POLAR POWER, INC.

1,875,000 Shares of Common Stock

This prospectus relates to the proposed resale by the selling security holders named in this prospectus or their permitted assigns of up to 1,875,000 shares of our common stock, including 625,000 shares of our common stock issuable upon exercise of warrants, or the Warrants, held by the selling security holders, or the Warrant Shares.

It is anticipated that the selling security holders will sell these shares of common stock from time to time in one or more transactions, in negotiated transactions or otherwise, at prevailing market prices or at prices otherwise negotiated. We will not receive any proceeds from the sale of the shares of common stock. However, we may receive proceeds from the cash exercise of the Warrants which, if exercised in cash at the current exercise price of \$3.13 per share with respect to all of the 625,000 Warrant Shares, will result in gross proceeds of \$1,956,250.

The shares may be sold by the selling security holders to or through underwriters or dealers, directly to purchasers or through agents designated from time to time. For additional information regarding the methods of sale you should refer to the section of this prospectus entitled "Plan of Distribution" on page 8. For a list of the selling security holders you should refer to the section of this prospectus entitled "Selling Security Holders" on page 6.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

We are filing the registration statement of which this prospectus is a part to fulfill contractual obligations to do so as further described in the section of this prospectus entitled "Description of Securities Purchase Agreement".

Our common stock is listed on The Nasdaq Capital Market under the symbol "POLA." The last reported price of our common stock on August 5, 2020, was \$3.00 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 3 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is August 5, 2020.

TABLE OF CONTENTS

| | Page |
|--|------|
| ABOUT THIS PROSPECTUS | i |
| PROSPECTUS SUMMARY | 1 |
| RISK FACTORS | 3 |
| CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS | 3 |
| USE OF PROCEEDS | 3 |
| DIVIDEND POLICY | 3 |
| MARKET INFORMATION FOR OUR COMMON STOCK | 3 |
| SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT | 4 |
| SELLING SECURITY HOLDERS | 6 |
| PLAN OF DISTRIBUTION | 8 |
| DESCRIPTION OF SECURITIES PURCHASE AGREEMENT | 10 |
| DESCRIPTION OF CAPITAL STOCK | 12 |
| LEGAL MATTERS | 15 |
| <u>EXPERTS</u> | 15 |
| WHERE YOU CAN FIND ADDITIONAL INFORMATION | 15 |
| INCORPORATION OF CERTAIN INFORMATION BY REFERENCE | 16 |

You should rely only on the information contained in this prospectus or a supplement to this prospectus. We have not authorized anyone to provide you with different information. The information in this prospectus is accurate only as of the date of this prospectus or the date of any supplement to this prospectus, regardless of the time of delivery of this prospectus or any supplement to this prospectus or any supplement to this prospectus or any sale of our common stock. We are not making an offer to sell shares of common stock, and we are not soliciting an offer to buy shares of common stock, in any jurisdiction where the offer is not permitted.

i

ABOUT THIS PROSPECTUS

This prospectus relates to the resale by the selling security holders of up to 1,875,000 shares of our common stock, including 625,000 Warrant Shares, in each case as described below under "Description of Securities Purchase Agreement" and "Description of Capital Stock." We are not selling any shares of common stock under this prospectus and will not receive any proceeds from the sale of shares of common stock by the selling security holders.

This prospectus is part of a registration statement on Form S-1 that we filed with the Securities and Exchange Commission, or the SEC. It omits some of the information contained in the registration statement and reference is made to the registration statement for further information with regard to us and the securities being offered by the selling security holders. You should review the information and exhibits in the registration statement for further information about us and the securities being offered hereby. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to the filings. You should review the complete document to evaluate these statements.

You should read this prospectus, any documents that we incorporate by reference in this prospectus and the additional information described below under "Where You Can Find Additional Information" and "Incorporation of Certain Information By Reference" before making an investment decision. You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with additional, different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information in this prospectus or any documents we incorporate by reference herein is accurate as of any date other than the date on the front of such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

PROSPECTUS SUMMARY

This summary highlights selected information included elsewhere in this prospectus and does not contain all of the information you should consider before buying shares of our common stock. You should read the entire prospectus carefully, especially the "Risk Factors" section and financial statements and the related notes appearing at the end of this prospectus, before deciding to invest in shares of our common stock. Some of the statements in this prospectus constitute forward-looking statements. See "Cautionary Note Regarding Forward-Looking Statements." In this prospectus, the words "we," "us," "our" and similar terms refer to Polar Power, Inc., a Delaware corporation, unless the context provides otherwise.

Our Company

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 charging, marine and industrial.

Within the telecommunications market, 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 applications) or have critical power needs and cannot be without power in the event of utility grid failure (i.e., back-up power applications). Within this market, we offer the following three configurations of our DC power systems, with output power ranging from 5 kW to 32 kW:

- DC base power systems. These systems integrate a DC generator and automated controls with remote monitoring, which are typically contained within an environmentally regulated enclosure.
- DC hybrid power systems. These systems incorporate lithium-ion batteries (or other advanced battery chemistries) with our proprietary BMS into our standard DC power systems.
- DC solar hybrid power systems. These systems incorporate photovoltaic and other sources of renewable energy into our DC hybrid power system.

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

Corporate Information

We were incorporated in 1979 in the State of Washington as Polar Products, Inc., and in 1991 we reincorporated in the State of California as Polar Power, Inc. In December 2016, we reincorporated in the State of Delaware. Our principal executive offices are located at 249 E. Gardena Blvd., Gardena, California 90248. Our telephone number is (310) 830-9153 and our Internet website is www.polarpower.com. The content of our Internet website does not constitute a part of this prospectus.

The Offering

Securities offered by the selling security holders

Common stock outstanding prior to this offering

Common stock to be outstanding after this offering

The Nasdaq Capital Market symbol

Use of Proceeds

Risk Factors

1,875,000 shares of common stock.

10,125,681 shares, as of July 1, 2020.

12,000,681 shares, which gives effect to the shares of common stock offered under

this prospectus.

POLA

We will not receive any of the proceeds from the sale of the shares of common stock being offered under this prospectus. However, we may receive proceeds from the cash exercise of the Warrants which, if exercised in cash at the current exercise price with respect to all of the 625,000 Warrant Shares, will result in gross proceeds of

\$1,956,250. See "Use of Proceeds."

There are many risks related to our business, this offering and ownership of our common stock that you should consider before you decide to buy our common stock in this offering. You should read the "Risk Factors" section beginning on page 3, as well as other cautionary statements throughout this prospectus, before investing in shares of

our common stock.

The number of shares of common stock that will be outstanding upon the completion of this offering is based on the 11,375,681 shares outstanding as of July 24, 2020 (which amount includes the 1,250,000 shares of common stock issued to the security holders under the terms of the securities purchase agreement described below), and excludes the following:

140,000 shares of common stock issuable upon the exercise of outstanding options, having a weighted average exercise price of \$5.22 per share;

115,000 shares of common stock issuable upon the exercise of outstanding warrants (other than the Warrants), having an exercise price of \$8.75 per share;

1,614,385 shares of common stock reserved for future issuance under our 2016 Stock Incentive Plan, or 2016 Plan; and

any additional shares of common stock we may issue from time to time after that date.

RISK FACTORS

Before you invest in our securities, in addition to the other information, documents or reports incorporated by reference in this prospectus and any prospectus supplement or other offering materials, you should carefully consider the risk factors in the section entitled "Risk Factors" in any prospectus supplement, as well as our most recent Annual Report on Form 10-K, our most recent Amendment to Annual Report on Form 10-K/A and our most recent Quarterly Report on Form 10-Q filed with the SEC. Each of the risks described in these sections and documents could materially and adversely affect our business, financial condition, results of operations and prospects, and could result in a partial or complete loss of your investment.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws, which statements involve substantial risks and uncertainties. All statements, other than statements of historical facts, included in this prospectus regarding our strategy, future events, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, among others, are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "might," "plan," "predict," "project," "would," "will," "should," "could," "objective," "target," "ongoing," "contemplate," "potential" or "continue" or the negative of these terms and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in our forward-looking statements. We have included important factors in the cautionary statements included in this prospectus, particularly in the "Risk Factors" section, which could cause actual results or events to differ materially from such forward-looking statements. Any forward-looking statement speaks only as of the date on which it is made, and we do not undertake any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares of common stock offered under this prospectus by the selling security holders. Rather, the selling security holders will receive those proceeds directly. However, we may receive proceeds from the cash exercise of the Warrants which, if exercised in cash at the current exercise price with respect to all of the 625,000 Warrant Shares, will result in gross proceeds of \$1,956,250.

DIVIDEND POLICY

We have never paid cash dividends on our common stock and do not intend to pay cash dividends on our common stock in the foreseeable future. We anticipate that we will retain any earnings for use in the continued development of our business.

MARKET INFORMATION FOR OUR COMMON STOCK

Our common stock is listed on The Nasdaq Capital Market under the symbol "POLA." As of July 24, 2020, we had 22 holders of record of our common stock, based on information provided by our transfer agent. These holders of record include depositories that hold shares of stock for brokerage firms which, in turn, hold shares of stock for numerous beneficial owners. On August 5, 2020, the last reported price of our common stock on The Nasdaq Capital Market was \$3.00 per share.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding beneficial ownership of our common stock as of July 24, 2020 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our shares of common stock;
- each of our directors;
- each of our named executive officers; and
- all of our directors and executive officers as a group.

The table is based on information provided to us by our directors, executive officers and principal stockholders. Beneficial ownership is determined in accordance with the rules of the SEC, and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, including stock options and warrants that are exercisable within 60 days of July 24, 2020. To our knowledge, except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. Shares of common stock underlying derivative securities, if any, that are currently exercisable or exercisable within 60 days after July 24, 2020 are deemed to be outstanding in calculating the percentage ownership of the applicable person or group, but are not deemed to be outstanding as to any other person or group. Percentage of beneficial ownership is based on 11,375,681 shares of common stock outstanding as of the date of the table.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Polar Power, Inc., 249 E. Gardena Boulevard, Gardena, California 90248.

| Name and Address of Beneficial Owner (1) | Title of Class | Amount and Nature of Beneficial Ownership | Percent of Class |
|--|----------------|---|------------------------|
| Arthur D. Sams (2) | Common | 5,626,676 | 49.2% |
| Rajesh Masina (3) | Common | 135,264 | 1.2% |
| Luis Zavala (4) | Common | 77,369 | * |
| Keith Albrecht (5) | Common | 33,334 | * |
| Peter Gross (6) | Common | 10,000 | * |
| Katherine Koster | Common | _ | * |
| All directors and executive officers as a group (6 persons)(7) | Common | 5,882,643 | 51.1% |

^{*} Less than 1%.

- (1) Messrs. Sams, Albrecht, Gross, and Ms. Koster are directors of Polar Power. Messrs. Sams, Masina and Zavala are named executive officers of Polar Power.
- (2) Includes 50,000 shares of common stock issuable upon exercise of options.
- (3) Includes 30,000 shares of common stock issuable upon exercise of options and excludes 506,150 shares of common stock held by Smartgen Solutions, Inc. Mr. Masina owns 40% of the share capital of Smartgen Solutions, Inc. Mr. Masina disclaims beneficial ownership over the shares of common stock of Polar held by Smartgen Solutions, Inc. Jayamadhuri Penumarthi, the President and Secretary of Smartgen Solutions, Inc., has voting and investment power over such shares of common stock. The address of Smartgen Solutions, Inc. is: 10324 Chestnut Ridge Rd., Austin, TX. 78726.
- (4) Includes 30,000 shares of common stock issuable upon exercise of options.
- (5) Includes 10,000 shares of common stock issuable upon exercise of options.
- (6) Amount represents 10,000 shares of common stock issuable upon exercise of options.
- (7) Includes 130,000 shares issuable upon exercise of options.

Equity Compensation Plan Information

The following table provides information about our common stock that may be issued upon the exercise of options, warrants and rights under all our existing equity compensation plans as of December 31, 2019.

| Plan Category Equity Companyation Plans Approved by Security Holdows | Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants or Rights | Weighted- Average Exercise Price of Outstanding Options, Warrants and Rights | Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans |
|--|--|---|--|
| Equity Compensation Plans Approved by Security Holders: 2016 Plan | 140,000 | \$ 5.22 | 1,614,385 |

SELLING SECURITY HOLDERS

Selling Security Holder Table

This prospectus covers the sale by the selling security holders of up to an aggregate of 1,875,000 shares of common stock, including the Warrant Shares. We are registering the shares of common stock in order to permit the selling security holders to offer the shares for resale from time to time. The selling security holders have not had any material relationship with us within the past three years.

The table below lists the selling security holders and other information regarding the beneficial ownership of the shares of common stock held by each of the selling security holders. The second column lists the number of shares of common stock beneficially owned by the selling security holders, based on their respective ownership of shares of common stock and Warrants as of July 24, 2020.

The third column lists the shares of common stock being offered by this prospectus by the selling security holders and does not take into account the limitation on exercisability of the Warrants in connection with any exercise resulting in a Selling Security Holder beneficially owning in excess of 4.99% of our issued and outstanding common stock (which limit may be decreased upon prior notice to us or may be increased to an amount not in excess of 9.99% upon 61-days' prior notice to us). The selling security holders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

The fourth column assumes the sale of all of the shares offered by the selling security holders under this prospectus. The number of shares in the fourth column does not take into account any limitations on the exercise of any Warrants held by the selling security holders.

Except as disclosed in the footnotes to the table below, each of the selling security holders has represented to us that it is not a broker-dealer, or affiliated with or associated with a broker-dealer, registered with the SEC or designated as a member of the Financial Industry Regulatory Authority. The shares of common stock being offered under this prospectus may be offered for sale from time to time during the period the registration statement of which this prospectus is a part remains effective, by or for the accounts of the selling security holders listed below.

Beneficial ownership is determined in accordance with the rules of the SEC, and includes voting or investment power with respect to the securities. To our knowledge, except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. Except as indicated by footnote, all shares of common stock underlying derivative securities, if any, that are currently exercisable or convertible or are scheduled to become exercisable or convertible for or into shares of common stock within 60 days after the date of the table are deemed to be outstanding for the purpose of calculating the percentage ownership of each listed person or group but are not deemed to be outstanding as to any other person or group.

| | Shares of Common Stock Beneficially Owned Prior to | Number of Shares of Common Stock to be Sold Pursuant to this | | n Stock Beneficially or Offering(2) |
|---------------------------------|---|--|--------|--|
| Name of Beneficial Owner | Offering | Prospectus(1) | Number | Percentage |
| Empery Asset Master, LTD(3) | 368,223 | 368,223 | 0 | * |
| Empery Tax Efficient, LP(4) | 120,126 | 120,126 | 0 | * |
| Empery Tax Efficient III, LP(5) | 186,651 | 186,651 | 0 | * |
| CVI Investments, Inc.(6) | 375,000 | 375,000 | 0 | * |
| Hudson Bay Master Fund Ltd.(7) | 375,000 | 375,000 | 0 | * |
| Lind Global Macro Fund, LP(8) | 450,000 | 450,000 | 0 | * |

Maximum

- (*) Indicates beneficial ownership of less than 1%.
- (1) Amounts include 1,250,000 shares of common stock and 625,000 Warrant Shares.
- (2) Assumes all shares being offered under this prospectus are sold. The percentage of beneficial ownership after the offering is based on 12,000,681 shares of common stock, consisting of 11,375,681 shares of common stock outstanding as of July 24, 2020 (which amount includes the 1,250,000 shares of common stock offered under this prospectus which have been issued to the selling security holders) and the 625,000 Warrant Shares offered under this prospectus.
- (3) Empery Asset Management LP, the authorized agent of Empery Asset Master, LTD, has discretionary authority to vote and dispose of the shares held by Empery Asset Master, LTD and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by Empery Asset Master, LTD. Empery Asset Master, LTD, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.
- (4) Empery Asset Management LP, the authorized agent of Empery Tax Efficient, LP, has discretionary authority to vote and dispose of the shares held by Empery Tax Efficient, LP and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by Empery Tax Efficient, LP. Empery Tax Efficient, LP, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.
- (5) Empery Asset Management LP, the authorized agent of Empery Tax Efficient III, LP, has discretionary authority to vote and dispose of the shares held by Empery Tax Efficient III, LP and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by Empery Tax Efficient III, LP. Empery Tax Efficient III, LP, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.
- Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc., has discretionary authority to vote and dispose of the shares held by CVI Investments, Inc. and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as investment manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI Investments, Inc. Mr. Kobinger disclaims any such beneficial ownership of the shares. CVI Investments, Inc. is affiliated with one or more FINRA members, none of whom are currently expected to participate in the sale pursuant to the prospectus contained in the registration statement of shares of common stock purchased by the investor in this offering.
- (7) Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd., has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay Master Fund Ltd. and Sander Gerber disclaims beneficial ownership over these securities.
- (8) Lind Global Partners LLC, the general partner of Lind Global Macro Fund, LP, may be deemed to have sole voting and dispositive power with respect to the shares held by Lind Global Macro Fund, LP. Jeff Easton, the managing member of Lind Global Partners LLC, may be deemed to have sole voting and dispositive power with respect to the shares held by Lind Global Macro Fund, LP. The address of the principal business office for Lind Global Partners LLC, Lind Global Macro Fund, LP and Mr. Easton is 444 Madison Ave, Floor 41, New York, NY 10022.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issued to the selling security holders and the Warrant Shares to permit the resale of these shares of common stock by the selling security holders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling security holders of the shares of common stock. However, we may receive proceeds from the cash exercise of the Warrants which, if exercised in cash at the current exercise price with respect to all of the 625,000 Warrant Shares, will result in gross proceeds of \$1,956,250. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling security holders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling security holders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- · through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the Registration Statement is declared effective by the SEC;
- broker-dealers may agree with the selling security holders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- · any other method permitted pursuant to applicable law.

The selling security holders may also sell shares of common stock under Rule 144 promulgated under the Securities Act or any other exemption under the Securities Act, if available, rather than under this prospectus. In addition, the selling security holders may transfer the shares of common stock by other means not described in this prospectus. If the selling security holders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling security holders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling security holders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling security holders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling security holders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling security holders may pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling security holders to include the pledgee, transferee or other successors in interest as selling security holders under this prospectus. The selling security holders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling security holders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling security holders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling security holder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling security holders and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling security holders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$35,000 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or "blue sky" laws. However, a selling security holder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling security holders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling security holders will be entitled to contribution. We may be indemnified by the selling security holders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling security holder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

DESCRIPTION OF SECURITIES PURCHASE AGREEMENT

General

On July 2, 2020, we entered into a Securities Purchase Agreement, or the Securities Purchase Agreement, under which we agreed to issue and sell an aggregate of 1,250,000 shares of common stock and Warrants to purchase up to 625,000 Warrant Shares, pursuant to an exemption from the registration requirements of the Securities Act provided in Section 4(a)(2) thereof and/or Rule 506 of Regulation D promulgated thereunder. We received gross proceeds of \$2,812,500 at the closing on July 7, 2020, before deducting fees owed to the placement agent and other fees applicable to the offering. The Securities Purchase Agreement contains customary representations, warranties and agreements by us, customary conditions to closing, indemnification obligations of our company, other obligations of the parties and termination provisions.

Placement Agent

In connection with Securities Purchase Agreement, we separately entered into a placement agent engagement letter with Roth Capital Partners, LLC, or the Placement Agent, pursuant to which we agreed to pay the Placement Agent an aggregate cash placement fee equal to 6% of the aggregate purchase price of the shares of our common stock issued in the offering. Subject to certain conditions, we also have agreed to reimburse certain out-of-pocket expenses of the Placement Agent, including but not limited to legal fees incurred by the Placement Agent up to a maximum of \$15,000. The engagement letter contains customary representations, warranties and agreements by us and customary conditions to closing. We have further agreed to indemnify the Placement Agent against certain liabilities arising out of or in connection with the transactions.

The Warrants

The Warrants are exercisable immediately for shares of common stock at an exercise price of \$3.13 per share, subject to adjustment as provided therein, and terminate five years after issuance. A holder of Warrants will not have the right to exercise any portion of its Warrants if the holder, together with its affiliates, would beneficially own over 4.99%; provided, however, that upon prior notice to us, the holder may decrease or may increase its ownership limitation, provided that in no event will the ownership limitation exceed 9.99%. The exercise price and number of the shares of our common stock issuable upon exercising the Warrants will be subject to adjustment in the event of any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction, as described therein. The Warrants impose penalties on us for failure to timely deliver Warrant Shares.

The Warrants may be exercised on a cashless basis if at the time of exercise there is no effective registration statement registering the Warrant Shares.

If we issue options, convertible securities, warrants, stock, or similar securities to all holders of shares of our common stock, each holder of a Warrant will have the right to acquire the same securities as if it had exercised its Warrant. If we make a distribution of our assets to all holders of shares of our common stock, each holder of a Warrant will have the right to acquire the same assets as if it had exercised its Warrant.

The Warrants contain provisions prohibiting us from entering into certain transactions involving a change of control, unless the successor assumes in writing all of our obligations under the Warrants.

Participation Rights

Until the date that is the six-month anniversary of the earlier of (i) the date upon which the initial registration statement filed pursuant the Registration Rights Agreement discussed below is declared effective by the SEC, (ii) all of the shares of common stock and Warrant Shares issued under the Securities Purchase Agreement have been sold pursuant to Rule 144, (iii) July 7, 2020, or (iv) all the shares of common stock and Warrant Shares issued under the Securities Purchase Agreement may be sold pursuant to an exemption from registration under Section 4(a)(1) of the Securities Act without volume or manner-of-sale restrictions, the Selling Security Holders have the right to participate in up to an amount of 35% of any offering by us of common stock or common stock equivalents for cash consideration.

Registration Rights Agreement

In connection with the issuance and sale of shares of common stock and the Warrants under the terms of the Securities Purchase Agreement, we entered into a registration rights agreement, or Registration Rights Agreement, with all of the selling security holders to file a registration statement with the SEC by July 31, 2020 for the resale by the selling security holders of up to 1,875,000 shares of common stock, including 625,000 Warrant Shares. We are required to use commercially reasonable best efforts to have such registration statement declared effective by the SEC within 90 days after July 2, 2020.

We are obligated to use commercially reasonable best efforts to keep a registration statement we file in compliance with our obligations under the Registration Rights Agreement effective (and the prospectus contained therein available for use) for resales by the selling security holders on a delayed or continuous basis at then-prevailing market prices at all times until the earlier of (i) the date on which all of the shares of common stock covered by the registration statement may be sold without restriction pursuant to Rule 144 of the Securities Act (including, without limitation, volume restrictions and without the need for current public information required by Rule 144(c)(i) or Rule 142(i)(2) if applicable) or (ii) the date on which the selling security holders have sold all the shares of common stock covered by the registration statement, or which this prospectus is a part.

The Registration Rights Agreement contains various indemnification provisions in connection with the registration of the 1,875,000 shares of common stock.

DESCRIPTION OF CAPITAL STOCK

Authorized and Outstanding Capital Stock

Our authorized capital stock consists of 50,000,000 shares of common stock, \$0.0001 par value per share, and 5,000,000 shares of preferred stock, \$0.0001 par value per share. As of July 24, 2020, there were 11,375,681 shares of common stock and no shares of preferred stock issued and outstanding and 17,477 shares of common stock held in treasury. The following description of our capital stock does not purport to be complete and should be reviewed in conjunction with our certificate of incorporation and our bylaws. See "Where You Can Find Additional Information."

Common Stock

All outstanding shares of our common stock are fully paid and nonassessable. The following summarizes the rights of holders of our common stock:

- a holder of common stock is entitled to one vote per share on all matters to be voted upon generally by the stockholders;
- subject to preferences that may apply to shares of preferred stock outstanding, the holders of common stock are entitled to receive lawful dividends as may be declared by our board of directors;
- upon our liquidation, dissolution or winding up, the holders of shares of common stock are entitled to receive a pro rata portion of all our assets remaining for distribution after satisfaction of all our liabilities and the payment of any liquidation preference of any outstanding preferred stock;
- there are no redemption or sinking fund provisions applicable to our common stock; and
- there are no preemptive or conversion rights applicable to our common stock.

Preferred Stock

Our board of directors is authorized to issue from time to time, in one or more designated series, any or all of our authorized but unissued shares of preferred stock with dividend, redemption, conversion, exchange, voting and other provisions as may be provided in that particular series. The issuance need not be approved by our common stockholders.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

A number of provisions of Delaware law, our certificate of incorporation and our bylaws contain provisions that could have the effect of delaying, deferring and discouraging another party from acquiring control of Polar Power. These provisions, which are summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of Polar Power to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquiror outweigh the disadvantages of discouraging a proposal to acquire Polar Power because negotiation of these proposals could result in an improvement of their terms. However, the existence of these provisions also could limit the price that investors might be willing to pay for our securities.

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of Polar Power.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that, for nominations to our board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Chief Executive Officer. For an annual meeting, a stockholder's notice generally must be delivered not less than 90 days nor more than 120 days prior to the anniversary of the mailing date of the proxy statement for the previous year's annual meeting. For a special meeting, the notice must generally be delivered not earlier than the 90th day prior to the meeting and not later than the later of (i) the 60th day prior to the meeting or (ii) the 10th day following the day on which public announcement of the meeting is first made. Detailed requirements as to the form of the notice and information required in the notice are specified in the bylaws. If it is determined that business was not properly brought before a meeting in accordance with our bylaw provisions, such business will not be conducted at the meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.

Delaware Anti-Takeover Statute

We are subject to the provisions of Section 203 of the Delaware General Corporation Law (sometimes referred to as Section 203) regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under specified circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the outstanding voting stock owned by the stockholder) (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of
 stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock that is not owned by the interested
 stockholder.

Generally, a business combination includes a merger, asset or stock 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, within three years prior to the determination of interested stockholder status, did own 15% or more of a corporation's outstanding voting securities. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors do not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of our common stock held by stockholders.

The provisions of Delaware law, our certificate of incorporation and our bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Choice of Forum

Our certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery (or, if such court lacks jurisdiction, any other state or federal court located within the State of Delaware) shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action or proceeding asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of us to us or our stockholders, (iii) any action or proceeding asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action or proceeding asserting a claim governed by the internal affairs doctrine; in all cases subject to the court's having personal jurisdiction over the indispensable parties named as defendants. For the avoidance of doubt, the exclusive forum provision described above does not apply to any claims arising under the Securities Act or 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 certificate of incorporation 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 Court of Chancery the sole and exclusive forum for certain types of actions, stockholders who do bring a claim in the 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 certificate of incorporation 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.

Warrants

As of July 24, 2020, we had 115,000 shares of common stock issuable upon the exercise of outstanding warrants (other than the Warrants), having an exercise price of \$8.75 per share.

Options

As of July 24, 2020, we had 140,000 shares of common stock issuable upon the exercise of outstanding options, having a weighted average exercise price of \$5.22 per share.

Registration Rights

The registration rights with respect to the shares of common stock and Warrant Shares issuable under the Securities Purchase Agreement are described in the "Description of Securities Purchase Agreement" section of this prospectus. We do not have any other registration rights.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is VStock Transfer, LLC. Its telephone number is (212) 828-8436.

LEGAL MATTERS

The validity of the shares of common stock offered under this prospectus will be passed upon by Troutman Pepper Hamilton Sanders LLP, Irvine, California.

EXPERTS

The financial statements of Polar Power, Inc. as of and for the years ended December 31, 2019 and 2018 appearing in Polar Power's Annual Report on Form 10-K, as amended by Amendment No. 1 to Annual Report on Form 10-K/A, have been audited by Weinberg & Company, P.A., an independent registered public accounting firm, as stated in their report thereon, included therein, and are incorporated by reference in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, and the rules and regulations promulgated under the Securities Act, with respect to the common stock offered under this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information contained in the registration statement and the exhibits and schedules to the registration statement. Many of the contracts and documents described in this prospectus are filed as exhibits to the registration statements and you may review the full text of these contracts and documents by referring to these exhibits.

For further information with respect to us and the common stock offered under this prospectus, reference is made to the registration statement and its exhibits and schedules. We file reports, including annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K with the SEC.

The SEC maintains an Internet web site that contains reports, prospectus and information statements and other information regarding issuers, including Polar Power, that file electronically with the SEC. The SEC's Internet website address is http://www.sec.gov. Our Internet website address is http://www.polarpower.com.

We do not anticipate that we will send an annual report to our stockholders until and unless we are required to do so by the rules of the SEC.

All trademarks or trade names referred to in this prospectus are the property of their respective owners.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference into this prospectus is considered to be part of this prospectus. These documents may include Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements. You should read the information incorporated by reference because it is an important part of this prospectus.

This prospectus incorporates by reference the documents listed below, other than those documents or the portions of those documents deemed to be furnished and not filed in accordance with SEC rules:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on May 14, 2020;
- our Amendment No. 1 to our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2019, filed with the SEC on May 26, 2020;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, filed with the SEC on June 29, 2020;
- our Current Reports on Form 8-K filed with the SEC on January 2, 2020, March 27, 2020, May 8, 2020, May 15, 2020, July 8, 2020 and July 17, 2020; and
- the description of our common stock contained in Exhibit 4.1 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed with the SEC on May 14, 2020, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the common stock made by this prospectus and such future filings will become a part of this prospectus from the respective dates that such documents are filed with the SEC. Any statement contained herein or in a document incorporated to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof or of the related prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated to deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may obtain copies of the documents incorporated by reference in this prospectus from us free of charge by requesting them in writing or by telephone at the following address:

Polar Power, Inc. 249 E. Gardena Blvd. Gardena, California 90248 Attn: Investor Relations Telephone: (310) 830-9153