

LARRY A. CERUTTI
949.622.2710 telephone
949.622.2739 facsimile
larry.cerutti@troutmansanders.com

TROUTMAN SANDERS

TROUTMAN SANDERS LLP
5 Park Plaza, Suite 1400
Irvine, CA 92614-2545
949.622.2700 telephone
troutmansanders.com

October 20, 2016

BY EDGAR AND FEDEX

Ms. Amanda Ravitz
Assistant Director
Office of Electronics and Machinery
Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

**Re: Polar Power, Inc.
Registration Statement on Form S-1
Filed September 9, 2016
File No. 333-213572**

Dear Ms. Ravitz:

On behalf of Polar Power, Inc. (the "Company"), the undersigned has set forth below the responses of the Company to the comments of the staff (the "Staff") of the United States Securities and Exchange Commission (the "Commission") contained in the Staff's comment letter dated October 5, 2016. For ease of reference, the text of each of the Staff's comments is reproduced in italics in numerical sequence in this letter, with the response of the Company immediately following each comment.

Concurrently with the submission of this letter, the Company has filed Amendment No. 1 to the above-referenced Registration Statement on Form S-1 (the "Registration Statement") with the Commission on EDGAR, reflecting the revisions described in this letter as well as certain other updated information.

For your convenience, the Company is supplementally providing to the Staff a copy of Amendment No. 1 to the Registration Statement, which has been marked to indicate the changes from the Registration Statement, as filed with the Commission on September 9, 2016.

ATLANTA BEIJING CHARLOTTE CHICAGO HONG KONG NEW YORK ORANGE COUNTY PORTLAND RALEIGH
RICHMOND SAN DIEGO SAN FRANCISCO SHANGHAI TYSONS CORNER VIRGINIA BEACH WASHINGTON, DC

BY EDGAR AND FEDEX

Ms. Amanda Ravitz
October 20, 2016
Page 2

Capitalized terms that are used but not defined in this letter shall have the meanings ascribed to them in the Registration Statement. All responses provided herein are based solely on information provided by the Company.

Graphics

1. *Please tell us why you believe the images you have included are illustrative of your operations, given your disclosure in the second risk factor on page 13 regarding your concentration in the telecommunications market. It also appears you do not make boats, planes, communication systems and military vehicles. Please revise accordingly.*

Response to Comment 1:

The Company has replaced all prior images on the inside front cover page and the inside back cover page with images of the Company's products that are currently being sold to its largest customer, Verizon Wireless.

2. *Please tell us the portion of sales you derive from the products you mention in each bullet point in your graphics. If one type of product, such as DC power systems, accounts for a significant portion of your revenue, as indicated by the disclosure on pages 12-13 and F-20, please revise to avoid the implication that the other products you list constitute a material part of your sales.*

Response to Comment 2:

Please see the response to Comment No. 1. In addition, we note that the Company has revised the disclosure on pages 2 and 12 of Amendment No. 1 to the Registration Statement to state that during the six months ended June 30, 2016 and 2015, substantially all revenues were within the telecommunications market and that a large percentage of such revenues were derived from sales to Verizon Wireless. The Company has revised the disclosure within the "Markets" subsection of the Business Section commencing on page 51 of Amendment No. 1 to the Registration Statement to indicate recent sales activities (or lack thereof) within each of the Company's identified markets.

Overview, page 1

3. *Please balance your disclosure in this section with disclosure regarding your dependence on the telecommunications industry and the percentage of revenue derived from each product category listed in the bullet points and the fuel source for those products.*
-

Response to Comment 3:

The Company has revised the disclosure on page 2 of Amendment No. 1 to the Registration Statement and throughout the Registration Statement to state that substantially all of the Company's revenues are derived from sales to customers within the telecommunications market and, within that market, substantially all revenues are derived from sales of the Company's DC base power systems to Verizon Wireless. The Company has also revised the disclosure on page 2 and 49 of Amendment No. 1 to the Registration Statement to include the percentage of DC power systems sales within each product category for the six months ended June 30, 2016 and 2015 and to include disclosure of the five fuel sources for the Company's DC power systems.

Our Competitive Strengths, page 2

4. *Please tell us why you believe it is appropriate to list specific telecommunications providers, other than your largest customer, given your disclosure in your first full risk factor on page 12.*

Response to Comment 4:

The Company has revised the disclosure on page 2 of Amendment No. 1 to the Registration Statement to remove the reference to the Company's other telecommunications customers.

5. *Please balance your disclosure in the last bullet point of this section with your disclosure in the last risk factor on page 15 and the first risk factor on page 16 that you do not have any long-term contracts with your key suppliers.*

Response to Comment 5:

The Company has revised the disclosure on pages 15 and 16 of Amendment No. 1 to the Registration Statement to clarify that the Company does not have any long-term contracts with its key suppliers.

Implications of Being an Emerging Growth Company, page 4

6. *Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.*
-

Ms. Amanda Ravitz
October 20, 2016
Page 4

Response to Comment 6:

The Company acknowledges the Staff's comment and respectfully advises the Staff that neither the Company, nor anyone authorized on behalf of the Company, has provided written materials in reliance on Section 5(d) of the Securities Act of 1933, as amended, to potential investors.

Summary Financial Information, page 8

7. *Please revise the "Total stockholders' equity" amounts as of June 30, 2016, December 31, 2015 and 2014 that are disclosed on page 9 to agree with the total stockholders' equity amounts disclosed in your balance sheets at page F-3.*

Response to Comment 7:

The Company has revised the disclosure on page 9 of Amendment No. 1 to the Registration Statement to conform the stockholders' equity disclosure contained in the Summary Financial Information section with the disclosure contained in the Company's balance sheet on page F-3.

To date, we have derived a significant percentage of our revenue . . . , page 12

8. *Please revise to clarify the "limited number of products and markets" to which you refer, so investors have a better understanding of the risks you face.*

Response to Comment 8

The Company has revised the disclosure on page 12 of Amendment No. 1 to the Registration Statement to reflect the fact that majority of the Company's revenues are derived from the Company's largest customer, Verizon Wireless.

We are dependent on relationships with our key material suppliers, . . . , page 15

9. *It appears that the entities you list provided you with only 30% of the engines used in the power systems you sold during 2015. Please clarify where you obtained the remaining engines and, in light of the number of engines they provided, why you refer only to these three "key engine suppliers."*

Response to Comment 9

The Company has revised the disclosure on page 15 of Amendment No. 1 to the Registration Statement to clarify the fact that the information relates to a percentage of the Company's cost of sales rather than a percentage of net sales, which amounts are consistent with the amounts disclosed on page F-4.

Use of Proceeds, page 34

10. *We note the multiple uses listed here and the amount of proceeds you intend to raise. If any material amount of other funds are necessary to accomplish the specified purposes for which the proceeds are to be obtained, state the amounts and sources of such other funds needed for each such specified purpose and the sources thereof. Refer to Instruction 3 to Item 504 of Regulation S-K.*

Response to Comment 10

The Company does not anticipate that any material amount of other funds would be necessary to accomplish the specified purposes for which the proceeds are to be obtained. Nonetheless, if the foregoing changes, the Company will update the "Use of Proceeds" section accordingly.

Dilution, page 35

11. *Please revise to include the disclosure required by the first sentence of Item 506 of Regulation S-K.*

Response to Comment 11

The Company has revised the disclosure on page 36 of Amendment No. 1 to the Registration Statement under heading "Dilution" to include the disclosure required by the first sentence of Item 506 of Regulation S-K.

Capitalization, page 36

12. *We note your disclosures here, on page 7 and throughout the filing that you will be effecting a reverse stock split prior to the completion of your initial public offering. Please explain to us why you plan to present this pending reverse stock split as a pro forma adjustment within your capitalization table based on the guidance at SAB Topic 4.C and ASC 260-10-55-12.*
-

Response to Comment 12

The Company has revised Amendment No. 1 to the Registration Statement to remove all references to the proposed reverse stock split that was to be conducted concurrently with the Company's reincorporation in the State of Delaware. The Company plans to effectuate a reverse stock split prior to its reincorporation in the State of Delaware and prior to filing a pre-effective amendment to the Registration Statement, which pre-effective amendment will include pricing information, disclosure regarding the reverse stock split and appropriate revisions to the Company's financial statements with respect to the reverse stock split consistent with the guidance contained in SAB Topic 4.C and ASC 260-10-55-12.

Management's Discussion and Analysis of Financial Condition and Results of Operations Overview, page 38

13. *We note your disclosure at the bottom of page 38 that you are "currently focused on the global telecommunications tower market which is undergoing a rapid transition from AC power systems to DC power systems globally." Please revise to clarify the extent to which AC power systems are currently used. Also, to the extent known, please clarify the extent of this transition and discuss the reasons underlying AC power's historical predominance and the reasons underlying the transition. Supplementally provide information that supports your basis.*

Response to Comment 13

The Company has revised the disclosure on page 38 of Amendment No. 1 to the Registration Statement to delete the statement that "the global telecommunications tower market which is undergoing a rapid transition from AC power systems to DC power systems globally."

Results of Operations, page 39

14. *When individual line items disclosed in your statements of operations significantly fluctuate in comparison to the comparable prior period, management should quantify and disclose the nature of each item that caused the significant change. Please revise the filing to quantify whether the changes in your net sales during the periods presented were due to changes in prices, volumes or a combination of both items. Refer to Item 303 of Regulation S-K.*

Response to Comment 14

The Company has revised the disclosure contained in the "Results of Operations" subsection of the Company's Management's Discussion and Analysis of Financial Condition and Results of Operations section of Amendment No. 1 to the Registration Statement to disclose that the changes in the Company's net sales during the periods presented were due to changes in volumes.

Liquidity and Capital Resources, page 43

15. *Please revise to discuss the limitations on your ability to raise additional debt financing, given Section 8.1 of Exhibit 10.6.*

Response to Comment 15

The Company has revised the disclosure on page 44 of Amendment No. 1 to the Registration Statement to discuss the limitations on the Company's ability to raise additional debt financing given certain negative covenants contained in the Company's credit facility with Gibraltar Business Capital.

Increased data traffic has resulted in increased investments..., page 51

16. *We note your disclosure that, according to the report you cite, capital expenditures in the mobile network industry declined in 2015 compared to 2014. Please clarify the cause of that decline and impact on your business.*

Response to Comment 16

The Company has revised the disclosure on page 52 of Amendment No. 1 to the Registration Statement to clarify that the overall decline was primarily due to a decline in capital expenditures related to wireline infrastructure. Capital expenditures for wireless infrastructure continued to grow.

A 2012 report..., page 53

17. *We note your disclosure regarding the trend that a significant number of mobile network providers are contemplating selling off tower assets to independent tower service companies. Please revise to clarify how this trend has impacted and may impact your business. We note, for example, the amount of revenues you derive from telecommunication service providers, such as Verizon.*

Response to Comment 17

The Company has revised the disclosure on page 54 of Amendment No. 1 to the Registration Statement to clarify how the trend that a significant number of mobile network providers are contemplating selling off tower assets to independent tower service companies has impacted and may impact the Company's business.

Strong Customer Base, page 59

18. *Please clarify your disclosure that you “work directly with” those entities listed in the last sentence of this bullet point.*

Response to Comment 18

The Company has revised the disclosure on pages 2 and 59 of Amendment No. 1 to the Registration Statement to delete the phrase “work directly with” and to the extent an entity is named, state that such entity is an actual customer of the Company.

Our Technologies, page 62

19. *Please provide us support for your belief that your technology has “significant advantages” over your competitors. Supplementally provide any information supporting your basis.*

Response to Comment 19

The Company has revised the disclosure on page 68 of Amendment No. 1 to delete the Company’s belief that its technology has “significant advantages” over the Company’s competitors.

Executive Officers, page 73

20. *Please revise to clarify the “extensive business experience” Mr. Masina has in “providing passive infrastructure for the telecommunications towers operators [in India].” Please also revise to clarify the dates of Mr. Masina’s business experience. From your current disclosure, it appears Mr. Masina began serving as “the Supply Chain Consultant” when he was 16 years old.*

Response to Comment 20

The Company has revised the disclosure on page 73 of Amendment No. 1 to clarify Mr. Masina’s business experience and the date Mr. Masina began working as a supply chain consultant.

Non-Employee Directors, page 74

21. *We note your disclosure that Mr. Goldman serves on the board of directors for “several of the Polaris portfolio companies.” Please name any company with a class of securities registered pursuant to section 12 of the Exchange Act or subject to the requirements of section 15(d) of such Act or any company registered as an investment company under the Investment Company Act of 1940 to which Mr. Goldman currently serves or has served in the past five years on the board. Refer to Item 401(e)(2) of Regulation S-K. Please also clarify whether Mr. Goldman continues to be employed by Polaris. Your disclosure here indicates his employment ended in 2015; however, note 6 on page 96 indicates he continues to be its “sole member.”*

Response to Comment 21

Mr. Goldman currently serves, or has served in the past five years, on the board of directors of two privately-held Polaris portfolio companies, neither of which has a class of securities registered pursuant to section 12 of the Exchange Act or subject to the requirements of section 15(d) of such Act or is a company registered as an investment company under the Investment Company Act of 1940.

There are two members of Polaris Capital LLC, including (i) Mr. Goldman and (ii) an S corporation that is wholly-owned by Mr. Goldman. Mr. Goldman is the managing member and sole beneficial owner of Polaris Capital LLC. Mr. Goldman is not an employee of Polaris Capital LLC. The Company has revised the disclosure on pages 74 and 96 of Amendment No. 1 to the Registration Statement consistent with the foregoing.

Executive and Director Compensation, page 80

22. *It appears from your disclosures on pages F-6 and F-14 that Mr. Ulinski received at least \$180,000 from you during 2015. If so, please tell us why you did not disclose the information required by Item 402 of Regulation S-K regarding the compensation received by him. See Regulation S-K Item 402(m)(2)(ii) and (iii). Please also revise your disclosure on page 95, as appropriate.*

Response to Comment 22

As disclosed on page F-14 of Amendment No. 1 to the Registration Statement, on July 7, 2012, the Company and Mr. Ulinski entered into an Intellectual Property Purchase Agreement (the “IP Purchase Agreement”) pursuant to which the Company purchased from Mr. Ulinski certain intellectual property for an aggregate consideration equal to \$600,000 payable in the form of a royalty on sales by the Company of generators and/or hybrid systems. The IP Purchase Agreement was amended and restated by that certain Memorandum of Understanding, dated December 30, 2014, by and between the Company and Mr. Ulinski (the “MOU”), which MOU is set forth as Exhibit 10.7 to Amendment No. 1 to the Registration Statement. The intellectual property acquired by the Company pursuant to the IP Purchase Agreement was comprised of the 27 products and technologies contained in Appendix A to the MOU (collectively, the “IP Assets”). All IP Assets were sold to the Company on July 7, 2012, the date of the IP Purchase Agreement. The parties subsequently entered into the MOU for the purpose of establishing a new method of payment for the remaining amounts then owing under the IP Purchase Agreement (i.e., monthly payments of a fixed dollar amount irrespective of the number of generators and/or hybrid units sold by the Company). Although the MOU states that it covers “control systems and associated products that Mr. Ulinski developed between December 2004 to December 30, 2014,” in fact, all such control systems and associated products had been developed on or prior to July 7, 2012 and sold to the Company on July 7, 2012.

Ms. Amanda Ravitz
October 20, 2016
Page 10

As discussed above, the aggregate consideration of \$600,000 payable to Mr. Ulinski represented consideration for the purchase by the Company of the IP Assets from Mr. Ulinski and did not represent compensation for services rendered to the Company as the Vice President Engineering or in some other capacity. The Company notes that at no time was Mr. Ulinski an employee of the Company. The Company also notes that on September 15, 2016, shortly after having received the last payment under the MOU, Mr. Ulinski resigned as the Vice President of Engineering of the Company.

Mr. Ulinski, now the former Vice President Engineering of the Company, (i) was not an “executive officer” of the Company, as such term is defined in Rule 3b-7 under the Exchange Act, as he was not in charge of a principal business unit, division or function (such as sales, administration or finance), and (ii) did not perform a policy making function for the Company. Additionally, as Mr. Ulinski was not an executive officer of the Company, Mr. Ulinski was not a “named executive officer” of the Company, as such term is defined under Item 402(m)(2) of Regulation S-K. As such, information under Item 402 of Regulation S-K regarding compensation received by named executive officers (including, without limitation, Item 402(m)(2)(ii) and (iii) of Regulation S-K) is not required to be disclosed in the Registration Statement for Mr. Ulinski. Additionally, the Company respectfully advises the Staff of the Commission that the disclosure under “Security Ownership of Certain Beneficial Owners and Management” on page 95 of the Registration Statement does not need to be revised, as Mr. Ulinski was not an executive officer or a named executive officer of the Company. As a result of the foregoing, the Company respectfully advises the Staff of the Commission that it does not believe that disclosure regarding Mr. Ulinski is required to be made within the Summary Compensation Table.

Related Party Transactions, page 91

23. *Please disclose all required information for any related party transaction occurring or outstanding during your disclosed time frame. In this regard, we note that you are currently indebted to one of your employees for technology you purchased, as discussed on page F-14, and you issued shares in exchange for services to one employee, as discussed on page F-15. Also, the disclosure on page F-14 indicates the technology development period ended in 2012; however, Exhibit 10.7 indicates that such period ended in 2014. Please revise as appropriate.*
-

Response to Comment 23

Neither (i) Mr. Ulinski, the former Vice President Engineering of the Company, nor (ii) the employee that was issued 50,000 shares of common stock of the Company in February 2016 in exchange for \$37,500 in wages payable (the "Employee") as disclosed on page F-15 of Amendment No. 1 to the Registration Statement, is a "related person" of the Company, as such term is defined in Item 404(a) of Regulation S-K. Neither Mr. Ulinski nor the Employee is currently, or has previously been, a director (or director nominee) of the Company; an "executive officer" of the Company, as such term is defined in Rule 3b-7 under the Exchange Act; an immediate family member of any of the foregoing; or a greater than 5% security holder of the Company or an immediate family member of any such security holder of the Company (see analysis of why Mr. Ulinski is not an "executive officer" in response to Comment No. 22). As such, the Company respectfully advises the Staff of the Commission that disclosure under Item 404 of Regulation S-K is not required for Mr. Ulinski or the Employee.

In light of the discussion in our response to Comment No. 22 with respect to the IP Purchase Agreement and the MOU, the Company has not made any change to the disclosure on page F-14 with respect to the timing of the termination of the development period.

Sales of Common Stock to Officers and Directors, page 92

24. *Please disclose which members of your board of directors participated in this private placement, the number of shares each purchased, and the number of additional shares each received.*

Response to Comment 24

The Company has revised the disclosure on page 92 of Amendment No. 1 to disclose that Messrs. Goldman and Albrecht purchased 1,000,000 and 50,000 shares, respectively, and received 330,000 and 16,500 additional shares, respectively, in the private placement.

Index to Financial Statements

Notes to Financial Statements

Note 1. Nature of Business and Significant Accounting Policies

-Revenue, page F-7

25. *We note that you recognize revenue for your products generally upon shipment or upon delivery of the product to the destination specified by your customer. Please tell us when and why you recognize revenue other than upon shipment or upon delivery of the product to your customers. Within your discussion, please explain and revise the filing to disclose whether you have any installation or post-delivery obligations. Refer to the guidance in ASC 605.*

Response to Comment 25

The Company has revised the disclosure on page F-7 of Amendment No. 1 to the Registration Statement to state that the Company recognizes revenue upon shipment or upon delivery of the product to its customers. The Company has also revised the disclosure to state that the Company does not have any post-delivery obligation to provide additional services to customers.

-Product Warranties, page F-8

26. *Please revise your filing to provide the disclosures required by ASC 460-10 paragraphs 50-7 and 50-8.*

Response to Comment 26

The Company has revised the disclosure on page F-8 of Amendment No. 1 to the Registration Statement to provide additional disclosure regarding warranty terms and to provide additional disclosure regarding the accrual of the Company's product warranty liability.

-Income Taxes, page F-9

27. *We noted the disclosures herein that "Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will be realized". Please tell us how the referenced policy complies with ASC 740-10-30-5(e).*

Response to Comment 27

The Company has revised the disclosure on page F-9 of Amendment No. 1 to the Registration Statement to correct the previous disclosure by stating that deferred tax assets will either expire before the Company is able to recognize their benefits or that future deductibility is uncertain.

Note 6. Shareholders' Equity, page F-14

28. *We note on page F-15 that you recognized \$581,895 of stock compensation expense during fiscal 2015 related to the difference between the sales price of your common stock sold to Smartgen and your common stock sold to other investors in August 2014. Please tell us how you calculated the amount of stock compensation expense recognized related to this transaction for the discount between the stock issued to Smartgen and the other investors.*

Response to Comment 28

The Company believes that the 1,442,527 shares of common stock sold to Smartgen at a price per share of approximately \$0.35 for a total purchase price of \$500,000, had a fair value per share of approximately \$0.75 for an aggregate valuation of \$1,081,895 at the date of the transaction. Because the sale of these shares of common stock was to an entity controlled by an employee of the Company, the Company recorded a cost in the amount of \$581,895, which amount represented the difference in the fair value and the cash received. The Company's estimate of the fair value of the shares of common stock of \$0.75 per share was based on the per share price paid by outside investors in a private placement conducted by the Company between July and September 2014. Because the Company's shares of common stock were not publicly traded at the date of issuance, and, therefore, there was no price established by a public market where a trading price or a value of its common stock could be determined, the Company believes that the cash price paid by outside third party investors is the best indicator of the fair value of its shares of common stock as of that date the Company entered into the transaction with Smartgen.

29. *We note on page F-15 that you issued 50,000 shares of common stock to an employee in exchange for \$37,500 in wages payable due to the employee. Please tell us and revise your filing to explain how you are accounting for and valuing the shares issued to your employees for services in accordance with ASC 718.*

Response to Comment 29

The Company has revised the disclosure on page F-15 of Amendment No. 1 to the Registration Statement to explain how the Company is accounting for and valuing the shares issued to its employee for services rendered in accordance with ASC 718.

* * *

BY EDGAR AND FEDEX

Ms. Amanda Ravitz

October 20, 2016

Page 14

In connection with this response to the Staff's comment letter, the Company acknowledges the following:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing; and
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing.

Sincerely,

/s/ Larry A. Cerutti
Larry A. Cerutti

cc: Mr. Arthur D. Sams (w/o enc.)
Heather Percival, Esq. (w/o enc.)
Geoff Kruczek, Esq. (w/o enc.)
