our securities. If we are unable to raise the funds we require for all of our planned operations, we may be forced to reallocate funds from other planned uses and may suffer a significant negative effect on our business plan and operations, including our ability to develop new products or services and continue our current operations. As a result, our business may suffer, and we may be forced to reduce or discontinue operations. We also might not be able to meet our financial obligations if we cannot raise enough funds through the sale of our common stock and we may be forced to reduce or discontinue operations.

We do not anticipate paying cash dividends, and accordingly, stockholders must rely on stock appreciation for any return on their investment.

We have never declared or paid cash dividends on our capital stock. We intend to retain a significant portion of our future earnings, if any, to finance the operations, development and growth of our business. Any future determination to declare dividends will be made at the discretion of our board of directors, subject to applicable laws, and will depend on number of factors, including our financial condition, results of operations, capital requirements, contractual restrictions, general business conditions and other factors that our board of directors may deem relevant. As a result, only appreciation of the price of our common stock, which may never occur, will provide a return to stockholders.

If securities or industry analysts do not publish research or reports or publish inaccurate or unfavorable research or reports about our business, our share price and trading volume could decline.

The trading market for our shares of common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If no securities or industry analysts undertake coverage of our company, the trading price for our shares of common stock may be negatively impacted. If we obtain securities or industry analyst coverage and if one or more of the analysts who covers us downgrades our shares of common stock, changes their opinion of our shares or publishes inaccurate or unfavorable research about our business, our share price would likely decline. If one or more of these analysts ceases coverage of us or fails to publish reports on us regularly, demand for our shares of common stock could decrease and we could lose visibility in the financial markets, which could cause our share price and trading volume to decline.

We are not subject to the provisions of Section 203 of the Delaware General Corporation Law, which could negatively affect your investment.

We elected in our certificate of incorporation to not be subject to the provisions of Section 203 of the Delaware General Corporation Law, or Section 203. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A “business combination” includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns (or, in certain cases, within three years prior, did own) 15% or more of the corporation’s voting stock. Our decision not to be subject to Section 203 will allow, for example, Arthur D. Sams, our Chairman, President, Chief Executive Officer and Secretary (who beneficially owns approximately 44% of our common stock) to transfer shares in excess of 15% of our voting stock to a third-party free of the restrictions imposed by Section 203. This may make us more vulnerable to takeovers that are completed without the approval of our board of directors and/or without giving us the ability to prohibit or delay such takeovers as effectively.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders. These provisions include:

- a requirement that special meetings of stockholders be called only by the board of directors, the president or the chief executive officer;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors; and
- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

These anti-takeover provisions and other provisions in our certificate of incorporation and bylaws could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our Company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

Our certificate of incorporation designates the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or other employees.

Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine.

For the avoidance of doubt, the exclusive forum provision described above does not apply to any claims arising under the Securities Act of 1933, as amended, or the Securities Act, or the Securities Exchange Act of 1934, as amended, or the Exchange Act. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

The choice of forum provision in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The applicable courts may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. With respect to the provision making the Delaware Court of Chancery the sole and exclusive forum for certain types of actions, stockholders who do bring a claim in the Delaware Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. Finally, if a court were to find this provision of our bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have a material adverse effect on us.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common stock.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

We are required to disclose changes made in our internal controls and procedures on a quarterly basis and our management is required to assess the effectiveness of these controls annually. However, for as long as we are a "non-accelerated filer" under SEC rules, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. An independent assessment of the effectiveness of our internal controls could detect problems that our management's assessment might not. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

We incur significant costs as a result of operating as a public company and our management expects to devote substantial time to public company compliance programs.

As a public company, we incur significant legal, accounting and other expenses due to our compliance with regulations and disclosure obligations applicable to us, including compliance with the Sarbanes-Oxley Act as well as rules implemented by the SEC and Nasdaq. The SEC and other regulators have continued to adopt new rules and regulations and make additional changes to existing regulations that require our compliance. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that have required the SEC to adopt additional rules and regulations in these areas. Stockholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact, in ways we cannot currently anticipate, the manner in which we operate our business. Our management and other personnel devote a substantial amount of time to these compliance programs and monitoring of public company reporting obligations and, as a result of the new corporate governance and executive compensation related rules, regulations, and guidelines prompted by the Dodd-Frank Act and further regulations and disclosure obligations expected in the future, we will likely need to devote additional time and costs to comply with such compliance programs and rules. These rules and regulations cause us to incur significant legal and financial compliance costs and make some activities more time-consuming and costly.

To comply with the requirements of being a public company, we may need to undertake various activities, including implementing new internal controls and procedures and hiring new accounting or internal audit staff. The Sarbanes-Oxley Act requires that we maintain effective disclosure controls and procedures and internal control over financial reporting. We are continuing to develop and refine our disclosure controls and other procedures that are designed to ensure that information required to be disclosed by us in the reports that we file with the SEC is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that information required to be disclosed in reports under the Exchange Act, is accumulated and communicated to our principal executive and financial officers. Our current controls and any new controls that we develop may become inadequate and weaknesses in our internal control over financial reporting may be discovered in the future.

Any failure to develop or maintain effective controls could adversely affect the results of periodic management evaluations and annual independent registered public accounting firm attestation reports regarding the effectiveness of our internal control over financial reporting which we may be required to include in our periodic reports we will file with the SEC under Section 404 of the Sarbanes-Oxley Act, harm our operating results, cause us to fail to meet our reporting obligations, or result in a restatement of our prior period financial statements. In the event that we are not able to demonstrate compliance with the Sarbanes-Oxley Act, that our internal control over financial reporting is perceived as inadequate or that we are unable to produce timely or accurate financial statements, investors may lose confidence in our operating results and the price of our common stock could decline. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the Nasdaq Capital Market.

We are not currently required to comply with the SEC rules that implement Section 404 of the Sarbanes-Oxley Act, and are therefore not yet required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. However, we are required to comply with certain of these rules, which require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of our internal control over financial reporting commencing with our next annual report. This assessment will need to include the disclosure of any material weaknesses in our internal control over financial reporting identified by our management or our independent registered public accounting firm. We are just beginning the costly and challenging process of compiling the system and processing documentation needed to comply with such requirements. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective.

Raising additional capital, including through future sales and issuances of our common stock, the exercise of warrants or the exercise of rights to purchase common stock pursuant to our equity incentive plan could result in additional dilution of the percentage ownership of our stockholders, could cause our share price to fall and could restrict our operations.

We expect that significant additional capital will be needed in the future to continue our planned operations, including any potential acquisitions, purchasing of capital equipment, hiring new personnel, and continuing activities as an operating public company. To the extent we seek additional capital through a combination of public and private equity offerings and debt financings, our stockholders may experience substantial dilution. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our existing stockholders may be diluted, and the terms may include liquidation or other preferences that adversely affect the rights of our stockholders. Debt and receivables financings may be coupled with an equity component, such as warrants to purchase shares of our common stock, which could also result in dilution of our existing stockholders' ownership. The incurrence of indebtedness would result in increased fixed payment obligations and could also result in certain restrictive covenants, such as limitations on our ability to incur additional debt and other operating restrictions that could adversely impact our ability to conduct our business. A failure to obtain adequate funds may cause us to curtail certain operational activities, including sales and marketing, in order to reduce costs and sustain the business, and would have a material adverse effect on our business and financial condition.

Under our 2016 Omnibus Stock Incentive Plan, as amended, or 2016 Plan, we may grant equity awards covering up to 1,754,385 shares of our common stock. As of September 30, 2022, we had granted options to purchase an aggregate of 140,000 shares of common stock and issued 161,347 shares of common stock as stock-based compensation to officers, employees and consultants under the 2016 Plan. We have registered 1,754,385 shares of common stock available for issuance under our 2016 Plan. Sales of shares issued upon exercise of options or granted under our 2016 Plan may result in material dilution to our existing stockholders, which could cause our share price to fall.

Our issuance of shares of preferred stock could adversely affect the market value of our common stock, dilute the voting power of common stockholders and delay or prevent a change of control.

Our board of directors has the authority to cause us to issue, without any further vote or action by the stockholders, up to 5,000,000 shares of preferred stock in one or more series, to designate the number of shares constituting any series, and to fix the rights, preferences, privileges and restrictions thereof, including dividend rights, voting rights, rights and terms of redemption, redemption price or prices and liquidation preferences of such series.

The issuance of shares of preferred stock with dividend or conversion rights, liquidation preferences or other economic terms favorable to the holders of preferred stock could adversely affect the market price for our common stock by making an investment in the common stock less attractive. For example, investors in the common stock may not wish to purchase common stock at a price above the conversion price of a series of convertible preferred stock because the holders of the preferred stock would effectively be entitled to purchase common stock at the lower conversion price causing economic dilution to the holders of common stock.

Further, the issuance of shares of preferred stock with voting rights may adversely affect the voting power of the holders of our other classes of voting stock either by diluting the voting power of our other classes of voting stock if they vote together as a single class, or by giving the holders of any such preferred stock the right to block an action on which they have a separate class vote even if the action were approved by the holders of our other classes of voting stock. The issuance of shares of preferred stock may also have the effect of delaying, deferring or preventing a change in control of our company without further action by the stockholders, even where stockholders are offered a premium for their shares.

ITEM 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

ITEM 3. Defaults Upon Senior Securities

Not applicable.

ITEM 4. Mine Safety Disclosure.

Not applicable.

ITEM 5. Other Information

None.

ITEM 6. Exhibits

Reference is made to the exhibits listed on the Index to Exhibits.

INDEX TO EXHIBITS

Exhibit Number	Description
10.1	Second Modification to Loan and Security Agreement dated November 3, 2022 between Pinnacle Bank and Polar Power, Inc.
31.1	Certification Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance 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)

SIGNATURES

Pursuant to the requirements 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.

Date: November 14, 2022	**POLAR POWER, INC.**
	By: */s/ Arthur D. Sams*
	Arthur D. Sams
	President, Chief Executive Officer and Secretary

Exhibit 10.1

SECOND MODIFICATION TO LOAN AND SECURITY AGREEMENT

This **Second Modification to Loan and Security Agreement** (this *Modification*) is entered into by and between **POLAR POWER, INC., a Delaware corporation** (*Borrower*), and **PINNACLE BANK, a California corporation** (*Lender*), as of this 11/3/2022 at **San Jose, California**.

RECITALS

A. Lender and Borrower previously entered into a Loan and Security Agreement dated September 30, 2020, as modified from time to time pursuant to one or more Modifications to Loan and Security Agreement (collectively, the *Loan Agreement*). Initially capitalized terms used but not defined herein shall have the meanings set forth in the Loan Agreement.

B. Borrower has requested, and Lender (subject to fulfillment of the Conditions Precedent set forth below) has agreed, to modify the Loan Agreement as set forth below.

AGREEMENT

For good and valuable consideration, the parties agree as set forth below:

1. Incorporation by Reference. The Loan Agreement and the above Recitals are incorporated herein by this reference.

2. Effective Date. The terms of this Modification shall become effective upon fulfillment of the Conditions Precedent set forth below as required by Lender.

3. Modifications to Loan Agreement. The definition of "Termination Date" set forth in Section 1.1 of the Loan Agreement is hereafter amended and restated in its entirety to read as follows:

> *Termination Date* means (a) September 30, 2024 (the period through such date the *Initial Term*), unless such date is extended pursuant to Section 3.1 hereof, and if so extended on one or more occasions the last date of the last such extension, or (b) if earlier terminated by Lender pursuant to Sections 3.1 or 9.1 hereof, the date of such termination.

4. Conditions Precedent. The effectiveness of this Modification is conditioned upon fulfillment of the following conditions precedent as required by Lender, with any unfulfilled conditions precedent (unless waived by Lender) to become conditions subsequent to be immediately satisfied:

(a) Borrower shall have executed and delivered a copy of this Modification to Lender;

(b) The delivery, execution, resolution and/or completion (as applicable), to Lender's satisfaction, of all other documents, matters or acts required by Lender in connection with this Modification including, without limitation:

(i) N/A.

(c) Borrower shall have paid Lender's attorneys' fees and costs incurred in connection with the preparation and negotiation of this Modification and related documents, which fees and costs (at Lender's option) may be charged as Advances under the Loan Agreement and added to the Obligations regardless of whether an Overadvance will result.

5. Releases. In consideration of Lender's agreement to enter into this Modification, Borrower and the undersigned guarantors each release Lender and its respective agents, employees, officers, directors, attorneys, representatives, insurers, and successors and assigns (individually and collectively, the *Released Parties*), from any and all claims, whether or not such claims are known, unknown or suspected to exist, and causes of action which have been sustained or may be sustained, relating in any way to the lending relationship between Lender, on the one hand, and Borrower and/or such guarantors, on the other hand (individually and collectively, the *Released Matters*). Borrower and the undersigned guarantors each covenant and agree that neither they nor their agents, employees or successors and assigns will hereafter commence, maintain or prosecute any action at law or otherwise, or assert any claim against the Released Parties, for damages or loss of any kind or amount arising out of the subject matter of the Released Matters. It is the intention of each of Borrower and the undersigned guarantors that this release shall be effective in full and final accord and satisfaction and release of and from all Released Matters. Borrower and the undersigned guarantors each hereby waive any and all rights which they have or may have against the Released Parties under the provisions of Section 1542 of the California Civil Code (or other applicable law) as now worded and hereafter amended, which section presently read as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

6. Reaffirmations. Borrower hereby ratifies, reaffirms, and remakes as of the date hereof each and every representation and warranty contained in the Loan Agreement (as amended by this Modification) and in any document incident thereto or connected therewith.

7. Legal Effect. Except as specifically set forth in this Modification, all of the terms and conditions of the Loan Agreement remain in full force and effect.

8. No Waiver of Events of Default. As of the date hereof, Lender may have been unable to ascertain the existence of any events of default under the Loan Agreement, and Lender's failure to refer herein to any existing event of default shall not be deemed a waiver of any such existing event of default.

9. Counterparts. This Modification may be executed in any number of counterparts, each of which shall be deemed an original but all of which taken together shall constitute a single original.

10. Electronic Signature. This Modification, or a signature page thereto intended to be attached to a copy of this Agreement, signed and transmitted by facsimile machine, telecopier or other electronic means (including via transmittal of a ".pdf" file) shall be deemed and treated as an original document. The signature of any person thereon, for purposes hereof, is to be considered as an original signature, and the document transmitted is to be considered to have the same binding effect as an original signature on an original document. At the request of any party hereto, any facsimile, telecopy or other electronic document is to be re-executed in original form by the person who executed the facsimile, telecopy of other electronic document. No party hereto may raise the use of a facsimile machine, telecopier or other electronic means or the fact that any signature was transmitted through the use of a facsimile machine, telecopier or other electronic means as a defense to the enforcement of this Modification.

11. Integration. This is an integrated Modification and supersedes all prior negotiations and agreements regarding the subject matter hereof. All amendments hereof must be in writing and signed by the parties.

IN WITNESS WHEREOF, the parties have executed this Second Modification to Loan and Security Agreement as of the date first set forth above.

POLAR POWER, INC.,
a Delaware corporation

By: */s/ Arthur D. Sams*
Name: Arthur D. Sams
Title: CEO & Corporate Secretary

PINNACLE BANK,
a California corporation

By: */s/ Kevin O'Hare*
Name: Kevin O'Hare
Title: President, Pinnacle Capital Finance

Exhibit 31.1

CERTIFICATION

I, Arthur D. Sams, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Polar 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal 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 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: November 14, 2022

/s/ Arthur D. Sams

Arthur D. Sams
President, Chief Executive Officer and Secretary
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Luis Zavala, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Polar 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 and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal 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 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: November 14, 2022

/s/ Luis Zavala

Luis Zavala
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATIONS OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350 AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Polar Power, Inc. (the "Company") for the quarterly period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned hereby certify in their capacities as the Chief Executive Officer and the Chief Financial Officer of the Company, respectively, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 14, 2022

/s/ Arthur D. Sams	*/s/ Luis Zavala*
Arthur D. Sams	Luis Zavala
President and Chief Executive Officer	Chief Financial Officer
(Principal Executive Officer)	(Principal Financial Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signatures that appear in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.