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

FORM 8-K

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

Date of Report (Date of Earliest Event Reported): April 2, 2019

REAL GOODS SOLAR, INC.
(Exact Name of Registrant as Specified in its Charter)

Colorado
(State or Other Jurisdiction
of Incorporation)

001-34044
(Commission
File Number)

26-1851813
(IRS Employer
Identification No.)

110 16th Street, Suite 300, Denver, CO 80202
(Address of Principal Executive Offices, Including Zip Code)

Registrant's telephone number, including area code: (303) 222-8300

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

Item 1.01. Entry into a Material Definitive Agreement.

Registered Offering

On April 2, 2019, Real Goods Solar, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) with three institutional and accredited investors (the “Investors”). Pursuant to the terms of the Purchase Agreement, the Company will sell to the Investors (a) “Primary Units,” each consisting of one share of the Company’s Class A common stock, par value \$0.0001 (“Common Stock”), and a Series R Warrant to purchase one share of Common Stock (the “Series R Warrant”), and (b) “Alternative Units,” each consisting of a Prepaid Series S Warrant to purchase one share of Common Stock (the “Series S Warrants,” and together with the Series R Warrants, collectively, the “Warrants”), and a Series R Warrant to purchase one share of Common Stock. The purchase price for a Primary Unit is \$0.19 and the purchase price for an Alternative Unit is \$0.18. The Primary Units and the Alternative Units are referred to in this Current Report on Form 8-K collectively as the “Units.” Pursuant to the terms of the Purchase Agreement, the Company will sell to the Investors an aggregate of approximately \$3,028,273 of the Primary Units and approximately \$257,425 of the Alternative Units. The aggregate gross proceeds from the offering are approximately \$3.3 million. The closing of the offering is expected to occur on or about April 2, 2019, subject to the satisfaction of certain customary closing conditions set forth in the Purchase Agreement. The Company expects to receive net proceeds of approximately \$2.9 million at the closing, after deducting commissions to the Placement Agent (as defined below) and estimated offering expenses associated with the offering payable by the Company. The Investors have participated in the Company’s past securities offerings.

The Company offered and sold the Units, the shares of Common Stock and the Series R Warrants issued as part of the Primary Units, and the Series S Warrant and the Series R Warrants issued as a part of the Alternative Units pursuant to an effective registration statement on Form S-3 (File No. 333-215985). In addition, the shares of Common Stock issuable upon exercise of the Warrants are also registered on the same registration statement. In the Purchase Agreement, the Company has agreed to maintain an effective registration statement covering the issuance of the Common Stock issuable upon exercise of the Warrants.

The Units will not be issued or certificated. The Series R Warrants and the Series S Warrants, as applicable, will be issued in physical form and may be transferred separately immediately thereafter. The Warrants will not be listed on any national securities exchange or other trading market, and no trading market for the Warrants is expected to develop.

Terms of the Series R Warrants

Each Primary Unit and Alternative Unit contains a Series R Warrant to purchase one share of Common Stock. The Series R Warrants will be exercisable upon issuance and will remain exercisable until the fifth anniversary of the date of issuance. The initial exercise price of the Series R Warrants is \$0.20 per share. The exercise price is subject to adjustments for stock splits or similar events, and if the Company in the future issue shares of Common Stock or securities exercisable for or convertible into shares of Common Stock at an effective price per share less than the exercise price then in effect, then the exercise price will be reduced to such lower effective price per share. In addition, the Company may, with the consent of the “required holders” (as defined in the Series R Warrants), reduce the then current exercise price to any amount and for any period of time deemed appropriate by the Company’s board of directors.

Under certain circumstances, the holders of the Series R Warrants may elect to exercise them through a cashless exercise, in which case the holders will receive upon such exercise the “net number” of shares of Common Stock determined according to the formula set forth in the Series R Warrants and the Company will not receive the exercise price. Further, on or after the 60th day following issuance, if the volume weighted price of the Common Stock for five consecutive trading days is less than the exercise price, the holder may thereafter, in its sole discretion and regardless of whether the shares of Common Stock issuable upon exercise of a Series R Warrant is not covered by a registration statement under the Securities Act of 1933, as amended (the “Securities Act”), elect to exercise a Series R Warrant without payment of any exercise price and receive a number of shares of Common Stock equal to the product of (x) the aggregate number of shares that would be issuable upon exercise of a Series R Warrant if such exercise were by means of a cash exercise rather than a cashless exercise and (y) 0.50.

A holder may not exercise a Series R Warrant and the Company may not issue shares of Common Stock under a Series R Warrant if, after giving effect to the exercise or issuance, the holder together with its affiliates would beneficially own in excess of a set percentage of the outstanding shares of the Common Stock. The cap will be set on the date of issuance at a percentage not in excess of 9.99%, at each holder's election. If no election is made, the initial cap will be set at 4.99%. At each holder's option, the cap may be increased or decreased to any other percentage not in excess of 9.99%, except that any increase will not be effective until the 61st day after notice to us.

The holders of the Series R Warrants are entitled to acquire options, convertible securities or rights to purchase the Company's securities or property granted, issued or sold pro rata to the holders of its Common Stock on an "as if exercised for Common Stock" basis. The holders of the Series R Warrants are entitled to receive any dividend or other distribution of the Company's assets (or rights to acquire its assets), at any time after the issuance of the Series R Warrants, on an "as if exercised for Common Stock" basis.

The Series R Warrants prohibit the Company from entering into transactions constituting a "fundamental transaction" (as defined in the Series R Warrants) unless the successor entity assumes all of the Company's obligations under the Series R Warrants and the other transaction documents in a written agreement approved by the "required holders" of the Series R Warrants. Further, after a fundamental transaction, upon the request of a holder, the Company is required to purchase such holder's Series R Warrants for an amount equal to the "Black Scholes value" (as defined in the Series R Warrants) of the remaining unexercised portion of such Series R Warrants. The definition of "fundamental transactions" includes, but is not limited to, mergers, a sale of all or substantially all of the Company's assets, certain tender offers and other transactions that result in a change of control.

Terms of the Series S Warrants

The exercise price for a Series S Warrant will be paid at the closing except for the further payment of the \$0.01 exercise price per share, which a holder will pay upon exercise. The Series S Warrants will have substantially the same terms as the Series R Warrants, other than (i) the foregoing, (ii) the exercise price is not subject to adjustment upon subsequent issuances of shares of Common Stock or securities exercisable for or convertible into shares of Common Stock, and (iii) holders may not require the Company to purchase the Series R Warrants for the "Black Scholes value."

Additional Terms of the Purchase Agreement

The terms of the Purchase Agreement limit the Company's ability to issue securities in the future:

- From the date of the Purchase Agreement until 90 "trading days" (as defined in the Purchase Agreement) after the closing of the offering, the Company may not issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock, or any security which would entitle the holder to acquire at any time shares of Common Stock.
 - From the date of the Purchase Agreement until one year after the closing of the offering, the Company may not effect or enter into an agreement to effect any issuance of shares of Common Stock or any security which would entitle the holder to acquire at any time shares of Common Stock involving a "variable rate transaction" (as defined in the Purchase Agreement). The term "variable rate transaction" generally means a transaction in which the Company (a) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (i) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (ii) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the Company's business or the market for the Common Stock, or (b) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price.
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The Purchase Agreement also provides that, until the one year anniversary of the closing of the offering, the Investor has the right to participate in any future “subsequent financing” (as defined in the Purchase Agreement) for cash consideration in an amount equal to up to 35% of such subsequent financing, on the same terms, conditions and price provided for in such subsequent financing.

However, the limitations on securities issuances and participation right described above do not apply to “exempt issuances” (as defined in the Purchase Agreement) (with respect to the limitation on securities issuances, so long as such exempt issuance is not a “variable rate transaction”). The term “exempt issuance” generally means the issuance of: (a) shares of Common Stock or options to the Company’s employees, officers or directors pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Company’s board of directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company; (b) the warrant the Company expects to issue to the Placement Agent in connection with this offering; (c) securities upon the exercise, exchange or conversion of the securities sold in this offering, the warrant the Company expects to issue to the Placement Agent in connection with this offering and/or other securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of the Purchase Agreement, subject to certain limitations; (d) up to 250,000 shares of Common Stock issued pursuant to an exemption from registration to the lender, or any successor thereto, who is a party to any revolving or other credit facility that is outstanding prior to the date of the Purchase Agreement or to which the Company becomes a party thereafter; (e) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the Company’s disinterested directors, subject to certain limitations; (f) securities issued in a transaction in which the Company is not issuing securities primarily for the purpose of raising capital from retail investors or one or more entities whose primary business is investing in securities, subject to certain limitations; or (g) securities issued in connection with the settlement of any dispute or disagreement with, or litigation claim against, the Company outstanding as of the date of the Purchase Agreement, subject to certain limitations.

For 75 days after the closing of the offering, the Company may not undertake or announce a reverse or forward stock split or reclassification of the Common Stock.

The Purchase Agreement also contains customary representations, warranties, covenants, including indemnifications, and closing conditions.

Leak-Out Agreements

On April 2, 2019, the Company entered into separate and substantially similar leak-out agreements directly with each of the Investors. Under the leak-out agreements, during the period commencing on the date of the Purchase Agreement and ending May 1, 2019, each Investor (together with certain of its affiliate) may not sell, dispose or otherwise transfer, directly or indirectly (including, without limitation, any sales, short sales, swaps or any derivative transactions that would be equivalent to any sales or short positions), on any trading day, shares of Common Stock (including the shares of Common Stock purchased in the offering and issuable upon exercise of the Series R Warrants and the Series S Warrants and other shares of Common Stock held or acquired in the future), in an amount more than a specified percentage of the trading volume of the Common Stock on the principal trading market, subject to certain exceptions. The aggregate trading volume for all Investors is 30% of the trading volume of the Common Stock on the principal trading market during each trading day during the above-referenced leak-out period, subject to certain exceptions. This restriction does not apply to any actual “long” (as defined in Regulation SHO promulgated under the Securities Exchange Act of 1934, as amended) sales by an Investor (together with certain of its affiliate) at a price greater than \$0.24. Further, this restriction does not apply to sales or transfers of any such shares of Common Stock in transactions which do not need to be reported on the OTCQX consolidated tape (or equivalent thereof) so long as the purchaser or transferee executes and delivers a leak-out agreement. After such sale or transfer, future sales of the securities covered by the leak-out agreement by the original owner (together with certain of its affiliate) and the purchaser or transferee will be aggregated to determine compliance with the terms of the leak-out agreement.

Placement Agent

Dawson James Securities, Inc. acted as the exclusive placement agent for the offering (the “Placement Agent”) pursuant to the terms an engagement letter, dated March 19, 2019 (the “Placement Agency Agreement”). In connection with the closing of the offering, the Company expects to pay the Placement Agent a cash fee equal to approximately \$231,000, an amount equal to 7% of the gross proceeds received by the Company from the offering. The Company has agreed to reimburse the Placement Agent’s reasonable and documented out-of-pocket expenses up to a maximum of \$5,000 and reasonable and documented out-of-pocket legal expenses up to a maximum of \$100,000.

In addition to the cash fees set forth above, Dawson James, as placement agent, has a right to purchase for the sum of \$100 a warrant to purchase up to an aggregate of 8% of the aggregate number of shares of Common Stock sold in the offering and issuable upon exercise of the Series S Warrants (exclusive of any shares of Common Stock issuable upon exercise of the Series R Warrants). The placement agent warrant will have similar terms as the Series R Warrants, other than (i) it will expire five years after the effective date of the offering; (ii) it will be exercisable through a cashless exercise regardless of whether the shares of Common Stock issuable upon exercise of the placement agent warrant are covered by a registration statement under the Securities Act but only based on the net number of shares; (iii) the exercise price will be 125% of the public offering price per Primary Unit; (iv) certain covenants appearing in the Series R Warrants will be removed in the placement agent warrant; (v) the initial beneficial ownership limitation will be set at 4.99%; (vi) the placement agent warrant will have certain demand and piggyback registration rights with respect to the shares issuable upon exercise of the placement agent warrant; and (vii) pursuant to FINRA Rule 5110(g), the placement agent warrant and the underlying securities will not be transferable for 6 months from the date of issuance, except the transfer of any security:

- by operation of law or by reason of reorganization of the Company;
- to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period;
- if the aggregate amount of securities of the Company held by the holder of the placement agent warrant or related persons do not exceed 1% of the securities being offered;
- that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or
- the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period.

Additionally, the Company has agreed to indemnify the Placement Agent against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the Placement Agent may be required to make because of those liabilities.

The Placement Agency Agreement also contains customary representations, warranties and covenants.

The descriptions of each of the Purchase Agreement, the Series R Warrant, the Series S Warrant, the leak-out agreements and the Placement Agency Agreement are qualified in their entirety by reference to the forms attached hereto as Exhibits 10.1, 4.1, 4.2, 10.2 and 1.1, respectively.

Disclaimers of Representations and Warranties

The representations and warranties of the Company and its subsidiaries contained in the Purchase Agreement and the Placement Agency Agreement have been made solely for the benefit of the parties thereto and beneficiaries thereof. In addition, such representations and warranties (a) have been made only for purposes of such documents, (b) in some cases, have been qualified by documents filed with, or furnished to, the Securities and Exchange Commission by the Company before the date of the Purchase Agreement and the Placement Agency Agreement, (c) are subject to materiality qualifications contained therein which may differ from what may be viewed as material by investors, (d) were made only as of the date of the Purchase Agreement and the Placement Agency Agreement, or such other date as is specified in such documents, and (e) have been included in the Purchase Agreement and the Placement Agency Agreement for the purpose of allocating risk between the contracting parties rather than establishing matters as facts.

Accordingly, the Purchase Agreement and the Placement Agency Agreement are included with this filing only to provide investors with information regarding the terms of such documents, and not to provide investors with any other factual information regarding the Company or its subsidiaries or their respective business. You should not rely on the representations and warranties or any descriptions thereof as characterizations of the actual state of facts or condition of the Company or any of its subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the Purchase Agreement and the Placement Agency Agreement, which subsequent information may or may not be fully reflected in the Company's public disclosures. The Purchase Agreement and Placement Agency Agreement should not be read alone, but should instead be read in conjunction with the other information regarding the Company and its subsidiaries that has been, is or will be contained in, or incorporated by reference into, the Forms 10-K, Forms 10-Q, Forms 8-K, proxy statements, registration statements and other documents that the Company files with the Securities and Exchange Commission.

Forward-Looking Statements

This Current Report on Form 8-K includes forward-looking statements relating to matters that are not historical facts. Forward-looking statements may be identified by the use of words such as "expect," "believe," "will," "should," "would," "project" or comparable terminology or by discussions of strategy. While the Company believes its assumptions and expectations underlying forward-looking statements are reasonable, there can be no assurance that actual results will not be materially different. Risks and uncertainties that could cause materially different results include, among others, the Company's ability to close the offering described herein and whether holders of the Warrants will exercise them for cash and other risks and uncertainties included in the Company's filings with the Securities and Exchange Commission. The Company assumes no duty to update any forward-looking statements.

Item 2.02. Results of Operations and Financial Condition.

The disclosure regarding the unaudited preliminary results for the Company's fourth quarter ended December 31, 2018 and other financial information set forth in Item 7.01 below is incorporated by reference in response to this Item 2.02.

The unaudited preliminary results and other financial information discussed in Item 2.02 and Item 7.01 consists of estimates derived from the Company's internal books and records and has been prepared by, and are the responsibility of, the Company's management. The preliminary financial data are subject to the completion of financial closing procedures, final adjustments and other developments that may arise between now and the time the financial results for the fourth quarter ended December 31, 2018 are finalized. Therefore, actual results may differ materially from these preliminary cash projections and financial data and all of these preliminary cash projections and financial data are subject to change.

The information in this Item 2.02 is being furnished by the Company pursuant to Item 2.02 "Results of Operations and Financial Condition." In accordance with General Instruction B.2 of Form 8-K, the information contained in this Item 2.02 shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. In addition, this information shall not be deemed incorporated by reference into any of the Company's filings with the Securities and Exchange Commission, except as shall be expressly set forth by specific reference in any such filing.

Item 7.01. Regulation FD Disclosure.

On April 2, 2019, the Company issued a press release announcing the offering described in Item 1.01 above, a copy of which is attached as Exhibit 99.1 and is incorporated by reference in response to this Item 7.01.

The prospectus supplement dated April 2, 2019 (the "Prospectus Supplement"), which is part of an effective registration statement on Form S-3 (Registration No. 333-215985), to be filed in connection with the offering described under Item 1.01 contained the following disclosures:

Nasdaq Delisting and Exchange Act Section 12 Registration

The Common Stock is currently registered pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended, or the "Exchange Act." On March 12, 2019 the Nasdaq Stock Market LLC filed a Form 25-NSE with the Securities and Exchange Commission, which delisted the Common Stock from Nasdaq on March 22, 2019 and will deregister the Common Stock from Section 12(b) of the Exchange Act on June 10, 2019. We plan to file a registration statement on Form 8-A to register the Common Stock pursuant to Section 12(g) of the Exchange Act before June 10, 2019.

Our Common Stock currently trades on the OTCQX under the symbol “RGSE.”

Preliminary Fourth Quarter of 2018 Results and Business Update

The following unaudited preliminary results for our fourth quarter ended December 31, 2018 are subject to the completion of our quarterly closing and review procedures, as well as the regular annual audit by our independent registered public accounting firm, and therefore is subject to change.

<i>(000's omitted and unaudited)</i>	<i>Preliminary Dec. 31, 2018</i>	<i>Last Quarter Reported Sept. 30, 2018</i>	<i>Year Ago Quarter Reported Dec. 31, 2017</i>
Selected Balance Sheet Items:			
Cash	\$ 5,831	\$ 8,593	\$ 1,170
Convertible Debt	336	218	1
Shareholder's Equity	10,782	6,639	6,166
Selected Income Statement Items:			
Revenue for Quarter	\$ 2,391	\$ 3,885	\$ 4,910
Gross Margin Percentage	(20)%	9%	10%
Operating Loss	(3,451)	(3,038)	(5,292)
Non-Cash Income (Expense)	(8,462)	(15,253)	37
Net Loss	(11,404)	(18,294)	(5,212)
Other Items:			
Working Capital	\$ 6,901	\$ 5,181	\$ 3,692
Backlog	15,657	15,760	12,765
Debt-to-Equity Ratio	3%	3%	0%

Non-cash expense for debt extinguishment was offset by a non-cash increase to additional paid in capital, and accordingly did not impair stockholders' equity as shown in the table below. Such non-cash expense represented approximately 73% of the loss for the fourth quarter.

On March 30, 2018, we entered into a Securities Purchase Agreement with two unaffiliated institutional and accredited investors for a private placement (“2018 Notes”) of up to \$10.75 million in principal amount and \$10 million funding amount (reflecting \$750,000 of original issue discount). During the fourth quarter, a significant amount of the 2018 Notes was converted to into shares of our Common Stock. Under applicable accounting rules for complex financial instruments, we have recorded these conversions as follows:

(000's omitted)

Statement of Stockholders' Equity:	
Fair value of Class A common stock exchanged for convertible notes	\$ 15,753
Statement of Operations:	
Amortization of debt discount and interest expense	(9,077)
Debt extinguishment on conversion of notes to Class A common stock	903
Net increase in Stockholders' Equity	<u>\$ 7,579</u>
Cash upon conversion, net of offering costs	<u>\$ 3,176</u>

2018 Annual Report

On March 27, 2019, our Board of Directors authorized commencement of a plan to significantly reduce operations in our residential solar division to reduce the associated annual cash outflow, a matter that has previously raised substantial doubt about our ability to operate as a going concern. The report of our independent accounting firm included in our Annual Report on Form 10-K for the year ended December 31, 2017 was unqualified with an explanatory paragraph for substantial doubt about our ability to operate as a going concern. We commenced commercialization of a new product, POWERHOUSE™, during the first quarter of 2019. The revenue for the first quarter from the new product was immaterial and, accordingly, we expect the report of our independent accounting firm to be included in our Annual Report on Form 10-K for the year ended December 31, 2018 will be unqualified with an explanatory paragraph for substantial doubt about our ability to operate as a going concern. We require additional time to complete related disclosures. On March 29, 2019, we filed a Form 12b-25 with the Securities and Exchange Commission to provide notice that we are unable to file our Annual Report on Form 10-K for the year ended December 31, 2018 by the prescribed due date without unreasonable effort or expense. We intend to file our Annual Report on Form 10-K for the year ended December 31, 2018 on or before the fifteenth calendar day following the prescribed due date.

In addition, the disclosure schedules to the Purchase Agreement contained the following information:

The following unaudited preliminary results for the Company's fourth quarter ended December 31, 2018 are subject to the completion of its quarterly closing and review procedures, as well as the regular annual audit by its independent registered public accounting firm, and therefore is subject to change.

<i>(000's omitted)</i>	<i>10-K</i> <i>12/31/18</i> <i>un-audited</i>	<i>2/29/19</i> <i>un-audited</i>	<i>Change</i>
Cash	\$ 5,831	\$ 3,737	\$ (2,094)
Other current assets	4,795	5,387	592
Total current assets	<u>10,626</u>	<u>9,124</u>	<u>(1,502)</u>
Long-term assets	5,634	5,571	(63)
Total assets	<u>\$ 16,260</u>	<u>\$ 14,695</u>	<u>\$ (1,565)</u>
Convertible notes	\$ 336	\$ 120	\$ (216)
Accounts payable and accrued liabilities	2,433	3,168	735
Other current liabilities	956	1,452	496
Total current liabilities	<u>3,725</u>	<u>4,740</u>	<u>1,015</u>
Long-term liabilities	<u>1,753</u>	<u>1,470</u>	<u>(283)</u>
Total liabilities	5,478	6,210	732
Stockholders'equity	<u>10,782</u>	<u>8,485</u>	<u>(2,297)</u>
	<u>\$ 16,260</u>	<u>\$ 14,695</u>	<u>\$ (1,565)</u>
Working Capital	6,901	4,384	(2,517)
Debt to Equity	0.03	0.01	

The information under this Item 7.01 and the press release attached hereto as Exhibit 99.1 are being furnished by the Company pursuant to Item 7.01. In accordance with General Instruction B.2 of Form 8-K, the information contained under this Item 7.01 and the press release attached hereto as Exhibit 99.1 shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liability of that section. In addition, this information shall not be deemed incorporated by reference into any of the Company's filings with the Securities and Exchange Commission, except as shall be expressly set forth by specific reference in any such filing.

Item 8.01. Other Events.

The Company is including in this Item 8.01 certain risk factors set forth in the Prospectus Supplement for purposes of incorporating such risk factors by reference into certain of the Company's outstanding registration statements.

We need to successfully commercialize POWERHOUSE™ or increase our sales, installations and revenue in order to achieve our goal of operating profitability.

Our current levels of sales, installations and revenue are insufficient for profitable operations. We believe we must commercialize POWERHOUSE™ 3.0, the principle component of our revenue growth strategy. Alternatively, we must increase our sales, installations and revenue in our Solar Division to achieve our goal of operating profitably. If we are unsuccessful in executing these plans, we will be unable to increase revenue and will not achieve our goal of operating profitability.

An increase in our cost of materials could arise as a result of the United States imposing trade remedies on imported solar panels, cells, inverters, batteries or other products related to our business.

During 2018, the United States and China each imposed new tariffs on various products imported from the other country. The U.S. tariffs include an additional 25% tariff on solar panels and cells that are manufactured in China and a tariff on inverters, certain batteries and other electrical equipment currently set at 25% effective January 1, 2019. The United States also has, from time to time, imposed, or announced tariffs on goods imported from other countries we use in our business. We cannot predict what actions may ultimately be taken with respect to tariffs or trade relations between the United States and other countries, what products may be subject to such actions, or what actions may be taken by the other countries in retaliation. The adoption and expansion of trade restrictions, the occurrence of a trade war, or other governmental action related to tariffs or trade agreements or policies has the potential to adversely impact our supply chain, our costs, our suppliers, and the U.S. economy, which could in turn adversely affect our business, financial condition and results of operation.

An increase in our cost of materials could arise as a result of changes in the price of oil and the foreign currency exchange rate for Chinese yuan.

The baseplate of our POWERHOUSE™ in-roof solar shingle is plastic and, accordingly, changes in the price of oil will affect our cost of this material. Currently, we purchase the solar laminate for our POWERHOUSE™ in-roof solar shingle from a Chinese manufacturer, and, accordingly, changes in the Chinese yuan versus the US Dollar will affect our cost of this material.

We may be unable to successfully commercialize POWERHOUSE™ 3.0, which may negatively impact our business and results of operation.

There are risks we must address to successfully commercialize POWERHOUSE™ 3.0:

- The adequacy of, and access to, capital necessary to commercialize POWERHOUSE™ 3.0;
 - Our ability to satisfy the conditions and our obligations under the exclusive domestic and international world-wide Technology License Agreement with Dow Global Technologies LLC for its POWERHOUSE™ solar shingles;
 - Our ability to grow a nationwide network of local roofers and solar installers to purchase POWERHOUSE™ solar shingles;
 - Our ability to contract with homebuilders to purchase POWERHOUSE™ solar shingles for their communities;
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- Our ability to manage a supply chain, including the cost and availability of raw materials, in order to achieve production levels and competitive pricing of the POWERHOUSE™ 3.0 shingles;
- Our ability to successfully expand operations and realize profitable revenue growth from the sale and installation of POWERHOUSE™ 3.0;
- Our ability to successfully and timely expand our POWERHOUSE™ 3.0 business outside of the United States and manage foreign exchange risks associated with the POWERHOUSE™ 3.0 business;
- Intellectual property infringement claims, and warranty claims related to the POWERHOUSE™ 3.0 business; and
- Competition in the built-in photovoltaic solar system business.

Our License with Dow for the exclusive use of the POWERHOUSE™ trademark name is subject to our selling of 50 megawatts of POWERHOUSE™ 3.0 in-roof shingle within the first 5 years and failure to do so could adversely affect our business, financial condition and results of operation.

If we do not sell 50 megawatts of POWERHOUSE™ 3.0 in-roof shingles during the first 5 years after obtaining UL certification, Dow has the right to amend the license to be non-exclusive. If that were to happen, Dow would be allowed to grant rights to others to sell POWERHOUSE™ 3.0 in-roof solar shingles and use associated intellectual property, thereby increasing competition, which could adversely affect our business, financial condition and results of operation.

While we are exploring and evaluating strategic alternatives, we may not be successful in identifying or completing any strategic alternative and any such strategic alternative may not yield additional value for shareholders.

On March 7, 2019, we announced that we had commenced a review of strategic alternatives which could result in, among other things, the possible sale of the Company. Our exploration of strategic alternatives may not result in the identification or consummation of any transaction. In addition, we may incur substantial expenses associated with identifying and evaluating potential strategic alternatives. The process of exploring strategic alternatives may be time consuming and disruptive to our business operations, and if we are unable to effectively manage the process, our business, financial condition and results of operations could be adversely affected. Any potential transaction and the related valuation would be dependent upon a number of factors that may be beyond our control, including, among other factors, market conditions, industry trends, the interest of third parties in our business and the availability of financing to potential buyers on reasonable terms.

We will likely need to receive approval from our shareholders to increase the number of shares of our Common Stock authorized for issuance in order to raise additional capital from equity financing in the future.

Following this offering, the Company expects to have approximately 11 million shares of Common Stock available for issuance in the future of the 150 million shares of Common Stock currently authorized. If the Company needs to raise additional capital from the sale of shares of Common Stock in the future and we have an insufficient number of shares of Common Stock authorized, we will need to receive approval from our shareholders to amend our articles of incorporation to increase the number of shares of Common Stock authorized for issuance.

Our Common Stock could become subject to the Securities and Exchange Commission's "penny stock" regulations, which may limit the liquidity of Common Stock held by our shareholders.

The Securities and Exchange Commission has adopted regulations which generally define a "penny stock" to be an equity security that has a market price of less than \$5.00 per share, subject to specific exemptions. Based on our Common Stock's trading price below \$5.00 per share, if we are unable in the future to continue to satisfy an available exemption from the definition of "penny stock," then our Common Stock would be considered a penny stock for purposes of federal securities laws. Penny stock is subject to regulations, which affect the ability of broker-dealers to sell such securities. Broker-dealers who recommend a penny stock to persons (other than established customers and accredited investors) must make a special written suitability determination and receive the purchaser's written agreement to a transaction prior to sale.

If penny stock regulations apply to our Common Stock, it may be difficult to trade the stock because compliance with the regulations can delay and/or preclude certain trading transactions. Broker-dealers could be discouraged from effecting transactions in our Common Stock if it penny stock regulations apply because of the sales practice and disclosure requirements. This could adversely affect the liquidity or price of our Common Stock and impede the sale of the Common Stock in the secondary market.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
1.1	Engagement Letter, dated March 19, 2019, among Real Goods Solar, Inc. and Dawson James Securities, Inc.
4.1	Form of Series R Warrant
4.2	Form of Series S Warrant
5.1	Opinion of Brownstein Hyatt Farber Schreck, LLP
10.1	Form of Securities Purchase Agreement, dated April 2, 2019, among Real Goods Solar, Inc. and the purchasers party thereto
10.2	Form of Leak-Out Agreement
23.1	Consent of Brownstein Hyatt Farber Schreck, LLP (contained in Exhibit 5.1 above)
99.1	Press Release dated April 2, 2019

SIGNATURE

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 hereunto duly authorized.

REAL GOODS SOLAR, INC.

By: /s/ Alan Fine
Alan Fine
Chief Financial Officer

Date: April 2, 2019



March 19, 2019

PERSONAL AND CONFIDENTIAL

Mr. Dennis Lacey
 CEO
 Real Goods Solar, Inc.
 110 16th Street
 Suite 300
 Denver, CO 80202

Dear Mr. Lacey:

This letter will confirm the understanding and agreement (the "Agreement") between Dawson James Securities, Inc. ("DJS") and Real Goods Solar, Inc. and its related and affiliated entities (the "Company") as follows:

1. **Engagement:** Subject to the terms set forth herein, the Company hereby engages DJS as its exclusive agent in the placement of approximately \$10.0 million of one or more classes or series of securities (the "Securities") of the Company to investors (the "Investors") with an intended closing for a portion of the Securities on or before March 31, 2019. The Securities may take the form of common stock of the Company (the "Common Stock"), convertible debt, or other equity-linked securities or any combination thereof. Such placement shall be referred to as the "Transaction." In the case all or a portion of the Securities consist of convertible debt, the intent is to procure a term sheet from a lead investor on or before March 31, 2019.
2. **DJS's Role:** DJS hereby accepts the engagement described herein and, in that connection, agrees to:
 - (a) review any offering documents used in connection with the Transaction (the "Offering Documents") describing the Company and the Securities;
 - (b) review with the Company the Investors to whom the Offering Documents will be provided;
 - (c) assist in the preparation of other communications to be used in placing the Securities, whether in the form of letter, circular, notice or otherwise; and
 - (d) assist and advise the Company with respect to the negotiation of the sale of the Securities to the Investors.
3. **Term; Exclusivity:** This engagement will commence on the date hereof and terminate on the date on which a party receives written notice from the other party of termination of this engagement. Subject to the terms hereof, during DJS's engagement hereunder: (i) the Company will not, and will not permit its representatives to, other than in coordination with DJS, contact or solicit institutions, corporations or other entities as potential purchasers of the Securities and (ii) the Company will not pursue any equity or debt financing transaction which would be in lieu of a Transaction. Notwithstanding the foregoing the Company may engage in, or continue discussions with, or engage, other investment bankers, advisors or other parties related to Strategic Transactions (as defined below) and M&A related transactions. Either party may terminate this Agreement at any time upon 5 days prior notice at which the Company shall pay to DJS all fees earned and reimburse DJS for all expenses incurred, in accordance with Paragraph 7 hereof. The Company agrees to pay DJS any fees specified in Paragraph 7 during the time limitations specified herein. The Company agrees that this Paragraph 3 and the provisions relating to the payment of fees (Paragraph 7), reimbursement of expenses (Paragraph 7), indemnification and contribution (Paragraph 9), confidentiality (Paragraph 12), conflicts (Paragraph 16), independent contractor (Paragraph 15) and cost and attorney's fees (Paragraph 18) will survive any termination of this Agreement. DJS may retain other brokers, dealers, agents or underwriters on its behalf in connection with a Transaction. DJS may retain other brokers or dealers to act as sub-agents or selected-dealers on its behalf in connection with such Transactions.

4. **Best Efforts:** It is understood that DJS's involvement in the Transaction is strictly on a reasonable best efforts basis and that the consummation of the Transaction will be subject to, among other things, market conditions. It is understood that DJS's assistance in the Transaction will be subject to the satisfactory completion of such investigation and inquiry into the affairs of the Company as DJS deems appropriate under the circumstances (such investigation hereinafter to be referred to as "Due Diligence") and to the receipt of all internal approvals of DJS in connection with the Transaction. DJS shall have the right in its sole discretion to terminate this Agreement if the outcome of the Due Diligence is not satisfactory to DJS or if approval of its internal committees is not obtained.
5. **Information:** The Company shall furnish, or cause to be furnished, to DJS all information requested by DJS for the purpose of rendering services hereunder (all such information being the "Information"). In addition, the Company agrees to make available to DJS upon request from time to time the officers, directors, accountants, counsel and other advisors of the Company. The Company recognizes and confirms that DJS: (a) will use and rely on the Information, including the Offering Documents, and on information available from generally recognized public sources in performing the services contemplated by this Agreement without having independently verified the same; (b) does not assume responsibility for the accuracy or completeness of the Offering Documents or the Information and such other information; and (c) will not make an appraisal of any of the assets or liabilities of the Company. Upon reasonable request, the Company will meet with DJS or its representatives to discuss all information relevant for disclosure in the Offering Documents and will cooperate in any investigation undertaken by DJS thereof, including any document included or incorporated by reference therein.
6. **Related Agreement:**
- (a) If required by DJS, the Company shall enter into a Placement Agency Agreement with DJS that is substantially consistent with DJS's standard form, modified as appropriate to reflect the terms of the Transaction and containing such terms, covenants, conditions, representations, warranties, and providing for the delivery of legal opinions, comfort letters and officers' certificates, all in form and substance satisfactory to DJS and its counsel.

- (b) Unless the Transaction is an underwritten offering by DJS, the sale of Securities to any Investor will be evidenced by a purchase agreement (“Purchase Agreement”) between the Company and such Investor in a form reasonably satisfactory to the Company and DJS. Prior to the signing of any Purchase Agreement, officers of the Company with responsibility for financial affairs will be available to answer inquiries from prospective investors.
7. **Fees:** As compensation for the services to be rendered by DJS hereunder, the Company will pay DJS the following fee (“Transaction Fee”):
- (a) A cash fee payable immediately upon the closing of the Transaction and equal to 7% of the aggregate gross proceeds raised in the Transaction.
- (b) For the sum of \$100.00, sell to DJS or its designees at closing such number of warrants (the “DJS Warrants”) to purchase common stock equal to 8% of the aggregate number of common stock issued and issuable pursuant to the Transaction. The DJS Warrants shall have the same terms as the warrants (if any) issued to the purchasers in the Transaction except that the exercise price shall be 125% of the public offering price per share and the expiration date shall be 5 years from the closing of the Transaction. The Warrants will have a cashless exercise provision regardless if there is an effective registration statement, and the shares underlying the Warrants will have standard piggyback and demand registration rights.
- (c) Expenses. The Company agrees to reimburse DJS for: (a) DJS’s legal fees and expenses in connection with the Transaction in the amount of up to \$15,000 (or up to \$100,000 if DJS’ legal counsel drafts definitive Transaction documents); notwithstanding the foregoing, if in the event the Lead Investor’s counsel drafts definitive Transaction documents, then the Company shall pay the Lead Investor’s legal expenses if requested by the Lead Investor). The DJS legal fee retainer in the amount of \$15,000 shall be payable to DJS’s counsel Ellenoff, Grossman & Schole LLP on the date hereof and the balance (if any) is payable on the closing , and (b) DJS’s reasonable out-of-pocket expenses in connection with the Transaction, including, without limitation, road show expenses (travel, accommodations, meals and entertainment), lucite transaction memorabilia, background checks and courier/postage expenses in the amount of up to \$5,000, (provided, however, that such reimbursement amount in no way limits or impairs the indemnification and contribution provisions of this Agreement). In the event that this Agreement is terminated prior to the consummation of the Transaction, DJS shall be entitled to reimbursement of DJS’s actual expenses.
8. **Representations and Warranties:** The Company agrees DJS may rely upon, and is a third-party beneficiary of, the representations and warranties, and applicable covenants, set forth in any agreements with Investors in the Transaction

9. **Indemnification:**

- a. The Company will indemnify DJS and its affiliates, stockholders, directors, officers, employees and controlling persons (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) against all losses, claims, damages, expenses and liabilities, as the same are incurred (including the reasonable fees and expenses of counsel), relating to or arising out of its activities hereunder or pursuant to this Agreement, except to the extent that any losses, claims, damages, expenses or liabilities (or actions in respect thereof) are found in a final judgment (not subject to appeal) by a court of law to have resulted primarily and directly from DJS's willful misconduct or gross negligence in performing the services described herein.
- b. Promptly after receipt by DJS of notice of any claim or the commencement of any action or proceeding with respect to which DJS is entitled to indemnity hereunder, DJS will notify the Company in writing of such claim or of the commencement of such action or proceeding, and the Company will assume the defense of such action or proceeding and will employ counsel reasonably satisfactory to DJS and will pay the fees and expenses of such counsel. Notwithstanding the preceding sentence, DJS will be entitled to employ counsel separate from counsel for the Company and from any other party in such action if counsel for DJS reasonably determines that it would be inappropriate under the applicable rules of professional responsibility for the same counsel to represent both the Company and DJS. In such event, the reasonable fees and disbursements of no more than one such separate counsel will be paid by the Company, in addition to local counsel. The Company will have the exclusive right to settle the claim or proceeding provided that the Company will not settle any such claim, action or proceeding without the prior written consent of DJS, which will not be unreasonably withheld, conditioned or delayed.
- c. The Company agrees to notify DJS promptly of the assertion against it or any other person of any claim or the commencement of any action or proceeding relating to a transaction contemplated by this Agreement.
- d. If for any reason the foregoing indemnity is unavailable to DJS or insufficient to hold DJS harmless, then the Company shall contribute to the amount paid or payable by DJS as a result of such losses, claims, damages or liabilities in such proportion as is appropriate to reflect not only the relative benefits received by the Company on the one hand and DJS on the other, but also the relative fault of the Company on the one hand and DJS on the other that resulted in such losses, claims, damages or liabilities, as well as any relevant equitable considerations. The amounts paid or payable by a party in respect of losses, claims, damages and liabilities referred to above shall be deemed to include any legal or other fees and expenses incurred in defending any litigation, proceeding or other action or claim. Notwithstanding the provisions hereof, DJS's share of the liability hereunder shall not be in excess of the amount of fees actually received, or to be received, by DJS under this Agreement (excluding any amounts received as reimbursement of expenses incurred by DJS).

- e. The Company and DJS agree that the Arbitrator (as defined below) shall enforce the plain terms of this Indemnity and Reimbursement provision, notwithstanding any law or public policy to the contrary.
- f. These indemnification provisions shall remain in full force and effect whether or not the transaction contemplated by this Agreement is completed and shall survive the termination of this Agreement and shall be in addition to any liability that the Company might otherwise have to any indemnified party under this Agreement or otherwise.
10. **Governing Laws:** This Agreement will be deemed to have been made and delivered in the State of Florida and both the binding provisions of this Agreement and the transactions contemplated hereby will be governed as to validity, interpretation, construction, effect and in all other respects by the internal laws of the State of Florida, without regard to the conflict of laws principles thereof. Each of DJS and the Company: (i) agrees that any legal suit, action or proceeding arising out of or relating to this Agreement and/or the transactions contemplated hereby will be instituted exclusively in the courts located in the county of Palm Beach, Florida; (ii) waives any objection which it may have or hereafter to the venue of any such suit, action or proceeding; and (iii) irrevocably consents to the jurisdiction of the courts located in the county of Palm Beach, Florida, in any such suit, action or proceeding. Each of DJS and the Company further agrees to accept and acknowledge service of any and all process which may be served in any such suit, action or proceeding in such courts and agrees that service of process upon the Company mailed by certified mail to the Company's address will be deemed in every respect effective service of process upon the Company, in any such suit, action or proceeding, and service of process upon DJS mailed by certified mail to DJS's address will be deemed in every respect effective service process upon DJS, in any such suit, action or proceeding. Notwithstanding any provision of this Agreement to the contrary, the Company agrees that neither DJS nor its affiliates, and the respective officers, directors, employees, agents and representatives of DJS, its affiliates and each other person, if any, controlling DJS or any of its affiliates, will have any liability (whether direct or indirect, in contract or tort or otherwise) to the Company for or in connection with the engagement and transactions described herein except for any such liability for losses, claims, damages or liabilities incurred by the Company that are finally judicially determined to have resulted from the bad faith or gross negligence of such individuals or entities. DJS will act under this Agreement as an independent contractor with duties to the Company.
11. **Right of First Refusal:** Except as provided for below with regard to a "Strategic Transaction," provided that DJS raises \$10 million in gross proceeds actually received by the Company in a Transaction or series of Transactions, DJS will be given right of first refusal on all public and private financings during the nine (9) month period after the term has expired. Any decision by DJS to act in such capacity will be documented in a separate agreement or amendment hereto, which would include, among other things, customary fees, indemnification of DJS, the terms of any such financing, conditions precedent including due diligence, and current conditions, as well as customary representations and warranties. DJS' right of first refusal shall not apply to the Company's pursuit of a "Strategic Transaction" defined as: (i) the sale or other conveyance of a controlling interest in the Company to any person, or persons; (ii) a "change of control" transaction whether by way of sale, merger, reorganization, or otherwise, (iii) issuance of Securities to holders of securities outstanding as of the date hereof, including, without limitation, upon exchange of such outstanding securities for Securities or the reduction of the exercise or conversion price of such outstanding securities, and; (iv) issuance of Securities to strategic institutional investors that shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital.

12. **Confidentiality:** Except as required by law, this Agreement and the services and advice to be provided by DJS hereunder, shall not be disclosed to third parties without DJS's prior written permission. Notwithstanding, DJS shall be permitted to advertise the services it provided in connection with the Transaction subsequent to the consummation of the Transaction. Such expense shall not be reimbursable under paragraph 7 hereof.
13. **No Brokers:** The Company represents and warrants to DJS that there are no brokers, representatives or other persons which have an interest in compensation due to DJS from any transaction contemplated herein or which would otherwise be due any fee, commission or remuneration upon consummation of any Transaction.
14. **Authorization:** The Company and DJS represent and warrant that each has all requisite power and authority to enter into and carry out the terms and provisions of this Agreement and the execution, delivery and performance of this Agreement does not breach or conflict with any agreement, document or instrument to which it is a party or bound.
15. **Independent Contractor:** The Company acknowledges that in performing its services, DJS is acting as an independent contractor, and not as a fiduciary, agent or otherwise, of the Company or any other person. The Company acknowledges that in performing its services hereunder, DJS shall act solely pursuant to a contractual relationship on an arm's length basis (including in connection with determining the terms of any Transaction). Any review by DJS of the Company, the transactions contemplated hereby or other matters relating to such transactions has been and shall be performed solely for the benefit of DJS and shall not be on behalf of the Company. The Company agrees that it shall not claim that DJS owes a fiduciary duty to the Company in connection with such transaction or the process leading thereto. No one other than the Company is authorized to rely upon the engagement of DJS hereunder or any statements, advice, opinions or conduct by DJS. The Company further acknowledges that DJS may perform certain of the services described herein through one or more of its affiliates and any such affiliates shall be entitled to the benefit of this Agreement.
16. **Conflicts:** The Company acknowledges that DJS and its affiliates may have and may continue to have investment banking and other relationships with parties other than the Company pursuant to which DJS may acquire information of interest to the Company. DJS shall have no obligation to disclose such information to the Company or to use such information in connection with any contemplated transaction.
17. **Anti-Money Laundering:** To help the United States government fight the funding of terrorism and money laundering, the federal laws of the United States require all financial institutions to obtain, verify and record information that identifies each person with whom they do business. This means we must ask you for certain identifying information, including a government-issued identification number (e.g., a U.S. taxpayer identification number) and such other information or documents that we consider appropriate to verify your identity, such as certified articles of incorporation, a government-issued business license, a partnership agreement or a trust instrument.

18. **Costs and Attorneys' Fees:** If any action, suit, arbitration proceeding, or any other proceeding is instituted arising out of this Agreement, the prevailing party shall recover all of such party's costs, including, without limitation, the court costs and attorneys' fees incurred therein, including any and all appeals or petitions therefrom. As used herein, "attorneys' fees" shall mean the full and actual costs of any legal services actually rendered in connection with the matters involved, calculated on the basis of the usual fee charged by the attorneys performing such services. The parties agree that final, binding, non-appealable arbitration is the sole method of dispute resolution under this Agreement.
19. **Pre-Arbitration Informal Dispute Resolution and Arbitration:**
Informal Dispute Resolution. The parties shall use good faith efforts to resolve any disputes that arise under this Agreement. In the event of a dispute, the party with a dispute shall provide written notice, by facsimile or email, of the dispute to the other party. Both parties shall meet in person or by conference call within fifteen (15) business days of the effective date of a notice of a dispute to resolve the issues in dispute. The effective date of the notice of a dispute is the date that the notice was faxed or e-mailed.
- Arbitration.* The Company and DJS agree that any dispute concerning this Agreement, including disputes as to arbitrability, that cannot be resolved by the Pre-Arbitration Informal Dispute Resolution meeting shall be resolved through final, binding, non-appealable arbitration, before a single, neutral arbitrator, at JAMS, in Boca Raton, Florida (the "Arbitrator"). Venue of all arbitration shall be JAMS Dispute Resolution Center, Boca Raton, Florida. The Parties initially shall split the costs of any arbitration proceeding fifty-fifty (50-50), but the arbitrator must award arbitration costs and attorneys' fees to the prevailing party. Judgment on any arbitration award may be entered in any Court having jurisdiction. Any arbitration award shall be in United States Dollars and may be enforced in any jurisdiction in which the party against whom enforcement is sought maintains assets. The Arbitrator shall have no authority to award punitive, consequential, indirect, special, exemplary, or other damages not measured by the prevailing party's actual compensatory damages and may not, in any event, make any ruling, finding, or award that does not conform to the terms and conditions of this Agreement. **IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOST PROFITS ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE PERFORMANCE OR BREACH THEREOF, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY THEREOF.** The Parties agree that the arbitrator shall enforce the terms of this Agreement, including the indemnity and reimbursement provisions of this Agreement, and no bar order or any other Court order shall operate to extinguish DJS's claims to indemnity and reimbursement. The Parties agree not to seek to avoid their indemnity and reimbursement obligations in any Court and that this Agreement shall be a complete defense to any such efforts. The Parties agree to limit their respective testimony at any arbitration hearing to three hours per side. This section provides the sole recourse for the settlement of any disputes arising out of, in connection with, or related to this Agreement.
20. **Miscellaneous:** This Agreement constitutes the entire understanding and agreement between the Company and DJS with respect to the subject matter hereof and supersedes all prior understanding or agreements between the parties with respect thereto, whether oral or written, express or implied. Any amendments or modifications must be executed in writing by both parties. It is understood and agreed that DJS's services hereunder will not include providing any tax, accounting, legal or regulatory advice or developing any tax strategies for the Company. This Agreement and all rights, liabilities and obligations hereunder shall be binding upon and inure to the benefit of each party's successors but may be assigned without prior written approval of the other party. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but such counterparts shall, together, constitute only one instrument. The descriptive headings of the Paragraphs of this Agreement are inserted for convenience only, do not constitute a part of this Agreement and shall not affect in anyway the meaning or interpretation of this Agreement.

If all the foregoing is acceptable to you, please so indicate by signing in the space provided below and returning a signed copy of this letter to us for our records.

Dawson James Securities is delighted to accept this engagement and looks forward to working with you. Please confirm that the foregoing correctly sets forth our Agreement by returning one executed Agreement to our corporate office at 1 North Federal Highway, Boca Raton, FL 33432.

Very truly yours,

DAWSON JAMES SECURITIES, INC.

BY: /s/ Robert Keyser
Name: Mr. Robert Keyser
Title: CEO

ACCEPTED AND AGREED TO
AS OF THE ABOVE DATE:

REAL GOODS SOLAR, INC.

BY: /s/ Dennis Lacey
Name: Mr. Dennis Lacey
Title: CEO

1 North Federal Highway • Suite 500 • Boca Raton, FL 33432 • Toll Free 866.928.0928 • Main 561.391.5555 • Fax 561.391.5757
New York, NY • Columbia, MD, • Manasquan, NJ • Boca Raton, FL

www.dawsonjames.com
Member FINRA/SIPC

REAL GOODS SOLAR, INC.

SERIES R WARRANT TO PURCHASE COMMON STOCK

Warrant No.: R-____
 Number of Shares of Common Stock: ____
 Date of Issuance: _____, 2019 (“**Issuance Date**”)

Real Goods Solar, Inc., a Colorado corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [PURCHASER], the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined in Section 1(b)) then in effect, at any time or times on or after the Issuance Date (the “**Initial Exercisability Date**”), but not after 11:59 p.m., New York time, on the Expiration Date, up to such number of fully paid and nonassessable shares of Common Stock equal to _____, subject to adjustment as provided herein (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Series R Warrant to Purchase Common Stock (including any warrants to purchase Common Stock issued in exchange, transfer or replacement hereof, this “**Warrant**”), shall have the meanings set forth in Section 17. This Warrant is one of the Series R Warrants to Purchase Common Stock (the “**Series R Warrants**”) originally issued pursuant to Section 2 of the Securities Purchase Agreement, dated as of April 2, 2019 (the “**Subscription Date**”), by and among the Company and the purchasers signatory thereto.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder at any time or times on or after the Initial Exercisability Date, in whole or in part, by (i) delivery of a written notice, in the form attached hereto as Exhibit A (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant and (ii) (A) payment to the Company of an amount equal to the applicable Exercise Price (as defined in Section 1(b)) multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds or (B) if the provisions of Section 1(d) are applicable, by notifying the Company that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. No ink-original Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required. Execution and delivery of an Exercise Notice for all of the then remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof. On or before the first (1st) Trading Day following the date on which the Company has received the Exercise Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of the Exercise Notice to the Holder and the Company’s transfer agent (the “**Transfer Agent**”). On or before the earlier of (i) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, following the date on which the Company has received the Exercise Notice, so long as the Holder delivers the Aggregate Exercise Price (or notice of a Cashless Exercise) on or prior to the first (1st) Trading Day following the date on which the Company has received the Exercise Notice (the “**Share Delivery Date**”) (provided that if the Aggregate Exercise Price has not been delivered by such date, the Share Delivery Date shall be one (1) Trading Day after the Aggregate Exercise Price (or notice of a Cashless Exercise) is delivered), the Company shall, (X) provided that the Transfer Agent is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program and either (A) the issuance of the Warrant Shares subject to the Exercise Notice is registered under the 1933 Act on an effective and available registration statement, (B) this Warrant is being exercised via Cashless Exercise or (C) such Warrant Shares may be resold by the Holder pursuant to a Permitted Securities Transaction, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) otherwise, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise. The Company agrees to maintain a transfer agent that is a participant in the DTC Fast Automated Securities Transfer Program so long as this Warrant remains outstanding and exercisable. The Company shall be responsible for all fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any. Upon delivery of the Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three (3) Trading Days after any exercise and at its own expense, issue a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares issuable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional Warrant Shares are to be issued upon the exercise of this Warrant, but rather the number of Warrant Shares to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all taxes (other than the Holder’s income taxes) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. The Company’s obligations to issue and deliver Warrant Shares in accordance with the terms and subject to the conditions hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination. If the Holder exercises this Warrant (other than by Cashless Exercise) at a time when either (I) the issuance of the Warrant Shares subject to the Exercise Notice is not registered under the 1933 Act on an effective and available registration statement or (II) the Holder may not sell the such Warrant Shares pursuant to a Permitted Securities Transaction, then any certificate representing such Warrant Shares may contain a restrictive legend.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$0.20, subject to adjustment as provided herein.

(c) Company’s Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason, in the manner required by Section 1(a), to issue to the Holder on or prior to the Share Delivery Date either (I) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company’s share register or if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the Holder’s balance account with DTC, for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant, or (II) if the Registration Statement (as defined in Section 1(d)) covering the issuance of all of the Warrant Shares that are the subject of the Exercise Notice (the “**Unavailable Warrant Shares**”) is not available for the issuance of such Unavailable Warrant Shares and the Company fails to promptly, but in no event later than one (1) Trading Day thereafter, (x) so notify the Holder and (y) deliver the Warrant Shares electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system (the event described in the immediately foregoing clause (II) is hereinafter referred as a “**Notice Failure**” and together with the event described in clause (I) above, an “**Exercise Failure**”), as the case may be, and if on or after the Share Delivery Date the Holder (or any other Person in respect, or on behalf, of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock equal to or any portion of the number of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company (a “**Buy-In**”), then, in addition to all other remedies available to the Holder, the Company shall, within three (3) Trading Days after the Holder’s request and in the Holder’s discretion, either (i) pay cash to the Holder in an amount equal to the Holder’s total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (the “**Buy-In Price**”), at which point the Company’s obligation to deliver such certificate (and to issue such shares of Common Stock) or credit such Holder’s balance account with DTC for such shares of Common Stock shall terminate, or (ii) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit such Holder’s balance account with DTC, as applicable, and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) any trading price of the Common Stock selected by the Holder in writing as in effect at any time during the period beginning on the date of the applicable Exercise Notice and ending on the date of such issuance and payment under this Section 1(c). Nothing shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver certificates representing shares of Common Stock (or to electronically deliver such shares of Common Stock) upon the exercise of this Warrant as required pursuant to the terms hereof.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, if the Registration Statement on Form S-3 (File number 333-215985) or other applicable registration statement under the 1933 Act (the “**Registration Statement**”) covering the issuance of the Unavailable Warrant Shares is not available for the issuance of such Unavailable Warrant Shares the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the “Net Number” of shares of Common Stock determined according to the following formula (a “**Cashless Exercise**”):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{D}$$

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised.

B= as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) (64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Exercise Notice if such Exercise Notice is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 1(a) hereof or (iii) the VWAP on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of “regular trading hours” on such Trading Day.

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

D= the Closing Sale Price of the Common Stock on the date of the Exercise Notice.

“**Bid Price**” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in a Cashless Exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the 1933 Act, the Warrant Shares shall take on the registered characteristics of the Warrant being exercised. The Company agrees not to take any position contrary to this Section 1(d). Notwithstanding the foregoing, on or after the 60th day following the Issuance Date, in the event that the VWAP of the Common Stock for 5 consecutive Trading Days is less than the Per Share Purchase Price (subject to adjustment for any stock splits, stock dividends, stock combinations, recapitalizations and similar events) for 5 consecutive Trading Days (such 5 Trading Day period, the "**Measurement Period**"), the Holder may, at any time following the Measurement Period, in its sole discretion and regardless of whether or not there is an effective registration statement covering the issuance of any Warrant Shares, exercise this Warrant in whole or in part and, in lieu of the foregoing or of making any cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the aggregate Exercise Price, elect instead to receive upon such exercise a number of shares of Common Stock equal to the product of (x) the aggregate number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise and (y) 0.50.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 12.

(f) Beneficial Ownership Limitation on Exercises. Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to the terms and conditions of this Warrant and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of ___% (the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of this Warrant beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 1(f). For purposes of this Section 1(f), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the “**1934 Act**”). For purposes of this Warrant, in determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of this Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the “**SEC**”), as the case may be, (y) a more recent public announcement by the Company or (3) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 1(f), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of this Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided, however, that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and (ii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Series R Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(f) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(f) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

(g) Insufficient Authorized Shares. If at any time while this Warrant remains outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise of this Warrant at least a number of shares of Common Stock equal to the maximum number of shares of Common Stock as shall from time to time be necessary to effect the exercise of all of this Warrant then outstanding (the “**Required Reserve Amount**” and the failure to have such sufficient number of authorized and unreserved shares of Common Stock, an “**Authorized Share Failure**”), then the Company shall promptly take all action reasonably necessary to increase the Company’s authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for this Warrant and the other Series R Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than seventy-five (75) days after the occurrence of such Authorized Share Failure, the Company shall either (x) obtain the written consent of its shareholders for the approval of an increase in the number of authorized shares of Common Stock and provide each shareholder with an information statement with respect thereto or (y) hold a meeting of its shareholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each shareholder with a proxy statement and shall use its reasonable best efforts to solicit its shareholders’ approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the shareholders that they approve such proposal. Notwithstanding the foregoing, if any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C. The initial number of shares of Common Stock reserved for exercise of this Warrant and the other Series R Warrants and each increase in the number of shares so reserved shall be allocated pro rata among the Holder and the holders of the other Series R Warrants, based on the number of shares of Common Stock issuable upon exercise of this Warrant (without regard to any limitations in exercise) issued to the Holder on the Issuance Date (the “**Authorized Share Allocation**”). In the event that the Holder shall sell or otherwise transfer this Warrant, each transferee shall be allocated a pro rata portion of such holder’s Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Series R Warrants shall be allocated to the Holder and the remaining holders of Series R Warrants, pro rata based on the shares of Common Stock issuable upon exercise of the Series R Warrants then held by such holders (without regard to any limitations on the exercise of the Series R Warrants).

2 . ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and the number of Warrant Shares shall be adjusted from time to time as follows:

(a) Voluntary Adjustment By Company. The Company may at any time during the term of this Warrant, subject to the approval of any applicable Eligible Market and with the prior written consent of the Required Holders, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

(b) Adjustment Upon Subdivision or Combination of Shares of Common Stock. If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(b) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(c) Subsequent Equity Sales. If the Company or any Subsidiary thereof, as applicable, at any time after the Initial Exercisability Date, while this Warrant is outstanding, shall sell or grant any option to purchase, or sell or grant any right to reprice, or otherwise dispose of or issue (or announce any offer, sale, grant or any option to purchase or other disposition) any Common Stock, Option or Convertible Security, at an effective price per share less than the Exercise Price then in effect (such lower price, the “**Base Share Price**” and such issuances collectively, a “**Dilutive Issuance**”) (it being understood and agreed that if the holder of the Common Stock, Option or Convertible Security so issued shall at any time, whether by operation of purchase price adjustments, reset provisions, floating conversion, exercise or exchange prices or otherwise, or due to warrants, options or rights per share which are issued in connection with such issuance, be entitled to receive shares of Common Stock at an effective price per share that is less than the Exercise Price, such issuance shall be deemed to have occurred for less than the Exercise Price on such date of the Dilutive Issuance at such effective price), then simultaneously with the consummation of each Dilutive Issuance the Exercise Price shall be reduced and only reduced to equal the Base Share Price. Notwithstanding the foregoing, no adjustments shall be made, paid or issued under this Section 2(c) in respect of an Exempt Issuance; provided, however, for the purposes of this Section 2(c), clauses (iv), (vi) and (vii) of Exempt Issuance shall not be deemed an Exempt Issuance. For purposes of clarification, whether or not the Company provides a Dilutive Issuance Notice pursuant to this Section 2(c), upon the occurrence of any Dilutive Issuance, the Holder is entitled to receive a number of Warrant Shares based upon the Base Share Price regardless of whether the Holder accurately refers to the Base Share Price in the Exercise Notice. For all purposes of the foregoing (including, without limitation, determining the Base Share Price under this Section 2(c)), the following shall be applicable:

(i) Issuance of Options. If the Company in any manner grants or sells any Options and the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof is less than the Exercise Price then in effect, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such Option for such price per share. For purposes of this Section 2(c)(i), the “lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof” shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option or otherwise pursuant to the terms thereof and (y) the lowest exercise price set forth in such Option for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such Option (or any other Person) with respect to any one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option or otherwise pursuant to the terms thereof plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Option (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock or of such Convertible Securities upon the exercise of such Options or otherwise pursuant to the terms thereof or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities.

(ii) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the lowest price per share for which one share of Common Stock is at any time issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof is less than the Exercise Price then in effect, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such Convertible Securities for such price per share. For the purposes of this Section 2(c)(ii), the “lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof” shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to one share of Common Stock upon the issuance or sale of the Convertible Security and upon conversion, exercise or exchange of such Convertible Security or otherwise pursuant to the terms thereof and (y) the lowest conversion price set forth in such Convertible Security for which one share of Common Stock is issuable upon conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such Convertible Security (or any other Person) with respect to any one share of Common Stock upon the issuance or sale of such Convertible Security plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Convertible Security (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities or otherwise pursuant to the terms thereof, and if any such issuance or sale of such Convertible Securities is made upon exercise of any Options for which adjustment of the Exercise Price has been or is to be made pursuant to other provisions of this Section 2(c), except as contemplated below, no further adjustment of the Exercise Price shall be made by reason of such issuance or sale.

(iii) Change in Option Price or Rate of Conversion. If the purchase or exercise price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Convertible Securities, or the rate at which any Convertible Securities are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time (other than proportional changes in conversion or exercise prices, as applicable, in connection with an event referred to in Section 2(b)), the Exercise Price in effect at the time of such increase or decrease shall be adjusted to the Exercise Price which would have been in effect at such time had such Options or Convertible Securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 2(c)(iii), if the terms of any Option or Convertible Security that was outstanding as of the Initial Exercisability Date are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Convertible Security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment pursuant to this Section 2(c) shall be made if such adjustment would result in an increase of the Exercise Price then in effect.

(iv) Calculation of Consideration Received. If any Option and/or Convertible Security is issued in connection with the issuance or sale or deemed issuance or sale of any other securities of the Company (as determined by the Holder, the “**Primary Security**”, and such Option and/or Convertible Security, the “**Secondary Securities**” and together with the Primary Security, each a “**Unit**”), together comprising one integrated transaction, the aggregate consideration per share of Common Stock with respect to such Primary Security shall be deemed to be the lowest of (x) the purchase price of such Unit, (y) if such Primary Security is an Option and/or Convertible Security, the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise or conversion of the Primary Security in accordance with Section 2(b)(i) or 2(b)(ii) above and (z) the lowest VWAP of the Common Stock on any Trading Day during the five Trading Day period immediately following the public announcement of such Dilutive Issuance (for the avoidance of doubt, if such public announcement is released prior to the opening of the Principal Market on a Trading Day, such Trading Day shall be the first Trading Day in such five Trading Day period). Notwithstanding the foregoing, in determining the lowest VWAP during the five Trading Days pursuant to clause (z) above, the Holder may, in its sole discretion, elect to set the lowest VWAP prior to the completion of the five Trading Day period at any of the VWAPs calculated up to that date and prior to the end of the five Trading Day period by providing written notice to the Company to elect to immediately set the lowest VWAP at such time. If any shares of Common Stock, Options or Convertible Securities are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor will be deemed to be the net amount of consideration received by the Company therefor. If any shares of Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company for such securities will be the arithmetic average of the VWAPs of such security for each of the five (5) Trading Days immediately preceding the date of receipt. If any shares of Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock, Options or Convertible Securities (as the case may be). The fair market value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the Holder. If such parties are unable to reach agreement within ten (10) days after the occurrence of an event requiring valuation (the “**Valuation Event**”), the fair market value of such consideration will be determined within five (5) Trading Days after the tenth (10th) day following such Valuation Event by an independent, reputable appraiser jointly selected by the Company and the Holder. The determination of such appraiser shall be final and binding upon all parties absent manifest error and the fees and expenses of such appraiser shall be borne by the Company.

(d) Other Events. If any event occurs of the type contemplated by the provisions of this Section 2, but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's Board of Directors will make an appropriate adjustment in the Exercise Price and the number of Warrant Shares, as mutually determined by the Company's Board of Directors and the Required Holders, so as to protect the rights of the Holder; provided, however, that no such adjustment pursuant to this Section 2(c) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2.

3. RIGHTS UPON DISTRIBUTION OF ASSETS. If the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "**Distribution**"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

4. PURCHASE RIGHTS; FUNDAMENTAL TRANSACTIONS.

(a) Purchase Rights. In addition to any adjustments pursuant to Section 2 above, if at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right held similarly in abeyance) to the same extent as if there had been no such limitation).

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 4(b) pursuant to written agreements in form and substance reasonably satisfactory to the Required Holders and approved by the Required Holders, such approval not to be unreasonably withheld or delayed, prior to such Fundamental Transaction, including agreements, if so requested by the Holder, to deliver to each holder of the Series R Warrants in exchange for such Series R Warrants a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, an adjusted exercise price equal to the value for the shares of Common Stock reflected by the terms of such Fundamental Transaction, and exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and satisfactory to the Required Holders, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the occurrence or consummation of such Fundamental Transaction). Upon the occurrence or consummation of any Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of any Fundamental Transaction that, the Company and the Successor Entity or Successor Entities, jointly and severally, shall succeed to, and the Company shall cause any Successor Entity or Successor Entities to jointly and severally succeed to, and be added to the term “Company” under this Warrant (so that from and after the date of such Fundamental Transaction, and the provisions of this Warrant referring to the “Company” shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Company and the Successor Entity or Successor Entities, jointly and severally, may exercise every right and power of the Company prior thereto and shall assume all of the obligations of the Company prior thereto under this Warrant with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company in this Warrant, and, solely at the request of the Holder, if the Successor Entity and/or Successor Entities is a publicly traded corporation whose common stock is quoted on or listed for trading on an Eligible Market, shall deliver (in addition to and without limiting any right under this Warrant) to the Holder in exchange for this Warrant a security of the Successor Entity and/or Successor Entities evidenced by a written instrument substantially similar in form and substance to this Warrant and exercisable for a corresponding number of shares of capital stock of the Successor Entity and/or Successor Entities (the “**Successor Capital Stock**”) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction (such corresponding number of shares of Successor Capital Stock to be delivered to the Holder shall be equal to the greater of (A) the quotient of (i) the aggregate dollar value of all consideration (including cash consideration and any consideration other than cash (“**Non-Cash Consideration**”), in such Fundamental Transaction, as such values are set forth in any definitive agreement for the Fundamental Transaction that has been executed at the time of the first public announcement of the Fundamental Transaction or, if no such value is determinable from such definitive agreement, as determined in accordance with Section 12 with the term “Non-Cash Consideration” being substituted for the term “Exercise Price”) that the Holder would have been entitled to receive upon the happening of such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction, had this Warrant been exercised immediately prior to such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction (without regard to any limitations on the exercise of this Warrant) (the “**Aggregate Consideration**”) divided by (ii) the per share Closing Sale Price of such Successor Capital Stock on the Trading Day immediately prior to the consummation or occurrence of the Fundamental Transaction and (B) the product of (i) the Aggregate Consideration and (ii) the highest exchange ratio pursuant to which any shareholder of the Company may exchange Common Stock for Successor Capital Stock) (provided, however, that to the extent that the Holder’s right to receive any such shares of publicly traded common stock (or their equivalent) of the Successor Entity would result in the Holder and its other Attribution Parties exceeding the Maximum Percentage, if applicable, then the Holder shall not be entitled to receive such shares to such extent (and shall not be entitled to beneficial ownership of such shares of publicly traded common stock (or their equivalent) of the Successor Entity as a result of such consideration to such extent) and the portion of such shares shall be held in abeyance for the Holder until such time or times, as its right thereto would not result in the Holder and its other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be delivered such shares to the extent as if there had been no such limitation), and such security shall be reasonably satisfactory to the Holder, and with an identical exercise price to the Exercise Price hereunder (such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting after the consummation or occurrence of such Fundamental Transaction the economic value of this Warrant that was in effect immediately prior to the consummation or occurrence of such Fundamental Transaction, as elected by the Holder solely at its option). Upon occurrence or consummation of the Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of such Fundamental Transaction that, the Company and the Successor Entity or Successor Entities shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the occurrence or consummation of the Fundamental Transaction, as elected by the Holder solely at its option, shares of Common Stock, Successor Capital Stock or, in lieu of the shares of Common Stock or Successor Capital Stock (or other securities, cash, assets or other property purchasable upon the exercise of this Warrant prior to such Fundamental Transaction), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights), which for purposes of clarification may continue to be shares of Common Stock, if any, that the Holder would have been entitled to receive upon the happening of such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction, had this Warrant been exercised immediately prior to such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction (without regard to any limitations on the exercise of this Warrant), as adjusted in accordance with the provisions of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the occurrence or consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities, cash, assets or other property with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to ensure that, and any applicable Successor Entity or Successor Entities shall ensure that, and it shall be a required condition to the occurrence or consummation of such Corporate Event that, the Holder will thereafter have the right to receive upon exercise of this Warrant at any time after the occurrence or consummation of the Corporate Event, shares of Common Stock or Successor Capital Stock or, if so elected by the Holder, in lieu of the shares of Common Stock (or other securities, cash, assets or other property) purchasable upon the exercise of this Warrant prior to such Corporate Event (but not in lieu of such items still issuable under Sections 3 and 4(a), which shall continue to be receivable on the Common Stock or on the such shares of stock, securities, cash, assets or any other property otherwise receivable with respect to or in exchange for shares of Common Stock), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights and any shares of Common Stock) which the Holder would have been entitled to receive upon the occurrence or consummation of such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event, had this Warrant been exercised immediately prior to such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event (without regard to any limitations on exercise of this Warrant). Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Holder. The provisions of this Section 4(b) shall apply similarly and equally to successive Fundamental Transactions and Corporate Events. Notwithstanding the foregoing, the Holder may elect, in its sole discretion, by delivery of written notice to the Company, to waive this Section 4(b) and allow the Company to enter into or be a party to a Fundamental Transaction without the assumption of this Warrant pursuant to the provisions of this Section 4(b), provided, however, that any such waiver shall only bind the Holder with respect to this Warrant and not the Holder with respect to any other warrant or other securities of the Company or any holder of other Series R Warrants.

(c) Notwithstanding the foregoing, in the event of Fundamental Transaction, at the request of the Holder delivered before the thirtieth (30th) day after the consummation of such Fundamental Transaction, the Company (or the Successor Entity) shall purchase this Warrant from the Holder by paying to the Holder, within five (5) Business Days after such request (or, if later, on the effective date of the Fundamental Transaction), cash in an amount equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of such Fundamental Transaction. For the purpose of this Section 4(c), "**Black Scholes Value**" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg determined as of the day immediately following the first public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of this Warrant as of such date of request, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, (iii) the underlying price per share used in such calculation shall be the greater of (a) the sum of the price per share being offered in cash, if any, plus the per share value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (b) the greater of (x) the last VWAP immediately prior to the public announcement of such Fundamental Transaction and (y) the last VWAP immediately prior to the consummation of such Fundamental Transaction, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Articles of Incorporation or Bylaws, or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith carry out all of the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as any of the Series R Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Series R Warrants, the Required Reserve Amount to effect the exercise of the Series R Warrants then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A SHAREHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a shareholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a shareholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 6, the Company shall provide the Holder with copies of the same notices and other information given to the shareholders of the Company generally, contemporaneously with the giving thereof to the shareholders.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form (which shall not include the posting of any bond) and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new warrant or warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no Series R Warrants for fractional Warrant Shares shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

8 . NOTICES. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, with respect to a notice to the Company or to a Holder, such notice shall be given in accordance with Section 5.4 of the Securities Purchase Agreement (in the case of a Holder who is not a party to the Securities Purchase Agreement, to such Holder's address, facsimile number or e-mail address in the Company's records). The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) immediately upon any adjustment of the Exercise Price, setting forth in reasonable detail, and certifying, the calculation of such adjustment and (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property to holders of shares of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation; provided, however, in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder. It is expressly understood and agreed that the time of exercise specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

9 . AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended or waived and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

10. GOVERNING LAW; JURISDICTION; JURY TRIAL. This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. The Company hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to the Company at the address set forth in the Securities Purchase Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the Holder from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Holder, to realize on any collateral or any other security for such obligations, or to enforce a judgment or other court ruling in favor of the Holder. **THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

1 1 . CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and all the Holders and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

1 2 . DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via facsimile or electronic mail within two (2) Business Days after receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within two (2) Business Days after such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within one (1) Business Day submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Holder and approved by the Company, such approval not to be unreasonably withheld or delayed or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant, approved by the Holder, such approval not to be unreasonably withheld or delayed. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error.

1 3 . REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

1 4 . TRANSFER. This Warrant and the Warrant Shares may be offered for sale, sold, transferred, pledged or assigned without the consent of the Company.

1 5 . SEVERABILITY. If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

1 6 . DISCLOSURE. Upon receipt or delivery by the Company of any notice in accordance with the terms of this Warrant, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries, the Company shall within one (1) Business Day after any such receipt or delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, nonpublic information relating to the Company or its subsidiaries, the Company so shall indicate to such Holder contemporaneously with delivery of such notice, and in the absence of any such indication, the Holder shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries.

17 . CERTAIN DEFINITIONS. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Securities Purchase Agreement. For purposes of this Warrant, the following terms shall have the following meanings:

(a) “**1933 Act**” means the Securities Act of 1933, as amended.

(b) “**Affiliate**” means, with respect to any Person, any other Person that directly or indirectly controls, is controlled by, or is under common control with, such Person, it being understood for purposes of this definition that “control” of a Person means the power directly or indirectly either to vote 10% or more of the stock having ordinary voting power for the election of directors of such Person or direct or cause the direction of the management and policies of such Person whether by contract or otherwise.

(c) “**Attribution Parties**” means, collectively, the following Persons: (i) any investment vehicle, including, any funds, feeder funds or managed accounts, currently, or from time to time after the Issuance Date, directly or indirectly managed or advised by the Holder’s investment manager or any of its Affiliates or principals, (ii) any direct or indirect Affiliates of the Holder or any of the foregoing, (iii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iv) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) of the 1934 Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

(d) “**Bloomberg**” means Bloomberg Financial Markets.

(e) “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(f) “**Closing Sale Price**” means, for any security as of any date, the last closing trade price for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing trade price, then the last trade price of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last trade price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no last trade price is reported for such security by Bloomberg, the average of the ask prices of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 12. All such determinations to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.

(g) “**Common Stock**” means (i) the Company’s shares of Class A Common Stock, par value \$0.0001 per share, and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.

(h) “**Convertible Securities**” means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(i) “**Eligible Market**” means the Principal Market, the NYSE American LLC, The NASDAQ Global Market, The NASDAQ Global Select Market, The New York Stock Exchange, Inc., the OTC Bulletin Board, or the OTCQB.

(j) “**Expiration Date**” means the date that is sixty (60) months after the Initial Exercisability Date, or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a “**Holiday**”), the next day that is not a Holiday.

(k) “**Fundamental Transaction**” means (A) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company or any of its “significant subsidiaries” (as defined in Rule 1-02 of Regulation S-X) to one or more Subject Entities, or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its Common Stock, (B) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other shareholders of the Company to surrender their shares of Common Stock without approval of the shareholders of the Company or (C) directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

(l) “**Group**” means a “group” as that term is used in Section 13(d) of the 1934 Act and as defined in Rule 13d-5 thereunder.

(m) “**Options**” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(n) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common shares or common stock or equivalent equity security is quoted or listed on an Eligible Market (or, if so elected by the Required Holders, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Required Holders or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(o) **“Permitted Securities Transaction”** means that the Warrant Shares subject to an Exercise Notice may then be resold pursuant (A) an effective and available registration statement, (B) Rule 144 if the Holder indicates on the applicable Exercise Notice that the shares of Common Stock issuable in connection with such Exercise Notice are being resold either (x) prior to, (y) contemporaneously with, or (z) within ten (10) Trading Days after, as applicable, the date of the applicable Exercise Notice by the Holder, or (C) Rule 144 without having to comply with the information requirements under Rule 144(c)(1).

(p) **“Person”** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(q) **“Principal Market”** means the OTCQX.

(r) **“Required Holders”** means the holders of the Series R Warrants representing at least two-thirds of the shares of Common Stock underlying the Series R Warrants as of the Issuance Date.

(s) **“Rule 144”** means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

(t) **“Securities Purchase Agreement”** means the Securities Purchase Agreement, dated April 2, 2019, entered into by the Company and the purchasers party thereto.

(u) **“Standard Settlement Period”** means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary trading market or quotation system from time to time, with respect to trades of the Common Stock as in effect of the date of delivery of the Exercise Notice.

(v) **“Subject Entity”** means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

(w) **“Successor Entity”** means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(x) **“Trading Day”** means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Series R Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

REAL GOODS SOLAR, INC.

By: _____
Name:
Title:

EXERCISE NOTICE
TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
SERIES R WARRANT TO PURCHASE COMMON STOCK

REAL GOODS SOLAR, INC.

The undersigned Holder hereby exercises the right to purchase _____ of the shares of Class A Common Stock, par value \$0.0001 per share (the "Warrant Shares"), of Real Goods Solar, Inc., a Colorado corporation (the "Company"), evidenced by the attached Series R Warrant to Purchase Common Stock No. _-____ (the "Warrant"). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The holder intends that payment of the Exercise Price shall be made as:

_____ a "Cash Exercise" with respect to _____ Warrant Shares; or

_____ a "Cashless Exercise" with respect to _____ Warrant Shares.

Check here if the Warrant Shares to be issued are being resold (or have been resold) in reliance on the exemption from registration provided by Rule 144 either (x) prior to, (y) contemporaneously with or (z) no later than ten (10) Trading Days after, as applicable, the date of this Exercise Notice.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of \$ _____ to the Company in accordance with the terms of the Warrant.

3. Beneficial Ownership. Notwithstanding anything to the contrary contained herein, this Exercise Notice shall constitute a representation by the undersigned Holder that after giving effect to the exercise provided for in this Exercise Notice, such Holder (together with its Attribution Parties) will not have beneficial ownership (together with the beneficial ownership of such Person's Attribution Parties) of a number of shares of the Common Stock which exceeds the Maximum Percentage (as defined in the Warrant) of the total outstanding shares of the Common Stock of the Company as determined pursuant to the provisions of Section 1(f)(i) of the Warrant.

4. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant.

Please issue the Warrant Shares in the following name and to the following account:

Issue to: _____

Facsimile Number and Electronic Mail: _____

Authorization: _____

By: _____

Title: _____

Dated: _____

Broker Name: _____

Broker DTC #: _____

Broker Telephone #: _____

Account Number: _____
(if electronic book entry transfer)

Transaction Code Number: _____
(if electronic book entry transfer)

TRANSFER AGENT INSTRUCTIONS

REAL GOODS SOLAR, INC.

_____, 20__

Computershare Trust Company, N.A.
8742 Lucent Blvd. Suite 225
Highlands Ranch CO 80129
Telephone: (303) 262-0684
Facsimile: (303) 262-0609

Re: Order to Issue Common Stock of Real Goods Solar, Inc.

Ladies and Gentlemen:

Reference is made to (A) the Securities Purchase Agreement, dated as of _____, 2019, by and among Real Goods Solar, Inc., a Colorado corporation (the "**Company**"), and the purchasers party thereto, and the Company's Registration Statement on Form S-3 (File No. 333-215985) and the Company's prospectus filed on _____, 2019 pursuant to Rule 424 promulgated pursuant to the Securities Act of 1933, as amended (the "**1933 Act**") pursuant to which the Company is issuing to the purchasers (i) shares of Class A common stock of the Company, par value \$0.0001 per share (the "**Common Stock**"), and (ii) Series R Warrants (the "**Warrants**"), which are exercisable to purchase shares of Common Stock; (B) the related Transfer Agent Instructions, dated _____, 2019 (the "**_____ 2019 Instruction**"); (C) the exercise notice attached hereto (the "**Exercise Notice**"); and (D) a certificate of the General Counsel of the Company (or its outside legal counsel) that (1) a registration statement covering the issuance of the shares of Common Stock subject to this letter has been declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "**1933 Act**"), (2) a registration statement covering the resale of the shares of the Common Stock, subject to this letter, has been declared effective by the Securities and Exchange Commission under the 1933 Act, (3) the Holders may transfer such shares of the Common Stock under Rule 144 promulgated under the 1933 Act ("**Rule 144**"), (4) the Holders may transfer such shares of the Common Stock under Rule 144, without having to comply with the information requirements under Rule 144(c)(1) or (5) or the Warrants are being exercised via Cashless Exercise.

This instruction letter shall serve as our authorization and direction to you to issue:

- to the recipient identified under "Issue to" in the Exercise Notice,
- in book entry form,
- such number of shares of Common Stock as set forth under "Delivery of Warrant Shares," respectively, in the Exercise Notice,
- out of the Transfer Agent Reserve (as defined in the _____ 2019 Instruction),
- by crediting the designated recipient's balance account with the Depository Trust Company, identified in the Exercise Notice under "Broker Name," "Broker DTC#," "Account Number," and "Transaction Code Number" through its Deposit Withdrawal at Custodian system

[Signature Page Follows]

REAL GOODS SOLAR, INC.

PREPAID SERIES S WARRANT TO PURCHASE COMMON STOCK

Warrant No.: S-____
 Number of Shares of Common Stock: ____
 Date of Issuance: _____, 2019 (“**Issuance Date**”)

Real Goods Solar, Inc., a Colorado corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [PURCHASER], the registered holder hereof or its permitted assigns (the “**Holder**”), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined in Section 1(b)) then in effect, at any time or times on or after the date hereof (the “**Initial Exercisability Date**”), but not after 11:59 p.m., New York time, on the Expiration Date, up to such number of fully paid and nonassessable shares of Common Stock equal to _____, subject to adjustment as provided herein (the “**Warrant Shares**”). Except as otherwise defined herein, capitalized terms in this Prepaid Series S Warrant to Purchase Common Stock (including any warrants to purchase Common Stock issued in exchange, transfer or replacement hereof, this “**Warrant**”), shall have the meanings set forth in Section 17. This Warrant is one of the Prepaid Series S Warrants to Purchase Common Stock (the “**Series S Warrants**”) originally issued pursuant to Section 2 of the Securities Purchase Agreement, dated as of April 2, 2019 (the “**Subscription Date**”), by and among the Company and the purchasers signatory thereto. The Exercise Price has been paid upon purchase of this Warrant except for further payment of \$0.01 per Warrant Share, to be paid on exercise hereof.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section 1(f)), this Warrant may be exercised by the Holder at any time or times on or after the Initial Exercisability Date, in whole or in part, by (i) delivery of a written notice, in the form attached hereto as Exhibit A (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant and (ii) (A) payment to the Company of an amount equal to the applicable Exercise Price (as defined in Section 1(b)) multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the “**Aggregate Exercise Price**”) in cash by wire transfer of immediately available funds or (B) if the provisions of Section 1(d) are applicable, by notifying the Company that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. No ink-original Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice be required. Execution and delivery of an Exercise Notice for all of the then remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof. On or before the first (1st) Trading Day following the date on which the Company has received the Exercise Notice, the Company shall transmit by facsimile an acknowledgment of confirmation of receipt of the Exercise Notice to the Holder and the Company’s transfer agent (the “**Transfer Agent**”). On or before the earlier of (i) the second (2nd) Trading Day and (ii) the number of Trading Days comprising the Standard Settlement Period, following the date on which the Company has received the Exercise Notice, so long as the Holder delivers the Aggregate Exercise Price (or notice of a Cashless Exercise) on or prior to the first (1st) Trading Day following the date on which the Company has received the Exercise Notice (the “**Share Delivery Date**”) (provided that if the Aggregate Exercise Price has not been delivered by such date, the Share Delivery Date shall be one (1) Trading Day after the Aggregate Exercise Price (or notice of a Cashless Exercise) is delivered), the Company shall, (X) provided that the Transfer Agent is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program and either (A) the issuance of the Warrant Shares subject to the Exercise Notice is registered under the 1933 Act on an effective and available registration statement, (B) this Warrant is being exercised via Cashless Exercise or (C) such Warrant Shares may be resold by the Holder pursuant to a Permitted Securities Transaction, credit such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system, or (Y) otherwise, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise. The Company agrees to maintain a transfer agent that is a participant in the DTC Fast Automated Securities Transfer Program so long as this Warrant remains outstanding and exercisable. The Company shall be responsible for all fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any. Upon delivery of the Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three (3) Trading Days after any exercise and at its own expense, issue a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares issuable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional Warrant Shares are to be issued upon the exercise of this Warrant, but rather the number of Warrant Shares to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all taxes (other than the Holder’s income taxes) which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. The Company’s obligations to issue and deliver Warrant Shares in accordance with the terms and subject to the conditions hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination. If the Holder exercises this Warrant (other than by Cashless Exercise) at a time when either (I) the issuance of the Warrant Shares subject to the Exercise Notice is not registered under the 1933 Act on an effective and available registration statement or (II) the Holder may not sell the such Warrant Shares pursuant to a Permitted Securities Transaction, then any certificate representing such Warrant Shares may contain a restrictive legend.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means the remaining amount of \$0.01, subject to adjustment as provided herein. The Exercise Price has been paid upon purchase of this Warrant except for the further payment of \$0.01 per Warrant Share, to be paid on exercise hereof.

(c) Company’s Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason, in the manner required by Section 1(a), to issue to the Holder on or prior to the Share Delivery Date either (I) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company’s share register or if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the Holder’s balance account with DTC, for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant, or (II) if the Registration Statement (as defined in Section 1(d)) covering the issuance of all of the Warrant Shares that are the subject of the Exercise Notice (the “**Unavailable Warrant Shares**”) is not available for the issuance of such Unavailable Warrant Shares and the Company fails to promptly, but in no event later than one (1) Trading Day thereafter, (x) so notify the Holder and (y) deliver the Warrant Shares electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system (the event described in the immediately foregoing clause (II) is hereinafter referred as a “**Notice Failure**” and together with the event described in clause (I) above, an “**Exercise Failure**”), as the case may be, and if on or after the Share Delivery Date the Holder (or any other Person in respect, or on behalf, of the Holder) purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock equal to or any portion of the number of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company (a “**Buy-In**”), then, in addition to all other remedies available to the Holder, the Company shall, within three (3) Trading Days after the Holder’s request and in the Holder’s discretion, either (i) pay cash to the Holder in an amount equal to the Holder’s total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (the “**Buy-In Price**”), at which point the Company’s obligation to deliver such certificate (and to issue such shares of Common Stock) or credit such Holder’s balance account with DTC for such shares of Common Stock shall terminate, or (ii) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit such Holder’s balance account with DTC, as applicable, and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) any trading price of the Common Stock selected by the Holder in writing as in effect at any time during the period beginning on the date of the applicable Exercise Notice and ending on the date of such issuance and payment under this Section 1(c). Nothing shall limit the Holder’s right to pursue any other remedies available to it hereunder, at law or in equity, including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver certificates representing shares of Common Stock (or to electronically deliver such shares of Common Stock) upon the exercise of this Warrant as required pursuant to the terms hereof.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, if the Registration Statement on Form S-3 (File number 333-215985) or other applicable registration statement under the 1933 Act (the “**Registration Statement**”) covering the issuance of the Unavailable Warrant Shares is not available for the issuance of such Unavailable Warrant Shares the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the “Net Number” of shares of Common Stock determined according to the following formula (a “**Cashless Exercise**”):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{D}$$

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised.

B= as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 1(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 1(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) (64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Exercise Notice if such Exercise Notice is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 1(a) hereof or (iii) the VWAP on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 1(a) hereof after the close of “regular trading hours” on such Trading Day.

C= the remaining \$0.01 Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

D= the Closing Sale Price of the Common Stock on the date of the Exercise Notice.

“**Bid Price**” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“**VWAP**” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in a Cashless Exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the 1933 Act, the Warrant Shares shall take on the registered characteristics of the Warrant being exercised. The Company agrees not to take any position contrary to this Section 1(d).

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 12.

(f) Beneficial Ownership Limitation on Exercises. Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder shall not have the right to exercise any portion of this Warrant, pursuant to the terms and conditions of this Warrant and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of ___% (the “**Maximum Percentage**”) of the number of shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of this Warrant beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 1(f). For purposes of this Section 1(f), beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the “**1934 Act**”). For purposes of this Warrant, in determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of this Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the “**SEC**”), as the case may be, (y) a more recent public announcement by the Company or (3) any other written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 1(f), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of this Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided, however, that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and (ii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Series S Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(f) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 1(f) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

(g) Insufficient Authorized Shares. If at any time while this Warrant remains outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise of this Warrant at least a number of shares of Common Stock equal to the maximum number of shares of Common Stock as shall from time to time be necessary to effect the exercise of all of this Warrant then outstanding (the “**Required Reserve Amount**” and the failure to have such sufficient number of authorized and unreserved shares of Common Stock, an “**Authorized Share Failure**”), then the Company shall promptly take all action reasonably necessary to increase the Company’s authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for this Warrant and the other Series S Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than seventy-five (75) days after the occurrence of such Authorized Share Failure, the Company shall either (x) obtain the written consent of its shareholders for the approval of an increase in the number of authorized shares of Common Stock and provide each shareholder with an information statement with respect thereto or (y) hold a meeting of its shareholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each shareholder with a proxy statement and shall use its reasonable best efforts to solicit its shareholders’ approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the shareholders that they approve such proposal. Notwithstanding the foregoing, if any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C. The initial number of shares of Common Stock reserved for exercise of this Warrant and the other Series S Warrants and each increase in the number of shares so reserved shall be allocated pro rata among the Holder and the holders of the other Series S Warrants, based on the number of shares of Common Stock issuable upon exercise of this Warrant (without regard to any limitations in exercise) issued to the Holder on the Issuance Date (the “**Authorized Share Allocation**”). In the event that the Holder shall sell or otherwise transfer this Warrant, each transferee shall be allocated a pro rata portion of such holder’s Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Series S Warrants shall be allocated to the Holder and the remaining holders of Series S Warrants, pro rata based on the shares of Common Stock issuable upon exercise of the Series S Warrants then held by such holders (without regard to any limitations on the exercise of the Series S Warrants).

2 . ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and the number of Warrant Shares shall be adjusted from time to time as follows:

(a) [RESERVED]

(b) Adjustment Upon Subdivision or Combination of Shares of Common Stock. If the Company at any time on or after the Subscription Date subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Subscription Date combines (by combination, reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(b) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(c) Other Events. If any event occurs of the type contemplated by the provisions of this Section 2, but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's Board of Directors will make an appropriate adjustment in the Exercise Price and the number of Warrant Shares, as mutually determined by the Company's Board of Directors and the Required Holders, so as to protect the rights of the Holder; provided, however, that no such adjustment pursuant to this Section 2(c) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2.

3. RIGHTS UPON DISTRIBUTION OF ASSETS. If the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "**Distribution**"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that to the extent that the Holder's right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

4. PURCHASE RIGHTS; FUNDAMENTAL TRANSACTIONS.

(a) Purchase Rights. In addition to any adjustments pursuant to Section 2 above, if at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right held similarly in abeyance) to the same extent as if there had been no such limitation).

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 4(b) pursuant to written agreements in form and substance reasonably satisfactory to the Required Holders and approved by the Required Holders, such approval not to be unreasonably withheld or delayed, prior to such Fundamental Transaction, including agreements, if so requested by the Holder, to deliver to each holder of the Series S Warrants in exchange for such Series S Warrants a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, an adjusted exercise price equal to the value for the shares of Common Stock reflected by the terms of such Fundamental Transaction, and exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and satisfactory to the Required Holders, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the occurrence or consummation of such Fundamental Transaction). Upon the occurrence or consummation of any Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of any Fundamental Transaction that, the Company and the Successor Entity or Successor Entities, jointly and severally, shall succeed to, and the Company shall cause any Successor Entity or Successor Entities to jointly and severally succeed to, and be added to the term “Company” under this Warrant (so that from and after the date of such Fundamental Transaction, and the provisions of this Warrant referring to the “Company” shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Company and the Successor Entity or Successor Entities, jointly and severally, may exercise every right and power of the Company prior thereto and shall assume all of the obligations of the Company prior thereto under this Warrant with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company in this Warrant, and, solely at the request of the Holder, if the Successor Entity and/or Successor Entities is a publicly traded corporation whose common stock is quoted on or listed for trading on an Eligible Market, shall deliver (in addition to and without limiting any right under this Warrant) to the Holder in exchange for this Warrant a security of the Successor Entity and/or Successor Entities evidenced by a written instrument substantially similar in form and substance to this Warrant and exercisable for a corresponding number of shares of capital stock of the Successor Entity and/or Successor Entities (the “**Successor Capital Stock**”) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction (such corresponding number of shares of Successor Capital Stock to be delivered to the Holder shall be equal to the greater of (A) the quotient of (i) the aggregate dollar value of all consideration (including cash consideration and any consideration other than cash (“**Non-Cash Consideration**”), in such Fundamental Transaction, as such values are set forth in any definitive agreement for the Fundamental Transaction that has been executed at the time of the first public announcement of the Fundamental Transaction or, if no such value is determinable from such definitive agreement, as determined in accordance with Section 12 with the term “Non-Cash Consideration” being substituted for the term “Exercise Price”) that the Holder would have been entitled to receive upon the happening of such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction, had this Warrant been exercised immediately prior to such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction (without regard to any limitations on the exercise of this Warrant) (the “**Aggregate Consideration**”) divided by (ii) the per share Closing Sale Price of such Successor Capital Stock on the Trading Day immediately prior to the consummation or occurrence of the Fundamental Transaction and (B) the product of (i) the Aggregate Consideration and (ii) the highest exchange ratio pursuant to which any shareholder of the Company may exchange Common Stock for Successor Capital Stock) (provided, however, that to the extent that the Holder’s right to receive any such shares of publicly traded common stock (or their equivalent) of the Successor Entity would result in the Holder and its other Attribution Parties exceeding the Maximum Percentage, if applicable, then the Holder shall not be entitled to receive such shares to such extent (and shall not be entitled to beneficial ownership of such shares of publicly traded common stock (or their equivalent) of the Successor Entity as a result of such consideration to such extent) and the portion of such shares shall be held in abeyance for the Holder until such time or times, as its right thereto would not result in the Holder and its other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be delivered such shares to the extent as if there had been no such limitation), and such security shall be reasonably satisfactory to the Holder, and with an identical exercise price to the Exercise Price hereunder (such adjustments to the number of shares of capital stock and such exercise price being for the purpose of protecting after the consummation or occurrence of such Fundamental Transaction the economic value of this Warrant that was in effect immediately prior to the consummation or occurrence of such Fundamental Transaction, as elected by the Holder solely at its option). Upon occurrence or consummation of the Fundamental Transaction, and it shall be a required condition to the occurrence or consummation of such Fundamental Transaction that, the Company and the Successor Entity or Successor Entities shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the occurrence or consummation of the Fundamental Transaction, as elected by the Holder solely at its option, shares of Common Stock, Successor Capital Stock or, in lieu of the shares of Common Stock or Successor Capital Stock (or other securities, cash, assets or other property purchasable upon the exercise of this Warrant prior to such Fundamental Transaction), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights), which for purposes of clarification may continue to be shares of Common Stock, if any, that the Holder would have been entitled to receive upon the happening of such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction, had this Warrant been exercised immediately prior to such Fundamental Transaction or the record, eligibility or other determination date for the event resulting in such Fundamental Transaction (without regard to any limitations on the exercise of this Warrant), as adjusted in accordance with the provisions of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the occurrence or consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities, cash, assets or other property with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to ensure that, and any applicable Successor Entity or Successor Entities shall ensure that, and it shall be a required condition to the occurrence or consummation of such Corporate Event that, the Holder will thereafter have the right to receive upon exercise of this Warrant at any time after the occurrence or consummation of the Corporate Event, shares of Common Stock or Successor Capital Stock or, if so elected by the Holder, in lieu of the shares of Common Stock (or other securities, cash, assets or other property) purchasable upon the exercise of this Warrant prior to such Corporate Event (but not in lieu of such items still issuable under Sections 3 and 4(a), which shall continue to be receivable on the Common Stock or on the such shares of stock, securities, cash, assets or any other property otherwise receivable with respect to or in exchange for shares of Common Stock), such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights and any shares of Common Stock) which the Holder would have been entitled to receive upon the occurrence or consummation of such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event, had this Warrant been exercised immediately prior to such Corporate Event or the record, eligibility or other determination date for the event resulting in such Corporate Event (without regard to any limitations on exercise of this Warrant). Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Holder. The provisions of this Section 4(b) shall apply similarly and equally to successive Fundamental Transactions and Corporate Events. Notwithstanding the foregoing, the Holder may elect, in its sole discretion, by delivery of written notice to the Company, to waive this Section 4(b) and allow the Company to enter into or be a party to a Fundamental Transaction without the assumption of this Warrant pursuant to the provisions of this Section 4(b), provided, however, that any such waiver shall only bind the Holder with respect to this Warrant and not the Holder with respect to any other warrant or other securities of the Company or any holder of other Series S Warrants.

(c) Notwithstanding anything herein to the contrary, the Company shall be required to obtain the prior written consent of the Required Holders to enter into, allow and/or consummate a Fundamental Transaction other than one in which a Successor Entity that is a publicly traded corporation whose stock is quoted or listed for trading on an Eligible Market assumes this Warrant such that the Warrant shall be exercisable for the publicly traded Common Stock of such Successor Entity.

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Articles of Incorporation or Bylaws, or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith carry out all of the provisions of this Warrant and take all action as may be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as any of the Series S Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Series S Warrants, the Required Reserve Amount to effect the exercise of the Series S Warrants then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A SHAREHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a shareholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a shareholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 6, the Company shall provide the Holder with copies of the same notices and other information given to the shareholders of the Company generally, contemporaneously with the giving thereof to the shareholders.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form (which shall not include the posting of any bond) and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new warrant or warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no Series S Warrants for fractional Warrant Shares shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

8. NOTICES. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, with respect to a notice to the Company or to a Holder, such notice shall be given in accordance with Section 5.4 of the Securities Purchase Agreement (in the case of a Holder who is not a party to the Securities Purchase Agreement, to such Holder's address, facsimile number or e-mail address in the Company's records). The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) immediately upon any adjustment of the Exercise Price, setting forth in reasonable detail, and certifying, the calculation of such adjustment and (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property to holders of shares of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation; provided, however, in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder. It is expressly understood and agreed that the time of exercise specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

9 . AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended or waived and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

10. GOVERNING LAW; JURISDICTION; JURY TRIAL. This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. The Company hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to the Company at the address set forth in the Securities Purchase Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the Holder from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Holder, to realize on any collateral or any other security for such obligations, or to enforce a judgment or other court ruling in favor of the Holder. **THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

1 1 . CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and all the Holders and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

1 2 . DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via facsimile or electronic mail within two (2) Business Days after receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within two (2) Business Days after such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within one (1) Business Day submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Holder and approved by the Company, such approval not to be unreasonably withheld or delayed or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant, approved by the Holder, such approval not to be unreasonably withheld or delayed. The Company shall cause at its expense the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives the disputed determinations or calculations. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error.

1 3 . REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

1 4 . TRANSFER. This Warrant and the Warrant Shares may be offered for sale, sold, transferred, pledged or assigned without the consent of the Company.

1 5 . SEVERABILITY. If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

1 6 . DISCLOSURE. Upon receipt or delivery by the Company of any notice in accordance with the terms of this Warrant, unless the Company has in good faith determined that the matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries, the Company shall within one (1) Business Day after any such receipt or delivery publicly disclose such material, nonpublic information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, nonpublic information relating to the Company or its subsidiaries, the Company so shall indicate to such Holder contemporaneously with delivery of such notice, and in the absence of any such indication, the Holder shall be allowed to presume that all matters relating to such notice do not constitute material, nonpublic information relating to the Company or its subsidiaries.

17 . CERTAIN DEFINITIONS. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in the Securities Purchase Agreement. For purposes of this Warrant, the following terms shall have the following meanings:

- (a) **“1933 Act”** means the Securities Act of 1933, as amended.
 - (b) **“Affiliate”** means, with respect to any Person, any other Person that directly or indirectly controls, is controlled by, or is under common control with, such Person, it being understood for purposes of this definition that “control” of a Person means the power directly or indirectly either to vote 10% or more of the stock having ordinary voting power for the election of directors of such Person or direct or cause the direction of the management and policies of such Person whether by contract or otherwise.
 - (c) **“Attribution Parties”** means, collectively, the following Persons: (i) any investment vehicle, including, any funds, feeder funds or managed accounts, currently, or from time to time after the Issuance Date, directly or indirectly managed or advised by the Holder’s investment manager or any of its Affiliates or principals, (ii) any direct or indirect Affiliates of the Holder or any of the foregoing, (iii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any of the foregoing and (iv) any other Persons whose beneficial ownership of the Company’s Common Stock would or could be aggregated with the Holder’s and the other Attribution Parties for purposes of Section 13(d) of the 1934 Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.
 - (d) **“Bloomberg”** means Bloomberg Financial Markets.
 - (e) **“Business Day”** means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.
 - (f) **“Closing Sale Price”** means, for any security as of any date, the last closing trade price for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing trade price, then the last trade price of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last trade price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no last trade price is reported for such security by Bloomberg, the average of the ask prices of any market makers for such security as reported in the OTC Link or “pink sheets” by OTC Markets Group Inc. (formerly Pink OTC Markets Inc.). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 12. All such determinations to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or other similar transaction during the applicable calculation period.
 - (g) **“Common Stock”** means (i) the Company’s shares of Class A Common Stock, par value \$0.0001 per share, and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.
 - (h) **“Convertible Securities”** means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.
 - (i) **“Eligible Market”** means the Principal Market, the NYSE American LLC, The NASDAQ Global Market, The NASDAQ Global Select Market, The New York Stock Exchange, Inc., the OTC Bulletin Board, or the OTCQB.
 - (j) **“Expiration Date”** means the date that is sixty (60) months after the Initial Exercisability Date, or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a **“Holiday”**), the next day that is not a Holiday.
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(k) **“Fundamental Transaction”** means (A) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Subject Entity, or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company or any of its “significant subsidiaries” (as defined in Rule 1-02 of Regulation S-X) to one or more Subject Entities, or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least either (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding; or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire, either (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its Common Stock, (B) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reorganization, recapitalization or reclassification or otherwise in any manner whatsoever, of either (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the Subscription Date calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other shareholders of the Company to surrender their shares of Common Stock without approval of the shareholders of the Company or (C) directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

(l) **“Group”** means a “group” as that term is used in Section 13(d) of the 1934 Act and as defined in Rule 13d-5 thereunder.

(m) **“Options”** means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(n) **“Parent Entity”** of a Person means an entity that, directly or indirectly, controls the applicable Person, including such entity whose common shares or common stock or equivalent equity security is quoted or listed on an Eligible Market (or, if so elected by the Required Holders, any other market, exchange or quotation system), or, if there is more than one such Person or such entity, the Person or such entity designated by the Required Holders or in the absence of such designation, such Person or entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(o) **“Permitted Securities Transaction”** means that the Warrant Shares subject to an Exercise Notice may then be resold pursuant (A) an effective and available registration statement, (B) Rule 144 if the Holder indicates on the applicable Exercise Notice that the shares of Common Stock issuable in connection with such Exercise Notice are being resold either (x) prior to, (y) contemporaneously with, or (z) within ten (10) Trading Days after, as applicable, the date of the applicable Exercise Notice by the Holder, or (C) Rule 144 without having to comply with the information requirements under Rule 144(c)(1).

(p) **“Person”** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(q) **“Principal Market”** means the OTCQX.

(r) **“Required Holders”** means the holders of the Series S Warrants representing at least two-thirds of the shares of Common Stock underlying the Series S Warrants as of the Issuance Date.

(s) **“Rule 144”** means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

(t) **“Securities Purchase Agreement”** means the Securities Purchase Agreement, dated April 2, 2019, entered into by the Company and the purchasers party thereto.

(u) **“Standard Settlement Period”** means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary trading market or quotation system from time to time, with respect to trades of the Common Stock as in effect of the date of delivery of the Exercise Notice.

(v) **“Subject Entity”** means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group.

(w) **“Successor Entity”** means one or more Person or Persons (or, if so elected by the Holder, the Company or Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or one or more Person or Persons (or, if so elected by the Holder, the Company or the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(x) **“Trading Day”** means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Prepaid Series S Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

REAL GOODS SOLAR, INC.

By: _____
Name:
Title:

EXERCISE NOTICE
TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
PREPAID SERIES S WARRANT TO PURCHASE COMMON STOCK

REAL GOODS SOLAR, INC.

The undersigned Holder hereby exercises the right to purchase _____ of the shares of Class A Common Stock, par value \$0.0001 per share (the "Warrant Shares"), of Real Goods Solar, Inc., a Colorado corporation (the "Company"), evidenced by the attached Prepaid Series S Warrant to Purchase Common Stock No. _-____ (the "Warrant"). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The holder intends that payment of the Exercise Price shall be made as:

_____ a "Cash Exercise" with respect to _____ Warrant Shares; or

_____ a "Cashless Exercise" with respect to _____ Warrant Shares.

Check here if the Warrant Shares to be issued are being resold (or have been resold) in reliance on the exemption from registration provided by Rule 144 either (x) prior to, (y) contemporaneously with or (z) no later than ten (10) Trading Days after, as applicable, the date of this Exercise Notice.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of \$ _____ to the Company in accordance with the terms of the Warrant.

3. Beneficial Ownership. Notwithstanding anything to the contrary contained herein, this Exercise Notice shall constitute a representation by the undersigned Holder that after giving effect to the exercise provided for in this Exercise Notice, such Holder (together with its Attribution Parties) will not have beneficial ownership (together with the beneficial ownership of such Person's Attribution Parties) of a number of shares of the Common Stock which exceeds the Maximum Percentage (as defined in the Warrant) of the total outstanding shares of the Common Stock of the Company as determined pursuant to the provisions of Section 1(f)(i) of the Warrant.

4. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant.

Please issue the Warrant Shares in the following name and to the following account:

Issue to: _____

Facsimile Number and Electronic Mail: _____

Authorization: _____

By: _____

Title: _____

Dated: _____

Broker Name: _____

Broker DTC #: _____

Broker Telephone #: _____

Account Number: _____
(if electronic book entry transfer)

Transaction Code Number: _____
(if electronic book entry transfer)

TRANSFER AGENT INSTRUCTIONS

REAL GOODS SOLAR, INC.

_____, 20__

Computershare Trust Company, N.A.
8742 Lucent Blvd. Suite 225
Highlands Ranch CO 80129
Telephone: (303) 262-0684
Facsimile: (303) 262-0609

Re: Order to Issue Common Stock of Real Goods Solar, Inc.

Ladies and Gentlemen:

Reference is made to (A) the Securities Purchase Agreement, dated as of _____, 2019, by and among Real Goods Solar, Inc., a Colorado corporation (the "Company"), and the purchasers party thereto, and the Company's Registration Statement on Form S-3 (File No. 333-215985) and the Company's prospectus filed on _____, 2019 pursuant to Rule 424 promulgated pursuant to the Securities Act of 1933, as amended (the "1933 Act") pursuant to which the Company is issuing to the purchasers (i) shares of Class A common stock of the Company, par value \$0.0001 per share (the "Common Stock"), and (ii) Series R Warrants (the "Warrants"), which are exercisable to purchase shares of Common Stock; (B) the related Transfer Agent Instructions, dated _____, 2019 (the "_____ 2019 Instruction"); (C) the exercise notice attached hereto (the "Exercise Notice"); and (D) a certificate of the General Counsel of the Company (or its outside legal counsel) that (1) a registration statement covering the issuance of the shares of Common Stock subject to this letter has been declared effective by the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "1933 Act"), (2) a registration statement covering the resale of the shares of the Common Stock, subject to this letter, has been declared effective by the Securities and Exchange Commission under the 1933 Act, (3) the Holders may transfer such shares of the Common Stock under Rule 144 promulgated under the 1933 Act ("Rule 144"), (4) the Holders may transfer such shares of the Common Stock under Rule 144, without having to comply with the information requirements under Rule 144(c)(1) or (5) or the Warrants are being exercised via Cashless Exercise.

This instruction letter shall serve as our authorization and direction to you to issue:

- to the recipient identified under "Issue to" in the Exercise Notice,
- in book entry form,
- such number of shares of Common Stock as set forth under "Delivery of Warrant Shares," respectively, in the Exercise Notice,
- out of the Transfer Agent Reserve (as defined in the _____ 2019 Instruction),
- by crediting the designated recipient's balance account with the Depository Trust Company, identified in the Exercise Notice under "Broker Name," "Broker DTC#," "Account Number," and "Transaction Code Number" through its Deposit Withdrawal at Custodian system

[Signature Page Follows]

LEGAL OPINION

April 2, 2019

Brownstein Hyatt Farber Schreck, LLP
410 Seventeenth Street, Suite 2200
Denver, Colorado 80202-4437
T 303.223.1100 F 303.223.1111Board of Directors
Real Goods Solar, Inc.
110 16th Street, Suite 300
Denver, CO 80202

Ladies and Gentlemen:

We are acting as special counsel to Real Goods Solar, Inc., a Colorado corporation (the "Company"), in connection with the offering and sale by the Company of (A) 15,938,280 units (the "Primary Units"), each consisting of (i) one share of the Company's Class A common stock, par value \$0.0001 ("Common Stock"), and (ii) a Series R Warrant to purchase one share of Common Stock (the "Series R Warrant"), (B) 1,430,141 units (the "Alternative Units"), and together with the Primary Units, collectively, the "Units"), each consisting of (i) a Prepaid Series S Warrant to purchase one share of Common Stock (the "Series S Warrant"), and together with the Series R Warrants, collectively, the "Warrants"), and (ii) a Series R Warrant, and (C) shares of Common Stock issuable upon exercise of the Warrants (the "Warrant Shares"). The Units, the Common Stock, the Warrants and the Warrant Shares are collectively referred to herein as the "Securities."

The Securities have been registered pursuant to a Registration Statement on Form S-3 (Registration Number 333-215985), dated as of February 9, 2017, as amended by Amendment No. 1 to Form S-3, dated as of July 11, 2017 (as so amended, the "Registration Statement"), under the Securities Act of 1933, as amended (the "Securities Act"), a related prospectus, dated as of July 21, 2017 (the "Prospectus"), and a prospectus supplement, dated as of April 2, 2019 (the "Prospectus Supplement").

This opinion letter is furnished to you for filing with the Securities and Exchange Commission pursuant to Item 601 of Regulation S-K promulgated under the Securities Act.

In reaching the opinion stated in this letter, we have reviewed originals or copies of (i) the Registration Statement, the Prospectus and the Prospectus Supplement, (ii) the Securities Purchase Agreement under which the Securities will be issued, (iii) the Company's Articles of Incorporation and Bylaws, (iv) resolutions of the Company's Board of Directors and committees thereof authorizing the issuance of the Securities, (v) the Warrants and (vi) such other documents as we have considered relevant.

We have assumed that (i) all information contained in all documents that we have reviewed is correct, (ii) all signatures on all documents that we have reviewed are genuine, (iii) all documents submitted to us as originals are true and complete, (iv) all documents submitted to us as copies are true and complete copies of the originals thereof, and (v) each natural person signing a document has sufficient legal capacity to do so.

Based upon the foregoing, it is our opinion that, when issued and delivered in the manner and on the terms described in the Prospectus Supplement, and, with respect to the Warrant Shares, following the exercise of the Warrants in the manner and on the terms described in the Warrants:

1. the Units will be validly issued, legally valid and binding obligations of the Company,
 2. the Common Stock will be validly issued, fully paid and non-assessable,
 3. the Warrants will be validly issued, legally valid and binding obligations of the Company, and
 4. the Warrant Shares will be validly issued, fully paid and non-assessable.
-

We hereby consent to the use of this opinion letter as Exhibit 5.1 to the Registration Statement. We also consent to the reference to this firm under the caption "Legal Matters" in the Prospectus Supplement. In giving such consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

As to the foregoing matters with respect to which we express our opinion, we advise that we are admitted to practice in the States of Colorado and New York, and do not render any opinion as to legal matters subject to or governed by laws other than the States of Colorado and New York or United States federal jurisprudence.

Very truly yours,

/s/ Brownstein Hyatt Farber Schreck, LLP

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this "Agreement") is dated as of April 2, 2019, between, Real Goods Solar, Inc., a Colorado corporation (the "Company"), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a "Purchaser" and collectively, the "Purchasers").

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), the Company desires to issue and sell to each Purchaser, and each Purchaser, severally and not jointly, desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser agree as follows:

**ARTICLE I.
DEFINITIONS**

1.1 Definitions. In addition to the terms defined elsewhere in this Agreement the following terms have the meanings set forth in this Section 1.1:

"Acquiring Person" shall have the meaning ascribed to such term in Section 4.6.

"Action" shall have the meaning ascribed to such term in Section 3.1(j).

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Closing" means the closing of the purchase and sale of the Securities pursuant to Section 2.1.

"Closing Date" means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchasers' obligations to pay the Subscription Amount and (ii) the Company's obligations to deliver the Securities, in each case, have been satisfied or waived, but in no event later than the second Trading Day following the date hereof.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the Class A common stock of the Company, par value \$0.0001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Company Counsel” means Brownstein Hyatt Farber Schreck, with offices located at 410 Seventeenth Street, Suite 2200, Denver, CO 80202.

“Disclosure 8-K” means a Current Report on Form 8-K containing the portions of the information set forth in the Prospectus Supplement under the caption “PROSPECTUS SUPPLEMENT SUMMARY – Recent Developments” (and the same information if included in the Disclosure Schedules) that constitute material non-public information; provided that the Company may elect to include in the Disclosure 8-K any additional information it deems appropriate and desirable, including the information required to be disclosed pursuant to clause (b) of the first sentence of Section 4.5.

“Disclosure Schedules” means the Disclosure Schedules of the Company delivered concurrently herewith.

“EGS” means Ellenoff Grossman & Schole LLP, with offices located at 1345 Avenue of the Americas, New York, New York 10105-0302.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(s).

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of: (i) shares of Common Stock or options to employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company; (ii) the Placement Agent Warrant; (iii) securities upon the exercise, exchange or conversion of the Securities, the Placement Agent Warrant and/or Common Stock Equivalents issued and outstanding on the date of this Agreement; provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities or to extend the term of such securities; (iv) up to 250,000 shares of Common Stock (subject to adjustment for reverse and forward stock splits, recapitalizations and similar transactions following the date hereof) issued pursuant to an exemption from registration under the Securities Act (which carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.12(a) herein) to a lender, or any successor thereto, who is a party to any revolving or other credit facility that is outstanding prior to the date of this Agreement or to which the Company becomes a party following the date of this Agreement; (v) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company; provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.12(a) herein; and provided further that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities; (vi) securities issued in a transaction in which the Company is not issuing securities primarily for the purpose of raising capital from retail investors or one or more entities whose primary business is investing in securities; provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.12(a) herein, which shall not include securities issued to vendors or consultants for services rendered to the Company, or (vii) securities issued in connection with the settlement of any dispute or disagreement with, or litigation claim against, the Company outstanding as of the date hereof and as set forth on the Disclosure Schedules; provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the prohibition period in Section 4.12(a) herein.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“GAAP” shall have the meaning ascribed to such term in Section 3.1(h).

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(aa).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(p).

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(n).

“OFAC” shall have the meaning ascribed to such term in Section 3.1(ii).

“Notice Termination Time” shall have the meaning ascribed to such term in Section 4.11(c).

“Participation Maximum” shall have the meaning ascribed to such term in Section 4.11(a).

“Per Share Purchase Price” means \$0.19.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Placement Agent” means Dawson James Securities, Inc.

“Placement Agent Warrant” means the warrant to purchase Common Stock to be issued by the Company to the Placement Agent in connection with the transactions herein.

“Pro Rata Portion” shall have the meaning ascribed to such term in Section 4.11(e).

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final base prospectus filed for the Registration Statement.

“Prospectus Supplement” means the supplement to the Prospectus complying with Rule 424(b) of the Securities Act that is filed with the Commission and delivered by the Company to each Purchaser at the Closing.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.9.

“Registration Statement” means the effective registration statement with the Commission file No. 333-215985 which registers the sale of the Shares, the Warrants and the Warrant Shares to the Purchasers.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Shares, the Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Series R Warrants” means Series R Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which warrants shall be exercisable immediately and have a term of exercise equal to five years, in the form of Exhibit B-1 attached hereto.

“Series S Warrants” means Prepaid Series S Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which warrants shall be exercisable immediately and have a term of exercise equal to five years, in the form of Exhibit B-2 attached hereto. The purchase price per Series S Warrant shall be the Per Share Purchase Price minus \$0.01.

“Series S Warrant Shares” means the shares of Common Stock issuable upon exercise of the Series S Warrants.

“Shares” means the shares of Common Stock issued to each Purchaser pursuant to this Agreement at the Closing.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include locating and/or borrowing shares of Common Stock).

“Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Shares and Warrants purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Subscription Amount,” in United States dollars and in immediately available funds.

“Subsequent Financing” shall have the meaning ascribed to such term in Section 4.11(a).

“Subsequent Financing Notice” shall have the meaning ascribed to such term in Section 4.11(b).

“Subsidiary” means any subsidiary of the Company as set forth on Schedule 3.1(a) and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the OTC Bulletin Board, the OTCQB or OTCQX (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Warrants, all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company, with a mailing address of 8742 Lucent Boulevard, Suite 225, Highlands Ranch, CO 80129 and a facsimile number of 303-226-0609, and any successor transfer agent of the Company.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.12(b).

“Warrants” means, collectively, the Series R Warrants and the Series S Warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof.

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Warrants.

ARTICLE II. PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, up to an aggregate of (i) \$3,300,000 of Shares, for each Purchaser equal to such Purchaser’s Subscription Amount for Shares as set forth on the signature page hereto executed by such Purchaser divided by the Per Share Purchase Price, and (ii) Series R Warrants and Series S Warrants, if applicable, as determined pursuant to Section 2.2(a). The Company shall deliver to each Purchaser its respective Shares, and a Series R Warrant Series and, if applicable, a Series S Warrant as determined pursuant to Section 2.2(a), and the Company and each Purchaser shall deliver the other items set forth in Section 2.2 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Section 2.3, the Closing shall occur at the offices of the Placement Agent or such other location as the parties shall mutually agree. The Company covenants that, if a Purchaser delivers an Exercise Notice (as defined in the Series S Warrants) to exercise Series S Warrants between the date hereof and the Closing Date, the Company shall deliver Series S Warrant Shares to the Purchaser on the Closing Date in connection with such Exercise Notice, provided that the Company shall be obligated to deliver Series S Warrant Shares on the Closing Date only in connection with Exercise Notice(s) that are delivered to the Company at or prior to 12:00 p.m. (New York City time) on the Trading Day immediately prior to the Closing Date.

2.2 Deliveries.

- (a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to each Purchaser the following:
- (i) this Agreement duly executed by the Company;
 - (ii) a legal opinion of Company Counsel, substantially in the form delivered to the Placement Agent and reasonably acceptable to the Purchasers;
 - (iii) the Company shall have provided each Purchaser with the Company's wire instructions, on Company letterhead and executed by the Chief Executive Officer or Chief Financial Officer;
 - (iv) a copy of the irrevocable instructions to the Transfer Agent instructing the Transfer Agent to deliver on an expedited basis via The Depository Trust Company Deposit or Withdrawal at Custodian system Shares equal to such Purchaser's Subscription Amount divided by the Per Share Purchase Price, registered in the name of such Purchaser;
 - (v) a Series R Warrant registered in the name of such Purchaser to purchase up to a number of shares of Common Stock equal to 100% of the sum of such Purchaser's Shares plus the shares of Common Stock issuable upon exercise of such Purchaser's Series S Warrant, if applicable, with an exercise price equal to \$0.20, subject to adjustment therein;
 - (vi) for those Purchasers purchasing Series S Warrants, Series S Warrants to purchase the number of shares of Common Stock set forth on the Purchaser's signature page hereto;
 - (vii) the Prospectus and Prospectus Supplement (which may be delivered in accordance with Rule 172 under the Securities Act).

- (b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company, the following:
 - (i) this Agreement duly executed by such Purchaser; and
 - (ii) such Purchaser's Subscription Amount which shall be by wire transfer to the account set forth in the Company's wire instructions pursuant to Section 2.2(a)(iii).

2.3 Closing Conditions.

- (a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:
 - (i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) on the Closing Date of the representations and warranties of the Purchasers contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);
 - (ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed; and
 - (iii) the delivery by each Purchaser of the items set forth in Section 2.2(b) of this Agreement.
- (b) The respective obligations of the Purchasers hereunder in connection with the Closing are subject to the following conditions being met:
 - (i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);
 - (ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;
 - (iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement;
 - (iv) there shall have been no Material Adverse Effect with respect to the Company since the date hereof; and

(v) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or the Company's principal Trading Market, and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any Trading Market, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of such Purchaser, makes it impracticable or inadvisable to purchase the Shares and Warrants at the Closing.

**ARTICLE III.
REPRESENTATIONS AND WARRANTIES**

3 . 1 Representations and Warranties of the Company. Except as set forth in the Disclosure Schedules, which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation made herein to the extent of the disclosure contained in the corresponding section of the Disclosure Schedules, the Company hereby makes the following representations and warranties to each Purchaser:

(a) Subsidiaries. All of the direct and indirect subsidiaries of the Company are set forth on Schedule 3.1(a). Except as set forth on Schedule 3.1(a), the Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities. If the Company has no subsidiaries, all other references to the Subsidiaries or any of them in the Transaction Documents shall be disregarded.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization: Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's shareholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(d) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Shares and Warrants, and the issuance and sale of the Warrant Shares in accordance with the terms of the Warrants, and the consummation by it of the transactions contemplated hereby and thereby do not and will not: (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, (ii) after obtaining the Required Approvals, conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.5 of this Agreement, (ii) the filing with the Commission of the Prospectus Supplement, (iii) the notice and/or application(s) to each applicable Trading Market for the issuance and sale of the Securities and the listing of the Shares and the Warrant Shares for trading thereon in the time and manner required thereby, (iv) any such consent, waiver, authorization or order of, notice to, or filing or registration with the Financial Industry Regulatory Authority, Inc., or under state securities or Blue Sky laws and (v) waivers of certain rights under the Securities Purchase Agreement, dated March 30, 2018, by and among the Company and the investors listed on the Schedule of Buyers attached thereto, as amended, which have been obtained (collectively, the “Required Approvals”).

(f) Issuance of the Securities: Registration. The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Warrant Shares, when issued in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock a number of shares of Common Stock issuable pursuant to this Agreement and the maximum number of shares of Common Stock issuable upon exercise of the Warrants. The Company has prepared and filed the Registration Statement in conformity with the requirements of the Securities Act, which became effective on July 21, 2017, including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Prospectus has been issued by the Commission and no proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, shall file the Prospectus Supplement with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Prospectus and any amendments or supplements thereto, at the time the Prospectus or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company was at the time of the filing of the Registration Statement eligible to use Form S-3. The Company meets the transaction requirements with respect to the aggregate market value of the Shares being sold pursuant to this offering and during the 12 months prior to this offering, as set forth in General Instruction I.B.6 of Form S-3.

(g) Capitalization. The capitalization of the Company is as set forth on Schedule 3.1(g). The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company's stock option plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents that has not been validly waived or satisfied. Except as set forth on Schedule 3.1(g) and as a result of the purchase and sale of the Securities, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. Except as set forth on Schedule 3.1(g), the issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Purchasers) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. Except as set forth on Schedule 3.1(g), there are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. Except as set forth on Schedule 3.1(g), the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. Except for the Required Approvals, no further approval or authorization of any shareholder, the Board of Directors or others is required for the issuance and sale of the Securities. Except as set forth on Schedule 3.1(g), there are no shareholders' agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's shareholders.

(h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Prospectus and the Prospectus Supplement, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as set forth on Schedule 3.1(i): (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company’s financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its shareholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans. The Company does not have pending before the Commission any request for confidential treatment of information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents and as set forth on Schedule 3.1(i), no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition, that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least 1 Trading Day prior to the date that this representation is made.

(j) Litigation. There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an “Action”) which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Except as set forth on Schedule 3.1(j), neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. Except as set forth on Schedule 3.1(j), there has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company’s or its Subsidiaries’ employees is a member of a union that relates to such employee’s relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(l) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

(m) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval other than with respect to, in each case of clause (i), (ii) and (iii), the failure to so comply or receive permits, licenses or other approvals could not have or reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(n) Regulatory Permits. The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not reasonably be expected to result in a Material Adverse Effect ("Material Permits"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(o) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (ii) Liens for the payment of federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance other than with respect to such non-compliance that could not be reasonably expected to have a Material Adverse Effect.

(p) Intellectual Property. The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade secrets, inventions, copyrights, licenses and other intellectual property rights and similar rights as necessary or required for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the “Intellectual Property Rights”). None of, and neither the Company nor any Subsidiary has received a notice (written or otherwise) that any of, the Intellectual Property Rights has expired, terminated or been abandoned, or is expected to expire or terminate or be abandoned, within two years from the date of this Agreement. Neither the Company nor any Subsidiary has received, since the date of the latest audited financial statements included within the SEC Reports, a written notice of a claim or otherwise has any knowledge that the Intellectual Property Rights violate or infringe upon the rights of any Person, except as could not have or could not reasonably be expected to have a Material Adverse Effect. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights. The Company and its Subsidiaries have taken reasonable security measures to protect the secrecy, confidentiality and value of all of their intellectual properties, except where failure to do so could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged, including, but not limited to, directors and officers insurance coverage at least equal to the aggregate Subscription Amount. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. None of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary, is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, shareholder, member or partner, in each case in excess of \$120,000 other than for: (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley; Internal Accounting Controls. The Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except as set forth in the Prospectus Supplement, no brokerage or finder's fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Shares and Warrants, will not be or be an Affiliate of, an “investment company” within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an “investment company” subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. Except as set forth on Schedule 3.1(v), no Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

(w) Listing and Maintenance Requirements. Except as set forth on Schedule 3.1(w), the Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as set forth on Schedule 3.1(w), the Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such currently applicable listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company’s certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company’s issuance of the Securities and the Purchasers’ ownership of the Securities.

(y) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which such material terms and conditions will have been disclosed after the filing of the press release pursuant to Section 4.5 and the information set forth in the Prospectus Supplement under the Caption “PROSPECTUS SUPPLEMENT SUMMARY – Recent Developments, which information will have been disclosed after the filing of the Disclosure 8-K pursuant to Section 4.5, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that it believes constitutes or might constitute material, non-public information. The Company understands and confirms that the Purchasers will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The press releases disseminated by the Company during the 12 months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof.

(z) No Integrated Offering. Assuming the accuracy of the Purchasers’ representations and warranties set forth in Section 3.2, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Shares and Warrants hereunder: (i) the fair saleable value of the Company’s assets exceeds the amount that will be required to be paid on or in respect of the Company’s existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company’s assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. Schedule 3.1(aa) sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, “Indebtedness” means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company’s consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP as in effect as of December 31, 2018. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(b b) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has: (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law or (iv) violated in any material respect any provision of FCPA.

(dd) Accountants. The Company's accounting firm is set forth on Schedule 3.1(dd). To the knowledge and belief of the Company, such accounting firm: (i) is a registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements to be included in the Company's Annual Report for the fiscal year ending December 31, 2018.

(ee) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding, it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term, (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future securities offering transactions, may negatively impact the market price of the Company's publicly-traded securities, (iii) any Purchaser, and counter-parties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, may presently have a "short" position in the Common Stock and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the Securities are outstanding, and (z) such hedging activities (if any) could reduce the value of the existing shareholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(g g) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or paid any compensation for soliciting purchases of, any of the Securities, or (iii) within the restricted period required by Regulation M, paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and, (iii) compensation paid to the Placement Agent in connection with the placement of the Shares and the Warrants.

(h h) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(ii) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(jj) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

(k k) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, 5% or more of the outstanding shares of any class of voting securities or 25% or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(11) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

3.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein, in which case they shall be accurate as of such date):

(a) Organization; Authority. Such Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of the Transaction Documents and performance by such Purchaser of the transactions contemplated by the Transaction Documents have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(b) Understandings or Arrangements. Such Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting such Purchaser's right to sell the Securities in compliance with applicable federal and state securities laws). Such Purchaser is acquiring the Securities in the ordinary course of its business.

(c) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants it will be either: (i) an "accredited investor" as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7) or (a)(8) under the Securities Act or (ii) a "qualified institutional buyer" as defined in Rule 144A(a) under the Securities Act.

(d) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(e) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Reports and has been afforded, (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Such Purchaser acknowledges and agrees that neither the Placement Agent nor any Affiliate of the Placement Agent has provided such Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired. Neither the Placement Agent nor any Affiliate has made or makes any representation as to the Company or the quality of the Securities and the Placement Agent and any Affiliate may have acquired non-public information with respect to the Company which such Purchaser agrees need not be provided to it. In connection with the issuance of the Securities to such Purchaser, neither the Placement Agent nor any of its Affiliates has acted as a financial advisor or fiduciary to such Purchaser.

The Company acknowledges and agrees that the representations contained in this Section 3.2 shall not modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby. Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

ARTICLE IV. OTHER AGREEMENTS OF THE PARTIES

4.1 Warrant Shares. If all or any portion of a Warrant is exercised at a time when there is an effective registration statement to cover the sale or resale of the Warrant Shares or if the Warrant is exercised via cashless exercise, the Warrant Shares issued pursuant to any such exercise shall be issued free of all legends. If at any time following the date hereof the Registration Statement (or any subsequent registration statement registering the sale or resale of the Warrant Shares) is not effective or is not otherwise available for the sale or resale of the Warrant Shares, the Company shall immediately notify the holders of the Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale or resale of the Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any Purchaser to sell, any of the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use best efforts to keep a registration statement (including the Registration Statement) registering the sale or resale of the Warrant Shares effective during the term of the Warrants.

4.2 Furnishing of Information: Public Information. Until the earliest of the time that (i) no Purchaser owns Securities or (ii) the Warrants have expired, the Company covenants to maintain the registration of the Common Stock under Section 12(b) or 12(g) of the Exchange Act and to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Exercise Procedures. The Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Warrants. Without limiting the preceding sentences, no ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Warrants. The Company shall honor exercises of the Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.5 Securities Laws Disclosure: Publicity. The Company shall: (a) by 9:00 a.m. (New York City time) on the date hereof, issue a press release disclosing the material terms of the transactions contemplated hereby and file the Disclosure 8-K; and (b) file a Current Report on Form 8-K, including the Transaction Documents as exhibits thereto, with the Commission within the time required by the Exchange Act. From and after the issuance of such press release, the Company represents to the Purchasers that it shall have publicly disclosed all material, non-public information delivered to any of the Purchasers by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees or agents. In addition, effective upon the issuance of such press release and Disclosure 8-K, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates on the one hand, and any of the Purchasers or any of their Affiliates on the other hand, shall terminate. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except: (a) as required by federal securities law in connection with the filing of final Transaction Documents with the Commission; and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure permitted under this clause (b).

4.6 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an “Acquiring Person” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchasers.

4.7 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents and the information required to be included in the Disclosure 8-K, which shall be disclosed pursuant to Section 4.5, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information that constitutes, or the Company reasonably believes constitutes, material non-public information, unless prior thereto such Purchaser shall have consented to the receipt of such information and agreed with the Company to keep such information confidential. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company delivers any material, non-public information to a Purchaser without such Purchaser’s consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates, or a duty to the Company, or any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates not to trade on the basis of, such material, non-public information, provided that the Purchaser shall remain subject to applicable law. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.8 Use of Proceeds. The Company shall use the net proceeds from the Closing (a) in connection with the commercialization of the POWERHOUSE™ product, (b) for working capital purposes and (c) for repayment of up to \$300,000 owed under the Company’s convertible notes due April 9, 2019, and shall not use such proceeds: (i) for the satisfaction of any portion of the Company’s debt (other than pursuant to clause (c) above and payment of trade payables in the ordinary course of the Company’s business and prior practices), (ii) for the redemption of any Common Stock or Common Stock Equivalents, (iii) for the settlement of any outstanding litigation or (iv) in violation of FCPA or OFAC regulations.

4.9 Indemnification of Purchasers. Subject to the provisions of this Section 4.9, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a “Purchaser Party”) harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys’ fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against the Purchaser Parties in any capacity, or any of them or their respective Affiliates, by any shareholder of the Company who is not an Affiliate of such Purchaser Party, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is based upon a breach of such Purchaser Party’s representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser Party may have with any such shareholder or any violations by such Purchaser Party of state or federal securities laws or any conduct by such Purchaser Party which constitutes fraud, gross negligence, willful misconduct or malfeasance). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company’s prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party’s breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents. The indemnification required by this Section 4.9 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or are incurred. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

4.10 Reservation and Listing of Securities.

(a) The Company shall maintain a reserve from its duly authorized shares of Common Stock for issuance pursuant to the Transaction Documents in such amount as may then be required to fulfill its obligations in full under the Transaction Documents.

(b) The Company shall, if applicable: (i) in the time and manner required by the principal Trading Market, prepare and file with such Trading Market an additional shares listing application covering a number of shares of Common Stock at least equal to the Shares and Warrant Shares on the date of such application, (ii) take all steps necessary to cause such shares of Common Stock to be approved for listing or quotation on such Trading Market as soon as possible thereafter, (iii) provide to the Purchasers evidence of such listing or quotation and (iv) maintain the listing or quotation of such Common Stock on such Trading Market or another Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.11 Participation in Future Financing.

(a) From the date hereof until the one year anniversary of the Closing Date, upon any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents for cash consideration (a "Subsequent Financing"), each Purchaser shall have the right to participate in such Subsequent Financing in an amount equal to up to 35% of the Subsequent Financing, provided that the aggregate participation right of all Purchasers shall not exceed 35% of such Subsequent Financing (the "Participation Maximum"), on the same terms, conditions and price provided for in the Subsequent Financing.

(b) Between the time period of 4:00 pm (New York City time) and 6:00 pm (New York City time) on the Trading Day immediately prior to the Trading Day of the expected announcement of the Subsequent Financing (or, if the Trading Day of the expected announcement of the Subsequent Financing is the first Trading Day following a holiday or a weekend (including a holiday weekend), between the time period of 4:00 pm (New York City time) on the Trading Day immediately prior to such holiday or weekend and 2:00 pm (New York City time) on the day immediately prior to the Trading Day of the expected announcement of the Subsequent Financing), the Company shall deliver to each Purchaser a written notice of the Company's intention to effect a Subsequent Financing (a "Subsequent Financing Notice"), which notice shall describe in reasonable detail the proposed terms of such Subsequent Financing, the amount of proceeds intended to be raised thereunder and the Person or Persons through or with whom such Subsequent Financing is proposed to be effected and shall include a term sheet and transaction documents relating thereto as an attachment.

(c) Any Purchaser desiring to participate in such Subsequent Financing must provide written notice to the Company by 6:30 am (New York City time) on the Trading Day following the date on which the Subsequent Financing Notice is delivered to such Purchaser (the "Notice Termination Time") that such Purchaser is willing to participate in the Subsequent Financing, the amount of such Purchaser's participation, and representing and warranting that such Purchaser has such funds ready, willing, and available for investment on the terms set forth in the Subsequent Financing Notice. If the Company receives no such notice from a Purchaser as of such Notice Termination Time, such Purchaser shall be deemed to have notified the Company that it does not elect to participate in such Subsequent Financing.

(d) If, by the Notice Termination Time, notifications by the Purchasers of their willingness to participate in the Subsequent Financing (or to cause their designees to participate) is, in the aggregate, less than the total amount of the Participation Maximum, then the Company may effect the remaining portion of such Participation Maximum on the terms and with the Persons set forth in the Subsequent Financing Notice.

(e) If, by the Notice Termination Time, the Company receives responses to a Subsequent Financing Notice from Purchasers seeking to purchase more than the aggregate amount of the Participation Maximum, each such Purchaser shall have the right to purchase its Pro Rata Portion (as defined below) of the Participation Maximum. "Pro Rata Portion" means the ratio of (x) the Subscription Amount of a Purchaser participating under this Section 4.11 and (y) the sum of the aggregate Subscription Amounts of all Purchasers participating under this Section 4.11.

(f) The Company must provide the Purchasers with a second Subsequent Financing Notice, and the Purchasers will again have the right of participation set forth above in this Section 4.11, if the definitive agreement related to the initial Subsequent Financing Notice is not entered into for any reason on the terms set forth in such Subsequent Financing Notice by 9:30 am (New York City time) on the second Trading Days following the date of delivery of the initial Subsequent Financing Notice.

(g) The Company and each Purchaser agree that, in connection with a Subsequent Financing, the transaction documents related to the Subsequent Financing shall include a requirement for the Company to issue a widely disseminated press release by 9:30 am (New York City time) on the Trading Day of execution of the transaction documents in such Subsequent Financing (or, if the date of execution is not a Trading Day, on the immediately following Trading Day) that discloses the material terms of the transactions contemplated by the transaction documents in such Subsequent Financing.

(h) Notwithstanding anything to the contrary in this Section 4.11 and unless otherwise agreed to by such Purchaser, the Company shall either confirm in writing to such Purchaser that the transaction with respect to the Subsequent Financing has been abandoned or shall publicly disclose its intention to issue the securities in the Subsequent Financing, in either case in such a manner such that such Purchaser will not be in possession of any material, non-public information, by 9:30 am (New York City time) on the third Trading Day following date of delivery of the Subsequent Financing Notice. If by 9:30 am (New York City time) on such third Trading Day, no public disclosure regarding a transaction with respect to the Subsequent Financing has been made, and no notice regarding the abandonment of such transaction has been received by such Purchaser, such transaction shall be deemed to have been abandoned and such Purchaser shall not be deemed to be in possession of any material, non-public information with respect to the Company or any of its Subsidiaries.

(i) Notwithstanding the foregoing, this Section 4.11 shall not apply in respect of an Exempt Issuance.

4.12 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) Trading Days following the Closing Date, neither the Company nor any Subsidiary shall issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock Equivalents.

(b) From the date hereof until one (1) year following the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price; provided, that, for the avoidance of doubt, the Company's voluntary reduction of the exercise price of warrants issued and outstanding on the date of this Agreement as permitted pursuant to the terms of such warrants as of the date of this Agreement shall not constitute a Variable Rate Transaction. Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, this Section 4.12 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.13 Capital Changes. Until the 75 day anniversary of the Closing Date, the Company shall not undertake or announce a reverse or forward stock split or reclassification of the Common Stock.

4.14 Equal Treatment of Purchasers. No consideration (including any modification of any Transaction Document) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of the Transaction Documents unless the same consideration is also offered to all of the parties to such Transaction Documents. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of the Securities or otherwise.

ARTICLE V. MISCELLANEOUS

5.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated on or before April 8, 2018; provided, however, that such termination will not affect the right of any party to sue for any breach by any other party (or parties).

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any conversion or exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

5 . 3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, the Prospectus and the Prospectus Supplement, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered via facsimile or email attachment at the facsimile number or email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile or email attachment at the facsimile number or email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address, facsimile number and email address for such notices and communications shall be as set forth on the signature pages attached hereto. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

5.5 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of any amendment, by the Company and Purchasers which purchased 100% in interest of the sum of the Shares and Series S Warrant Shares based on the initial Subscription Amounts hereunder, or, in the case of a waiver, by the party against which enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any proposed waiver, modification, supplement or amendment that disproportionately, materially and adversely affects the rights and obligations of any Purchaser relative to the comparable rights and obligations of the other Purchasers shall require the prior written consent of such adversely affected Purchaser. Any waiver, modification, supplement or amendment effected in accordance with this Section 5.5 shall be binding upon each Purchaser and subsequent holder of Securities and the Company.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the "Purchasers."

5.8 No Third-Party Beneficiaries. The Placement Agent shall be the third party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations and warranties of the Purchasers in Section 3.2. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.9 and this Section 5.8.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such Proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such Action or Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.9, the prevailing party in such Action or Proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Shares and the Warrants.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that in the case of a rescission of an exercise of a Warrant, the applicable Purchaser shall be required to return any shares of Common Stock subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser's right to acquire such shares pursuant to such Purchaser's Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

5.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.16 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

5.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, each Purchaser and its respective counsel have chosen to communicate with the Company through EGS. EGS does not represent any of the Purchasers and only represents the Placement Agent. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

5.18 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.19 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

5.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

5.21 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

REAL GOODS SOLAR, INC.

Address for Notice:

RGS Energy
110 16th Street, Suite 300
Denver, CO 80202
Attn: Tyler Clarke
Fax: (303) 223-9206
Email: investorrelations@rgsenergy.com

By: /s/Dennis Lacey
Name: Dennis Lacey
Title: Chief Executive Officer

With a copy to (which shall not constitute notice):

Rikard Lundberg
Brownstein Hyatt Farber Schreck, LLP
410 Seventeenth Street, Suite 2200
Denver, CO 80202
Fax: (303) 223-8032
Email: RLundberg@BHFS.com

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

[PURCHASER SIGNATURE PAGES TO RGSE SECURITIES PURCHASE AGREEMENT]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: _____

Signature of Authorized Signatory of Purchaser: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Email Address of Authorized Signatory: _____

Facsimile Number of Authorized Signatory: _____

Address for Notice to Purchaser:

Address for Delivery of Warrants to Purchaser (if not same as address for notice):

DWAC for Shares: _____

Subscription Amount for Shares: _____ Number of Shares: _____

Subscription Amount for Series __ Warrants: _____ Number of Series __ Warrants: _____

Series __ Warrant Shares: _____

I elect for my Warrants to have a ____ 4.99% or ____ 9.99% initial beneficial ownership blocker (if you do not make an election your Warrants will have a 4.99% blocker)

EIN Number: _____

Notwithstanding anything contained in this Agreement to the contrary, by checking this box (i) the obligations of the above-signed to purchase the securities set forth in this Agreement to be purchased from the Company by the above-signed, and the obligations of the Company to sell such securities to the above-signed, shall be unconditional and all conditions to Closing shall be disregarded, (ii) the Closing shall occur on the second (2nd) Trading Day following the date of this Agreement and (iii) any condition to Closing contemplated by this Agreement (but prior to being disregarded by clause (i) above) that required delivery by the Company or the above-signed of any agreement, instrument, certificate or the like or purchase price (as applicable) shall no longer be a condition and shall instead be an unconditional obligation of the Company or the above-signed (as applicable) to deliver such agreement, instrument, certificate or the like or purchase price (as applicable) to such other party on the Closing Date.

[SIGNATURE PAGES CONTINUE]

**Disclosure Schedule to Securities Purchase Agreement
Dated April 2, 2019**

Schedule 3.1(a) Subsidiaries

<u>Entity Name</u>	<u>State or country of Incorporation or Registration</u>	
Alteris Renewables, Inc.	Delaware	1
Elemental Energy LLC	Hawaii	1
Real Goods Energy Tech, Inc.	Colorado	1
Real Goods Solar, Inc.	Colorado	
RGS Financing, Inc.	Colorado	1
Mercury Energy, Inc.	Delaware	1
Real Goods Solar, Inc. – Mercury Solar	New York	2
Other entities without material assets		
Alteris RPS, LLC	Delaware	3
Real Goods Syndicated, Inc.	Delaware	1
Sunetric Management LLC	Delaware	4
Mercury Commercial Solar Fund I, LLC	New York	2
Mercury Solar Birch, LLC	Delaware	2
Mercury Solar Cedar, LLC	Delaware	2
Mercury Solar Pine, LLC	Delaware	2
Mercury Residential Solar Fund I, LLC	New York	2
RGS Energy Asset Management, LLC	Delaware	1
RGS Capital, LLC	Delaware	1

1. Subsidiary of Real Goods Solar, Inc.
 2. Subsidiary of Mercury Energy, Inc.
 3. Subsidiary of Alteris Renewables, Inc.
 4. Subsidiary of Elemental Energy, LLC
-

Schedule 3.1(g) Capitalization

Capitalization Schedule – Authorized and outstanding capital stock as of March 25, 2019

Class/Category	Authorized	Reserved	Outstanding
Class A common stock	150,000,000	-	92,964,471
Class B common stock	50,000,000	-	-
Preferred Stock	50,000,000	-	-
2018 convertible debt ¹		831,591	-
Warrants (for Class A Common Stock)	-	8,505,298	-
Stock Options (for Class A Common Stock)	-	1,206,645	-
Total:	250,000,000	10,543,534	92,964,471

(1) estimated as if \$255,049 of debt was outstanding

Outstanding Options and Warrants :

Outstanding Options, Warrants	Current Exercise Price	Outstanding	
Stock options	\$ 1,428 - \$ 46,560	145	Options outstanding under the Company's 2008 Long-Term Incentive Plan
Stock options	\$ 0.32 - \$ 1.08	1,206,500	Options outstanding under the Company's 2018 Long-Term Incentive Plan
November 2013 warrants	\$ 40,920.00	418	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances; redemption for fundamental transactions and going private
June, 2014 Warrants	\$ 38,280	76	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances; redemption for fundamental transactions and going private
Feb 2015 A & C Warrants	\$ 6,000	9	Full ratchet anti-dilution (exercise price); purchase rights for pro-rata issuances; adjustment of shares and exercise price for splits; redemption in certain circumstances in fundamental transactions
Feb 2015 Westpark warrants	\$ 6,000	47	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances; redemption in certain circumstances in fundamental transactions.
SVB Warrants	\$ 9,720 - \$ 28,320	42	Ratchet for 12 months (expired); adjustment of shares and exercise price for splits
June 2015 Series F warrants	\$ 744.00	868	One time adjustment of exercise price on July 9, 2015; adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
June 2015 Westpark warrants	\$ 744.00	183	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances; adjustment of exercise price for splits; purchase rights for pro-rata issuances
April 2016 Series G Warrants	\$ 1.36	3,323	One time adjustment of exercise price on April 1, 2017; adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
April 2016 Roth Warrants	\$ 496.80	1,411	One time adjustment of exercise price on April 1, 2017; adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
September 2016 Series H Warrants	\$ 165.00	7,455	One time adjustment of exercise price on date all Convertible Notes (as defined below) are paid-off; adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
September 2016 Underwriter Warrants	\$ 30,000	5	Includes 90,177 Class A Common shares, and 25,454 Series H Warrants (see Series H Warrants above)
December 2016 Series I Warrants	\$ 1.27	141,676	One time adjustment of exercise price on April 1, 2017; adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
December 2016 Roth Warrants	\$ 10.50	30,834	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
February 6, 2017 Series K Warrants	\$ 3.10	3,710,000	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
February 6, 2017 Roth Warrants	\$ 3.88	185,500	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
February 9, 2017 Series M Warrants	\$ 2.40	1,609,974	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
February 9, Roth Warrants	\$ 3.13	120,000	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
January 2018 Series O Warrants	\$ 1.47	1,600,000	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
January 2018 Underwriter Warrants	\$ 1.47	128,000	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
March 2018 Series Q Warrants	\$ 0.3223	235,317	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances
March 2018 Underwriter Warrants	\$ 0.3223	730,160	Adjustment of shares and exercise price for splits; purchase rights for pro-rata issuances

In February 2015, the Company issued warrants to purchase Common Stock (the “February 2015 Warrants), which contain a provision adjusting the exercise price for certain issuances of securities as well as provisions adjusting the shares and exercise price for stock splits, reverse stock splits and the like. There are currently a total of 9 shares of Common Stock issuable upon the exercise of the February 2015 Warrants at an exercise price of \$6,000.00 per share, after adjusting for the applicable reverse stock splits and subsequent issuances of securities but prior to giving effect to the securities issuable under this Agreement.

In April 2018, the Company issued warrants to purchase Common Stock (the “Series Q Warrants), which contain a provision adjusting the exercise price for certain issuances of securities as well as provisions adjusting the shares and exercise price for stock splits, reverse stock splits and the like. There are currently a total of 235,317 shares of Common Stock issuable upon the exercise of the Series Q Warrants at an exercise price of \$0.3223 per share, prior to giving effect to any adjustment resulting from the issuance of the Securities issuable under this Agreement.

Convertible Convertible Notes

Outstanding Convertible Notes	Current Conversion Price	Convertible Notes Payable	
April 2018 Senior Secured Convertible Notes	see below	\$ 129,698	Redemption features

As previously disclosed, on April 9, 2018, the Company issued an aggregate of \$10.75 million in principal amount and \$10 million funding amount (reflecting an original issue discount of \$750,000) of Series A senior convertible notes due April 9, 2019 (the "Series A Notes") and Series B senior secured convertible notes due April 9, 2019 (the "Series B Notes" and, together with the Series A Notes, collectively, the "2018 Convertible Notes"). The 2018 Convertible Notes are convertible at any time, at the option of the holders, into shares of Common Stock at a fixed conversion price. The fixed conversion price is currently \$0.3223 per share, subject to adjustment (i) upon certain issuances of securities, (ii) in connection with "variable price securities" (as defined in the 2018 Convertible Notes), (iii) upon stock splits and similar events, and (iv) if agreed to by the "required holders" (as defined in the 2018 Convertible Notes) and the Company's board of directors.

In accordance with the terms of the 2018 Convertible Notes, effective on August 27, 2018, the conversion price was reduced to \$0.3067 per share and, effective on August 29, 2018, the 2018 Convertible Note holders waived future adjustment date resets of the conversion price of the 2018 Convertible Notes and the exercise price of the Series Q Warrants (but the conversion price and exercise price remain subject to potential future anti-dilution and stock split related adjustments).

The 2018 Convertible Notes contain certain redemption rights upon, among other things, the occurrence of an event or default or a "fundamental transaction" (as defined in the 2018 Convertible Notes).

Stock Appreciation Rights and Phantom Stock

Under the Company's 2018 Long-Term Incentive Plan the Company may grant Stock Appreciation Rights either alone, or in conjunction with other awards, either at the time of grant or by amendment thereafter. The plan does not expressly provide for the issuance of "phantom stock." However, the plan permits the Company's Compensation Committee to issue any type of award deemed by the Compensation Committee to be consistent with the purposes of the plan. Therefore, it is possible that the Compensation Committee in the future may issue "phantom stock" under the plan.

Section 3.1(i) Material Changes; Undisclosed Events, Liabilities or Developments.

The following unaudited preliminary results for the Company's fourth quarter ended December 31, 2018 are subject to the completion of its quarterly closing and review procedures, as well as the regular annual audit by its independent registered public accounting firm, and therefore is subject to change.

<i>(000's omitted)</i>	<i>10-K 12/31/18 un-audited</i>	<i>2/29/19 un-audited</i>	<i>Change</i>
Cash	\$ 5,831	\$ 3,737	\$ (2,094)
Other current assets	4,795	5,387	592
Total current assets	<u>10,626</u>	<u>9,124</u>	<u>(1,502)</u>
Long-term assets	5,634	5,571	(63)
Total assets	<u>\$ 16,260</u>	<u>\$ 14,695</u>	<u>\$ (1,565)</u>
Convertible notes	\$ 336	\$ 120	\$ (216)
Accounts payable and accrued liabilities	2,433	3,168	735
Other current liabilities	956	1,452	496
Total current liabilities	<u>3,725</u>	<u>4,740</u>	<u>1,015</u>
Long-term liabilities	1,753	1,470	(283)
Total liabilities	5,478	6,210	732
Stockholders'equity	<u>10,782</u>	<u>8,485</u>	<u>(2,297)</u>
	<u>\$ 16,260</u>	<u>\$ 14,695</u>	<u>\$ (1,565)</u>
Working Capital	6,901	4,384	(2,517)
Debt to Equity	0.03	0.01	

On March 27, 2019, the Company's Board of Directors authorized commencement of a plan to significantly reduce operations in the Company's residential solar division to reduce the associated annual cash outflow, a matter that has previously raised substantial doubt about the Company's ability to operate as a going concern. The report of the Company's independent accounting firm included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 was unqualified with an explanatory paragraph for substantial doubt about the Company's ability to operate as a going concern. The Company commenced commercialization of a new product, POWERHOUSE™, during the first quarter of 2019. The revenue for the first quarter from the new product was immaterial and, accordingly, the Company expects the report of its independent accounting firm to be included in its Annual Report on Form 10-K for the year ended December 31, 2018 will be unqualified with an explanatory paragraph for substantial doubt about the Company's ability to operate as a going concern.

Schedule 3.1(j) Litigation

On July 9, 2014, the Company completed a private offering of approximately \$7.0 million of its Common Stock and warrants (the "July 2014 PIPE Offering"). Five of the investors that participated in the offering (out of approximately 20 total investors that participated in the offering) asserted claims against the Company in three separate lawsuits alleging certain misrepresentations and omissions in the offering. The Company subsequently reached settlements with all five investors. The Company recorded a charge to operations of \$0.5 million as of June 30, 2015, in recognition of the loss contingency for the July 2014 PIPE offering. That charge was equal to the retention under the Company's 2014-15 Officers and Directors liability insurance policy as the Company expects the insurance policy will cover any future claims in excess of the retention limit.

The Company received a subpoena from the U.S. Securities and Exchange Commission ("SEC") requesting certain information pertaining to the Company's July 2014 PIPE Offering. The Company established a special committee of the board of directors to review the facts and circumstances surrounding the July 2014 PIPE Offering and engaged outside counsel to assist it with its review. On May 11, 2016, the Company was advised by the SEC staff that the staff did not intend to recommend any enforcement action against the Company with respect to the investigation commenced by the SEC staff in June 2015.

As reported on Form 8-K filed March 12, 2018, the Financial Industry Regulatory Authority ("FINRA") contacted the Company to inquire about trading activity in the Company's Class A common stock in the time period surrounding the Company's announcement of the Company's license agreement for the POWERHOUSE solar shingle system on October 4, 2017. In February 2018, FINRA notified the Company that FINRA had concluded its review and referred the matter to the US Securities and Exchange Commission ("SEC") for whatever action, if any, the SEC deems necessary. John Schaeffer, who retired from the Company's board of directors on March 9, 2018, has informed the Company that he is in contact with the SEC in connection with this matter. The Company has no information about the nature or scope of the SEC's involvement in this matter. Further, the Company has not received any communication, inquiry or subpoena from the SEC in connection with this matter and has no reason to believe that the Company is implicated in any way in this matter.

Schedule 3.1(v) Registration Rights

The Company has granted registration rights under the following:

The Amended and Restated Registration Rights Agreement, dated as of December 19, 2011, by and among the Company, Gaiam, Inc., and Riverside Renewable Energy Investments, LLC. [Note: On November 5, 2013, Gaiam ceased to be a party to the Amended and Restated Registration Rights Agreement pursuant to the terms of an Agreement, dated November 5, 2013, among the parties.]

The Registration Rights Agreement, dated as of June 3, 2013, by and among the Company and the investors party thereto.

The Warrants to purchase the Company's Common Stock, issued November 20, 2013.

The Registration Rights Agreement, dated as of July 9, 2014, by and among the Company and the investors party thereto.

The Conversion Agreement dated as of June 24, 2015 by and between the Company and Riverside Fund III, L.P.

Registration right granted to Roth Capital Partners, LLC.

Pursuant to Section 4.1 of the Securities Purchase Agreement, dated as of December 8, 2016, by and among the Company and the investors party thereto, the Company has agreed to use its best efforts to keep a registration statement effective registering the issuance or resale of the shares of Common Stock issuable upon exercise of the Company's Series I Warrants, during the term of the Series I Warrants.

Pursuant to Section 4.1 of the Securities Purchase Agreement, dated as of February 1, 2017, by and among the Company and the investors party thereto, the Company has agreed to use its best efforts to keep a registration statement effective registering the issuance or resale of the shares of Common Stock issuable upon exercise of the Company's Series K Warrants, during the term of the Series K Warrants.

Pursuant to Section 4.1 of the Securities Purchase Agreement, dated as of February 7, 2017, by and among the Company and the investors party thereto, the Company has agreed to use its best efforts to keep a registration statement effective registering the issuance or resale of the shares of Common Stock issuable upon exercise of the Company's Series M Warrants, during the term of the Series M Warrants.

Pursuant to the Cooperation Agreement, dated as of January 2, 2018, by and among the Company and the investors party thereto, the Company has agreed to use its best efforts to keep a registration statement effective registering the issuance or resale of the shares of Common Stock delivered pursuant to the Cooperation Agreement.

Pursuant to Section 4.1 of the Securities Purchase Agreement, dated as of January 2, 2018, by and among the Company and the investors party thereto, the Company has agreed to use its best efforts to keep a registration statement effective registering the issuance or resale of the shares of Common Stock issuable upon exercise of the Company's Series O Warrants, during the term of the Series O Warrants.

Schedule 3.1 (w) Listing and Maintenance Requirements

On August 7, 2018, the Company received a letter from The Nasdaq Stock Market (“Nasdaq”), notifying the Company that for the last 30 consecutive business days, the bid price of the Company’s Class A common stock had closed below the minimum \$1.00 per share requirement for continued inclusion on Nasdaq based on Listing Rule 5550(a)(2), and describing a timetable for bringing the Company into compliance with that rule.

The Common Stock is currently registered pursuant to Section 12(b) of the Exchange Act. On March 12, 2019 the Nasdaq Stock Market filed a Form 25-NSE with the Securities and Exchange Commission, which delisted the Common Stock from Nasdaq on March 22, 2019 and will deregister the Common Stock from Section 12(b) of the Exchange Act on June 10, 2019. The Company plans to file a registration statement on Form 8-A to register the Common Stock pursuant to Section 12(g) of the Exchange Act before June 10, 2019.

The Company moved trading of the Common Stock to the OTCQX from The Nasdaq Capital Market effective February 15, 2019.

Schedule 3.1(aa) Solvency

The following schedule sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments.

- Payable to Columbia Casualty of \$400,000
- Amount due under the 2018 Convertible Note of \$129,699 as of March 25, 2019

Schedule 3.1(dd) Accountants

On December 5, 2018, the Company’s Audit Committee engaged BDO USA, LLP as the Company’s new principal accountant to audit the Company’s financial statements for the fiscal year ending December 31, 2018.

[Form 1]

April 2, 2019

[Purchaser]

Dear Sirs:

This agreement (the "**Leak-Out Agreement**") is being delivered to you in connection with an understanding by and among Real Goods Solar, Inc., a Colorado corporation (the "**Company**"), and the person or persons named on the signature pages hereto (collectively, the "**Holder**").

Reference is hereby made to (a) the Securities Purchase Agreement, dated April 2, 2019, by and among the Company and the certain purchasers signatory thereto (the "**SPA**") and (b) the registration statement on Form S-3 (File No. 333-215985) ("**Registration Statement**"), pursuant to which the Holder acquired (i) shares of Common Stock ("**Shares**"), (ii) Series R Warrants, and, if applicable, (iii) Series S Warrants (the Series R Warrants and the Series S Warrants, collectively, the "**Holder Warrants**"). Capitalized terms not defined herein shall have the meaning as set forth in the SPA.

The Holder agrees solely with the Company that from the date that both the undersigned executes the SPA and the Company or its agent has notified the Holder that each other Purchaser under the SPA executes an agreement (collectively, the "**Other Leak-Out Agreements**") regarding such Purchaser's trading with terms that are no less restrictive than the terms contained herein (such date, the "**Effective Date**") and ending at 4:00 pm (New York City time) on May 1, 2019 (such period, the "**Restricted Period**"), neither the Holder, nor any Affiliate of such Holder which (x) had or has knowledge of the transactions contemplated by the SPA, (y) has or shares discretion relating to such Holder's investments or trading or information concerning such Holder's investments, including in respect of the Securities, or (z) is subject to such Holder's review or input concerning such Affiliate's investments or trading (together, the "**Holder's Trading Affiliates**"), collectively, shall sell dispose or otherwise transfer, directly or indirectly, (including, without limitation, any sales, short sales, swaps or any derivative transactions that would be equivalent to any sales or short positions) on any Trading Day during the Restricted Period (any such date, a "**Date of Determination**"), shares of Common Stock, or shares of Common Stock underlying any Common Stock Equivalents, held by the Holder on the date hereof or otherwise acquired by the Holder following the Effective Date, including the Shares and the Warrant Shares issuable upon exercise of the Holder Warrants in an amount more than ___%^[1] of the trading volume of Common Stock on the principal Trading Market as reported by Bloomberg, LP for the applicable Date of Determination; provided, that the foregoing restrictions shall not apply to any actual "long" (as defined in Regulation SHO of the Securities Exchange Act of 1934, as amended) sales by the Holder or any of the Holder's Trading Affiliates at a price greater than \$0.24 (in each case, as adjusted for stock splits, stock dividends, stock combinations, recapitalizations or other similar events occurring after the date hereof).

¹ Pro rata portion of 30% among investors executing Leak-Out Agreements, based on Subscription Amount.

Notwithstanding anything herein to the contrary, during the Restricted Period, the Holder may, directly or indirectly, sell or transfer all, or any part, of the Shares or the Warrant Shares underlying the Holder Warrants (the “**Restricted Securities**”) to any Person (an “**Assignee**”) in a transaction which does not need to be reported on the OTCQB consolidated tape (or equivalent thereof), without complying with (or otherwise limited by) the restrictions set forth in this Leak-Out Agreement; provided, that as a condition to any such sale or transfer an authorized signatory of the Company and such Assignee duly execute and deliver a leak-out agreement in the form of this Leak-Out Agreement (an “**Assignee Agreement**”, and each such transfer a “**Permitted Transfer**”) and, subsequent to a Permitted Transfer, sales of the Holder and the Holder’s Trading Affiliates and all Assignees (other than any such sales that constitute Permitted Transfers) shall be aggregated for all purposes of this Leak-Out Agreement and all Assignee Agreements.

Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Leak-Out Agreement must be in writing and shall be given in accordance with the terms of the SPA.

This Leak-Out Agreement constitutes the entire agreement among the parties hereto with respect to the subject matter hereof and supersedes all prior negotiations, letters and understandings relating to the subject matter hereof and are fully binding on the parties hereto.

This Leak-Out Agreement may be executed simultaneously in any number of counterparts. Each counterpart shall be deemed to be an original, and all such counterparts shall constitute one and the same instrument. This Leak-Out Agreement may be executed and accepted by facsimile or PDF signature and any such signature shall be of the same force and effect as an original signature.

The terms of this Leak-Out Agreement shall be binding upon and shall inure to the benefit of each of the parties hereto and their respective successors and assigns.

This Leak-Out Agreement may not be amended or modified except in writing signed by each of the parties hereto.

All questions concerning the construction, validity, enforcement and interpretation of this Leak-Out Agreement shall be governed by Sections 5.9 and 5.20 of the SPA.

Each party hereto acknowledges that, in view of the uniqueness of the transactions contemplated by this Leak-Out Agreement, the other party or parties hereto may not have an adequate remedy at law for money damages in the event that this Leak-Out Agreement has not been performed in accordance with its terms, and therefore agrees that such other party or parties shall be entitled to seek specific enforcement of the terms hereof in addition to any other remedy it may seek, at law or in equity.

The obligations of the Holder under this Leak-Out Agreement are several and not joint with the obligations of any other holder of any of the Securities issued under the SPA (each, an “**Other Holder**”), and the Holder shall not be responsible in any way for the performance of the obligations of any Other Holder. Nothing contained herein or in this Leak-Out Agreement, and no action taken by the Holder pursuant hereto, shall be deemed to constitute the Holder and Other Holders as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Holder and the Other Holders are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by this Leak-Out Agreement and the Company acknowledges that the Holder and the Other Holders are not acting in concert or as a group with respect to such obligations or the transactions contemplated by this Leak-Out Agreement or any other agreement. The Company and the Holder confirms that the Holder has independently participated in the negotiation of the transactions contemplated hereby with the advice of its own counsel and advisors. The Holder shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Leak-Out Agreement, and it shall not be necessary for any Other Holder to be joined as an additional party in any proceeding for such purpose.

The Company hereby represents and warrants as of the date hereof and covenants and agrees from and after the date hereof that none of the terms offered to any Other Holder with respect to any restrictions on the sale of Securities substantially in the form of this Leak-Out Agreement (or any amendment, modification, waiver or release thereof) (each a “**Settlement Document**”), is or will be more favorable to such Other Holder than those of the Holder and this Agreement. If, and whenever on or after the date hereof, the Company enters into a Settlement Document, then (i) the Company shall provide notice thereof to the Holder promptly following the occurrence thereof and (ii) the terms and conditions of this Leak-Out Agreement shall be, without any further action by the Holder or the Company, automatically amended and modified in an economically and legally equivalent manner such that the Holder shall receive the benefit of the more favorable terms and/or conditions (as the case may be) set forth in such Settlement Document, provided that upon written notice to the Company at any time the Holder may elect not to accept the benefit of any such amended or modified term or condition, in which event the term or condition contained in this Agreement shall apply to the Holder as it was in effect immediately prior to such amendment or modification as if such amendment or modification never occurred with respect to the Holder. The provisions of this paragraph shall apply similarly and equally to each Settlement Document.

[The remainder of the page is intentionally left blank]

Sincerely,

REAL GOODS SOLAR, INC.

By: _____
Name:
Title:

Agreed to and Acknowledged:

“HOLDER”

By: _____
Name:
Title:

[Signature Page to RGSE Leakout]

April 2, 2019

[Purchaser]

Dear Sirs:

This agreement (the "**Leak-Out Agreement**") is being delivered to you in connection with an understanding by and among Real Goods Solar, Inc., a Colorado corporation (the "**Company**"), and the person or persons named on the signature pages hereto (collectively, the "**Holder**").

Reference is hereby made to (a) the Securities Purchase Agreement, dated April 2, 2019, by and among the Company and the certain purchasers signatory thereto (the "**SPA**") and (b) the registration statement on Form S-3 (File No. 333-215985) ("**Registration Statement**"), pursuant to which the Holder acquired (i) shares of Common Stock ("**Shares**"), (ii) Series R Warrants, and, if applicable, (iii) Series S Warrants (the Series R Warrants and the Series S Warrants, collectively, the "**Holder Warrants**"). Capitalized terms not defined herein shall have the meaning as set forth in the SPA.

The Holder agrees solely with the Company that from the date that the undersigned executes the SPA (such date, the "**Effective Date**") and ending at 4:00 pm (New York City time) on May 1, 2019 (such period, the "**Restricted Period**"), neither the Holder, nor any Affiliate of such Holder which (x) had or has knowledge of the transactions contemplated by the SPA, (y) has or shares discretion relating to such Holder's investments or trading or information concerning such Holder's investments, including in respect of the Securities, or (z) is subject to such Holder's review or input concerning such Affiliate's investments or trading (together, the "**Holder's Trading Affiliates**"), collectively, shall sell dispose or otherwise transfer, directly or indirectly, (including, without limitation, any sales, short sales, swaps or any derivative transactions that would be equivalent to any sales or short positions) on any Trading Day during the Restricted Period (any such date, a "**Date of Determination**"), shares of Common Stock, or shares of Common Stock underlying any Common Stock Equivalents, held by the Holder on the date hereof or otherwise acquired by the Holder following the Effective Date, including the Shares and the Warrant Shares issuable upon exercise of the Holder Warrants in an amount more than ___% ("**Leak-Out Percentage**") of the trading volume of Common Stock on the principal Trading Market as reported by Bloomberg, LP for the applicable Date of Determination; provided, that the foregoing restrictions shall not apply to any actual "long" (as defined in Regulation SHO of the Securities Exchange Act of 1934, as amended) sales by the Holder or any of the Holder's Trading Affiliates at a price greater than \$0.24 (in each case, as adjusted for stock splits, stock dividends, stock combinations, recapitalizations or other similar events occurring after the date hereof).

Notwithstanding anything herein to the contrary, during the Restricted Period, the Holder may, directly or indirectly, sell or transfer all, or any part, of the Shares or the Warrant Shares underlying the Holder Warrants (the “**Restricted Securities**”) to any Person (an “**Assignee**”) in a transaction which does not need to be reported on the OTCQB consolidated tape (or equivalent thereof), without complying with (or otherwise limited by) the restrictions set forth in this Leak-Out Agreement; provided, that as a condition to any such sale or transfer an authorized signatory of the Company and such Assignee duly execute and deliver a leak-out agreement in the form of this Leak-Out Agreement (an “**Assignee Agreement**”, and each such transfer a “**Permitted Transfer**”), provided that the Leak-Out Percentage as to such Assignee and the Leak-Out Percentage of the assignor shall be proportionally adjusted based on the original Leak-Out Percentage of the Holder.

Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Leak-Out Agreement must be in writing and shall be given in accordance with the terms of the SPA.

This Leak-Out Agreement constitutes the entire agreement among the parties hereto with respect to the subject matter hereof and supersedes all prior negotiations, letters and understandings relating to the subject matter hereof and are fully binding on the parties hereto.

This Leak-Out Agreement may be executed simultaneously in any number of counterparts. Each counterpart shall be deemed to be an original, and all such counterparts shall constitute one and the same instrument. This Leak-Out Agreement may be executed and accepted by facsimile or PDF signature and any such signature shall be of the same force and effect as an original signature.

The terms of this Leak-Out Agreement shall be binding upon and shall inure to the benefit of each of the parties hereto and their respective successors and assigns and shall not be for the benefit of, or be enforceable by, any other person or entity.

This Leak-Out Agreement may not be amended or modified except in writing signed by each of the parties hereto.

All questions concerning the construction, validity, enforcement and interpretation of this Leak-Out Agreement shall be governed by Sections 5.9 and 5.20 of the SPA.

Each party hereto acknowledges that, in view of the uniqueness of the transactions contemplated by this Leak-Out Agreement, the Company may not have an adequate remedy at law for money damages in the event that this Leak-Out Agreement has not been performed in accordance with its terms, and therefore agrees that the Company shall be entitled to seek specific enforcement of the terms hereof in addition to any other remedy it may seek, at law or in equity.

Without implication that the contrary would otherwise be true, the Company acknowledges and agrees that this Leak-Out Agreement is a separate agreement that is solely between the Company and the undersigned and not between or among any other person or entity.

[The remainder of the page is intentionally left blank]

Sincerely,

REAL GOODS SOLAR, INC.

By: _____
Name:
Title:

Agreed to and Acknowledged:

“HOLDER”

By: _____
Name:
Title:

[Signature Page to RGSE Leakout]



RGS Energy Prices \$3.3 Million Public Offering of Common Stock and Warrants

DENVER, CO, April 2, 2019 – RGS Energy (OTCQX: RGSE), the exclusive worldwide manufacturer of the visually stunning POWERHOUSE™ Solar Shingle System, today announced that it has entered into a securities purchase agreement for a registered offering of (A) “Primary Units,” each consisting of one share of Class A common stock, par value \$0.0001, or “Common Stock,” and a Series R Warrant to purchase Common Stock, and (B) “Alternative Units,” each consisting of one prepaid Series S Warrant to purchase one share of Common Stock and a Series R Warrant to purchase Common Stock. The purchase price for a Primary Unit is \$0.19 per unit and the purchase price for an Alternative Unit is \$0.18 per unit, for expected aggregate gross proceeds of approximately \$3.3 million.

Each Primary Unit consists of one share of Common Stock and a Series R Warrant to purchase one share of Common Stock at an exercise price of \$0.20 per share. The Series S Warrants will be exercisable immediately after issuance and for a period of five years thereafter. Each Alternative Unit consists of a prepaid Series S Warrant to purchase one share of Common Stock and a Series R Warrant to purchase one share of Common Stock at an exercise price of \$0.20 per share. The Series S Warrants will be exercisable immediately after issuance and for a period of five years thereafter at an exercise price of \$0.19 per share, of which \$0.18 per share will be paid at the closing with \$0.01 per share payable upon exercise of the Series S Warrant.

Dawson James Securities, Inc. is serving as exclusive placement agent in the offering.

After RGS Energy pays the placement agent fees and estimated offering expenses, RGS Energy expects to receive net proceeds of approximately \$2.9 million.

The offering is expected to close on or about April 2, 2019, subject to customary closing conditions. The warrants will not be separately listed for trading.

The offering is being conducted pursuant to a prospectus supplement and an accompanying prospectus filed as part of an effective shelf registration statement filed with the U.S. Securities and Exchange Commission (“SEC”). Copies of the prospectus supplement and the accompanying prospectus relating to the offering are available free of charge on the SEC’s website at www.sec.gov. Copies of the preliminary prospectus supplement and the accompanying prospectus may also be obtained from the offices of Dawson James Securities, Inc. at 1 North Federal Highway, Suite 500, Boca Raton FL, 3342.

This announcement shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any offer or sale of any securities, in any state or jurisdiction in which the offer, solicitation, or sale of securities would be unlawful. Any offers, solicitations of offers to buy, or sales of securities will only be made pursuant to the registration statement filed with the SEC, including the related prospectus.

About RGS Energy

RGS Energy (OTCQX: RGSE) is America's Original Solar Company and exclusive manufacturer of POWERHOUSE™, an innovative in-roof solar shingle using technology developed by The Dow Chemical Company.

For more information, visit RGSEnergy.com and RGSPOWERHOUSE.com, on Facebook at www.facebook.com/RGSEnergy and on Twitter at twitter.com/rgsenery. Information on such websites and the websites referred to above in this press release is not incorporated by reference into this press release.

RGS Energy is the company's registered trade name. RGS Energy files periodic and other reports with the SEC under its official name "Real Goods Solar, Inc."

POWERHOUSE™ is a trademark of The Dow Chemical Company, used under license.

Forward-Looking Statements and Cautionary Statements

This press release contains forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties, including statements regarding RGS Energy's statements regarding the closing of and the net proceeds from the unit offering discussed herein. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they provide RGS Energy's current beliefs, expectations, assumptions, forecasts, and hypothetical constructs about future events, and include statements regarding our future results of operations and financial position, business strategy, budgets, projected costs, plans and objectives of management for future operations. The words "plan," "future," "may," "will," "expect," "hypothetical," "believe" and similar expressions as they relate to us are intended to identify such forward-looking statements.

Forward-looking statements should not be read as a guarantee of future performance or results and will not necessarily be accurate indications of the times at, or by, which such performance or results will be achieved, if at all. Forward looking statements are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Therefore, RGS Energy cautions you against relying on any of these forward-looking statements.

Key risks and uncertainties that may cause a change in any forward-looking statement or that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include: RGS Energy's ability to implement its growth strategy, achieve its target level of sales, generate cash flow from operations, and achieve break-even and better results; RGS Energy's ability to successfully commercialize POWERHOUSE™ 3.0; the adequacy of, and access to, capital necessary to commercialize POWERHOUSE™ 3.0; the closing of and the net proceeds from the Unit offering discussed herein; and other risks and uncertainties included in the Company's filings with the SEC.

You should read the section entitled "Risk Factors" in our 2017 Annual Report on Form 10-K and in our Quarterly Reports on Form 10-Q for the quarters ended March 30, 2018, June 30, 2018 and September 30, 2018, and the risk factors included in the Current Report on Form 8-K to which this press release is an exhibit, each of which has been filed with the SEC, which identify certain of these and additional risks and uncertainties. Any forward-looking statements made by us in this press release speak only as of the date of this press release. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We do not undertake any obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

POWERHOUSE™ is a trademark of The Dow Chemical Company, used under license.

RGS Energy is the Company's registered trade name. The Company files periodic and other reports with the SEC under its official name "Real Goods Solar, Inc."

Investor Relations Contact:

Ron Both
Managing Partner, CMA
Tel 1-949-432-7566
RGSE@cma.team