

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):

October 26, 2020

PACIFIC ETHANOL, INC.

(Exact Name of Registrant as Specified in Charter)

Delaware

(State or Other Jurisdiction
of Incorporation)

000-21467

(Commission File Number)

41-2170618

(IRS Employer
Identification No.)

400 Capitol Mall, Suite 2060
Sacramento, California

(Address of Principal Executive Offices)

95814

(Zip Code)

Registrant's Telephone Number, Including Area Code:

(916) 403-2123

(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 communication 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 communication pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.001 par value	PEIX	The Nasdaq Stock Market LLC (Nasdaq Capital Market)

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

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.

Underwritten Public Offering of Common Stock and Pre-Funded Warrants

Underwriting Agreement

On October 26, 2020, Pacific Ethanol, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Guggenheim Securities, LLC, as sole book-running manager, and Craig-Hallum Capital Group LLC and H.C. Wainwright & Co., LLC, as co-managers (collectively, the “Underwriters”), relating to the issuance and sale in an underwritten public offering (the “Offering”) by the Company of (i) 5,075,000 shares (the “Common Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”), at a public offering price of \$8.42 per share, and (ii) pre-funded warrants (the “Pre-Funded Warrants”) to purchase up to 3,825,493 shares of Common Stock at a public offering price of \$8.4199 per Pre-Funded Warrant for total gross proceeds of approximately \$75 million.

The Underwriting Agreement contains customary representations, warranties, covenants and agreements by the Company, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended (the “Securities Act”), other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for the purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement and may be subject to limitations agreed upon by the contracting parties.

In addition, pursuant to the terms of the Underwriting Agreement, the Company and its executive officers and directors have entered into agreements providing that the Company and each of these persons may not, without the prior written approval of the Underwriters, subject to limited exceptions, offer, sell, transfer or otherwise dispose of the Company’s securities for a period of 90 days (and for a certain executive officer who owns, or beneficially owns, an aggregate of 60,639 shares of common stock, 30 days) following the date of the final Prospectus Supplement (as defined below) filed by the Company with the Securities and Exchange Commission (the “SEC”) in connection with the Offering. Notwithstanding the foregoing, beginning on a date that is 30 days after the date of the Prospectus Supplement, a certain executive officer may exercise or exchange any option or warrant to acquire shares of Common Stock or options to purchase shares of Common Stock, in each case for cash or on a “cashless” or “net exercise” basis, pursuant to any stock option, stock bonus or other stock plan or arrangement described or incorporated by reference in the Registration Statement (as defined below) of which the Prospectus Supplement forms a part; provided, however, that the underlying shares of Common Stock shall continue to be subject to the restrictions on transfer set forth in that lock-up agreement and that no filing by any party under the Securities Exchange Act of 1934, as amended, or other public announcement shall be required or shall be made voluntarily in connection with such distribution.

The foregoing summary of the Underwriting Agreement does not purport to be complete and is qualified in its entirety by the Underwriting Agreement, which is filed as Exhibit 1.1 to this Current Report on Form 8-K and incorporated herein by this reference.

The Offering

The Common Shares and Pre-Funded Warrants are being issued and sold pursuant to an effective registration statement on Form S-3 (Registration No. 333-238939) (as amended to date, the “Registration Statement”) and a prospectus supplement dated October 26, 2020 filed with the SEC pursuant to Rule 424(b) of the Securities Act (the “Prospectus Supplement”).

The Offering is expected to close on October 28, 2020, subject to the satisfaction of customary closing conditions. The net proceeds to the Company from the Offering are expected to be approximately \$70 million, excluding any exercise of the Pre-Funded Warrants issued in connection with the Offering and any exercise of the Series A Warrants (as defined below) issued in connection with the concurrent Private Placement (as defined below), after deducting underwriting discounts and commissions and other estimated offering expenses payable by the Company. The Company expects to use a portion of the net proceeds to repay a portion of its indebtedness under some or all of the following credit facilities: (i) the term loan credit facility entered into by its subsidiary Pacific Ethanol Pekin, LLC ("PE Pekin") with 1st Farm Credit Services, PCA and CoBank, ACB ("CoBank"), which matures on August 20, 2021 and bears interest at a rate per annum equal to the 30-day LIBOR plus 5.75%, (ii) the revolving credit facility entered into by PE Pekin with CoBank, which matures on February 1, 2022 and bears interest at a rate per annum equal to the 30-day LIBOR plus 5.75%, (iii) the term loan credit facility entered into by its subsidiary Illinois Corn Processing, LLC ("ICP") with Compeer Financial, PCA and CoBank, which matures on September 1, 2021 and bears interest at a rate per annum equal to the 30-day LIBOR plus 3.75%, (iv) the revolving credit facility entered into by ICP with CoBank, which matures on September 1, 2021 and bears interest at a rate per annum equal to the 30-day LIBOR plus 3.75%, and (v) the Company's senior secured notes, which mature on December 15, 2021 and bear interest at a rate per annum equal to 15.0%. The Company intends to use the remaining net proceeds for working capital needs, capital expenditures, acquisitions and other general corporate purposes.

Form of Pre-Funded Warrant

The Pre-Funded Warrants are being offered at \$8.4199 per Pre-Funded Warrant and have an exercise price of \$0.0001 per share, which is subject to adjustment in the event of certain stock dividends, stock splits, reorganizations or similar events affecting the Common Stock and the exercise price. Each Pre-Funded Warrant is exercisable at any time and from time to time after issuance and expires five years after the date of issuance. In the event of certain corporate transactions, the holders of the Pre-Funded Warrants will be entitled to receive, upon exercise of the Pre-Funded Warrants, the kind and amount of securities, cash or other property that the holders would have received had they exercised the Pre-Funded Warrants immediately prior to such transaction.

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, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of Common Stock determined according to a formula set forth in the Pre-Funded Warrants if at the time of exercise the Registration Statement or prospectus supplement and accompanying prospectus is not available for use for the issuance of all of the shares of Common Stock issuable upon exercise of the Pre-Funded Warrant. The Pre-Funded Warrants do not contain voting rights or any of the other rights or privileges of a holder of Common Stock.

The foregoing summary of the Pre-Funded Warrants does not purport to be complete and is qualified in its entirety by the form of Pre-Funded Warrant, which is filed as Exhibit 4.1 to this Current Report on Form 8-K and incorporated herein by this reference.

Private Placement

Securities Purchase Agreement

On October 26, 2020, in connection with the Offering the Company also entered into a securities purchase agreement (the “Purchase Agreement”) with the institutional investor party thereto for the sale by the Company in a private placement concurrent with the Offering (the “Private Placement”) of a Series A Warrant (the “Series A Warrant”) to purchase up to 8,900,493 shares (the “Series A Warrant Shares”) of the Company’s Common Stock at a purchase price per Series A Warrant Share of \$0.00654250 for total gross proceeds of approximately \$58,000.

The Purchase Agreement contains customary representations, warranties and covenants by the Company, customary conditions to closing, indemnification obligations of the Company, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Purchase Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreements and may be subject to limitations agreed upon by the contracting parties.

The foregoing summary of the Purchase Agreement does not purport to be complete and is qualified in its entirety by the Purchase Agreement, which is filed as Exhibit 10.1 to this Current Report on Form 8-K and incorporated herein by this reference.

Form of Series A Warrant

The Series A Warrant is exercisable for up to 8,900,493 shares of Common Stock at an exercise price of \$9.757 per share, is exercisable beginning six months after the date of issuance and will expire 18-months after the date of issuance. The exercise price and number of Series A Warrant Shares issuable upon exercise of the Series A Warrants is subject to adjustment in the event of any stock dividend and split, reverse stock split, recapitalization, reorganization or similar transaction, as described in the Series A Warrant.

A holder of Series A Warrants has the right to exercise the Series A Warrants on a cashless basis in certain circumstances as described in the Series A Warrants, including, among others, if at any time after 30 days after the closing date of the Private Placement there is no effective registration statement registering the resale of the Series A Warrant Shares. The Company may also require a holder of Series A Warrants to exercise the Series A Warrants on a cashless basis. Subject to limited exceptions, a holder of Series A Warrants will not have the right to exercise any portion of its Series A Warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or, at the election of the holder, up to 9.99%). Any increase in the beneficial ownership limitation shall not be effective until 61 days following notice of such change to the Company. In addition, in certain circumstances, upon a fundamental transaction, the holder will have the right to require the Company to repurchase its Series A Warrants at the Black Scholes value.

The foregoing summary of the Series A Warrant does not purport to be complete and is qualified in its entirety by the form of Series A Warrant, which is filed as Exhibit 4.2 to this Current Report on Form 8-K and incorporated herein by this reference.

Form of Registration Rights Agreement

In connection with the Private Placement, the Company also expects to enter into a registration rights agreement (the “Registration Rights Agreement”) at the closing of the Private Placement pursuant to which, among other things, the Company will prepare and file with the SEC a registration statement to register for resale the Series A Warrant Shares.

The Series A Warrant and Series A Warrant Shares issued in the Private Placement have not been registered under the Securities Act and until so registered the Series A Warrant and Series A Warrant Shares may not be offered or sold absent registration or availability of an applicable exemption from registration.

The foregoing summary of the Registration Rights Agreement does not purport to be complete and is qualified in its entirety by the form of Registration Rights Agreement, which is filed as Exhibit 10.2 to this Current Report on Form 8-K and incorporated herein by this reference.

The closing of the Private Placement is expected to take place on October 28, 2020.

Item 3.02 Unregistered Sales of Equity Securities.

Pursuant to the Private Placement described in Item 1.01 of this Current Report on Form 8-K, which description is incorporated by reference into this Item 3.02 in its entirety, the Company sold the Series A Warrant exercisable for Series A Warrant Shares to an institutional investor in reliance on the exemption from registration afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated under the Securities Act and corresponding provisions of state securities or “blue sky” laws. The investor represented that it is acquiring the Series A Warrant for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof. Accordingly, the Series A Warrant and Series A Warrant Shares have not been registered under the Securities Act and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act and any applicable state securities laws.

Neither this Current Report on Form 8-K nor any exhibit attached hereto is an offer to sell or the solicitation of an offer to buy securities of the Company.

Item 7.01 Regulation FD Disclosure.

On October 26, 2020, the Company issued a press release announcing the pricing and terms of the above-described Offering and Private Placement. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by this reference. A copy of the investor slide deck presented in connection with the Offering is also attached hereto as Exhibit 99.2 and is incorporated herein by this reference.

Item 8.01 Other Events.

In connection with the offering discussed in Item 1.01 above, the legal opinion letter of Troutman Pepper Hamilton Sanders LLP, counsel to the Company, regarding the validity of the Common Shares and shares of Common Stock underlying the Pre-Funded Warrants is filed as Exhibit 5.1 to this Current Report on Form 8-K. The legal opinion letter is also filed with reference to, and is hereby incorporated by reference into, the Registration Statement.

Item 9.01 Financial Statements and Exhibits.(d) Exhibits.

Number	Description
1.1	<u>Underwriting Agreement by and among Pacific Ethanol, Inc., Guggenheim Securities, LLC, Craig-Hallum Capital Group LLC and H.C. Wainwright & Co., LLC dated as of October 26, 2020 (*)</u>
4.1	<u>Form of Pre-Funded Warrant (*)</u>
4.2	<u>Form of Series A Warrant (*)</u>
5.1	<u>Opinion of Troutman Pepper Hamilton Sanders LLP (*)</u>
10.1	<u>Securities Purchase Agreement dated October 26, 2020 by and between Pacific Ethanol, Inc. and the investor party thereto (*)</u>
10.2	<u>Form of Registration Rights Agreement to be entered into by and between Pacific Ethanol, Inc. and the investor party thereto (*)</u>
23.1	<u>Consent of Troutman Pepper Hamilton Sanders LLP (contained in Exhibit 5.1) (*)</u>
99.1	<u>Press Release dated October 26, 2020 (*)</u>
99.2	<u>Investor Slide Deck (*)</u>

(*) Filed herewith. The agreement filed as an exhibit to this report contains representations and warranties made by the parties thereto. The assertions embodied in such representations and warranties are not necessarily assertions of fact, but a mechanism for the parties to allocate risk. Accordingly, investors should not rely on the representations and warranties as characterizations of the actual state of facts or for any other purpose at the time they were made or otherwise.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: October 26, 2020

PACIFIC ETHANOL, INC.

By: /S/ CHRISTOPHER W. WRIGHT
Christopher W. Wright,
Vice President, General Counsel & Secretary

5,075,000 Shares of Common Stock, par value \$0.001

Pre-Funded Warrants to Purchase 3,825,493 Shares of Common Stock

PACIFIC ETHANOL, INC.

UNDERWRITING AGREEMENT

October 26, 2020

GUGGENHEIM SECURITIES, LLC
As Representative of the several
Underwriters set forth in Schedule C hereto
c/o Guggenheim Securities, LLC
330 Madison Avenue
New York, New York 10017

Dear Sirs:

1. *Introduction.* Pacific Ethanol, Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell to the several Underwriters (as defined below) pursuant to the terms and conditions of this Underwriting Agreement (this “**Agreement**”), (i) an aggregate of 5,075,000 shares of common stock, \$0.001 par value per share (the “**Common Stock**”) of the Company (the “**Shares**”) as set forth in Schedule C hereto (the “**Underwriters**”) and (ii) pre-funded warrants to purchase up to an aggregate of 3,825,493 shares of Common Stock at an exercise price of \$0.001 per share (the “**Pre-Funded Warrants**”). The shares of Common Stock underlying the Pre-Funded Warrants are referred to herein as the “**Pre-Funded Warrant Shares**.” The Shares, the Pre-Funded Warrants and the Pre-Funded Warrant Shares are collectively referred to as the “**Securities**”. The terms of the Pre-Funded Warrants are set forth in the form of Pre-Funded Warrant attached hereto as Exhibit C. The Company hereby confirms that the Underwriters listed on Schedule C hereto are acting as the Underwriters in accordance with the terms and conditions hereof. Guggenheim Securities, LLC is acting as the representative of the Underwriters and in such capacity is hereinafter referred to as the “**Representative**.”

2. Delivery and Payment.

On the basis of the representations, warranties and agreements of the Company herein contained, and subject to the terms and conditions set forth in this Agreement:

2.1 The Company agrees to issue and sell, and the Underwriters agree to purchase from the Company, an aggregate of 5,075,000 Shares and Pre-Funded Warrants to purchase 3,825,493 shares of Common Stock. The purchase price per Share and each Pre-Funded Warrant to be paid by the Underwriters to the Company for the Shares will be \$7.9425 per Share (the “**Purchase Price**”). The Company has been advised by you that you propose to make a public offering of the Shares and the Pre-Funded Warrants (the “**Offering**”) as soon after this Agreement has become effective as in your judgment is advisable. The Company is further advised by you that the Shares and Pre-Funded Warrants are to be offered to the public initially at \$7.9424 per each Share and whole Pre-Funded Warrant.

2.2 Payment of the Purchase Price for, and delivery of, the Shares and the Pre-Funded Warrants shall be made at the time and date of closing and delivery of the documents required to be delivered to the Underwriters pursuant to Sections 4 and 6 hereof, which delivery shall take place at 10:00 A.M., New York time, on October 28, 2020 (the “**Closing Date**”) at the office of Troutman Pepper Hamilton Sanders LLP, 5 Park Plaza, Suite 1400, Irvine, CA 92614 or at such other time and date as the Representative and the Company determine pursuant to Rule 15c6-1(a) under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”). The Company shall deliver to the purchasers thereof the Pre-Funded Warrants in accordance with the Underwriters’ instructions at least one (1) full business day before the Closing Date against release of a wire transfer of immediately available funds for the amount of the purchase price therefor on the Closing Date. On the Closing Date, the Company shall deliver the Shares, which shall be registered in the name or names and shall be in such denominations as the Representative may request at least one (1) business day before the Closing Date, to the Representative, which delivery shall be made through the facilities of the Depository Trust Company on the Closing Date.

3. Representations And Warranties Of The Company.

The Company represents and warrants to the Underwriters, and agrees with the Underwriters, that:

(a) The Company has prepared and filed in conformity with the requirements of the Securities Act of 1933, as amended (the “**Securities Act**”), and published rules and regulations thereunder (the “**Rules and Regulations**”) adopted by the Securities and Exchange Commission (the “**Commission**”) a “shelf” Registration Statement (as hereinafter defined) on Form S-3 (File No. 333-238939), which became effective as of July 1, 2020 (the “**Effective Date**”), including a base prospectus relating to the Securities (the “**Base Prospectus**”), and such amendments and supplements thereto as may have been required to the date of this Agreement. The term “**Registration Statement**” as used in this Agreement means the registration statement (including all exhibits, financial schedules and all documents and information deemed to be a part of the Registration Statement pursuant to Rule 430A and 430B of the Rules and Regulations), as amended and/or supplemented to the date of this Agreement, including the Base Prospectus. 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, will file the Prospectus (as defined below), with the Commission pursuant to Rule 424(b) of the Rules and Regulations. The term “**Prospectus**” as used in this Agreement means the Prospectus, in the form in which it is to be filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations, or, if the Prospectus is not to be filed with the Commission pursuant to Rule 424(b), the Prospectus in the form included as part of the Registration Statement as of the Effective Date, except that if any revised prospectus or prospectus supplement shall be provided to the Underwriters by the Company for use in connection with the Offering which differs from the Prospectus (whether or not such revised prospectus or prospectus supplement is required to be filed by the Company pursuant to Rule 424(b) of the Rules and Regulations), the term “**Prospectus**” shall refer to such revised prospectus or prospectus supplement, as the case may be, from and after the time it is first provided to the Underwriters for such use (or in the form first made available to the Underwriters by the Company to meet requests of prospective purchasers pursuant to Rule 173 of the Rules and Regulations). Any preliminary prospectus or prospectus subject to completion included in the Registration Statement or filed with the Commission pursuant to Rule 424 of the Rules and Regulations is hereafter called a “**Preliminary Prospectus**.” Any reference herein to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 which were filed under the Exchange Act, on or before the last to occur of the Effective Date, the date of the Preliminary Prospectus, or the date of the Prospectus, and any reference herein to the terms “amend,” “amendment,” or “supplement” with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include (i) the filing of any document under the Exchange Act after the Effective Date, the date of such Preliminary Prospectus or the date of the Prospectus, as the case may be, which is incorporated by reference and (ii) any such document so filed. If the Company has filed an abbreviated registration statement to register additional securities pursuant to Rule 462(b) of the Rules and Regulations (the “**462(b) Registration Statement**”), then any reference herein to the Registration Statement shall also be deemed to include such 462(b) Registration Statement.

(b) As of the Applicable Time (as defined below) and as of the Closing Date, neither (i) any General Use Free Writing Prospectus (as defined below) issued at or prior to the Applicable Time, and the Pricing Prospectus (as defined below) and the information included on Schedule A hereto, all considered together (collectively, the “**General Disclosure Package**”), (ii) any individual Limited Use Free Writing Prospectus (as defined below), nor (iii) the bona fide electronic road show (as defined in Rule 433(h)(5) of the Rules and Regulations), if any, that has been made available without restriction to any person, when considered together with the General Disclosure Package, included or will include, any untrue statement of a material fact or omitted or as of the Closing Date will 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; *provided, however*, that the Company makes no representations or warranties as to information contained in or omitted from any Issuer Free Writing Prospectus, in reliance upon, and in conformity with, written information furnished to the Company by the Representative specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriters’ Information (as defined in Section 16). As used in this paragraph (b) and elsewhere in this Agreement:

“**Applicable Time**” means 8:00 A.M., New York time, on the date of this Agreement.

“**General Use Free Writing Prospectus**” means any Issuer Free Writing Prospectus that is identified on Schedule A to this Agreement.

“**Issuer Free Writing Prospectus**” means any “**issuer free writing prospectus**,” as defined in Rule 433 of the Rules and Regulations relating to the Securities in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g) of the Rules and Regulations.

“**Limited Use Free Writing Prospectuses**” means any Issuer Free Writing Prospectus that is not a General Use Free Writing Prospectus.

“**Pricing Prospectus**” means any Issuer Free Writing Prospectus, the Preliminary Prospectus, if any, and the Base Prospectus, each as amended and supplemented immediately prior to the Applicable Time, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof.

(c) No order preventing or suspending the use of any Issuer Free Writing Prospectus or the Prospectus relating to the Offering has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 7A of the Securities Act has been instituted or to the knowledge of the Company threatened by the Commission.

(d) At the time the Registration Statement most recently became effective, at the date of this Agreement and at the Closing Date, the Registration Statement conformed and will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations 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; each Preliminary Prospectus (if any), at the time of filing thereof, conformed in all material respects to the requirements of the Securities Act and the Rules and Regulations, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; the Prospectus, at the time the Prospectus was issued and at the Closing Date conformed and will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations 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 light of the circumstances under which they were made, not misleading; *provided, however*, that the foregoing representations and warranties in this paragraph (d) shall not apply to information contained in or omitted from the Registration Statement, any Preliminary Prospectus or the Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Representative specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriters’ Information (as defined in Section 16).

(e) Each Issuer Free Writing Prospectus, if any, as of its issue date and at all subsequent times through the completion of the Offering or until any earlier date that the Company notified or notifies the Representative as described in Section 4(c), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, Pricing Prospectus or the Prospectus, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof that has not been superseded or modified, or includes an untrue statement of a material fact or omitted or would 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, not misleading. The foregoing sentence does not apply to statements in or omissions from any of the foregoing in reliance upon, and in conformity with, written information furnished to the Company by the Representative specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriters' Information (as defined in Section 16).

(f) The documents incorporated by reference in the Prospectus, when they became effective or were filed with the Commission, as the case may be, conformed in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder and none of such documents contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; and any further documents so filed and incorporated by reference in the Prospectus, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and the rules and regulations of the Commission thereunder 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, in light of the circumstances under which they were made, not misleading.

(g) The Company is not an "ineligible issuer" in connection with the Offering pursuant to Rules 164, 405 and 433 under the Securities Act. The Company has not, directly or indirectly, distributed and will not distribute any offering material in connection with the Offering other than any Preliminary Prospectus, the Prospectus and other materials, if any, permitted under the Securities Act and consistent with Section 4(b) below. The Company will file with the Commission all Issuer Free Writing Prospectuses (other than a "road show," as described in Rule 433(d)(8) of the Rules and Regulations), if any, in the time and manner required under Rules 163(b)(2) and 433(d) of the Rules and Regulations.

(h) The Company and each of its subsidiaries (as defined in [Section 14](#)) have been duly organized and are validly existing as corporations or other legal entities in good standing (or the foreign equivalent thereof) under the laws of their respective jurisdictions of incorporation or organization, as applicable. The Company and each of its subsidiaries are duly qualified to do business and are in good standing or validly existing, as the case may be, as foreign corporations or other legal entities in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such qualification and have all power and authority (corporate or other) necessary to own or hold their respective properties and to conduct the businesses in which they are engaged, except where the failure to so qualify or have such power or authority would not (i) have, singly or in the aggregate, a material adverse effect on the condition (financial or otherwise), results of operations, assets, properties, business or prospects of the Company and its subsidiaries taken as a whole, or (ii) impair in any material respect the ability of the Company to perform its obligations under this Agreement or to consummate any transactions contemplated by this Agreement, the General Disclosure Package or the Prospectus (any such effect as described in clauses (i) or (ii), a “**Material Adverse Effect**”). The Company owns or controls, directly or indirectly, only the following corporations, partnerships, limited liability partnerships, limited liability companies, associations or other entities: Kinergy Marketing, LLC, an Oregon limited liability company, Pacific Ag. Products, LLC, a California limited liability company, Pacific Ethanol Development, LLC, a Delaware limited liability company, PE Op Co., a Delaware corporation (formerly, New PE Holdco LLC, a Delaware limited liability company), Pacific Ethanol Central, LLC, a Delaware limited liability company, Pacific Ethanol West, LLC, a Delaware limited liability company, Pacific Ethanol Madera LLC, a Delaware limited liability company, Pacific Ethanol Columbia, LLC, a Delaware limited liability company, Pacific Ethanol Stockton, LLC, a Delaware limited liability company, Pacific Ethanol Magic Valley, LLC, a Delaware limited liability company, Pacific Ethanol Pekin, Inc., a Delaware corporation, Pacific Ethanol Canton, LLC, a Delaware limited liability company, and Illinois Corn Processing, LLC, a Delaware limited liability company.

(i) The Company has the full right, power and authority to enter into this Agreement and the Pre-Funded Warrants, and to perform and to discharge its obligations hereunder and thereunder, including, without limitation, the full right, power and authority to issue, sell and deliver the Shares and the Pre-Funded Warrants; and this Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid and binding obligation of the Company enforceable in accordance with its terms. The Pre-Funded Warrants have been duly authorized by the Company and, upon their execution and delivery, will be valid and binding and binding obligations, enforceable in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity.

(j) The Shares to be issued and sold by the Company to the Underwriters hereunder have been duly and validly authorized and, when issued and delivered by the Company against payment therefor as provided herein, will be duly and validly issued, fully paid and non-assessable and free of any preemptive rights, rights of first refusal, registration rights or similar rights and will conform to the description thereof contained in the General Disclosure Package and the Prospectus. The Pre-Funded Warrant Shares have been duly and validly authorized and reserved for issuance pursuant to the terms of the Warrants, and when issued by the Company upon valid exercise of the Pre-Funded Warrants and payment of the exercise price, will be duly and validly issued, fully paid and nonassessable. The Pre-Funded Warrants and the Pre-Funded Warrant Shares conform in all material respects to the description thereof in the Registration Statement (including in any agreements filed as exhibits to the Registration Statement), in the General Disclosure Package and in the Prospectus.

(k) The Company has an authorized capitalization as set forth in the Pricing Prospectus, and all of the issued shares of capital stock of the Company have been duly and validly authorized and issued, are fully paid and non-assessable, have been issued in compliance with United States federal and state securities laws, and conform to the description thereof contained in the General Disclosure Package and the Prospectus. As of September 30, 2020, there were 63,478,914 shares of Common Stock, par value \$0.001 per share, issued and outstanding, 896 shares of Non-Voting Common Stock, par value \$0.001 per share, issued and outstanding, no shares of Series A preferred stock, par value \$0.001 per share, of the Company issued and outstanding and 926,927 shares of Series B Preferred Stock, par value \$0.001 per share, of the Company issued and outstanding, and 228,585 shares of Common Stock were issuable upon the exercise of all options, warrants and convertible securities outstanding as of such date. Since such date, the Company has not issued any securities, other than Common Stock of the Company issued pursuant to the exercise of stock options previously outstanding under the Company's stock option plans or the issuance of restricted Common Stock pursuant to employee stock purchase plans. All of the Company's options, warrants and other rights to purchase or exchange any securities for shares of the Company's capital stock have been duly authorized and validly issued and were issued in compliance with United States federal and state securities laws. None of the outstanding shares of Common Stock was issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding shares of capital stock, options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those described above or accurately described in the General Disclosure Package. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, as described in the General Disclosure Package and the Prospectus, accurately and fairly present the information required to be shown with respect to such plans, arrangements, options and rights.

(l) [RESERVED]

(m) [RESERVED]

(n) All the outstanding shares of capital stock or other equity interests of each subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and, except to the extent set forth in the General Disclosure Package and the Prospectus, are owned by the Company directly or indirectly through one or more wholly-owned subsidiaries, free and clear of any claim, lien, encumbrance, security interest, restriction upon voting or transfer or any other claim of any third party.

(o) The execution, delivery and performance of this Agreement and the Pre-Funded Warrants by the Company, the issuance and sale of the Securities by the Company and the consummation of the transactions contemplated hereby and thereby will not (with or without notice or lapse of time or both) conflict with or result in a breach or violation of any of the terms or provisions of, constitute a default or Debt Repayment Triggering Event (as defined below) under, give rise to any right of termination or other right or the cancellation or acceleration of any right or obligation or loss of a benefit under, or give rise to the creation or imposition of any lien, encumbrance, security interest, claim or charge upon any property or assets of the Company or any subsidiary pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject, nor will such actions result in any violation of the provisions of the certificate of incorporation or by-laws (or analogous governing instruments, as applicable) of the Company or any of its subsidiaries or any law, statute, rule, regulation, judgment, order or decree of any court or governmental agency or body, domestic or foreign, having jurisdiction over the Company or any of its subsidiaries or any of their properties or assets. A **"Debt Repayment Triggering Event"** means any event or condition that gives, or with the giving of notice or lapse of time would give the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(p) Except for the registration of the Securities under the Securities Act, and such consents, approvals, authorizations, registrations or qualifications as may be required under the Exchange Act and applicable state or foreign securities laws, the Financial Industry Regulatory Authority ("**FINRA**") and the NASDAQ Capital Market ("**NASDAQ CM**") in connection with the Offering and the listing of the Common Stock on the NASDAQ CM, no consent, approval, authorization or order of, or filing, qualification or registration (each an **"Authorization"**) with, any court, governmental or non-governmental agency or body, foreign or domestic, which has not been made, obtained or taken and is not in full force and effect, is required for the execution, delivery and performance of this Agreement and the Pre-Funded Warrants by the Company, the offer or sale of the Securities or the consummation of the transactions contemplated hereby or thereby; and no event has occurred that allows or results in, or after notice or lapse of time or both would allow or result in, revocation, suspension, termination or invalidation of any such Authorization or any other impairment of the rights of the holder or maker of any such Authorization. All corporate approvals (including those of stockholders) necessary for the Company to consummate the transactions contemplated by this Agreement and the Pre-Funded Warrants have been obtained and are in effect.

(q) RSM US LLP, who has certified certain financial statements and related schedules included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, is an independent registered public accounting firm as required by the Securities Act and the Rules and Regulations and the Public Company Accounting Oversight Board (United States) (the "**PCAOB**"). Except as disclosed in the Registration Statement and as pre-approved in accordance with the requirements set forth in Section 10A of the Exchange Act, RSM US LLP has not been engaged by the Company to perform any "prohibited activities" (as defined in Section 10A of the Exchange Act).

(r) [RESERVED]

(s) The Company's financial statements, together with the related notes and schedules, included or incorporated by reference in the General Disclosure Package, the Prospectus and in the Registration Statement fairly present the financial position and the results of operations and changes in financial position of the Company and its consolidated subsidiaries and other consolidated entities at the respective dates or for the respective periods therein specified. Such statements and related notes and schedules have been prepared in accordance with the generally accepted accounting principles in the United States ("GAAP") applied on a consistent basis throughout the periods involved except as may be set forth in the related notes included or incorporated by reference in the General Disclosure Package. The Company's financial statements, together with the related notes and schedules, included or incorporated by reference in the General Disclosure Package and the Prospectus comply in all material respects with the Securities Act, the Exchange Act, and the Rules and Regulations and the rules and regulations under the Exchange Act. No other financial statements or supporting schedules or exhibits are required by the Securities Act or the Rules and Regulations to be described, or included or incorporated by reference in the Registration Statement, the General Disclosure Package or the Prospectus. There is no pro forma or as adjusted financial information which is required to be included in the Registration Statement, the General Disclosure Package, or and the Prospectus or a document incorporated by reference therein in accordance with the Securities Act and the Rules and Regulations, which has not been included or incorporated as so required. The summary and selected financial data included or incorporated by reference in the General Disclosure Package, the Prospectus and each Registration Statement fairly present the information shown therein as at their respective dates and for the respective periods specified and are derived from the consolidated financial statements set forth or incorporated by reference in the Registration Statement, the Pricing Prospectus and the Prospectus and other financial information. All information contained in the Registration Statement, the General Disclosure Package and the Prospectus regarding "non-GAAP financial measures" (as defined in Regulation G) complies with Regulation G and Item 10 of Regulation S-K, to the extent applicable.

(t) Neither the Company nor any of its subsidiaries has sustained, since the date of the latest audited financial statements included or incorporated by reference in the General Disclosure Package, any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth or contemplated in the General Disclosure Package; and, since such date, there has not been any change in the capital stock or long-term debt of the Company or any of its subsidiaries, or any material adverse change, or any development involving a prospective material adverse change, in or affecting the business, assets, general affairs, management, financial position, prospects, stockholders' equity or results of operations of the Company and its subsidiaries taken as a whole, otherwise than as set forth or contemplated in the General Disclosure Package.

(u) There is no legal or governmental action, suit, claim or proceeding pending to which the Company or any of its subsidiaries is a party or of which any property or assets of the Company or any of its subsidiaries is the subject, which is required to be described in the Registration Statement, the General Disclosure Package or the Prospectus or a document incorporated by reference therein and is not described therein, or which, singly or in the aggregate, if determined adversely to the Company or any of its subsidiaries, could have a Material Adverse Effect or prevent the consummation of the transactions contemplated hereby; and to the Company's knowledge, no such proceedings are threatened or contemplated by governmental authorities or threatened by others.

(v) Except as described in the Registration Statement, the General Disclosure Package or the Prospectus, neither the Company nor any of its subsidiaries (i) is in violation of its certificate of incorporation or by-laws (or analogous governing instrument, as applicable), (ii) is in default in any respect, and no event has occurred which, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan agreement, note, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which it is bound or to which any of its or their property or assets is subject or (iii) is in violation in any respect of any law, ordinance, governmental rule, regulation or court order, decree or judgment to which it or its property or assets may be subject except, in the case of clauses (ii) and (iii) of this paragraph (v), for any violations or defaults which, singly or in the aggregate, would not have a Material Adverse Effect.

(w) The Company and each of its subsidiaries possess all licenses, certificates, authorizations and permits issued by, and have made all declarations and filings with, the appropriate local, state, federal or foreign regulatory agencies or bodies which are necessary or desirable for the ownership of their respective properties or the conduct of their respective businesses as described in the General Disclosure Package and the Prospectus (collectively, the “**Governmental Permits**”) except where any failures to possess or make the same, singly or in the aggregate, would not have a Material Adverse Effect. The Company and its subsidiaries are in compliance with all such Governmental Permits; all such Governmental Permits are valid and in full force and effect, except where the validity or failure to be in full force and effect would not, singly or in the aggregate, have a Material Adverse Effect. All such Governmental Permits are free and clear of any restriction or condition that are in addition to, or materially different from those normally applicable to similar licenses, certificates, authorizations and permits. Neither the Company nor any subsidiary has received notification of any non-renewal, revocation, modification, suspension, termination or invalidation (or proceedings related thereto) of any such Governmental Permit and to the knowledge of the Company, no event has occurred that allows or results in, or after notice or lapse of time or both would allow or result in, revocation, modification, suspension, termination or invalidation (or proceedings related thereto) of any such Governmental Permit and the Company has no reason to believe that any such Governmental Permit will not be renewed; and the Company and its subsidiaries are members in good standing of each federal, state or foreign exchange, board of trade, clearing house or association and self-regulatory or similar organization, in each case as necessary to conduct their respective businesses as described in the General Disclosure Package and the Prospectus.

(x) Neither the Company nor any of its subsidiaries is or, after giving effect to the Offering and the application of the proceeds thereof as described in the General Disclosure Package and the Prospectus, will become an “investment company” within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder.

(y) Neither the Company nor any of its subsidiaries, or any of their respective officers, directors or affiliates has taken or will take, directly or indirectly, any action designed or intended to stabilize or manipulate the price of any security of the Company, or which caused or resulted in, or which might in the future reasonably be expected to cause or result in, stabilization or manipulation of the price of any security of the Company.

(z) The Company and its subsidiaries own or possess legally enforceable rights from all necessary third parties (the “**Licensors**”) to use all patents, trademarks, trademark registrations, service marks, service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, know-how and other intellectual property rights necessary for the conduct of its business described in the General Disclosure Package and the Prospectus, and the Company is not aware of any claim to the contrary or any challenge by any other person to the rights of the Company or its subsidiaries with respect to the foregoing. Except where such failure to make the same would not, singly or in the aggregate, have a Material Adverse Effect, the Company or its subsidiaries is listed in the records of the appropriate United States, state, or foreign registry as the sole current owner of record for each intellectual property registration and application for registration owned by the Company or its subsidiaries, respectively, except for such intellectual property applications as have been filed in the name of employees who are contractually obligated to assign all of their rights in and to such intellectual property applications to the Company, and all such applications and registrations have been duly maintained, are subsisting, in full force and effect, have not been cancelled, expired, or abandoned. Neither the Company nor its subsidiaries has received written notification of any revocation or modification of any registered intellectual property right, or has any reason to believe that any renewable registered intellectual property right will not be renewed, other than any revocation, modification or failure to renew that would not, singly or in the aggregate, have a Material Adverse Effect. The business of the Company and its subsidiaries as now conducted, and as proposed to be conducted as described in the General Disclosure Package and the Prospectus, does not and will not infringe or conflict with any patents, trademarks, service marks, trade names, copyrights, trade secrets, licenses, know-how or other intellectual property right or franchise right of any person, except where such infringement would not, singly or in the aggregate, have a Material Adverse Effect. There are no oppositions, cancellations, invalidity proceedings, re-examination proceedings, suits, arbitrations, or threatened claims pending or for which notice has been provided or, to the knowledge of Company, threatened, challenging the Company's or its subsidiaries' ownership of, right to use, or the validity or enforceability of any patent, trademark, service mark, trade name, copyright, trade secret, license, know-how or other intellectual property right or franchise right of any person which would, singly or in the aggregate, have a Material Adverse Effect.

(aa) Patent applications for all inventions owned by or licensed to the Company or its subsidiaries that are material to the conduct of the business of the Company or its subsidiaries in the manner in which it has been or is contemplated to be conducted have been duly and properly filed or caused to be filed with the United States Patent and Trademark Office (“PTO”) and, in some cases, applicable foreign and international patent authorities. Assignments for all patents and patent applications, including, without limitation any continuations, divisionals, continuations-in-part, renewals, reissues and applications for registration of any of the foregoing (collectively, the “**Patents**”) owned by or licensed to the Company or its subsidiaries that are material to the conduct of the business of the Company or its subsidiaries in the manner in which it has been or is contemplated to be conducted have been properly executed and recorded for each named inventor. To the knowledge of the Company, all printed publications and patent references material to the patentability of the inventions claimed in the Patents have been disclosed to those patent offices so requiring. To the knowledge of the Company, each of the Company, its subsidiaries and their respective assignors or the Licensors, as applicable, has met its duty of candor and good faith to the PTO for the Patents. To the knowledge of the Company, no material misrepresentation has been made to any patent office in connection with the Patents. The Company is not aware of any facts material to a determination of patentability regarding the Patents not disclosed to the PTO or other applicable patent office. The Company is not aware of any facts not disclosed to the PTO or other applicable patent office that would preclude the patentability, validity or enforceability of any patent or patent application in the Patents. The Company has no knowledge of any facts that would preclude the Company, its subsidiaries or the Licensors, as applicable, from having clear title to the patents and patent applications in the Patents.

(bb) To the knowledge of the Company, no third party is engaging in any activity that infringes, misappropriates or otherwise violates any patent, trademark, service mark, trade name, copyright, trade secret, license, know-how or any other intellectual property right or franchise right owned by or licensed to the Company or its subsidiaries, except as described in the General Disclosure Package and the Prospectus and except for such activities that, singly or in the aggregate, would not have a Material Adverse Effect.

(cc) With respect to each material agreement governing all rights in and to any patent, trademark, service mark, trade name, copyright, trade secret, license, know-how or any other intellectual property right or franchise right licensed by or licensed to the Company or its subsidiaries: (i) neither the Company nor its subsidiaries has received any notice of indemnification, termination or cancellation under such agreement, received any notice of breach or default under such agreement, which breach has not been cured, or granted to any third party any rights, adverse or otherwise, under such agreement that would constitute a material breach of such agreement; and (ii) none of the Company, its subsidiaries nor, to the knowledge of the Company, any other party to such agreement, is in breach or default thereof in any material respect, and no event has occurred that, with notice or lapse of time, would constitute such a material breach or default or permit termination, modification or acceleration under such agreement.

(dd) Except as described in the General Disclosure Package, the Company and each of its subsidiaries have good and marketable title in fee simple to, or have valid rights to lease or otherwise use, all items of real or personal property which are material to the business of the Company and its subsidiaries taken as a whole, in each case free and clear of all liens, encumbrances, security interests, claims and defects that do not, singly or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company or any of its subsidiaries; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or any of its subsidiaries holds properties described in the General Disclosure Package and the Prospectus, are in full force and effect, and neither the Company nor any subsidiary has received any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease.

(ee) There is (A) no significant unfair labor practice complaint pending against the Company, or any of its subsidiaries, nor, to the knowledge of the Company, threatened against it or any of its subsidiaries, before the National Labor Relations Board, any state or local labor relation board or any foreign labor relations board, and no significant grievance or significant arbitration proceeding arising out of or under any collective bargaining agreement is so pending against the Company or any of its subsidiaries, or, to the knowledge of the Company, threatened against it and (B) no labor disturbance by the employees of the Company or any of its subsidiaries exists or, to the Company's knowledge, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its subsidiaries principal suppliers, manufacturers, customers or contractors, that could reasonably be expected, singly or in the aggregate, to have a Material Adverse Effect. The Company is not aware that any key employee or significant group of employees of the Company or any subsidiary plans to terminate employment with the Company or any such subsidiary.

(ff) No "prohibited transaction" (as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("**ERISA**"), or Section 4975 of the Internal Revenue Code of 1986, as amended from time to time (the "**Code**")) or "accumulated funding deficiency" (as defined in Section 302 of ERISA) or any of the events set forth in Section 4043(b) of ERISA (other than events with respect to which the thirty (30)-day notice requirement under Section 4043 of ERISA has been waived) has occurred or could reasonably be expected to occur with respect to any employee benefit plan of the Company or any of its subsidiaries which could, singly or in the aggregate, have a Material Adverse Effect. Each employee benefit plan of the Company or any of its subsidiaries is in compliance in all material respects with applicable law, including ERISA and the Code. The Company and its subsidiaries have not incurred and could not reasonably be expected to incur liability under Title IV of ERISA with respect to the termination of, or withdrawal from, any pension plan (as defined in ERISA). Each pension plan for which the Company or any of its subsidiaries would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which could, singly or in the aggregate, cause the loss of such qualification.

(gg) The Company and its subsidiaries are in compliance with all applicable foreign, federal, state and local statutes, laws, including the common law rules, and regulations, codes, ordinances, orders, judgments or decrees relating to the use, treatment, storage and disposal of hazardous or toxic substances or wastes and the protection of health and safety or the environment, including without limitation, natural resources, which are applicable to their business ("**Environmental Laws**"), except where the failure to comply could not, singularly or in the aggregate, reasonably be expected to have a Material Adverse Effect. There has been no use, storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of hazardous or toxic substances or wastes by, due to, or caused by the Company or any of its subsidiaries (or, to the Company's knowledge, any other entity for whose acts or omissions the Company or any of its subsidiaries is or may otherwise be liable) upon under, at or from any of the property now or previously owned, leased or operated by the Company or any of its subsidiaries, or upon any other property, in violation of any Environmental Law, or Governmental Permit issued thereunder or which would, give rise to any liability, except for any violation or liability which could not reasonably be expected to have, singularly or in the aggregate with all such violations and liabilities, a Material Adverse Effect; and there has been no disposal, discharge, emission or other release of any kind onto under, at or from such property or into the environment of any toxic hazardous substances or wastes with respect to which the Company has knowledge, except for any such disposal, discharge, emission, or other release of any kind which could not reasonably be expected to have, singularly or in the aggregate with all such discharges and other releases, a Material Adverse Effect.

(hh) The Company and its subsidiaries each (i) have timely filed all necessary federal, state, local and foreign tax returns, and all such returns were true, complete and correct, (ii) have paid all federal, state, local and foreign taxes, assessments, governmental or other charges due and payable for which it is liable, including, without limitation, all sales and use taxes and all taxes which the Company or any of its subsidiaries is obligated to withhold from amounts owing to employees, creditors and third parties, and (iii) do not have any tax deficiency or claims outstanding or assessed or, to its knowledge, proposed against any of them, except those, in each of the cases described in clauses (i), (ii) and (iii) of this paragraph (ee), that would not, singly or in the aggregate, have a Material Adverse Effect. The Company and its subsidiaries have not engaged in any transaction which is a corporate tax shelter or which could be characterized as such by the Internal Revenue Service or any other taxing authority. The accruals and reserves on the books and records of the Company and its subsidiaries in respect of tax liabilities for any taxable period not yet finally determined are adequate to meet any assessments and related liabilities for any such period, and since December 31, 2016, neither the Company nor any of its subsidiaries has incurred any liability for taxes other than in the ordinary course.

(ii) The Company and each of its subsidiaries carry, or are covered by, insurance provided by recognized, financially sound and reputable institutions with policies in such amounts and covering such risks as is adequate for the conduct of their respective businesses and the value of their respective properties and as is customary for companies engaged in similar businesses in similar industries. Neither the Company nor any of its subsidiaries has any reason to believe that it will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries have been denied any insurance coverage that they have sought or for which they have applied. Neither the Company nor any of its subsidiaries has received written notice from any insurer, agent of such insurer or the broker of the Company or any of its subsidiaries that any material capital improvements or any other material expenditures (other than premium payments) are required or necessary to be made in order to continue such insurance. The Company insures a portion of its risk of loss through participation in an ethanol industry captive insurance risk retention group.

(jj) The Company and each of its subsidiaries maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15 of the General Rules and Regulations under the Exchange Act (the “**Exchange Act Rules**”)) that complies with the requirements of the Exchange Act and has been designed by the Company’s principal executive officer and principal financial officer, or under their supervision, to provide reasonable assurances 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 accountability for assets; (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 existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company’s internal control over financial reporting is effective. Since the end of the Company’s most recent audited fiscal year, there has been (A) no material weakness in the Company’s internal control over financial reporting (whether or not remediated) and (B) no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting. The Company’s internal control over financial reporting is overseen by the Audit Committee of the Board of Directors of the Company (the “**Audit Committee**”) in accordance with the Exchange Act Rules. The Company has not publicly disclosed or reported to the Audit Committee or to the Board, and within the next 90 days the Company does not reasonably expect to publicly disclose or report to the Audit Committee or the Board, a significant deficiency, material weakness, change in internal control over financial reporting or fraud involving management or other employees who have a significant role in the internal control over financial reporting (each an “**Internal Control Event**”), any violation of, or failure to comply with, the U.S. Securities Laws, or any matter which, if determined adversely, would have a Material Adverse Effect.

(kk) A member of the Audit Committee has confirmed to the Chief Executive Officer, Chief Financial Officer or General Counsel of the Company that, except as set forth in the General Disclosure Package, the Audit Committee is not reviewing or investigating, and neither the Company’s independent auditors nor its internal auditors have recommended that the Audit Committee review or investigate, (i) adding to, deleting, changing the application of or changing the Company’s disclosure with respect to, any of the Company’s material accounting policies, (ii) any matter which could result in a restatement of the Company’s financial statements for any annual or interim period during the current or prior three fiscal years, or (iii) any Internal Control Event.

(ll) The minute books of the Company and each of its subsidiaries that would be a “significant subsidiary” within the meaning of Rule 1-02(w) of Regulation S-X (such a significant subsidiary of the Company, a “**Significant Subsidiary**”) have been made available to the Underwriters and counsel for the Underwriters, and such books (i) contain a complete summary of all meetings and actions of the board of directors (including each board committee) and stockholders of the Company (or analogous governing bodies and interest holders, as applicable), and each of its Significant Subsidiaries since the time of their respective incorporation or organization through the date of the latest meeting and action, and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

(mm) There is no franchise agreement, lease, contract, or other agreement or document required by the Securities Act or by the Rules and Regulations to be described in the General Disclosure Package and in the Prospectus or a document incorporated by reference therein or to be filed as an exhibit to the Registration Statement or a document incorporated by reference therein which is not so described or filed therein as required; and all descriptions of any such franchise agreement, leases, contracts, or other agreements or documents contained the Registration Statement or the Prospectus or in a document incorporated by reference therein are accurate and complete descriptions of such documents in all material respects. Other than as described in the General Disclosure Package, no such franchise agreement, lease, contract or other agreement has been suspended or terminated for convenience or default by the Company or any of the other parties thereto, and neither the Company nor any of its subsidiaries has received notice nor does the Company have knowledge of any such pending or threatened suspension or termination.

(nn) No relationship, direct or indirect, exists between or among the Company and any of its subsidiaries on the one hand, and the directors, officers, stockholders (or analogous interest holders), customers or suppliers of the Company or any of its subsidiaries or any of their affiliates on the other hand, which is required to be described in the General Disclosure Package and the Prospectus or a document incorporated by reference therein and which is not so described.

(oo) No person or entity has the right to exercise any preemptive rights to purchase the Company’s securities, or to require registration of shares of Common Stock or other securities convertible into or exercisable or exchangeable for Common Stock of the Company or any of its subsidiaries because of the filing or effectiveness of the Registration Statement or otherwise, except for persons and entities who have expressly waived such rights in writing or who have been given timely and proper written notice and have failed to exercise such rights within the time or times required under the terms and conditions of such right. Except as described in the General Disclosure Package, there are no persons with preemptive rights or other rights to subscribe for securities of the Company, or registration rights or similar rights to have any securities registered by the Company or any of its subsidiaries under the Securities Act.

(pp) Neither the Company nor any of its subsidiaries owns any “margin securities” as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the “**Federal Reserve Board**”), and none of the proceeds of the sale of any of the Securities will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the Securities to be considered a “purpose credit” within the meanings of Regulations T, U or X of the Federal Reserve Board.

(qq) Other than any contracts or agreements between the Company and the Underwriters, neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Underwriters for a brokerage commission, finder’s fee or like payment in connection with the Offering or any transaction contemplated by this Agreement and the Pre-Funded Warrants, the Registration Statement, the General Disclosure Package or the Prospectus.

(rr) Except as described in the General Disclosure Package and the Prospectus with respect to the Company’s credit facilities, no subsidiary of the Company is currently prohibited, directly or indirectly, under any agreement or other instrument to which it is a party or is subject, from paying any dividends to the Company, from making any other distribution on such subsidiary’s capital stock, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary’s properties or assets to the Company or any other subsidiary of the Company.

(ss) Since the date as of which information is given in the General Disclosure Package and the Prospectus through the date hereof, and except as set forth in the General Disclosure Package, neither the Company nor any of its subsidiaries has (i) issued or granted any securities other than options to purchase Common Stock pursuant to the Company’s stock option plan or shares of Common Stock issued or issuable upon exercise thereof, (ii) incurred any material liability or obligation, direct or contingent, other than liabilities and obligations which were incurred in the ordinary course of business, (iii) entered into any material transaction other than in the ordinary course of business or (iv) declared or paid any dividend on its capital stock.

(tt) No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in either the General Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(uu) The Company is in compliance in all material respects with all applicable effective provisions of the Sarbanes-Oxley Act of 2002 and any related rules and regulations promulgated by the Commission thereunder (the “**Sarbanes-Oxley Act**”).

(vv) The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act and is listed on the NASDAQ CM, and the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the NASDAQ CM. Except as described in the General Disclosure Package or the Prospectus, the Company has not received any notification that the Commission, FINRA or the NASDAQ Stock Market LLC is currently contemplating terminating such registration or listing. No consent, approval, authorization or order of, or filing, notification or registration with, the NASDAQ CM is required for the listing and trading of the shares of Common Stock on the NASDAQ CM, except for (i) a Notification Form: Listing of Additional Shares; and (ii) a Notification Form: Change in the Number of Shares Outstanding.

(ww) Except as described in the General Disclosure Package or the Prospectus, the Company is, and after giving effect to the Offering will be, in compliance in all material respects with all applicable corporate governance requirements set forth in the NASDAQ Marketplace Rules.

(xx) There are no transactions, arrangements or other relationships between and/or among the Company, any of its affiliates (as such term is defined in Rule 405 of the Rules and Regulations) and any unconsolidated entity, including, but not limited to, any structured finance, special purpose or limited purpose entity that could reasonably be expected to materially affect the Company's or any of its subsidiaries' liquidity or the availability of or requirements for their capital resources required to be described in the General Disclosure Package and the Prospectus or a document incorporated by reference therein which have not been described as required.

(yy) The statistical, industry and market related data included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate, and such data agree with the sources from which they are derived.

(zz) Neither the Company nor any of its subsidiaries nor any director, officer or employee of the Company or any of its subsidiaries nor, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries has (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted, maintain and enforce, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(aaa) The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the “**Anti-Money Laundering Laws**”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(bbb) Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries is currently the subject or the target of any sanctions administered or enforced by the U.S. government, (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (“**OFAC**”) or the U.S. Department of State and including, without limitation, the designation as a “specially designated national” or “blocked person”), the United Nations Security Council (“**UNSC**”), the European Union, Her Majesty’s Treasury (“**HMT**”) or other relevant sanctions authority (collectively, “Sanctions”), nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject or target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea and Syria (each, a “**Sanctioned Country**”); and the Company will not directly or indirectly use the proceeds of the offering of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the subject or target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions.

(ccc) The Company and its subsidiaries’ information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, “**IT Systems**”) are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personal, personally identifiable, sensitive, confidential or regulated data (“**Personal Data**”)) used in connection with their businesses, and there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. The Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

(ddd) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

(eee) Neither the Company nor any subsidiary nor any of their affiliates (within the meaning of FINRA's Rule 5121(f)(1)) directly or indirectly controls, is controlled by, or is under common control with, or is an associated person of, any member firm of FINRA (within the meaning of Article I, Section 1(ee) of the By-laws of FINRA). At the time the Registration Statement was originally declared effective, the Company met, and as of the date hereof meets, the then applicable requirements for the use of Form S-3, including pursuant to Instruction B.1. thereunder, under the Securities Act.

(fff) No approval of the stockholders of the Company under the rules and regulations of NASDAQ (including Rule 5635 of the NASDAQ Marketplace Rules) is required to issue and deliver the Securities to the Underwriters.

Any certificate signed by or on behalf of the Company and delivered to the Underwriters or to counsel for the Underwriters shall be deemed to be a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

4. Further Agreements Of The Company.

The Company agrees with the Underwriters:

(a) To prepare the Rule 462(b) Registration Statement, if necessary, in a form approved by the Representative and file such Rule 462(b) Registration Statement with the Commission on the date hereof, and the Company shall at the time of such filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Rules and Regulations; to prepare the Prospectus in a form approved by the Representative containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rules 430A, 430B and 430C of the Rules and Regulations and to file such Prospectus pursuant to Rule 424(b) of the Rules and Regulations not later than the second (2nd) business day following the execution and delivery of this Agreement or, if applicable, such earlier time as may be required by Rule 430A of the Rules and Regulations; to promptly notify the Representative of the Company's intention to file or prepare any supplement or amendment to any Registration Statement or to the Prospectus and to make no amendment or supplement to the Registration Statement, the General Disclosure Package or to the Prospectus; to advise the Representative, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the General Disclosure Package or the Prospectus or any amended Prospectus has been filed and to furnish the Representative copies thereof; to file promptly all materials required to be filed by the Company with the Commission pursuant to Rule 433(d) or 163(b)(2), as the case may be, of the Rules and Regulations; to file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) of the Rules and Regulations) is required in connection with the Offering or sale of the Securities; to advise the Representative, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the initiation or threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement, the General Disclosure Package or the Prospectus or for additional information; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus or suspending any such qualification, and promptly to use its best efforts to obtain the withdrawal of such order.

(b) The Company represents and agrees that, it has not made, and unless it obtains the prior consent of the Representative, it will not, make any offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 of the Rules and Regulations (each, a “**Permitted Free Writing Prospectus**”); *provided* that the prior written consent of the Representative hereto shall be deemed to have been given in respect of the Issuer Free Writing Prospectus(es) included in Schedule A hereto. The Company represents that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, comply with the requirements of Rules 164 and 433 of the Rules and Regulations applicable to any Issuer Free Writing Prospectus, including the requirements relating to timely filing with the Commission, legending and record keeping and will not take any action that would result in the Underwriters or the Company being required to file with the Commission pursuant to Rule 433(d) of the Rules and Regulations a free writing prospectus prepared by or on behalf of such Underwriters that such Underwriters otherwise would not have been required to file thereunder.

(c) If at any time when a Prospectus relating to the Securities is required to be delivered under the Securities Act, any event occurs or condition exists as a result of which the Prospectus, as then amended or supplemented, would include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, or the Registration Statement, as then amended or supplemented, would include any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein not misleading, or if for any other reason it is necessary at any time to amend or supplement any Registration Statement or the Prospectus to comply with the Securities Act or the Exchange Act, the Company will promptly notify the Representative, and upon the Representative’s request, the Company will promptly prepare and file with the Commission, at the Company’s expense, an amendment to the Registration Statement or an amendment or supplement to the Prospectus that corrects such statement or omission or effects such compliance and will deliver to the Underwriters, without charge, such number of copies thereof as the Underwriters may reasonably request. The Company consents to the use of the Prospectus or any amendment or supplement thereto by the Underwriters.

(d) If the General Disclosure Package is being used to solicit offers to buy the Securities at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur as a result of which, in the judgment of the Company or in the reasonable opinion of the Representative, it becomes necessary to amend or supplement the General Disclosure Package in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or to make the statements therein not conflict with the information contained or incorporated by reference in the Registration Statement then on file and not superseded or modified, or if it is necessary at any time to amend or supplement the General Disclosure Package to comply with any law, the Company promptly will either (i) prepare, file with the Commission (if required) and furnish to the Underwriters and any dealers an appropriate amendment or supplement to the General Disclosure Package or (ii) prepare and file with the Commission an appropriate filing under the Exchange Act which shall be incorporated by reference in the General Disclosure Package so that the General Disclosure Package as so amended or supplemented will not, in the light of the circumstances under which they were made, be misleading or conflict with the Registration Statement then on file, or so that the General Disclosure Package will comply with law.

(e) If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or will conflict with the information contained in the Registration Statement, Pricing Prospectus or Prospectus, including any document incorporated by reference therein and any prospectus supplement deemed to be a part thereof and not superseded or modified or included or would include an untrue statement of a material fact or omitted or would 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, not misleading, the Company has promptly notified or will promptly notify the Representative so that any use of the Issuer Free Writing Prospectus may cease until it is amended or supplemented and has promptly amended or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Representative specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriters’ Information (as defined in Section 16 hereof).

(f) To the extent not available on the Commission's EDGAR system, to furnish promptly to the Underwriters and to counsel for the Underwriters a signed copy of the Registration Statement as originally filed with the Commission, and of each amendment thereto filed with the Commission, including all consents and exhibits filed therewith.

(g) To the extent not available on the Commission's EDGAR system, to deliver promptly to the Representative in New York City such number of the following documents as the Representative shall reasonably request: (i) conformed copies of the Registration Statement as originally filed with the Commission (in each case excluding exhibits), (ii) each Preliminary Prospectus (if any), (iii) any Issuer Free Writing Prospectus, (iv) the Prospectus (the delivery of the documents referred to in clauses (i), (ii) and (iii) of this paragraph (g) to be made not later than 10:00 A.M., New York time, on the business day following the execution and delivery of this Agreement), (v) conformed copies of any amendment to the Registration Statement (excluding exhibits), (vi) any amendment or supplement to the General Disclosure Package or the Prospectus (the delivery of the documents referred to in clauses (v) and (vi) of this paragraph (g) to be made not later than 10:00 A.M., New York City time, on the business day following the date of such amendment or supplement) and (vii) any document incorporated by reference in the General Disclosure Package or the Prospectus (excluding exhibits thereto) (the delivery of the documents referred to in clause (vi) of this paragraph (g) to be made not later than 10:00 A.M., New York City time, on the business day following the date of such document).

(h) To make generally available to its stockholders as soon as practicable, but in any event not later than sixteen (16) months after the effective date of each Registration Statement (as defined in Rule 158(c) of the Rules and Regulations), an earning statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Securities Act and the Rules and Regulations (including, at the option of the Company, Rule 158).

(i) To take promptly from time to time such actions as the Representative may reasonably request to qualify the Securities for offering and sale under the securities or blue sky laws of such jurisdictions (domestic or foreign) as the Representative may designate and to continue such qualifications in effect, and to comply with such laws, for so long as required to permit the offer and sale of Securities in such jurisdictions; *provided that* the Company and its subsidiaries shall not be obligated to qualify as foreign corporations in any jurisdiction in which they are not so qualified or to file a general consent to service of process in any jurisdiction.

(j) To the extent not available on the Commission's EDGAR system, upon request, during the period of five (5) years from the date hereof, to deliver to the Underwriters, as soon as they are available (i) copies of all reports or other communications furnished to stockholders, and (ii) copies of any reports and financial statements furnished or filed with the Commission or any national securities exchange or automatic quotation system on which the Common Stock is listed or quoted.

(k) That the Company will not, for a period of ninety (90) days from the date of this Agreement (the “**Lock-Up Period**”), without the prior written consent of the Representative, directly or indirectly offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, other than the Company’s sale of the Securities hereunder, the issuance of the private placement warrants and the shares of common stock issuable upon exercise of the private placement warrants pursuant to the Securities Purchase Agreement that the Company entered into on the date hereof with a certain investor (the “**Securities Purchase Agreement**”) and the issuance of restricted Common Stock or options to acquire Common Stock pursuant to the Company’s employee benefit plans, qualified stock option plans or other employee compensation plans as such plans are in existence on the date hereof and described in the Prospectus and the issuance of Common Stock pursuant to the valid exercises of options, warrants or rights outstanding on the date hereof. The Company will cause each executive officer and director, and each stockholder listed in SCHEDULE B to furnish to the Underwriters, prior to the date of this Agreement, a letter, substantially in the form of Exhibit B hereto. The Company also agrees that during such period, other than for the sale of the Securities hereunder, the Company will not file any registration statement, preliminary prospectus or prospectus, or any amendment or supplement thereto, under the Securities Act for any such transaction or which registers, or offers for sale, Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, except for a registration statement on Form S-8 relating to employee benefit plans.

(l) To supply the Representative with copies of all correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Securities under the Securities Act or the Registration Statement, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto or document incorporated by reference therein.

(m) Prior to the Closing Date, to furnish to the Representative, promptly after they have been prepared, copies of any unaudited interim consolidated financial statements of the Company for any periods subsequent to the periods covered by the financial statements appearing in the Registration Statement and the Prospectus.

(n) Prior to the Closing Date, not to issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its condition, financial or otherwise, or earnings, business affairs or business prospects (except for routine oral marketing communications in the ordinary course of business and consistent with the past practices of the Company and of which the Representative are notified), without the prior written consent of the Representative, unless in the judgment of the Company and its counsel, and after notification to the Representative, such press release or communication is required by law or applicable stock exchange rules.

(o) Until the Representative shall have notified the Company of the completion of the Offering, that the Company will not, and will cause its affiliated purchasers (as defined in Regulation M under the Exchange Act) not to, either alone or with one or more other persons, bid for or purchase, for any account in which it or any of its affiliated purchasers has a beneficial interest, any Securities, or attempt to induce any person to purchase any Securities; and not to, and to cause its affiliated purchasers not to, make bids or purchases for the purpose of creating actual, or apparent, active trading in or of raising the price of the Securities.

- (p) Not to take any action prior to the Closing Date which would require the Prospectus to be amended or supplemented, without the prior written consent of the Representative.
- (q) To at all times comply with all applicable provisions of the Sarbanes-Oxley Act in effect from time to time.
- (r) To maintain, at its expense, a registrar and transfer agent for the Common Stock (including the Shares and the Pre-Funded Warrant Shares).
- (s) To apply the net proceeds from the sale of the Shares and the Pre-Funded Warrants (including any cash exercise of the Pre-Funded Warrants) as set forth in the Registration Statement, the General Disclosure Package and the Prospectus under the heading "Use of Proceeds." The Company shall manage its affairs and investments in such a manner as not to be or become an "investment company" within the meaning of the Investment Company Act and the rules and regulations thereunder.
- (t) To use its reasonable best efforts to list, subject to notice of issuance, and to maintain the listing of the Common Stock (including the Shares and the Pre-Funded Warrant Shares) on the NASDAQ CM.
- (u) To use its reasonable best efforts to assist the Underwriters with any filings with FINRA and obtaining clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters.
- (v) To use its reasonable best efforts to do and perform all things required to be done or performed under this Agreement and the Pre-Funded Warrants by the Company prior to the Closing Date and to satisfy all conditions precedent to the delivery of the Shares and the Pre-Funded Warrants.
- (w) To reserve and keep available for the exercise of the Pre-Funded Warrants such number of authorized but unissued shares of Common Stock as are sufficient to permit the exercise in full of the Pre-Funded Warrants for the Pre-Funded Warrant Shares.

5. Payment Of Expenses.

The Company agrees to pay, or reimburse if paid by the Underwriters, upon consummation of the transactions contemplated hereby: (a) the costs incident to the authorization, issuance, sale, preparation and delivery of the Shares and the Pre-Funded Warrants to the Underwriters and any taxes payable in that connection; (b) the costs incident to the registration of the Securities under the Securities Act; (c) the costs incident to the preparation, printing and distribution of the Registration Statement, the Base Prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package, the Prospectus, any amendments, supplements and exhibits thereto or any document incorporated by reference therein and the costs of printing, reproducing and distributing this Agreement and any closing document by mail, telex or other means of communications; (d) the fees and expenses (including related fees and expenses of counsel for the Underwriters) incurred in connection with securing any required review by FINRA of the terms of the Offering and any filings made with FINRA; (e) any applicable listing, quotation or other fees; (f) the fees and expenses (including related fees and expenses of counsel to the Underwriters) of qualifying the Securities under the securities laws of the several jurisdictions as provided in Section 4(i) and of preparing, printing and distributing wrappers, Blue Sky Memoranda and Legal Investment Surveys; (g) all fees and expenses of the registrar and transfer agent of the Shares and the Pre-Funded Warrant Shares; (h) the fees, disbursements and expenses of counsel to the Underwriters; (i) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Securities, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the officers of the Company and such consultants, including the cost of any aircraft chartered in connection with the road show, and (j) all other costs and expenses incident to the offering of the Securities or the performance of the obligations of the Company under this Agreement and the Pre-Funded Warrants (including, without limitation, the fees and expenses of the Company's counsel and the Company's independent accountants).

6. *Conditions To The Obligations Of The Underwriters, And The Sale Of The Securities.*

The respective obligations of the Underwriters hereunder are subject to the accuracy, when made and as of the Applicable Time and on the Closing Date of the representations and warranties of the Company contained herein, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder, and to each of the following additional terms and conditions:

(a) The Registration Statement is effective under the Securities Act, and no stop order suspending the effectiveness of any Registration Statement or any part thereof, preventing or suspending the use of any Base Prospectus, the Preliminary Prospectus, the Prospectus or any Permitted Free Writing Prospectus or any part thereof shall have been issued and no proceedings for that purpose or pursuant to Section 7A under the Securities Act shall have been initiated or threatened by the Commission, and all requests for additional information on the part of the Commission (to be included or incorporated by reference in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Representative; and the Rule 462(b) Registration Statement, if any, each Issuer Free Writing Prospectus (except for a road show), if any, and the Prospectus shall have been filed with the Commission within the applicable time period prescribed for such filing by, and in compliance with, the Rules and Regulations and in accordance with Section 4(a) and the Rule 462(b) Registration Statement, if any, shall have become effective immediately upon its filing with the Commission; and, if applicable, FINRA shall have raised no objection to the fairness and reasonableness of the terms of this Agreement or the transactions contemplated hereby.

(b) The Representative shall not have discovered and disclosed to the Company on or prior to the Closing Date that any Registration Statement or any amendment or supplement thereto contains an untrue statement of a fact which, in the opinion of counsel for the Underwriters, is material or omits to state any fact which, in the opinion of such counsel, is material and is required to be stated therein or is necessary to make the statements therein not misleading, or that the General Disclosure Package, any Issuer Free Writing Prospectus or the Prospectus or any amendment or supplement thereto contains an untrue statement of fact which, in the opinion of such counsel, is material or omits to state any fact which, in the opinion of such counsel, is material and is necessary in order to make the statements, in the light of the circumstances in which they were made, not misleading.

(c) All corporate proceedings and other legal matters incident to the authorization, form and validity of each of this Agreement, the Securities, the Registration Statement, the General Disclosure Package, each Issuer Free Writing Prospectus, and the Prospectus and all other legal matters relating to this Agreement and the Pre-Funded Warrants and the transactions contemplated hereby and thereby shall be reasonably satisfactory in all material respects to counsel for the Underwriters, and the Company shall have furnished to such counsel all documents and information that they may reasonably request to enable them to pass upon such matters.

(d) [RESERVED]

(e) Troutman Pepper Hamilton Sanders LLP shall have furnished to the Representative such counsel's written opinion and negative assurance statement, as counsel to the Company, addressed to the Underwriters dated the Closing Date, in form and substance reasonably satisfactory to the Underwriters.

(f) The Underwriters shall have received from White & Case LLP, counsel for the Underwriters, such opinion or opinions, dated the Closing Date, with respect to such matters as the Representative may reasonably require, and the Company shall have furnished to such counsel such documents as it requests to enable it to pass upon such matters.

(g) At the time of the execution of this Agreement, the Representative shall have received from RSM US LLP a letter, addressed to the Underwriters, executed and dated such date, in form and substance satisfactory to the Representative (i) confirming that they are an independent registered accounting firm with respect to the Company and its subsidiaries within the meaning of the Securities Act and the Rules and Regulations and PCAOB and (ii) stating the conclusions and findings of such firm, of the type ordinarily included in accountants' "comfort letters" to underwriters, with respect to the financial statements and certain financial information contained or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus.

(h) On the effective date of any post-effective amendment to any Registration Statement and on the Closing Date, the Representative shall have received a letter (the “**RSM Bring-Down Letter**”) from RSM US LLP addressed to the Underwriters and dated the Closing Date confirming, as of the date of the Bring-Down Letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the General Disclosure Package and the Prospectus, as the case may be, as of a date not more than three (3) business days prior to the date of the RSM Bring-Down Letter), the conclusions and findings of such firm, of the type ordinarily included in accountants’ “comfort letters” to underwriters, with respect to the financial information and other matters covered by its letter delivered to the Representative concurrently with the execution of this Agreement pursuant to paragraph (f) of this Section 6.

(i) The Company shall have furnished to the Representative a certificate, dated the Closing Date of its Chairman of the Board, its President or a Vice President and its chief financial officer stating that (i) such officers have carefully examined the Registration Statement, the General Disclosure Package, any Permitted Free Writing Prospectus and the Prospectus and, in their opinion, the Registration Statement and each amendment thereto, at the Applicable Time, as of the date of this Agreement and as of the Closing Date did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the General Disclosure Package, as of the Applicable Time and as of the Closing Date any Permitted Free Writing Prospectus as of its date and as of the Closing Date the Prospectus and each amendment or supplement thereto, as of the respective date thereof and as of the Closing Date did not include any untrue statement of a material fact and did not omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances in which they were made, not misleading, (ii) since the effective date of the Registration Statement, no event has occurred which should have been set forth in a supplement or amendment to the Registration Statement, the General Disclosure Package or the Prospectus, (iii) to their knowledge, as of the Closing Date the representations and warranties of the Company in this Agreement are true and correct and the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date and (iv) there has not been, subsequent to the date of the most recent audited financial statements included or incorporated by reference in the General Disclosure Package, any material adverse change in the financial position or results of operations of the Company and its subsidiaries, or any change or development that, singly or in the aggregate, would involve a material adverse change or a prospective material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company and its subsidiaries taken as a whole, except as set forth in the Prospectus.

(j) Since the date of the latest audited financial statements included in the General Disclosure Package or incorporated by reference in the General Disclosure Package as of the date hereof, (i) neither the Company nor any of its subsidiaries shall have sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth in the General Disclosure Package, and (ii) there shall not have been any change in the capital stock or long-term debt of the Company or any of its subsidiaries, or any change, or any development involving a prospective change, in or affecting the business, general affairs, management, financial position, stockholders’ equity or results of operations of the Company and its subsidiaries, otherwise than as set forth in the General Disclosure Package, the effect of which, in any such case described in clause (i) or (ii) of this paragraph (k), is, in the judgment of the Representative, so material and adverse as to make it impracticable or inadvisable to proceed with the sale or delivery of the Shares and the Pre-Funded Warrants on the terms and in the manner contemplated in the General Disclosure Package.

(k) No action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental agency or body which would prevent the issuance or sale of the Shares or the Pre-Funded Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Shares or the Pre-Funded Warrants or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company.

(l) Subsequent to the execution and delivery of this Agreement (i) no downgrading shall have occurred in the Company's corporate credit rating or the rating accorded the Company's debt securities by any "nationally recognized statistical rating organization," as that term is defined by the Commission for purposes of Rule 436(g)(2) of the Rules and Regulations and (ii) no such organization shall have publicly announced that it has under surveillance or review (other than an announcement with positive implications of a possible upgrading), the Company's corporate credit rating or the rating of any of the Company's debt securities.

(m) Subsequent to the execution and delivery of this Agreement there shall not have occurred any of the following: (i) trading in securities generally on the New York Stock Exchange, NASDAQ CM or the NYSE Amex or in the over-the-counter market, or trading in any securities of the Company on any exchange or in the over-the-counter market, shall have been suspended or materially limited, or minimum or maximum prices or maximum range for prices shall have been established on any such exchange or such market by the Commission, by such exchange or market or by any other regulatory body or governmental authority having jurisdiction, (ii) a banking moratorium shall have been declared by Federal or state authorities or a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, (iii) the United States shall have become engaged in hostilities, or the subject of an act of terrorism, or there shall have been an outbreak of or escalation in hostilities involving the United States, or there shall have been a declaration of a national emergency or war by the United States or (iv) there shall have occurred such a material adverse change in general economic, political or financial conditions (or the effect of international conditions on the financial markets in the United States shall be such) as to make it, in the judgment of the Representative, impracticable or inadvisable to proceed with the sale or delivery of the Securities on the terms and in the manner contemplated in the General Disclosure Package and the Prospectus.

(n) The NASDAQ CM shall have approved the Common Stock (including the Shares and the Pre-Funded Warrant Shares) for listing therein, subject only to official notice of issuance.

(o) The Representative shall have received the written agreements, substantially in the form of Exhibit B hereto, of the executive officers and directors, and the stockholders of the Company listed in SCHEDULE B to this Agreement.

(p) The Company shall have obtained all required consents from the holders of its securities or any third parties necessary for the transactions contemplated by the General Disclosure Package and the Prospectus.

(q) The Representative shall have received electronic copies of the Pre-Funded Warrants, substantially in the form of Exhibit C, executed by the Company at least one (1) full business day prior to the Closing Date.

(r) The Company shall have entered into the Securities Purchase Agreement with a certain investor to purchase private placement warrants, and the Securities Purchase Agreement shall be in full force and effect as of the date hereof, and the closing conditions set forth therein shall have been satisfied as of the Closing Date.

(s) The Company shall have prepared and filed with the Commission a Current Report on Form 8-K including as an exhibit thereto this Agreement.

(t) Prior to the Closing Date, the Company shall have furnished to the Underwriters such further information, opinions, certificates (including a Secretary's Certificate), good standing certificates, letters or documents as the Representative shall have reasonably requested.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. Indemnification and Contribution.

(a) The Company shall indemnify and hold harmless each Underwriter, its affiliates and each of its and their respective directors, officers, members, employees, representatives and agents and each person, if any, who controls the Underwriters within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "**Underwriter Indemnified Parties**," and each a "**Underwriter Indemnified Party**") against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), joint or several, to which such Underwriter Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (A) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, or (B) the omission or alleged omission to state in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto or document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, or (C) any breach of the representations and warranties of the Company contained herein or the failure of the Company to perform its obligations hereunder or pursuant to any law, any act or failure to act, or any alleged act or failure to act, by the Underwriters in connection with, or relating in any manner to the Securities or the Offering, and which is included as part of or referred to in any loss, claim, damage, expense, liability, action, investigation or proceeding arising out of or based upon matters covered by subclause (A), (B) or (C) above of this Section 7(a) (provided that the Company shall not be liable in the case of any matter covered by this subclause (C) to the extent that it is determined in a final judgment by a court of competent jurisdiction that such loss, claim, damage, expense or liability resulted primarily from any such act or failure to act undertaken or omitted to be taken by the Underwriters through their gross negligence or willful misconduct), and shall reimburse the Underwriter Indemnified Party promptly upon demand for any legal fees or other expenses reasonably incurred by that Underwriter Indemnified Party in connection with investigating, or preparing to defend, or defending against, settling, compromising, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding, as such fees and expenses are incurred; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, expense or liability arises out of or is based upon an untrue statement or alleged untrue statement in, or omission or alleged omission from any Preliminary Prospectus, any Registration Statement or the Prospectus, or any such amendment or supplement thereto, or any Issuer Free Writing Prospectus made in reliance upon and in conformity with written information furnished to the Company by the Representative specifically for use therein, which information the parties hereto agree is limited to the Underwriters' Information (as defined in Section 16). This indemnity agreement is not exclusive and will be in addition to any liability which the Company might otherwise have and shall not limit any rights or remedies which may otherwise be available at law or in equity to each Underwriter Indemnified Party.

(b) The Underwriters shall indemnify and hold harmless the Company and its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the “**Company Indemnified Parties**” and each a “**Company Indemnified Party**”) against any loss, claim, damage, expense or liability whatsoever (or any action, investigation or proceeding in respect thereof), joint or several, to which such Company Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action, investigation or proceeding arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any “issuer information” filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto, or (ii) the omission or alleged omission to state in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any “issuer information” filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, any Registration Statement or the Prospectus, or in any amendment or supplement thereto, a material fact required to be stated therein or necessary to make the statements therein not misleading, but in each case only to the extent that the untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company by the Representative specifically for use therein, which information the parties hereto agree is limited to the Underwriters’ Information as defined in Section 16, and shall reimburse the Company Indemnified Parties for any legal or other expenses reasonably incurred by such party in connection with investigating or preparing to defend or defending against or appearing as third party witness in connection with any such loss, claim, damage, liability, action, investigation or proceeding, as such fees and expenses are incurred. Notwithstanding the provisions of this Section 7(b), in no event shall any indemnity by the Underwriters under this Section 7(b) exceed the total discount and commission received by such Underwriters in accordance with Section 2.

(c) Promptly after receipt by an indemnified party under this Section 7 of notice of the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against an indemnifying party under this Section 7, notify such indemnifying party in writing of the commencement of that action; *provided, however*, that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 7 except to the extent it has been materially prejudiced by such failure; and, *provided, further*, that the failure to notify an indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 7. If any such action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense of such action with counsel reasonably satisfactory to the indemnified party (which counsel shall not, except with the written consent of the indemnified party, be counsel to the indemnifying party). After notice from the indemnifying party to the indemnified party of its election to assume the defense of such action, except as provided herein, the indemnifying party shall not be liable to the indemnified party under Section 7 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense of such action other than reasonable costs of investigation; *provided, however*, that any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense of such action but the fees and expenses of such counsel (other than reasonable costs of investigation) shall be at the expense of such indemnified party unless (i) the engagement thereof has been specifically authorized in writing by the Company in the case of a claim for indemnification under Section 7(a), or the Representative in the case of a claim for indemnification under Section 7(b), (ii) such indemnified party shall have been advised by its counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party, or (iii) the indemnifying party has failed to assume the defense of such action and employ counsel reasonably satisfactory to the indemnified party within a reasonable period of time after notice of the commencement of the action or the indemnifying party does not diligently defend the action after assumption of the defense, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of (or, in the case of a failure to diligently defend the action after assumption of the defense, to continue to defend) such action on behalf of such indemnified party and the indemnifying party shall be responsible for legal or other expenses subsequently incurred by such indemnified party in connection with the defense of such action; *provided, however*, that the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys at any time for all such indemnified parties (in addition to any local counsel), which firm shall be designated in writing by the Representative if the indemnified parties under this Section 7 consist of any Underwriter Indemnified Party or by the Company if the indemnified parties under this Section 7 consist of any Company Indemnified Parties. Subject to this Section 7(c), the amount payable by an indemnifying party under Section 7 shall include, but not be limited to, (x) reasonable legal fees and expenses of counsel to the indemnified party and any other expenses in investigating, or preparing to defend or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any action, investigation, proceeding or claim, and (y) all amounts paid in settlement of any of the foregoing. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of judgment with respect to any pending or threatened action or any claim whatsoever, in respect of which indemnification or contribution could be sought under this Section 7 (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party in form and substance reasonably satisfactory to such indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party. Subject to the provisions of the following sentence, no indemnifying party shall be liable for settlement of any pending or threatened action or any claim whatsoever that is effected without its written consent (which consent shall not be unreasonably withheld or delayed), but if settled with its written consent, if its consent has been unreasonably withheld or delayed or if there be a judgment for the plaintiff in any such matter, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, if at any time an indemnified party shall have requested that an indemnifying party reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated herein effected without its written consent if (i) such settlement is entered into more than forty-five (45) days after receipt by such indemnifying party of the request for reimbursement, (ii) such indemnifying party shall have received notice of the terms of such settlement at least thirty (30) days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under Section 7(a) or Section 7(b), then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid, payable or otherwise incurred by such indemnified party as a result of such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof), as incurred, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other hand from the Offering, or (ii) if the allocation provided by clause (i) of this Section 7(d) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) of this Section 7(d) but also the relative fault of the Company on the one hand and the Underwriters on the other with respect to the statements, omissions, acts or failures to act which resulted in such loss, claim, damage, expense or liability (or any action, investigation or proceeding in respect thereof) as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other with respect to the Offering shall be deemed to be in the same proportion as the total net proceeds from the Offering under this Agreement (before deducting expenses) received by the Company bear to the total underwriting discount and commission received by the Underwriters in connection with the Offering, in each case as set forth in the table on the cover page of the Prospectus. The relative fault of the Company on the one hand and the Underwriters on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement, omission, act or failure to act; *provided* that the parties hereto agree that the written information furnished to the Company by the Representative for use in any Registration Statement or the Prospectus, or in any amendment or supplement thereto, consists solely of the Underwriters' Information as defined in Section 16. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 7(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, damage, expense, liability, action, investigation or proceeding referred to above in this Section 7(d) shall be deemed to include, for purposes of this Section 7(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating, preparing to defend or defending against or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding. Notwithstanding the provisions of this Section 7(d), the Underwriters shall not be required to contribute any amount in excess of the total underwriting discount and commission received by the Underwriters in connection with the Offering, less the amount of any damages which the Underwriters have otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement, omission or alleged omission, act or alleged act or failure to act or alleged failure to act. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

8. Termination.

The obligations of the Underwriters hereunder may be terminated by the Representative, in its absolute discretion by notice given to the Company prior to delivery of and payment for the Securities if, prior to that time, any of the events described in Sections 6(j), 6(k), 6(l) or 6(m) have occurred or if the Underwriters shall decline to purchase the Securities for any reason permitted under this Agreement.

9. Reimbursement Of Underwriters' Expenses.

Notwithstanding anything to the contrary in this Agreement, if (a) this Agreement shall have been terminated pursuant to Section 7, (b) the Company shall fail to tender the Securities to the Underwriters for any reason not permitted under this Agreement, (c) the Underwriters shall decline to purchase the Securities for any reason permitted under this Agreement or (d) the sale of the Securities is not consummated because any condition to the obligations of the Underwriters set forth herein is not satisfied or because of the refusal, inability or failure on the part of the Company to perform any agreement herein or to satisfy any condition or to comply with the provisions hereof, then, the Company shall reimburse the Underwriters' out-of-pocket expenses in accordance with Section 5 and, in addition, the Company shall reimburse the Underwriters for the reasonable fees and expenses of the Underwriters' counsel and for all other accountable out-of-pocket expenses as shall have been reasonably incurred by them in connection with this Agreement and the proposed Offering, and promptly upon demand the Company shall pay the full amount thereof to the Representative.

10. Absence Of Fiduciary Relationship.

The Company acknowledges and agrees that:

- (a) the Underwriters' responsibility to the Company is solely contractual in nature, the Underwriters have been retained solely to act as Underwriters in connection with the Offering and no fiduciary, advisory or agency relationship between the Company and the Underwriters have been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether any of the Underwriters has advised or is advising the Company on other matters;
- (b) the price of the Securities set forth in this Agreement was established by the Company following discussions and arms-length negotiations with the Representative, and the Company is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;
- (c) it has been advised that the Underwriters and their affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Underwriters have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and
- (d) it waives, to the fullest extent permitted by law, any claims it may have against the Underwriters for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that the Underwriters shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

11. *Successors; Persons Entitled To Benefit Of Agreement.*

This Agreement shall inure to the benefit of and be binding upon the Underwriters, the Company, and their respective successors and assigns. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, other than the persons mentioned in the preceding sentences, any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person; except that the representations, warranties, covenants, agreements and indemnities of the Company contained in this Agreement shall also be for the benefit of the Underwriter Indemnified Parties, and the indemnities of the Underwriters shall be for the benefit of the Company Indemnified Parties. It is understood that Underwriters' responsibility to the Company is solely contractual in nature and the Underwriters do not owe the Company, or any other party, any fiduciary duty as a result of this Agreement.

12. *SURVIVAL OF INDEMNITIES, REPRESENTATIONS, WARRANTIES, ETC.*

The respective indemnities, covenants, agreements, representations, warranties and other statements of the Company and the Underwriters, as set forth in this Agreement or made by them respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation made by or on behalf of the Underwriters, the Company or any person controlling any of them and shall survive delivery of and payment for the Securities. Notwithstanding any termination of this Agreement, including without limitation any termination pursuant to Section 8, the indemnity and contribution and reimbursement agreements contained in Sections 7 and 9 and the covenants, representations, warranties set forth in this Agreement shall not terminate and shall remain in full force and effect at all times.

13. *Notices.*

All statements, requests, notices and agreements hereunder shall be in writing, and:

(a) if to the Representative, shall be delivered or sent by mail, telex, facsimile transmission or email to (i) Guggenheim Securities, LLC, 330 Madison Avenue, New York, New York 10017, Attention: Alexander Sheers, Deputy General Counsel; and

(b) if to the Company, shall be delivered or sent by mail, telex, facsimile transmission or email to Pacific Ethanol, Inc., 400 Capitol Mall, Suite 2060, Sacramento, CA 95814, Attention: General Counsel, Facsimile: (916) 446-3937.

provided, however, that any notice to the Underwriters pursuant to Section 7 shall be delivered or sent by mail, telex or facsimile transmission to the Representative at the addresses set forth in their acceptance telex to the Underwriters, which addresses will be supplied to any other party hereto by the Underwriters upon request. Any such statements, requests, notices or agreements shall take effect at the time of receipt thereof, except that any such statement, request, notice or agreement delivered or sent by email shall take effect at the time of confirmation of receipt thereof by the recipient thereof.

14. *Definition Of Certain Terms.*

For purposes of this Agreement, (a) “**business day**” means any day on which the NASDAQ CM is open for trading, (b) “**subsidiary**” has the meaning set forth in Rule 405 of the Rules and Regulations, and (c) “**to the Company’s knowledge**” or “**to the knowledge of the Company**” or words of similar import shall mean to the knowledge of any officer or director of the Company after a reasonable investigation of such facts by such officer or director.

15. *Governing Law, Agent For Service And Jurisdiction.*

This Agreement shall be governed by and construed in accordance with the laws of the State of New York, including without limitation Section 5-1401 of the New York General Obligations Law. No legal proceeding may be commenced, prosecuted or continued in any court other than the courts of the State of New York located in the City and County of New York or in the United States District Court for the Southern District of New York, which courts shall have jurisdiction over the adjudication of such matters, and the Company and the Underwriters each hereby consent to the jurisdiction of such courts and personal service with respect thereto. The Company and the Underwriters each hereby waive all right to trial by jury in any legal proceeding (whether based upon contract, tort or otherwise) in any way arising out of or relating to this Agreement. The Company agrees that a final judgment in any such legal proceeding brought in any such court shall be conclusive and binding upon the Company and the Underwriters and may be enforced in any other courts in the jurisdiction of which the Company is or may be subject, by suit upon such judgment.

16. *Underwriters’ Information.*

The parties hereto acknowledge and agree that, for all purposes of this Agreement, the “Underwriters’ Information” consists solely of the following information in the Prospectus: the concession figure appearing in the first paragraph under the caption “Underwriting—Commissions and Discounts; Expenses,” the statements concerning stabilization by the Underwriters under the caption “Underwriting—Price Stabilization and Short Positions” and the statements contained under the caption “Underwriting—Passive Market Making.”

17. *Partial Unenforceability.*

The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision hereof. If any section, paragraph, clause or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

18. *General.*

This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. In this Agreement, the masculine, feminine and neuter genders and the singular and the plural include one another. The section headings in this Agreement are for the convenience of the parties only and will not affect the construction or interpretation of this Agreement. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representative.

19. *Research Analyst Independence.*

The Company acknowledges that each Underwriter's research analysts and research departments are required to be independent from its investment banking division and are subject to certain regulations and internal policies, and that such Underwriter's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the Offering that differ from the views of their investment banking division. The Company acknowledges that each Underwriter is a full service securities firm and as such from time to time, subject to applicable securities laws, rules and regulations, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the Company; provided, however, that nothing in this Section 19 shall relieve any Underwriter of any responsibility or liability it may otherwise bear in connection with activities in violation of applicable securities laws, rules or regulations.

20. *Counterparts.*

This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument and such signatures may be delivered by facsimile.

If the foregoing is in accordance with your understanding of the agreement between the Company and the Underwriters, kindly indicate your acceptance in the space provided for that purpose below.

Very truly yours,

PACIFIC ETHANOL, INC.

By: /s/ Bryon T. McGregor
Name: Bryon T. McGregor
Title: CFO

Accepted as of the date
first above written on behalf of
themselves and the Underwriters
named in Schedule C hereto:

GUGGENHEIM SECURITIES, LLC

By: /s/ David Dolezal
Name: David Dolezal
Title: Senior Managing Director

SCHEDULE A

General Use Free Writing Prospectuses

None.

SCHEDULE B

List of Directors, Executive Officers and Stockholders subject to
Section 4(k)

Directors and Executive Officers:

William L. Jones

Michael D. Kandris

Neil M. Koehler

Terry L. Stone

John L. Prince

Douglas L. Kieta

Gilbert E. Nathan

Dianne S. Nury

Christopher W. Wright

Bryon T. McGregor

James R. Sneed

SCHEDULE C

UNDERWRITER	NUMBER OF SHARES PURCHASED	NUMBER OF PRE-FUNDED WARRANTS PURCHASED
GUGGENHEIM SECURITIES, LLC	4,060,000	3,060,395
CRAIG-HALLUM CAPITAL GROUP LLC	507,500	382,549
H.C. WAINWRIGHT & CO., LLC	507,500	382,549
TOTAL	5,075,000	3,825,493

EXHIBIT B

Form of Lock-Up Agreement

October [], 2020

GUGGENHEIM SECURITIES, LLC
As Representative of the Underwriters
Listed on Schedule C to the Underwriting Agreement
c/o Guggenheim Securities, LLC
330 Madison Avenue
New York, New York 10017

Re: Pacific Ethanol, Inc. - Underwritten Offering of Common Stock and Pre-Funded Warrants

Dear Sirs:

In order to induce Guggenheim Securities, LLC (the “**Representative**”), as Representative of the Underwriters, to enter into that certain underwriting agreement with Pacific Ethanol, Inc., a Delaware corporation (the “**Company**”), with respect to the public offering (the “**Offering**”) of shares of the Company’s common stock, par value \$0.001 per share (“**Common Stock**”) and pre-funded warrants to purchase shares of Common Stock, the undersigned hereby agrees that for a period of ninety (90) days following the date of the final prospectus supplement filed by the Company with the Securities and Exchange Commission in connection with the Offering (the “**Lock-up Period**”), the undersigned will not, without the prior written consent of the Representative, directly or indirectly, (i) offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, or publicly announce the intention to otherwise dispose of, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (including, without limitation, shares of Common Stock or any such securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations promulgated under the Securities Act of 1933, as the same may be amended or supplemented from time to time (such shares or securities, the “**Beneficially Owned Shares**”)), (ii) enter into any swap, hedge or other agreement or arrangement that transfers in whole or in part, the economic risk of ownership of any Beneficially Owned Shares, Common Stock or securities convertible into or exercisable or exchangeable for Common Stock, or (iii) engage in any short selling of any Beneficially Owned Shares, Common Stock or securities convertible into or exercisable or exchangeable for Common Stock.

Anything contained herein to the contrary notwithstanding, any person to whom shares of Common Stock, securities convertible into or exercisable or exchangeable for Common Stock or Beneficially Owned Shares are transferred from the undersigned shall be bound by the terms of this Agreement.

In addition, the undersigned hereby waives, from the date hereof until the expiration of the Lock-up Period, any and all rights, if any, to request or demand registration pursuant to the Securities Act of 1933, as amended, of any shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock that are registered in the name of the undersigned or that are Beneficially Owned Shares. In order to enable the aforesaid covenants to be enforced, the undersigned hereby consents to the placing of a stop-transfer order with the transfer agent of the Common Stock with respect to any shares of Common Stock, securities convertible into or exercisable or exchangeable for Common Stock or Beneficially Owned Shares.

[Signature page follows]

Executed as of the date set forth above.

Very truly yours,

By: _____
Name:
Title:

EXHIBIT C

Form of Pre-Funded Warrant

[SEE ATTACHED]

THE NUMBER OF SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT MAY BE LESS THAN THE AMOUNTS SET FORTH ON THE FACE HEREOF PURSUANT TO SECTION 1(a) OF THIS WARRANT.

PACIFIC ETHANOL, INC.

Series B Prepaid Warrant To Purchase Common Stock

Warrant No.: B-1

Date of Issuance: October __, 2020 ("Issuance Date")

PACIFIC ETHANOL, INC., a Delaware corporation (the "**Company**"), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [BUYER], 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 below) then in effect, upon exercise of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the "**Warrant**"), at any time or times on or after the Issuance Date, but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), 3,825,493 (subject to adjustment as provided herein) fully paid and non-assessable shares of Common Stock (as defined below) (the "**Warrant Shares**"), and such number of Warrant Shares, the "**Warrant Number**"). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 19. This Warrant is one of the Warrants to Purchase Common Stock (the "**Registered Warrants**") issued pursuant to (i) Section 1 of that certain Underwriting Agreement, dated as of October 26, 2020 (the "**Subscription Date**"), by and among the Company and the underwriter(s) referred to therein, as amended from time to time (the "**Underwriting Agreement**") and (ii) the Company's Registration Statement on Form S-3 (File number 333-238939) (the "**Registration Statement**").

Notwithstanding anything herein to the contrary, the Aggregate Exercise Price (as defined below) of this Warrant, except for a nominal exercise price of \$0.001 per Warrant Share, was pre-funded to the Company on or prior to the initial Issuance Date and, consequently, no additional consideration (other than the nominal exercise price of \$0.001 per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant.

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 on any day on or after the Issuance Date (an "**Exercise Date**"), in whole or in part, by delivery (whether via facsimile, electronic mail or otherwise) of a written notice, in the form attached hereto as **Exhibit A** (the "**Exercise Notice**"), of the Holder's election to exercise this Warrant. Within one (1) Trading Day following an exercise of this Warrant as aforesaid, the Holder shall deliver payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant was so exercised (the "**Aggregate Exercise Price**") in cash or via wire transfer of immediately available funds if the Holder did not notify the Company in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall not be required to deliver the original of this Warrant in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. 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 an Exercise Notice, the Company shall transmit by facsimile or electronic mail an acknowledgment of confirmation of receipt of such Exercise Notice, in the form attached hereto as **Exhibit B**, to the Holder and the Company's transfer agent (the "**Transfer Agent**"), which confirmation shall constitute an instruction to the Transfer Agent to process such Exercise Notice in accordance with the terms herein. On or before the second (2nd) Trading Day following the date on which the Company has received such Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date), the Company shall (i) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program, upon the request of the Holder, credit such aggregate number of shares of Common Stock 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 (ii) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, upon the request of the Holder, issue and deliver (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder shall be entitled pursuant to such exercise. Upon delivery of an 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 and upon surrender of this Warrant to the Company by the Holder, then, at the request of the Holder, the Company shall as soon as practicable and in no event later than two (2) Business Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all transfer, stamp, issuance and similar taxes, costs and expenses (including, without limitation, fees and expenses of the Transfer Agent) that may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. Notwithstanding the foregoing, except in the case where an exercise of this Warrant is validly made pursuant to a Cashless Exercise, the Company's failure to deliver Warrant Shares to the Holder on or prior to the later of (A) two (2) Trading Days after receipt of the applicable Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date) and (B) one (1) Trading Day after the Company's receipt of the Aggregate Exercise Price (or valid notice of a Cashless Exercise) (such later date, the "**Share Delivery Date**") shall not be deemed to be a breach of this Warrant. From the Issuance Date through and including the Expiration Date, the Company shall maintain a transfer agent that participates in the DTC's Fast Automated Securities Transfer Program. Notwithstanding any other provision in this Agreement, the Holder may elect, at its sole discretion, to receive unregistered Warrant Shares issued in response to an Exercise Notice instead of Warrant Shares (i) registered pursuant to the Existing Registration Statement or a Replacement Registration Statement or (ii) issued pursuant to Section 1(c).

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$0.001, 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, 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, to issue and deliver to the Holder (or its designee) a certificate for the number of Warrant Shares to which the Holder is entitled and register such Warrant Shares on the Company’s share register or, if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the balance account of the Holder or the Holder’s designee with DTC for such number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise of this Warrant (as the case may be) or (II) if the Registration Statement (or prospectus contained therein) covering the issuance 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 (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 to as a “**Notice Failure**” and together with the event described in clause (I) above, a “**Delivery Failure**”), and if on or after such Share Delivery Date 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 issuable upon such exercise that the Holder is entitled to receive from the Company (a “**Buy-In**”), then, in addition to all other remedies available to the Holder, the Company shall, within two (2) Business Days after the Holder’s request and in the Holder’s discretion, either (i) as an indemnity for loss hereunder, 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 (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”), at which point the Company’s obligation to so issue and deliver such certificate (and to issue such shares of Common Stock) or credit the balance account of such Holder or such Holder’s designee, as applicable, with DTC for the number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) (and to issue such Warrant Shares) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such Warrant Shares or credit the balance account of such Holder or such Holder’s designee, as applicable, with DTC for the number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) and, as an indemnity for loss hereunder, pay cash to the Holder in an amount equal to the excess (if any) of 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 (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”) over the product of (A) such number of Warrant Shares multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice and ending on the date of such issuance and payment under this clause (ii) (the “**Buy-In Payment Amount**”). 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. While this Warrant is outstanding, the Company shall cause its transfer agent to participate in the DTC Fast Automated Securities Transfer Program. In addition to the foregoing rights, (i) if the Company fails to deliver the applicable number of Warrant Shares upon an exercise pursuant to Section 1 by the applicable Share Delivery Date, then the Holder shall have the right to rescind such exercise in whole or in part and retain and/or have the Company return, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an exercise shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise, and (ii) if a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares that are subject to an Exercise Notice is not available for the issuance or resale, as applicable, of such Exercise Notice Warrant Shares and the Holder has submitted an Exercise Notice prior to receiving notice of the non-availability of such registration statement and the Company has not already delivered the Warrant Shares underlying such Exercise Notice 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 Holder shall have the option, by delivery of notice to the Company, to (x) rescind such Exercise Notice in whole or in part and retain or have returned, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an Exercise Notice shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise, and/or (y) switch some or all of such Exercise Notice from a cash exercise to a Cashless Exercise.

(d) **Cashless Exercise.** Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if at the time of exercise hereof the Registration Statement is not effective (or the prospectus contained therein is not available for use) for the issuance of all of the Warrant Shares, then 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 Warrant Shares 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 = the quotient of (x) the sum of the VWAP of the Common Stock of each of the ten (10) Trading Days ending at the close of business on the Principal Market immediately prior to the time of exercise as set forth in the applicable Exercise Notice, divided by (y) ten (10).

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

D = as applicable: (i) the Closing Sale Price of the Common Stock 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) the Bid Price of the Common Stock 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 pursuant to Section 1(a) hereof, or (iii) the Closing Sale Price of the Common Stock 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.

If the 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 take on the registered characteristics of the Warrants being exercised. For purposes of Rule 144(d) promulgated under the 1933 Act, as in effect on the Subscription Date, it is intended that the Warrant Shares issued in a Cashless Exercise shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued pursuant to the Underwriting Agreement.

(e) **Disputes.** In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, 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 15.

(f) Limitations on Exercises. 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 9.99% (the “**Maximum Percentage**”) of the 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 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, including other Registered 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)(i). For purposes of this Section 1(f)(i), beneficial ownership shall be calculated in accordance with Section 13(d) of the 1934 Act. For purposes of 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 SEC, as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent, if any, 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)(i), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be acquired 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 (with such increase not effective until the sixty-first (61st) day after delivery of such notice) or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided 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 Registered 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. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. 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)(i) 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)(i) 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) Reservation of Shares.

(i) Required Reserve Amount. So long as this Warrant remains outstanding, the Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock under the Registered Warrants then outstanding (without regard to any limitations on exercise) (the "**Required Reserve Amount**"); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 1(g)(i) be reduced other than proportionally in connection with any exercise or redemption of Registered Warrants or such other event covered by Section 2(a) below. The Required Reserve Amount (including, without limitation, each increase in the number of shares so reserved) shall be allocated pro rata among the holders of the Registered Warrants based on number of shares of Common Stock issuable upon exercise of Registered Warrants held by each holder on the Closing Date (without regard to any limitations on exercise) or increase in the number of reserved shares, as the case may be (the "**Authorized Share Allocation**"). In the event that a holder shall sell or otherwise transfer any of such holder's Registered Warrants, 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 Registered Warrants shall be allocated to the remaining holders of Registered Warrants, pro rata based on the number of shares of Common Stock issuable upon exercise of the Registered Warrants then held by such holders (without regard to any limitations on exercise).

(ii) Insufficient Authorized Shares. If, notwithstanding Section 1(g)(i) above, and not in limitation thereof, at any time while any of the Registered Warrants remain outstanding, the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall immediately take all action 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 all the Registered 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 sixty (60) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders 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 stockholder with a proxy statement and shall use its best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. In the event that the Company is prohibited from issuing shares of Common Stock upon an exercise of this Warrant due to the failure by the Company to have sufficient shares of Common Stock available out of the authorized but unissued shares of Common Stock (such unavailable number of shares of Common Stock, the "**Authorization Failure Shares**"), in lieu of delivering such Authorization Failure Shares to the Holder, the Company shall pay cash in exchange for the cancellation of such portion of this Warrant exercisable into such Authorization Failure Shares at a price equal to the sum of (i) the product of (x) such number of Authorization Failure Shares and (y) the greatest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date the Holder delivers the applicable Exercise Notice with respect to such Authorization Failure Shares to the Company and ending on the date of such issuance and payment under this Section 1(f); and (ii) to the extent 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 Authorization Failure Shares, any Buy-In Payment Amount, brokerage commissions and other out-of-pocket expenses, if any, of the Holder incurred in connection therewith.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

(a) Stock Dividends and Splits. Without limiting any provision of Section 4, if the Company, at any time on or after the Subscription Date, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) [Intentionally Omitted]

(c) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to this Section 2(a), the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein).

(d) Other Events. In the event that the Company (or any Subsidiary (as defined in the Underwriting Agreement)) shall take any action to which the provisions hereof are not strictly applicable, or, if applicable, would not operate to protect the Holder from dilution or 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 shall in good faith determine and implement an appropriate adjustment in the Exercise Price and the number of Warrant Shares (if applicable) so as to protect the rights of the Holder, provided that no such adjustment pursuant to this Section 2(d) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2, provided further that if the Holder does not accept such adjustments as appropriately protecting its interests hereunder against such dilution, then the Company's board of directors and the Holder shall agree, in good faith, upon an independent investment bank of nationally recognized standing to make such appropriate adjustments, whose determination shall be final and binding absent manifest error and whose fees and expenses shall be borne by the Company.

(e) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issuance or sale of Common Stock.

(f) Voluntary Adjustment By Company. Subject to the rules and regulations of the Principal Market, the Company may at any time during the term of this Warrant, with the prior written consent of the holders of a majority of the Registered Warrants then outstanding, 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.

3. RIGHTS UPON DISTRIBUTION OF ASSETS. In addition to any adjustments pursuant to Section 2 above, 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 on 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 the extent of the Maximum Percentage (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to the extent of any such excess) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times, if ever, 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, issuance 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 the extent of the Maximum Percentage (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 the extent of any such excess) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times, if ever, 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 (i) the Successor Entity assumes in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 4(b) pursuant to written agreements in form and substance satisfactory to the Holder and approved by the Holder prior to such Fundamental Transaction, including agreements to deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, which is 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 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 consummation of such Fundamental Transaction) and (ii) the Successor Entity (including its Parent Entity) is a publicly traded corporation whose common stock is quoted on or listed for trading on an Eligible Market. Upon the consummation of each Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of the applicable Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of each Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the consummation of the applicable Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of this Warrant prior to the applicable Fundamental Transaction, such shares of publicly traded common stock (or its equivalent) of the Successor Entity (including its Parent Entity) which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant), as adjusted in accordance with the provisions of this Warrant. Notwithstanding the foregoing, and without limiting Section 1(f) hereof, the Holder may elect, at its sole option, by delivery of written notice to the Company to waive this Section 4(b) to permit the Fundamental Transaction without the assumption of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of each Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of this Warrant at any time after the consummation of the applicable Fundamental Transaction but prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of the 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 the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant). Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Holder.

(c) [Intentionally Omitted]

(d) Application. The provisions of this Section 4 shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied as if this Warrant (and any such subsequent warrants) were fully exercisable and without regard to any limitations on the exercise of this Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of this Warrant (or any such other warrant)).

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its certificate of incorporation, bylaws or other organizational documents or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issuance 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 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 (a) 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, and (b) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares of Common Stock upon the exercise of this Warrant. Notwithstanding anything herein to the contrary, if after the sixty (60) calendar day anniversary of the Issuance Date, the Holder is not permitted to exercise this Warrant in full for any reason (other than pursuant to restrictions set forth in Section 1(f) hereof), the Company shall use its best efforts to promptly remedy such failure, including, without limitation, obtaining such consents or approvals as necessary to permit such exercise into shares of Common Stock.

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in its 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 its capacity as the Holder of this Warrant, any of the rights of a stockholder 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 it 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 stockholder 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 stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders.

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 (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form 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, no warrants for fractional shares of Common Stock 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. (a) General. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or by facsimile or (b) from outside the United States, by International Federal Express, electronic mail or facsimile, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier, one (1) Business Day after so mailed, (C) if delivered by International Federal Express, two (2) Business Days after so mailed and (D) if delivered by electronic mail, when sent (provided that such sent email is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's email server that such e-mail could not be delivered to such recipient) and (E) if delivered by facsimile, upon electronic confirmation of receipt of such facsimile, and will be delivered and addressed as follows:

- (i) if to the Company, to:

Pacific Ethanol, Inc.
400 Capitol Mall, Suite 2060
Sacramento, CA 95814
Attention: General Counsel
Fax: (916) 446-3937
E-Mail: cwright@pacificethanol.com

- (ii) if to the Holder, at such address or other contact information delivered by the Holder to Company or as is on the books and records of the Company.

(b) Required Notices. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant (other than the issuance of shares of Common Stock upon exercise in accordance with the terms hereof), 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 each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s), (ii) at least ten Trading 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 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, and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

9. DISCLOSURE. Upon delivery by the Company to the Holder (or receipt by the Company from the Holder) 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, non-public information relating to the Company or any of its Subsidiaries, the Company shall on or prior to 9:00 am, New York city time on the Business Day immediately following such notice delivery date, publicly disclose such material, non-public information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, non-public information relating to the Company or any of its Subsidiaries, the Company so shall indicate to the Holder explicitly in writing in such notice (or immediately upon receipt of notice from the Holder, as applicable), and in the absence of any such written indication in such notice (or notification from the Company immediately upon receipt of notice from the Holder), the Holder shall be entitled to presume that information contained in the notice does not constitute material, non-public information relating to the Company or any of its Subsidiaries.

10. ABSENCE OF TRADING AND DISCLOSURE RESTRICTIONS. The Company acknowledges and agrees that the Holder is not a fiduciary or agent of the Company and that the Holder shall have no obligation to (a) maintain the confidentiality of any information provided by the Company or (b) refrain from trading any securities while in possession of such information in the absence of a written non-disclosure agreement signed by an officer of the Holder that explicitly provides for such confidentiality and trading restrictions. In the absence of such an executed, written non-disclosure agreement, the Company acknowledges that the Holder may freely trade in any securities issued by the Company, may possess and use any information provided by the Company in connection with such trading activity, and may disclose any such information to any third party.

11. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f)) may be amended 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. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

12. 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).

13. GOVERNING LAW. 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 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 its principal executive office and agrees that such service shall constitute good and sufficient service of process and notice thereof. 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. 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 TO, 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.**

14. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder 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.

15. DISPUTE RESOLUTION.

(a) Submission to Dispute Resolution.

(i) In the case of a dispute relating to the Exercise Price, the Closing Sale Price, the Bid Price, or fair market value or the arithmetic calculation of the number of Warrant Shares (as the case may be) (including, without limitation, a dispute relating to the determination of any of the foregoing), the Company or the Holder (as the case may be) shall submit the dispute to the other party via facsimile or electronic mail (A) if by the Company, within two (2) Business Days after the occurrence of the circumstances giving rise to such dispute or (B) if by the Holder, at any time after the Holder learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to promptly resolve such dispute relating to such Exercise Price, such Closing Sale Price, such Bid Price, or such fair market value or such arithmetic calculation of the number of Warrant Shares (as the case may be), at any time after the second (2nd) Business Day following such initial notice by the Company or the Holder (as the case may be) of such dispute to the Company or the Holder (as the case may be), then the Holder may, at its sole option, select an independent, reputable investment bank to resolve such dispute.

(ii) The Holder and the Company shall each deliver to such investment bank (A) a copy of the initial dispute submission so delivered in accordance with the first sentence of this Section 15 and (B) written documentation supporting its position with respect to such dispute, in each case, no later than 5:00 p.m. (New York time) by the fifth (5th) Business Day immediately following the date on which the Holder selected such investment bank (the “**Dispute Submission Deadline**”) (the documents referred to in the immediately preceding clauses (A) and (B) are collectively referred to herein as the “**Required Dispute Documentation**”) (it being understood and agreed that if either the Holder or the Company fails to so deliver all of the Required Dispute Documentation by the Dispute Submission Deadline, then the party who fails to so submit all of the Required Dispute Documentation shall no longer be entitled to (and hereby waives its right to) deliver or submit any written documentation or other support to such investment bank with respect to such dispute and such investment bank shall resolve such dispute based solely on the Required Dispute Documentation that was delivered to such investment bank prior to the Dispute Submission Deadline). Unless otherwise agreed to in writing by both the Company and the Holder or otherwise requested by such investment bank, neither the Company nor the Holder shall be entitled to deliver or submit any written documentation or other support to such investment bank in connection with such dispute (other than the Required Dispute Documentation).

(iii) The Company and the Holder shall cause such investment bank to determine the resolution of such dispute and notify the Company and the Holder of such resolution no later than ten (10) Business Days immediately following the Dispute Submission Deadline. The fees and expenses of such investment bank shall be borne solely by the Company, and such investment bank’s resolution of such dispute shall be final and binding upon all parties absent manifest error.

(b) Miscellaneous. The Company expressly acknowledges and agrees that (i) this Section 15 constitutes an agreement to arbitrate between the Company and the Holder (and constitutes an arbitration agreement) under the rules then in effect under § 7501, et seq. of the New York Civil Practice Law and Rules (“**CPLR**”) and that the Holder is authorized to apply for an order to compel arbitration pursuant to CPLR § 7503(a) in order to compel compliance with this Section 15, (ii) the terms of this Warrant shall serve as the basis for the selected investment bank’s resolution of the applicable dispute, such investment bank shall be entitled (and is hereby expressly authorized) to make all findings, determinations and the like that such investment bank determines are required to be made by such investment bank in connection with its resolution of such dispute.

16. REMEDIES, CHARACTERIZATION, 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, 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 and consequential damages for any failure by the Company to comply with the terms of this Warrant. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). 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 specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent jurisdiction in any such case without the necessity of proving actual damages and without posting a bond or other security. The Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company’s compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder or such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

17. PAYMENT OF COLLECTION, ENFORCEMENT AND OTHER COSTS. If (a) this Warrant is placed in the hands of an attorney for collection or enforcement or is collected or enforced through any legal proceeding or the holder otherwise takes action to collect amounts due under this Warrant or to enforce the provisions of this Warrant or (b) there occurs any bankruptcy, reorganization, receivership of the company or other proceedings affecting company creditors' rights and involving a claim under this Warrant, then the Company shall pay the costs incurred by the Holder for such collection, enforcement or action or in connection with such bankruptcy, reorganization, receivership or other proceeding, including, without limitation, attorneys' fees and disbursements.

18. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

19. CERTAIN DEFINITIONS. For purposes of this Warrant, the following terms shall have the following meanings:

(a) "**1933 Act**" means the Securities Act of 1933, as amended, and the rules and regulations thereunder.

(b) "**1934 Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

(c) [Intentionally Omitted]

(d) "**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 shares 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.

(e) [Intentionally Omitted]

(f) **“Attribution Parties”** means, collectively, the following Persons and entities: (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.

(g) **“Bid Price”** means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of any market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(h) [Intentionally Omitted]

(i) **“Bloomberg”** means Bloomberg, L.P.

(j) **“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.

(k) **“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 does 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 “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC). 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(l) **“Common Stock”** means (i) the Company’s shares of common stock, \$0.001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(m) **“Convertible Securities”** means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock.

(n) **“Eligible Market”** means The New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market, or the Principal Market.

(o) [Intentionally Omitted]

(p) **“Expiration Date”** means the date that is the fifth (5th) anniversary of the Issuance 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 date that is not a Holiday.

(q) **“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 stock or 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 all 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 date of this Warrant 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.

(r) “**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.

(s) “**Options**” means any rights, warrants or options to subscribe for or purchase Ordinary Shares or Convertible Securities.

(t) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

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

(v) “**Principal Market**” means The Nasdaq Capital Market.

(w) “**SEC**” means the United States Securities and Exchange Commission or the successor thereto.

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

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

(z) “**Trading Day**” means, as applicable, (x) with respect to all price or trading volume determinations relating to the Common Stock, 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, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

(aa) “**VWAP**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market (or, if the Principal Market is not the principal trading market for such security, then on the principal securities exchange or securities market on which such security is then traded), during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg through its “VAP” function (set to 09:30 start time and 16:00 end time) or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC). If the VWAP cannot be calculated for such security on such date on any of the foregoing bases, the VWAP 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, recapitalization or other similar transaction during such period.

[signature page follows]

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

PACIFIC ETHANOL, INC.

By: _____

Name: Michael D. Kandris

Title: President and CEO

EXERCISE NOTICE

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

PACIFIC ETHANOL, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock ("**Warrant Shares**") of Pacific Ethanol, Inc., a Delaware corporation (the "**Company**"), evidenced by Warrant to Purchase Common Stock No. B-1 (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 Aggregate Exercise Price shall be made as:

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

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

In the event that the Holder has elected a Cashless Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder hereby represents and warrants that (i) this Exercise Notice was executed by the Holder at _____ [a.m.][p.m.] on the date set forth below and (ii) if applicable, the Bid Price as of such time of execution of this Exercise Notice was \$ _____.

☐ If this Exercise Notice is being delivered after the Alternate Exercise Eligibility Date, check here if Holder is electing to use the following Alternate Exercise Price in this exercise: _____.

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. Delivery of Warrant Shares. The Company shall deliver to Holder, or its designee or agent as specified below, _____ Warrant Shares in accordance with the terms of the Warrant. Delivery shall be made to Holder, or for its benefit, as follows:

☐ Check here if requesting delivery as a certificate to the following name and to the following address:

Issue to:

☐ Check here if requesting delivery by Deposit/Withdrawal at Custodian as follows:

DTC Participant:

DTC Number:

Account Number:

Date: _____,

Name of Registered Holder

By: _____

Name:

Title:

Tax ID: _____

Facsimile: _____

E-mail Address: _____

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs _____ to issue the aboveindicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated _____, 20____, from the Company and acknowledged and agreed to by _____.

PACIFIC ETHANOL, INC.

By: _____

Name: Michael D. Kandris

Title: President and CEO

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

THE NUMBER OF SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THIS WARRANT MAY BE LESS THAN THE AMOUNTS SET FORTH ON THE FACE HEREOF PURSUANT TO SECTION 1(a) OF THIS WARRANT.

PACIFIC ETHANOL, INC.

Series A Warrant To Purchase Common Stock

Warrant No.: A-1

Date of Issuance: October __, 2020 (“**Issuance Date**”)

PACIFIC ETHANOL, INC., a Delaware corporation (the “**Company**”), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [BUYER], 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 below) then in effect, upon exercise of this Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the “**Warrant**”), at any time or times on or after the date six (6) months after the date hereof (the “**Exercisability Date**”), but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), 8,900,493 (subject to adjustment as provided herein) fully paid and non-assessable shares of Common Stock (as defined below) (the “**Warrant Shares**”, and such number of Warrant Shares, the “**Warrant Number**”). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 19.

This Warrant is one of the Warrants to Purchase Common Stock (the “**SPA Warrants**”) issued pursuant to Section 1 of that certain Securities Purchase Agreement, dated as of October 26, 2020 (the “**Subscription Date**”), by and among the Company and the investors (the “**Buyers**”) referred to therein, as amended from time to time (the “**Securities Purchase Agreement**”).

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 on any day on or after the Exercisability Date (an “**Exercise Date**”), in whole or in part, by delivery (whether via facsimile, electronic mail or otherwise) of a written notice, in the form attached hereto as **Exhibit A** (the “**Exercise Notice**”), of the Holder’s election to exercise this Warrant. Within one (1) Trading Day following an exercise of this Warrant as aforesaid, the Holder shall deliver payment to the Company of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant was so exercised (the “**Aggregate Exercise Price**”) in cash or via wire transfer of immediately available funds if the Holder did not notify the Company in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)); provided, however, that upon thirty (30) days’ prior written notice to the Holder, the Company may elect to require the Holder to make any portion of such future exercises pursuant to a Cashless Exercise until such time as the Company provides another thirty (30) days’ prior written notice to the Holder requiring the Holder to make any portion of such future exercises on a cash exercise basis, subject to the provisions of Section 1(d). The Holder shall not be required to deliver the original of this Warrant in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. 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 an Exercise Notice, the Company shall transmit by facsimile or electronic mail an acknowledgment of confirmation of receipt of such Exercise Notice, in the form attached hereto as **Exhibit B**, to the Holder and the Company’s transfer agent (the “**Transfer Agent**”), which confirmation shall constitute an instruction to the Transfer Agent to process such Exercise Notice in accordance with the terms herein. On or before the second (2nd) Trading Day following the date on which the Company has received such Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date), the Company shall (i) provided that the Transfer Agent is participating in The Depository Trust Company (“**DTC**”) Fast Automated Securities Transfer Program, upon the request of the Holder, credit such aggregate number of shares of Common Stock 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 (ii) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, upon the request of the Holder, issue and deliver (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder shall be entitled pursuant to such exercise. Upon delivery of an 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 and upon surrender of this Warrant to the Company by the Holder, then, at the request of the Holder, the Company shall as soon as practicable and in no event later than two (2) Business Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all transfer, stamp, issuance and similar taxes, costs and expenses (including, without limitation, fees and expenses of the Transfer Agent) that may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. Notwithstanding the foregoing, except in the case where an exercise of this Warrant is validly made pursuant to a Cashless Exercise, the Company’s failure to deliver Warrant Shares to the Holder on or prior to the later of (A) two (2) Trading Days after receipt of the applicable Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date) and (B) one (1) Trading Day after the Company’s receipt of the Aggregate Exercise Price (or valid notice of a Cashless Exercise) (such later date, the “**Share Delivery Date**”) shall not be deemed to be a breach of this Warrant. From the Issuance Date through and including the Expiration Date, the Company shall maintain a transfer agent that participates in the DTC’s Fast Automated Securities Transfer Program.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means \$9.757, 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, 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, to issue and deliver to the Holder (or its designee) a certificate for the number of Warrant Shares to which the Holder is entitled and register such Warrant Shares on the Company’s share register or, if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the balance account of the Holder or the Holder’s designee with DTC for such number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise of this Warrant (as the case may be) or (II) if a registration statement (or prospectus contained therein) covering the resale of the Warrant Shares that are the subject of the Exercise Notice (the “**Unavailable Warrant Shares**”) is not available for the resale of such Unavailable Warrant Shares and the Company fails to promptly (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 to as a “**Notice Failure**” and together with the event described in clause (I) above, a “**Delivery Failure**”), and if on or after such Share Delivery Date 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 issuable upon such exercise that the Holder is entitled to receive from the Company (a “**Buy-In**”), then, in addition to all other remedies available to the Holder, the Company shall, within two (2) Business Days after the Holder’s request and in the Holder’s discretion, either (i) as an indemnity for loss hereunder, 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 (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”), at which point the Company’s obligation to so issue and deliver such certificate (and to issue such shares of Common Stock) or credit the balance account of such Holder or such Holder’s designee, as applicable, with DTC for the number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) (and to issue such Warrant Shares) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such Warrant Shares or credit the balance account of such Holder or such Holder’s designee, as applicable, with DTC for the number of Warrant Shares to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) and, as an indemnity for loss hereunder, pay cash to the Holder in an amount equal to the excess (if any) of 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 (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”) over the product of (A) such number of Warrant Shares multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice and ending on the date of such issuance and payment under this clause (ii) (the “**Buy-In Payment Amount**”). 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. While this Warrant is outstanding, the Company shall cause its transfer agent to participate in the DTC Fast Automated Securities Transfer Program. In addition to the foregoing rights, (i) if the Company fails to deliver the applicable number of Warrant Shares upon an exercise pursuant to Section 1 by the applicable Share Delivery Date, then the Holder shall have the right to rescind such exercise in whole or in part and retain and/or have the Company return, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an exercise shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise, and (ii) if a registration statement covering the resale of the Warrant Shares that are subject to an Exercise Notice is not available for the resale of such Exercise Notice Warrant Shares and the Holder has submitted an Exercise Notice prior to receiving notice of the non-availability of such registration statement and the Company has not already delivered the Warrant Shares underlying such Exercise Notice 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 Holder shall have the option, by delivery of notice to the Company, to (x) rescind such Exercise Notice in whole or in part and retain or have returned, as the case may be, any portion of this Warrant that has not been exercised pursuant to such Exercise Notice; provided that the rescission of an Exercise Notice shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice pursuant to this Section 1(c) or otherwise, and/or (y) switch some or all of such Exercise Notice from a cash exercise to a Cashless Exercise.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if at the time of exercise hereof a registration statement covering the resale of the Warrant Shares is not effective (or the prospectus contained therein is not available for use) for the issuance of all of the Warrant Shares, then 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 Warrant Shares 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 = the quotient of (x) the sum of the VWAP of the Common Stock of each of the ten (10) Trading Days ending at the close of business on the Principal Market immediately prior to the time of exercise as set forth in the applicable Exercise Notice, divided by (y) ten (10).

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

D = as applicable: (i) the Closing Sale Price of the Common Stock 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) the Bid Price of the Common Stock 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 pursuant to Section 1(a) hereof, or (iii) the Closing Sale Price of the Common Stock 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.

If the 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 take on the registered characteristics of the Warrants being exercised. For purposes of Rule 144(d) promulgated under the 1933 Act, as in effect on the Subscription Date, it is intended that the Warrant Shares issued in a Cashless Exercise shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the date this Warrant was originally issued pursuant to the Securities Purchase Agreement.

(c) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, 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 15.

(f) Limitations on Exercises. 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 4.99% (the “**Maximum Percentage**”) of the 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 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, including other SPA 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)(i). For purposes of this Section 1(f)(i), beneficial ownership shall be calculated in accordance with Section 13(d) of the 1934 Act. For purposes of 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 SEC, as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent, if any, 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)(i), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be acquired 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 (with such increase not effective until the sixty-first (61st) day after delivery of such notice) or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided 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 SPA 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. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. 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)(i) 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)(i) 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) Reservation of Shares.

(i) Required Reserve Amount. So long as this Warrant remains outstanding, the Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock under the SPA Warrants then outstanding (without regard to any limitations on exercise) (the "**Required Reserve Amount**"); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 1(g)(i) be reduced other than proportionally in connection with any exercise or redemption of SPA Warrants or such other event covered by Section 2(a) below. The Required Reserve Amount (including, without limitation, each increase in the number of shares so reserved) shall be allocated pro rata among the holders of the SPA Warrants based on number of shares of Common Stock issuable upon exercise of SPA Warrants held by each holder on the Closing Date (without regard to any limitations on exercise) or increase in the number of reserved shares, as the case may be (the "**Authorized Share Allocation**"). In the event that a holder shall sell or otherwise transfer any of such holder's SPA Warrants, 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 SPA Warrants shall be allocated to the remaining holders of SPA Warrants, pro rata based on the number of shares of Common Stock issuable upon exercise of the SPA Warrants then held by such holders (without regard to any limitations on exercise).

(ii) Insufficient Authorized Shares. If, notwithstanding Section 1(g)(i) above, and not in limitation thereof, at any time while any of the SPA Warrants remain outstanding, the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall immediately take all action 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 all the SPA 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 sixty (60) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders 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 stockholder with a proxy statement and shall use its best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. In the event that the Company is prohibited from issuing shares of Common Stock upon an exercise of this Warrant due to the failure by the Company to have sufficient shares of Common Stock available out of the authorized but unissued shares of Common Stock (such unavailable number of shares of Common Stock, the "**Authorization Failure Shares**"), in lieu of delivering such Authorization Failure Shares to the Holder, the Company shall pay cash in exchange for the cancellation of such portion of this Warrant exercisable into such Authorization Failure Shares at a price equal to the sum of (i) the product of (x) such number of Authorization Failure Shares and (y) the greatest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date the Holder delivers the applicable Exercise Notice with respect to such Authorization Failure Shares to the Company and ending on the date of such issuance and payment under this Section 1(f); and (ii) to the extent 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 Authorization Failure Shares, any Buy-In Payment Amount, brokerage commissions and other out-of-pocket expenses, if any, of the Holder incurred in connection therewith.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

(a) Stock Dividends and Splits. Without limiting any provision of Section 2(b) or Section 4, if the Company, at any time on or after the Subscription Date, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) [Intentionally Omitted]

(c) [Intentionally Omitted]

(d) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to this Section 2(a), the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein).

(e) Other Events. In the event that the Company (or any Subsidiary (as defined in the Securities Purchase Agreement)) shall take any action to which the provisions hereof are not strictly applicable, or, if applicable, would not operate to protect the Holder from dilution or 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 shall in good faith determine and implement an appropriate adjustment in the Exercise Price and the number of Warrant Shares (if applicable) so as to protect the rights of the Holder, provided that no such adjustment pursuant to this Section 2(d) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2, provided further that if the Holder does not accept such adjustments as appropriately protecting its interests hereunder against such dilution, then the Company's board of directors and the Holder shall agree, in good faith, upon an independent investment bank of nationally recognized standing to make such appropriate adjustments, whose determination shall be final and binding absent manifest error and whose fees and expenses shall be borne by the Company.

(f) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issuance or sale of Common Stock.

(g) Voluntary Adjustment By Company. Subject to the rules and regulations of the Principal Market, the Company may at any time during the term of this Warrant, with the prior written consent of the holders of a majority of the SPA Warrants then outstanding, 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.

3. RIGHTS UPON DISTRIBUTION OF ASSETS. In addition to any adjustments pursuant to Section 2 above, 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 on 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 the extent of the Maximum Percentage (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to the extent of any such excess) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times, if ever, 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, issuance 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 the extent of the Maximum Percentage (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 the extent of any such excess) and such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times, if ever, 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 (i) the Successor Entity assumes in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 4(b) pursuant to written agreements in form and substance satisfactory to the Holder and approved by the Holder prior to such Fundamental Transaction, including agreements to deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, which is 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 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 consummation of such Fundamental Transaction) and (ii) the Successor Entity (including its Parent Entity) is a publicly traded corporation whose common stock is quoted on or listed for trading on an Eligible Market. Upon the consummation of each Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of the applicable Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of each Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the consummation of the applicable Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of this Warrant prior to the applicable Fundamental Transaction, such shares of publicly traded common stock (or its equivalent) of the Successor Entity (including its Parent Entity) which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant), as adjusted in accordance with the provisions of this Warrant. Notwithstanding the foregoing, and without limiting Section 1(f) hereof, the Holder may elect, at its sole option, by delivery of written notice to the Company to waive this Section 4(b) to permit the Fundamental Transaction without the assumption of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of each Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of this Warrant at any time after the consummation of the applicable Fundamental Transaction but prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of the 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 the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had this Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of this Warrant). Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Holder.

(c) Black Scholes Value. Notwithstanding the foregoing and the provisions of Section 4(b) above, at the request of the Holder delivered at any time commencing on the earliest to occur of (x) the public disclosure of any Fundamental Transaction, (y) the consummation of any Fundamental Transaction and (z) the Holder first becoming aware of any Fundamental Transaction through the date that is ninety (90) days after the public disclosure of the consummation of such Fundamental Transaction by the Company pursuant to a Current Report on Form 8-K filed with the SEC, the Company or the Successor Entity (as the case may be) shall purchase this Warrant from the Holder on the date of such request by paying to the Holder cash in an amount equal to the Black Scholes Value. Payment of such amounts shall be made by the Company (or at the Company’s direction) to the Holder on or prior to the later of (x) the second (2nd) Trading Day after the date of such request and (y) the date of consummation of such Fundamental Transaction.

(d) Application. The provisions of this Section 4 shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied as if this Warrant (and any such subsequent warrants) were fully exercisable and without regard to any limitations on the exercise of this Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of this Warrant (or any such other warrant)).

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its certificate of incorporation, bylaws or other organizational documents or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issuance 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 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 (a) 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, and (b) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares of Common Stock upon the exercise of this Warrant. Notwithstanding anything herein to the contrary, if after the one hundred eighty (180) calendar day anniversary of the Issuance Date, the Holder is not permitted to exercise this Warrant in full for any reason (other than pursuant to restrictions set forth in Section 1(f) hereof), the Company shall use its best efforts to promptly remedy such failure, including, without limitation, obtaining such consents or approvals as necessary to permit such exercise into shares of Common Stock.

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in its 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 its capacity as the Holder of this Warrant, any of the rights of a stockholder 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 it 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 stockholder 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 stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred pursuant to the terms of the Securities Purchase Agreement, 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 (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form 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, no warrants for fractional shares of Common Stock 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. (a) General. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or by facsimile or (b) from outside the United States, by International Federal Express, electronic mail or facsimile, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier, one (1) Business Day after so mailed, (C) if delivered by International Federal Express, two (2) Business Days after so mailed and (D) if delivered by electronic mail, when sent (provided that such sent email is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's email server that such e-mail could not be delivered to such recipient) and (E) if delivered by facsimile, upon electronic confirmation of receipt of such facsimile, and will be delivered and addressed as follows:

- (i) if to the Company, to:

Pacific Ethanol, Inc.
400 Capitol Mall, Suite 2060
Sacramento, CA 95814
Attention: General Counsel
Fax: (916) 446-3937
E-Mail: cwright@pacificethanol.com

- (ii) if to the Holder, at such address or other contact information delivered by the Holder to Company or as is on the books and records of the Company.

(b) Required Notices. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant (other than the issuance of shares of Common Stock upon exercise in accordance with the terms hereof), 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 each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s), (ii) at least ten Trading 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 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, and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

9. DISCLOSURE. Upon delivery by the Company to the Holder (or receipt by the Company from the Holder) 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, non-public information relating to the Company or any of its Subsidiaries, the Company shall on or prior to 9:00 am, New York city time on the Business Day immediately following such notice delivery date, publicly disclose such material, non-public information on a Current Report on Form 8-K or otherwise. In the event that the Company believes that a notice contains material, non-public information relating to the Company or any of its Subsidiaries, the Company so shall indicate to the Holder explicitly in writing in such notice (or immediately upon receipt of notice from the Holder, as applicable), and in the absence of any such written indication in such notice (or notification from the Company immediately upon receipt of notice from the Holder), the Holder shall be entitled to presume that information contained in the notice does not constitute material, non-public information relating to the Company or any of its Subsidiaries.

10. ABSENCE OF TRADING AND DISCLOSURE RESTRICTIONS. The Company acknowledges and agrees that the Holder is not a fiduciary or agent of the Company and that the Holder shall have no obligation to (a) maintain the confidentiality of any information provided by the Company or (b) refrain from trading any securities while in possession of such information in the absence of a written non-disclosure agreement signed by an officer of the Holder that explicitly provides for such confidentiality and trading restrictions. In the absence of such an executed, written non-disclosure agreement, the Company acknowledges that the Holder may freely trade in any securities issued by the Company, may possess and use any information provided by the Company in connection with such trading activity, and may disclose any such information to any third party.

11. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f)) may be amended 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. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

12. 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).

13. GOVERNING LAW. 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 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 its principal executive office and agrees that such service shall constitute good and sufficient service of process and notice thereof. 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. 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 to 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 TO, 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.**

14. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder 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.

15. DISPUTE RESOLUTION.

(a) Submission to Dispute Resolution.

(i) In the case of a dispute relating to the Exercise Price, the Closing Sale Price, the Bid Price, Black Scholes Consideration Value, Black Scholes Value or fair market value or the arithmetic calculation of the number of Warrant Shares (as the case may be) (including, without limitation, a dispute relating to the determination of any of the foregoing), the Company or the Holder (as the case may be) shall submit the dispute to the other party via facsimile or electronic mail (A) if by the Company, within two (2) Business Days after the occurrence of the circumstances giving rise to such dispute or (B) if by the Holder, at any time after the Holder learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to promptly resolve such dispute relating to such Exercise Price, such Closing Sale Price, such Bid Price, such Black Scholes Consideration Value Black Scholes Value or such fair market value or such arithmetic calculation of the number of Warrant Shares (as the case may be), at any time after the second (2nd) Business Day following such initial notice by the Company or the Holder (as the case may be) of such dispute to the Company or the Holder (as the case may be), then the Holder may, at its sole option, select an independent, reputable investment bank to resolve such dispute.

(ii) The Holder and the Company shall each deliver to such investment bank (A) a copy of the initial dispute submission so delivered in accordance with the first sentence of this Section 15 and (B) written documentation supporting its position with respect to such dispute, in each case, no later than 5:00 p.m. (New York time) by the fifth (5th) Business Day immediately following the date on which the Holder selected such investment bank (the **'Dispute Submission Deadline'**) (the documents referred to in the immediately preceding clauses (A) and (B) are collectively referred to herein as the **"Required Dispute Documentation"**) (it being understood and agreed that if either the Holder or the Company fails to so deliver all of the Required Dispute Documentation by the Dispute Submission Deadline, then the party who fails to so submit all of the Required Dispute Documentation shall no longer be entitled to (and hereby waives its right to) deliver or submit any written documentation or other support to such investment bank with respect to such dispute and such investment bank shall resolve such dispute based solely on the Required Dispute Documentation that was delivered to such investment bank prior to the Dispute Submission Deadline). Unless otherwise agreed to in writing by both the Company and the Holder or otherwise requested by such investment bank, neither the Company nor the Holder shall be entitled to deliver or submit any written documentation or other support to such investment bank in connection with such dispute (other than the Required Dispute Documentation).

(iii) The Company and the Holder shall cause such investment bank to determine the resolution of such dispute and notify the Company and the Holder of such resolution no later than ten (10) Business Days immediately following the Dispute Submission Deadline. The fees and expenses of such investment bank shall be borne solely by the Company, and such investment bank's resolution of such dispute shall be final and binding upon all parties absent manifest error.

(b) Miscellaneous. The Company expressly acknowledges and agrees that (i) this Section 15 constitutes an agreement to arbitrate between the Company and the Holder (and constitutes an arbitration agreement) under the rules then in effect under § 7501, et seq. of the New York Civil Practice Law and Rules ("CPLR") and that the Holder is authorized to apply for an order to compel arbitration pursuant to CPLR § 7503(a) in order to compel compliance with this Section 15, (ii) the terms of this Warrant shall serve as the basis for the selected investment bank's resolution of the applicable dispute, such investment bank shall be entitled (and is hereby expressly authorized) to make all findings, determinations and the like that such investment bank determines are required to be made by such investment bank in connection with its resolution of such dispute.

16. REMEDIES, CHARACTERIZATION, 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, 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 and consequential damages for any failure by the Company to comply with the terms of this Warrant. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). 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 specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent jurisdiction in any such case without the necessity of proving actual damages and without posting a bond or other security. The Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder or such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

17. PAYMENT OF COLLECTION, ENFORCEMENT AND OTHER COSTS. If (a) this Warrant is placed in the hands of an attorney for collection or enforcement or is collected or enforced through any legal proceeding or the holder otherwise takes action to collect amounts due under this Warrant or to enforce the provisions of this Warrant or (b) there occurs any bankruptcy, reorganization, receivership of the company or other proceedings affecting company creditors' rights and involving a claim under this Warrant, then the Company shall pay the costs incurred by the Holder for such collection, enforcement or action or in connection with such bankruptcy, reorganization, receivership or other proceeding, including, without limitation, attorneys' fees and disbursements.

18. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

19. CERTAIN DEFINITIONS. For purposes of this Warrant, the following terms shall have the following meanings:

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

(b) “**1934 Act**” means the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

(c) [Intentionally Omitted]

(d) “**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 shares 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.

(e) [Intentionally Omitted]

(f) “**Attribution Parties**” means, collectively, the following Persons and entities: (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.

(g) **“Bid Price”** means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of any market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(h) **“Black Scholes Consideration Value”** means the value of the applicable Option, Convertible Security or Adjustment Right (as the case may be) as of the date of issuance thereof calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the public announcement of the execution of definitive documents with respect to the issuance of such Option or Convertible Security (as the case may be), (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of such Option, Convertible Security or Adjustment Right (as the case may be) as of the date of issuance of such Option, Convertible Security or Adjustment Right (as the case may be), (iii) a zero cost of borrow and (iv) an expected volatility equal to the greater of 100% and the 30 day volatility obtained from the “HVT” function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the date of issuance of such Option, Convertible Security or Adjustment Right (as the case may be).

(i) **“Black Scholes Value”** means the value of the unexercised portion of this Warrant remaining on the date of the Holder’s request pursuant to Section 4(c), which value is calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the greater of (1) the highest Closing Sale Price of the Common Stock during the period beginning on the Trading Day immediately preceding the announcement of the applicable Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder’s request pursuant to Section 4(c) and (2) the sum of the price per share being offered in cash in the applicable Fundamental Transaction (if any) plus the value of the non-cash consideration being offered in the applicable Fundamental Transaction (if any), (ii) a strike price equal to the Exercise Price in effect on the date of the Holder’s request pursuant to Section 4(c), (iii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the greater of (1) the remaining term of this Warrant as of the date of the Holder’s request pursuant to Section 4(c) and (2) the remaining term of this Warrant as of the date of consummation of the applicable Fundamental Transaction or as of the date of the Holder’s request pursuant to Section 4(c) if such request is prior to the date of the consummation of the applicable Fundamental Transaction, (iv) a zero cost of borrow and (v) an expected volatility equal to the greater of 100% and the 30 day volatility obtained from the “HVT” function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the earliest to occur of (A) the public disclosure of the applicable Fundamental Transaction, (B) the consummation of the applicable Fundamental Transaction and (C) the date on which the Holder first became aware of the applicable Fundamental Transaction.

(j) “**Bloomberg**” means Bloomberg, L.P.

(k) “**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.

(l) “**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 does 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 “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC). 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(m) “**Common Stock**” means (i) the Company’s shares of common stock, \$0.001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(n) [Intentionally Omitted]

(o) “**Eligible Market**” means The New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market, or the Principal Market.

(p) “**Expiration Date**” means the date that is the eighteen (18) month anniversary of the Issuance 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 date that is not a Holiday.

(q) “**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 stock or 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 all 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 date of this Warrant 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.

(r) “**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.

(s) “**Options**” means any rights, warrants or options to subscribe for or purchase Ordinary Shares or Convertible Securities.

(t) “**Parent Entity**” of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

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

(v) “**Principal Market**” means The Nasdaq Capital Market.

(w) “**SEC**” means the United States Securities and Exchange Commission or the successor thereto.

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

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

(z) “**Trading Day**” means, as applicable, (x) with respect to all price or trading volume determinations relating to the Common Stock, 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, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder or (y) with respect to all determinations other than price determinations relating to the Common Stock, any day on which The New York Stock Exchange (or any successor thereto) is open for trading of securities.

(aa) “**VWAP**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market (or, if the Principal Market is not the principal trading market for such security, then on the principal securities exchange or securities market on which such security is then traded), during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg through its “VAP” function (set to 09:30 start time and 16:00 end time) or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC). If the VWAP cannot be calculated for such security on such date on any of the foregoing bases, the VWAP 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 in accordance with the procedures in Section 15. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, recapitalization or other similar transaction during such period.

[signature page follows]

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

PACIFIC ETHANOL, INC.

By:

Name: Michael D. Kandris
Title: President and CEO

EXERCISE NOTICE

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

PACIFIC ETHANOL, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock ("**Warrant Shares**") of Pacific Ethanol, Inc., a Delaware corporation (the "**Company**"), evidenced by Warrant to Purchase Common Stock No. A-1 (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 Aggregate Exercise Price shall be made as:

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

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

In the event that the Holder has elected a Cashless Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder hereby represents and warrants that (i) this Exercise Notice was executed by the Holder at _____ [a.m.][p.m.] on the date set forth below and (ii) if applicable, the Bid Price as of such time of execution of this Exercise Notice was \$ _____.

☐ If this Exercise Notice is being delivered after the Alternate Exercise Eligibility Date, check here if Holder is electing to use the following Alternate Exercise Price in this exercise: _____.

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. Delivery of Warrant Shares. The Company shall deliver to Holder, or its designee or agent as specified below, _____ Warrant Shares in accordance with the terms of the Warrant. Delivery shall be made to Holder, or for its benefit, as follows:

☐ Check here if requesting delivery as a certificate to the following name and to the following address:

Issue to:

☐ Check here if requesting delivery by Deposit/Withdrawal at Custodian as follows:

DTC Participant:

DTC Number:

Account Number:

Date: _____,

Name of Registered Holder

By: _____

Name:

Title:

Tax ID: _____

Facsimile: _____

E-mail Address: _____

ACKNOWLEDGMENT

The Company hereby acknowledges this Exercise Notice and hereby directs _____ to issue the aboveindicated number of shares of Common Stock in accordance with the Transfer Agent Instructions dated _____, 201_, from the Company and acknowledged and agreed to by _____.

PACIFIC ETHANOL, INC.

By: _____

Name: Michael D. Kandris

Title: President and CEO

Troutman Pepper Hamilton Sanders LLP
5 Park Plaza, Suite 1400
Irvine, CA 92614-2545
troutman.com



October 26, 2020

Pacific Ethanol, Inc.
400 Capitol Mall, Suite 2060
Sacramento, CA 95814

Ladies and Gentlemen:

We have acted as legal counsel to Pacific Ethanol, Inc., a Delaware corporation (the "**Company**"), in connection with the preparation and filing with the Securities and Exchange Commission (the "**Commission**") of a Prospectus Supplement, dated October 26, 2020 (the "**Prospectus Supplement**"), to a Registration Statement (File No. 333-238939) on Form S-3 (the "**Registration Statement**"), filed by the Company with the Commission under the Securities Act of 1933, as amended (the "**Securities Act**"). The Prospectus Supplement relates to the sale of an aggregate of 5,075,000 shares (the "**Shares**") of the Company's common stock, \$0.001 par value per share (the "**Common Stock**"), pre-funded warrants (the "**Pre-Funded Warrants**") to purchase an aggregate of 3,825,493 shares of Common Stock and 3,825,493 shares of Common Stock underlying the Pre-Funded Warrants (the "**Pre-Funded Warrant Shares**") to Guggenheim Securities, LLC, as representative of the underwriters (the "**Underwriters**"), pursuant to an Underwriting Agreement dated October 26, 2020 between the Company and the Underwriters (the "**Underwriting Agreement**"). The Underwriting Agreement will be filed as an exhibit to a Current Report on Form 8-K and incorporated by reference into the Registration Statement. This opinion is being rendered in connection with the filing of the Prospectus Supplement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinions, we have examined the Company's Certificate of Incorporation, as amended, and By-laws, as amended, each as currently in effect, the Registration Statement and the exhibits thereto, the Prospectus Supplement, the Underwriting Agreement, the Pre-Funded Warrants, and such other records of the corporate proceedings of the Company and certificates of the Company's officers as we have deemed relevant

In rendering the opinion expressed herein, we have, without independent inquiry or investigation, assumed that (i) all documents submitted to us as originals are authentic and complete, (ii) all documents submitted to us as copies conform to authentic, complete originals, (iii) all signatures on all documents that we reviewed are genuine, (iv) all natural persons executing documents had and have the legal capacity to do so, (v) all statements in certificates of public officials and officers of the Company that we reviewed were and are accurate and (vi) all representations made by the Company as to matters of fact in the documents that we reviewed were and are accurate.

Based upon the foregoing, we are of the opinion that (i) the Shares, when issued and sold in accordance with the Underwriting Agreement and the Prospectus Supplement, will be validly issued, fully paid and non-assessable, (ii) the Pre-Funded Warrants, when issued and delivered by the Company in accordance with the Underwriting Agreement and the Prospectus Supplement, will constitute binding obligations of the Company in accordance with their terms, except as enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally and by general equitable principles (regardless of whether such enforceability is considered in a proceeding at law or in equity), and (iii) the Pre-Funded Warrant Shares, when issued and sold against payment therefor in accordance with the Pre-Funded Warrants, will be validly issued, fully paid and non-assessable.

We are members of the Bars of the States of California, New York and Delaware, and this opinion is limited solely to the federal laws of the United States of America and the General Corporation Law of the State of Delaware (including the statutory provisions and all applicable judicial decisions interpreting those laws).

We hereby consent to the filing of this opinion as an exhibit to a report on Form 8-K to be filed by the Company on the date hereof and its incorporation by reference into the Registration Statement and further consent to the reference to our name under the caption "Legal Matters" in the Prospectus Supplement, which is a part of the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended.

Very truly yours,

/s/ TROUTMAN PEPPER HAMILTON SANDERS LLP

SECURITIES PURCHASE AGREEMENT

This **SECURITIES PURCHASE AGREEMENT** (the “**Agreement**”), dated as of October 26, 2020, is by and among Pacific Ethanol, Inc., a Delaware corporation with offices located at 400 Capitol Mall, Suite 2060, Sacramento, California (the “**Company**”), and each of the investors listed on the Schedule of Buyers attached hereto (individually, a “**Buyer**” and collectively, the “**Buyers**”).

RECITALS

A. The Company and each Buyer is executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the “**1933 Act**”), and Rule 506(b) of Regulation D (“**Regulation D**”) as promulgated by the United States Securities and Exchange Commission (the “**SEC**”) under the 1933 Act.

B. The Company has authorized a the issuance of a warrant to purchase shares of Common Stock, substantially in the form attached hereto as **Exhibit A** (the “**Warrants**”), which Warrant shall be exercisable into shares of Common Stock (the shares of Common Stock issuable pursuant to the terms of the Warrants collectively, the “**Warrant Shares**”), in accordance with the terms of the Warrants.

C. Each Buyer wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, a Warrant in the aggregate original principal amount set forth opposite such Buyer’s name in column (3) on the Schedule of Buyers.

D. The Warrants are being issued contemporaneously with an underwritten offering (the “**Offering**”) of the Company’s Common Stock pursuant to the terms of an underwriting agreement, dated as of October 26, 2020 (the “**Subscription Date**”), by and among the Company and the underwriter(s) referred to therein, as amended from time to time (the “**Underwriting Agreement**”) and (ii) the Company’s Registration Statement on Form S-3 (File number 333-238939) (the “**Registration Statement**”).

E. At the Closing, the parties hereto shall execute and deliver a Registration Rights Agreement, in the form attached hereto as **Exhibit B** (the “**Registration Rights Agreement**”), pursuant to which the Company has agreed to provide certain registration rights with respect to the Registrable Securities (as defined in the Registration Rights Agreement), under the 1933 Act and the rules and regulations promulgated thereunder, and applicable state securities laws.

F. The Warrants and the Warrant Shares are collectively referred to herein as the “**Securities**.”

AGREEMENT

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and each Buyer hereby agree as follows:

1. PURCHASE AND SALE OF WARRANTS.

(a) Purchase of Warrants. Subject to the satisfaction (or waiver) of the conditions set forth in Sections 6 and 7 below, the Company shall issue and sell to each Buyer, and each Buyer severally, but not jointly, agrees to purchase from the Company on the Closing Date (as defined below) a Warrant as is set forth opposite such Buyer’s name in column (3) on the Schedule of Buyers.

(b) Closing. The closing (the “**Closing**”) of the purchase of the Warrants by the Buyers shall occur remotely. The date and time of the Closing (the “**Closing Date**”) shall be 10:00 a.m., New York time, on the first (1st) Business Day on which the conditions to the Closing set forth in Sections 6 and 7 below are satisfied or waived (or such other date as is mutually agreed to by the Company and each Buyer). As used herein “**Business Day**” means any day other than a Saturday, Sunday or other day on which commercial banks in New York, New York are authorized or required by law to remain closed.

(c) Purchase Price. The aggregate purchase price for the Warrants to be purchased by each Buyer (the “**Purchase Price**”) shall be the amount set forth opposite such Buyer’s name in column (4) on the Schedule of Buyers.

(d) Form of Payment. On the Closing Date, (i) each Buyer shall pay its respective Purchase to the Company for the Warrants to be issued and sold to such Buyer at the Closing and the Company shall deliver to each Buyer a Warrant to purchase a number of shares of Common Stock as is set forth opposite such Buyer’s name in column (3) of the Schedule of Buyers, duly executed on behalf of the Company and registered in the name of such Buyer or its designee.

2. BUYER’S REPRESENTATIONS AND WARRANTIES.

Each Buyer, severally and not jointly, represents and warrants to the Company with respect to only itself that, as of the date hereof and as of the Closing Date:

(a) Organization; Authority. Such Buyer is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents (as defined below) to which it is a party and otherwise to carry out its obligations hereunder and thereunder.

(b) No Public Sale or Distribution. Such Buyer (i) is acquiring its Warrant, and (ii) upon exercise of its Warrant will acquire the Warrant Shares issuable upon exercise thereof, in each case, for its own account and not with a view towards, or for resale in connection with, the public sale or distribution thereof in violation of applicable securities laws, except pursuant to sales registered or exempted under the 1933 Act; provided, however, by making the representations herein, such Buyer does not agree, or make any representation or warranty, to hold any of the Securities for any minimum or other specific term and reserves the right to dispose of the Securities at any time in accordance with or pursuant to a registration statement or an exemption from registration under the 1933 Act. Such Buyer does not presently have any agreement or understanding, directly or indirectly, with any Person to distribute any of the Securities in violation of applicable securities laws. For purposes of this Agreement, “**Person**” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and any Governmental Entity or any department or agency thereof.

(c) Accredited Investor Status. Such Buyer is an “accredited investor” as that term is defined in Rule 501(a) of Regulation D.

(d) Reliance on Exemptions. Such Buyer understands that the Securities are being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities laws and that the Company is relying in part upon the truth and accuracy of, and such Buyer’s compliance with, the representations, warranties, agreements, acknowledgments and understandings of such Buyer set forth herein in order to determine the availability of such exemptions and the eligibility of such Buyer to acquire the Securities.

(e) Information. Such Buyer and its advisors, if any, have been furnished with all materials relating to the business, finances and operations of the Company and materials relating to the offer and sale of the Securities that have been requested by such Buyer. Such Buyer and its advisors, if any, have been afforded the opportunity to ask questions of the Company. Neither such inquiries nor any other due diligence investigations conducted by such Buyer or its advisors, if any, or its representatives shall modify, amend or affect such Buyer’s right to rely on the Company’s representations and warranties contained herein. Such Buyer understands that its investment in the Securities involves a high degree of risk. Such Buyer has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities.

(f) No Governmental Review. Such Buyer understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(g) Transfer or Resale. Such Buyer understands that except as provided in the Registration Rights Agreement and Section 4(h) hereof: (i) the Securities have not been and are not being registered under the 1933 Act or any state securities laws, and may not be offered for sale, sold, assigned or transferred unless (A) subsequently registered thereunder, (B) such Buyer shall have delivered to the Company (if requested by the Company) an opinion of counsel, in a form reasonably acceptable to the Company, to the effect that such Securities to be sold, assigned or transferred may be sold, assigned or transferred pursuant to an exemption from such registration, or (C) such Buyer provides the Company with reasonable assurance that such Securities can be sold, assigned or transferred pursuant to Rule 144 or Rule 144A promulgated under the 1933 Act (or a successor rule thereto) (collectively, “**Rule 144**”); (ii) any sale of the Securities made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144, and further, if Rule 144 is not applicable, any resale of the Securities under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the 1933 Act) may require compliance with some other exemption under the 1933 Act or the rules and regulations of the SEC promulgated thereunder; and (iii) neither the Company nor any other Person is under any obligation to register the Securities under the 1933 Act or any state securities laws or to comply with the terms and conditions of any exemption thereunder. Notwithstanding the foregoing, the Securities may be pledged in connection with a bona fide margin account or other loan or financing arrangement secured by the Securities and such pledge of Securities shall not be deemed to be a transfer, sale or assignment of the Securities hereunder, and no Buyer effecting a pledge of Securities shall be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document (as defined in Section 3(b)), including, without limitation, this Section 2(g).

(h) Validity; Enforcement. This Agreement and the Registration Rights Agreement have been duly and validly authorized, executed and delivered on behalf of such Buyer and shall constitute the legal, valid and binding obligations of such Buyer enforceable against such Buyer in accordance with their respective terms, except as such enforceability may be limited by general principles of equity or to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors’ rights and remedies.

(i) No Conflicts. The execution, delivery and performance by such Buyer of this Agreement and the Registration Rights Agreement and the consummation by such Buyer of the transactions contemplated hereby and thereby will not (i) result in a violation of the organizational documents of such Buyer, or (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which such Buyer is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to such Buyer, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which could not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Buyer to perform its obligations hereunder.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to each of the Buyers that, as of the date hereof and as of the Closing Date:

(a) Organization and Qualification. The Company and each of its Subsidiaries are entities duly organized and validly existing and in good standing under the laws of the jurisdiction in which they are formed, and have the requisite power and authority to own their properties and to carry on their business as now being conducted and as presently proposed to be conducted. The Company and each of its Subsidiaries is duly qualified as a foreign entity to do business and is in good standing in every jurisdiction in which its ownership of property or the nature of the business conducted by it makes such qualification necessary, except to the extent that the failure to be so qualified or be in good standing would not reasonably be expected to have a Material Adverse Effect (as defined below). As used in this Agreement, “**Material Adverse Effect**” means any material adverse effect on (i) the business, properties, assets, liabilities, operations (including results thereof), condition (financial or otherwise) or prospects of the Company and its Subsidiaries, taken as a whole, (ii) the transactions contemplated hereby or in any of the other Transaction Documents or any other agreements or instruments to be entered into in connection herewith or therewith or (iii) the authority or ability of the Company or any of its Subsidiaries to perform any of their respective obligations under any of the Transaction Documents (as defined below). Other than the Subsidiaries set forth on Exhibit 21.1 to the Company’s most recent Amendment No. 1 to Annual Report on Form 10-K/A filed with the SEC, the Company has no material Subsidiaries that would be required to be disclosed thereon. “**Subsidiaries**” means any Person in which the Company, directly or indirectly, (I) owns any of the outstanding capital stock or holds any equity or similar interest of such Person or (II) controls or operates all or any part of the business, operations or administration of such Person, and each of the foregoing, is individually referred to herein as a “**Subsidiary**.”

(b) Authorization; Enforcement; Validity. The Company has the requisite power and authority to enter into and perform its obligations under this Agreement and the other Transaction Documents and to issue the Securities in accordance with the terms hereof and thereof. Each Subsidiary has the requisite power and authority to enter into and perform its obligations under the Transaction Documents to which it is a party. The execution and delivery of this Agreement and the other Transaction Documents by the Company, and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Warrants and the reservation for issuance and issuance of the Warrant Shares issuable upon exercise of the Warrants) have been duly authorized by the Company's board of directors or other governing body, as applicable, and (other than the filing with the SEC of one or more Registration Statements in accordance with the requirements of the Registration Rights Agreement, a Form D with the SEC and any other filings as may be required by any state securities laws or agencies, and filing and clearance with the Principle Market (as defined below)) no further filing, consent or authorization is required by the Company, its Subsidiaries, their respective boards of directors or their stockholders or other governing body. This Agreement has been, and the other Transaction Documents to which it is a party will be prior to the Closing, duly executed and delivered by the Company, and each constitutes the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with its respective terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies and except as rights to indemnification and to contribution may be limited by federal or state securities law. "**Transaction Documents**" means, collectively, this Agreement, the Warrants, the Registration Rights Agreement, the Irrevocable Transfer Agent Instructions (as defined below) and each of the other agreements and instruments entered into or delivered by any of the parties hereto in connection with the transactions contemplated hereby and thereby, as may be amended from time to time.

(c) Issuance of Securities. The issuance of the Warrants is duly authorized and upon issuance in accordance with the terms of the Transaction Documents shall be validly issued, fully paid and non-assessable and free from all preemptive or similar rights, mortgages, defects, claims, liens, pledges, charges, taxes, rights of first refusal, encumbrances, security interests and other encumbrances (collectively "**Liens**") with respect to the issuance thereof. As of the Closing, the Company shall have reserved from its duly authorized capital stock not less than 100% of the maximum number of Warrant Shares issuable upon exercise of the Warrants (assuming for purposes hereof that (x) the Warrants are exercisable at the initial Warrant Price (as defined in the Warrants), and (y) any such Warrant shall not take into account any limitations on the exercise of the Warrants set forth in the Warrants). Upon exercise of the Warrants in accordance with the Warrants, the Warrant Shares, when issued, will be validly issued, fully paid and nonassessable and free from all preemptive or similar rights or Liens with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. Subject to the accuracy of the representations and warranties of the Buyers in this Agreement, the offer and issuance by the Company of the Securities is exempt from registration under the 1933 Act.

(d) No Conflicts. The execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Warrants and the Warrant Shares and the reservation for issuance of the Warrant Shares) will not (i) result in a violation of the certificate of incorporation (including, without limitation, any certificate of designation contained therein), bylaws, certificate of formation, memorandum of association, articles of association, or other organizational documents of the Company or any of its Subsidiaries, or any capital stock or other securities of the Company or any of its Subsidiaries, (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) in any respect under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which the Company or any of its Subsidiaries is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including, without limitation, foreign, federal and state securities laws and regulations and the rules and regulations of the Nasdaq Capital Market (the "**Principal Market**") and including all applicable foreign, federal and state laws, rules and regulations) applicable to the Company or any of its Subsidiaries or by which any property or asset of the Company or any of its Subsidiaries is bound or affected.

(e) Consents. Neither the Company nor any Subsidiary is required to obtain any consent from, authorization or order of, or make any filing or registration with (other than the filing with the SEC of one or more Registration Statements in accordance with the requirements of the Registration Rights Agreement, a Form D with the SEC and any other filings as may be required by any state securities laws or agencies, and filing and clearance with the Principle Market), any Governmental Entity (as defined below) or any regulatory or self-regulatory agency or any other Person in order for it to execute, deliver or perform any of its respective obligations under or contemplated by the Transaction Documents, in each case, in accordance with the terms hereof or thereof. All consents, authorizations, orders, filings and registrations which the Company or any Subsidiary is required to obtain pursuant to the preceding sentence have been or will be obtained or effected on or prior to the Closing Date, and neither the Company nor any of its Subsidiaries are aware of any facts or circumstances which might prevent the Company or any of its Subsidiaries from obtaining or effecting any of the registration, application or filings contemplated by the Transaction Documents. The Company is not in violation of the requirements of the Principal Market and has no knowledge of any facts or circumstances which would reasonably lead to delisting or suspension of the Common Stock in the foreseeable future. “**Governmental Entity**” means any nation, state, county, city, town, village, district, or other political jurisdiction of any nature, federal, state, local, municipal, foreign, or other government, governmental or quasi-governmental authority of any nature (including any governmental agency, branch, department, official, or entity and any court or other tribunal), multi-national organization or body; or body exercising, or entitled to exercise, any administrative, executive, judicial, legislative, police, regulatory, or taxing authority or power of any nature or instrumentality of any of the foregoing, including any entity or enterprise owned or controlled by a government or a public international organization or any of the foregoing.

(f) Acknowledgment Regarding Buyer’s Purchase of Securities. The Company acknowledges and agrees that each Buyer is acting solely in the capacity of an arm’s length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that no Buyer is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by a Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Buyer’s purchase of the Securities. The Company further represents to each Buyer that the Company’s and each Subsidiary’s decision to enter into the Transaction Documents to which it is a party has been based solely on the independent evaluation by the Company, each Subsidiary and their respective representatives.

(g) No General Solicitation; Placement Agent’s Fees. Neither the Company, nor any of its Subsidiaries or affiliates, nor any Person acting on its or their behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D) in connection with the offer or sale of the Securities. The Company shall be responsible for the payment of any placement agent’s fees, financial advisory fees, or brokers’ commissions (other than for Persons engaged by any Buyer or its investment advisor) relating to or arising out of the transactions contemplated hereby, including, without limitation, placement agent fees payable to Guggenheim Securities, Inc., Craig-Hallum Capital Group, LLC and H.C. Wainwright & Co., LLC, and/or one or more of their respective affiliates, as placement agents (collectively, the “**Placement Agent**”) in connection with the sale of the Securities. The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, attorney’s fees and out-of-pocket expenses) arising in connection with any such claim. The Company acknowledges that it has engaged the Placement Agent in connection with the sale of the Securities. Other than the Placement Agent, neither the Company nor any of its Subsidiaries has engaged any placement agent or other agent in connection with the offer or sale of the Securities.

(h) Application of Takeover Protections; Rights Agreement. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, interested stockholder, business combination, poison pill (including, without limitation, any distribution under a rights agreement), stockholder rights plan or other similar anti-takeover provision under the certificate of incorporation, bylaws or other organizational documents of the Company or the laws of the jurisdiction of its incorporation or otherwise which is or could become applicable to any Buyer as a result of the transactions contemplated by this Agreement, including, without limitation, the Company’s issuance of the Securities and any Buyer’s ownership of the Securities. The Company and its board of directors have taken all necessary action, if any, in order to render inapplicable any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of shares of Common Stock or a change in control of the Company or any of its Subsidiaries.

(i) SEC Documents; Financial Statements. During the two (2) years prior to the date hereof, the Company has timely filed all reports, schedules, forms, proxy statements, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the Securities Exchange Act of 1934, as amended (the “1934 Act”) (all of the foregoing filed prior to the date hereof and all exhibits and appendices included therein and financial statements, notes and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the “SEC Documents”). The Company has delivered or has made available to the Buyers or their respective representatives true, correct and complete copies of each of the SEC Documents not available on the EDGAR system. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC, 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. As of their respective dates, the financial statements of the Company included in the SEC Documents complied in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto as in effect as of the time of filing. Such financial statements have been prepared in accordance with generally accepted accounting principles (“GAAP”), consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments). The reserves, if any, established by the Company or the lack of reserves, if applicable, are reasonable based upon facts and circumstances known by the Company on the date hereof and there are no loss contingencies that are required to be accrued by the Statement of Financial Accounting Standard No. 5 of the Financial Accounting Standards Board which are not provided for by the Company in its financial statements or otherwise. No other information provided by or on behalf of the Company to any of the Buyers which is not included in the SEC Documents (including, without limitation, information referred to in Section 2(e) of this Agreement or in the disclosure schedules to this Agreement) contains any untrue statement of a material fact or omits to state any material fact necessary in order to make the statements therein not misleading, in the light of the circumstance under which they are or were made. The Company is not currently contemplating to amend or restate any of the financial statements (including, without limitation, any notes or any letter of the independent accountants of the Company with respect thereto) included in the SEC Documents (the “Financial Statements”), nor is the Company currently aware of facts or circumstances which would require the Company to amend or restate any of the Financial Statements, in each case, in order for any of the Financial Statements to be in compliance with GAAP and the rules and regulations of the SEC. The Company has not been informed by its independent accountants that they recommend that the Company amend or restate any of the Financial Statements or that there is any need for the Company to amend or restate any of the Financial Statements.

(j) Absence of Certain Changes. Since the date of the Company’s most recent audited financial statements contained in a Form 10-K, except as disclosed in the SEC Documents, there has been no material adverse change and no material adverse development in the business, assets, liabilities, properties, operations (including results thereof), condition (financial or otherwise) or prospects of the Company or any of its Subsidiaries. Since the date of the Company’s most recent audited financial statements contained in a Form 10-K, except as disclosed in the SEC Documents, neither the Company nor any of its Subsidiaries has (i) declared or paid any dividends, (ii) sold any assets, individually or in the aggregate, outside of the ordinary course of business or (iii) made any capital expenditures, individually or in the aggregate, outside of the ordinary course of business. Neither the Company nor any of its Subsidiaries has taken any steps to seek protection pursuant to any law or statute relating to bankruptcy, insolvency, reorganization, receivership, liquidation or winding up, nor does the Company or any Subsidiary have any knowledge or reason to believe that any of their respective creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact which would reasonably lead a creditor to do so. The Company and its Subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur at the Closing, will not be Insolvent (as defined below). For purposes of this Section 3(l), “Insolvent” means, (i) with respect to the Company and its Subsidiaries, on a consolidated basis, (A) the present fair saleable value of the Company’s and its Subsidiaries’ assets is less than the amount required to pay the Company’s and its Subsidiaries’ total Indebtedness (as defined below), (B) the Company and its Subsidiaries are unable to pay their debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured or (C) the Company and its Subsidiaries intend to incur or believe that they will incur debts that would be beyond their ability to pay as such debts mature; and (ii) with respect to the Company and each Subsidiary, individually, (A) the present fair saleable value of the Company’s or such Subsidiary’s (as the case may be) assets is less than the amount required to pay its respective total Indebtedness, (B) the Company or such Subsidiary (as the case may be) is unable to pay its respective debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured or (C) the Company or such Subsidiary (as the case may be) intends to incur or believes that it will incur debts that would be beyond its respective ability to pay as such debts mature. Neither the Company nor any of its Subsidiaries has engaged in any business or in any transaction, and is not about to engage in any business or in any transaction, for which the Company’s or such Subsidiary’s remaining assets constitute unreasonably small capital with which to conduct the business in which it is engaged as such business is now conducted and is proposed to be conducted.

(k) No Undisclosed Events, Liabilities, Developments or Circumstances No event, liability, development or circumstance has, to the Company's knowledge, occurred or exists, or is reasonably expected to exist or occur with respect to the Company, any of its Subsidiaries or any of their respective businesses, properties, liabilities, prospects, operations (including results thereof) or condition (financial or otherwise), that (i) would be required to be disclosed by the Company under applicable securities laws on a registration statement on Form S-1 filed with the SEC relating to an issuance and sale by the Company of its Common Stock and which has not been publicly announced, (ii) would reasonable be expected to have a material adverse effect on any Buyer's investment hereunder or (iii) would reasonable be expected to have a Material Adverse Effect.

(l) Foreign Corrupt Practices Neither the Company, any Subsidiary or any director, officer, agent, employee, nor any other person acting for or on behalf of the foregoing (individually and collectively, a "**Company Affiliate**") has violated the U.S. Foreign Corrupt Practices Act (the "**FCPA**") or any other applicable anti-bribery or anti-corruption laws, nor has any Company Affiliate offered, paid, promised to pay, or authorized the payment of any money, or offered, given, promised to give, or authorized the giving of anything of value, to any officer, employee or any other person acting in an official capacity for any Governmental Entity to any political party or official thereof or to any candidate for political office (individually and collectively, a "**Government Official**") or to any person under circumstances where such Company Affiliate knew or was aware of a high probability that all or a portion of such money or thing of value would be offered, given or promised, directly or indirectly, to any Government Official, for the purpose of:

(i) (A) influencing any act or decision of such Government Official in his/her official capacity, (B) inducing such Government Official to do or omit to do any act in violation of his/her lawful duty, (C) securing any improper advantage, or (D) inducing such Government Official to influence or affect any act or decision of any Governmental Entity, or

(ii) assisting the Company or its Subsidiaries in obtaining or retaining business for or with, or directing business to, the Company or its Subsidiaries.

(m) Sarbanes-Oxley Act. The Company and each Subsidiary is in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002, as amended, and any and all applicable rules and regulations promulgated by the SEC thereunder.

(n) Transactions With Affiliates. No current or former employee, partner, director, officer or stockholder (direct or indirect) of the Company or its Subsidiaries, or any associate, or, to the knowledge of the Company, any affiliate of any thereof, or any relative with a relationship no more remote than first cousin of any of the foregoing, is presently, or has been during the two (2) years prior to the date hereof, except as disclosed in the SEC Documents, (i) a party to any transaction with the Company or its Subsidiaries (including any contract, agreement or other arrangement providing for the furnishing of services by, or rental of real or personal property from, or otherwise requiring payments to, any such director, officer or stockholder or such associate or affiliate or relative Subsidiaries (other than for ordinary course services as employees, officers or directors of the Company or any of its Subsidiaries)) or (ii) the direct or indirect owner of an interest in any corporation, firm, association or business organization which is a competitor, supplier or customer of the Company or its Subsidiaries (except for a passive investment (direct or indirect) in less than 5% of the common stock of a company whose securities are traded on or quoted through an Eligible Market (as defined in the Warrants)), nor does any such Person receive income from any source other than the Company or its Subsidiaries which relates to the business of the Company or its Subsidiaries or should properly accrue to the Company or its Subsidiaries. No employee, officer, stockholder or director of the Company or any of its Subsidiaries or member of his or her immediate family is indebted to the Company or its Subsidiaries, as the case may be, nor is the Company or any of its Subsidiaries indebted (or committed to make loans or extend or guarantee credit) to any of them, other than (i) for payment of salary for services rendered, (ii) reimbursement for reasonable expenses incurred on behalf of the Company, (iii) for other standard employee benefits made generally available to all employees or executives (including stock option agreements outstanding under any stock option plan approved by the Board of Directors of the Company), (iv) under the Senior Secured Notes of the Company referenced in the SEC Documents, and (v) with respect to accrued and unpaid dividends on the Series B Cumulative Convertible Preferred Stock of the Company.

(o) Acknowledgement Regarding Buyers' Trading Activity. It is understood and acknowledged by the Company that (i) following the public disclosure of the transactions contemplated by the Transaction Documents, in accordance with the terms thereof, none of the Buyers has been asked by the Company or any of its Subsidiaries to agree, nor has any Buyer agreed with the Company or any of its Subsidiaries, to desist from effecting any transactions in or with respect to (including, without limitation, purchasing or selling, long and/or short) any securities of the Company, or "derivative" securities based on securities issued by the Company or to hold any of the Securities for any specified term; (ii) any Buyer, and counterparties in "derivative" transactions to which any such Buyer is a party, directly or indirectly, presently may have a "short" position in the Common Stock which was established prior to such Buyer's knowledge of the transactions contemplated by the Transaction Documents; (iii) each Buyer shall not be deemed to have any affiliation with or control over any arm's length counterparty in any "derivative" transaction; and (iv) each Buyer may rely on the Company's obligation to timely deliver shares of Common Stock upon exercise of the Securities as and when required pursuant to the Transaction Documents for purposes of effecting trading in the Common Stock of the Company. The Company further understands and acknowledges that following the public disclosure of the transactions contemplated by the Transaction Documents pursuant to the Press Release (as defined below) one or more Buyers may engage in hedging and/or trading activities (including, without limitation, the location and/or reservation of borrowable shares of Common Stock) at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value and/or number of the Warrant Shares deliverable with respect to the Securities are being determined and such hedging and/or trading activities (including, without limitation, the location and/or reservation of borrowable shares of Common Stock), if any, can reduce the value of the existing stockholders' equity interest in the Company both at and after the time the hedging and/or trading activities are being conducted. The Company acknowledges that such aforementioned hedging and/or trading activities do not constitute a breach of this Agreement, the Warrants or any other Transaction Document or any of the documents executed in connection herewith or therewith.

(p) Manipulation of Price. Neither the Company nor any of its Subsidiaries has, and, to the knowledge of the Company, no Person acting on their behalf has, directly or indirectly, (i) taken any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company or any of its Subsidiaries 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 (other than the Placement Agent), (iii) except as disclosed in the SEC Documents, paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company or any of its Subsidiaries in the two (2) years prior to the date hereof, or (iv) paid or agreed to pay any Person for research services with respect to any securities of the Company or any of its Subsidiaries.

(q) Registration Eligibility. The Company is eligible to register the Registrable Securities (as defined in the Registration Rights Agreement) for resale by the Buyers using Form S-3 promulgated under the 1933 Act.

(r) Shell Company Status. The Company is not, and has never been, an issuer identified in, or subject to, Rule 144(i).

(s) Disclosure. The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Buyers or their agents or counsel with any information that constitutes or would reasonably be expected to constitute material, non-public information concerning the Company or any of its Subsidiaries, other than the existence of the transactions contemplated by this Agreement and the other Transaction Documents or such information that will be disclosed publicly on or prior to the Closing. The Company understands and confirms that each of the Buyers will rely on the foregoing representations in effecting transactions in securities of the Company. All disclosure provided to the Buyers regarding the Company and its Subsidiaries, their businesses and the transactions contemplated hereby, including the schedules to this Agreement, furnished by or on behalf of the Company or any of its Subsidiaries 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. All of the written information furnished after the date hereof by or on behalf of the Company or any of its Subsidiaries to each Buyer pursuant to or in connection with this Agreement and the other Transaction Documents, taken as a whole, will be true and correct in all material respects as of the date on which such information is so provided and will 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. No event or circumstance has occurred or information exists with respect to the Company or any of its Subsidiaries or its or their business, properties, liabilities, prospects, operations (including results thereof) or conditions (financial or otherwise), which, under applicable law, rule or regulation, requires public disclosure at or before the date hereof or announcement by the Company but which has not been so publicly disclosed. All financial projections and forecasts that have been prepared by or on behalf of the Company or any of its Subsidiaries and made available to the Buyers have been prepared in good faith based upon reasonable assumptions and represented, at the time each such financial projection or forecast was delivered to each Buyer, the Company's best estimate of future financial performance (it being recognized that such financial projections or forecasts are not to be viewed as facts and that the actual results during the period or periods covered by any such financial projections or forecasts may differ materially from the projected or forecasted results). The Company acknowledges and agrees that no Buyer makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 2.

4. COVENANTS.

(a) Best Efforts. Each Buyer shall use its best efforts to timely satisfy each of the covenants hereunder and conditions to be satisfied by it as provided in Section 6 of this Agreement. The Company shall use its best efforts to timely satisfy each of the covenants hereunder and conditions to be satisfied by it as provided in Section 7 of this Agreement.

(b) Form D and Blue Sky. The Company shall file a Form D with respect to the Securities as required under Regulation D and provide a copy thereof to each Buyer promptly after such filing. The Company shall, on or before the Closing Date, take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for, or to, qualify the Securities for sale to the Buyers at the Closing pursuant to this Agreement under applicable securities or "Blue Sky" laws of the states of the United States (or to obtain an exemption from such qualification), and shall provide evidence of any such action so taken to the Buyers on or prior to the Closing Date. Without limiting any other obligation of the Company under this Agreement, the Company shall timely make all filings and reports relating to the offer and sale of the Securities required under all applicable securities laws (including, without limitation, all applicable federal securities laws and all applicable "Blue Sky" laws), and the Company shall comply with all applicable foreign, federal, state and local laws, statutes, rules, regulations and the like relating to the offering and sale of the Securities to the Buyers.

(c) Reporting Status. Until the date on which the Buyers shall have sold all of the Registrable Securities (the "**Reporting Period**"), the Company shall timely file all reports required to be filed with the SEC pursuant to the 1934 Act, and the Company shall not terminate its status as an issuer required to file reports under the 1934 Act even if the 1934 Act or the rules and regulations thereunder would no longer require or otherwise permit such termination.

(d) Listing. The Company shall promptly secure the listing or designation for quotation (as the case may be) of all of the Registrable Securities upon each national securities exchange and automated quotation system, if any, upon which the Common Stock is then listed or designated for quotation (as the case may be) (subject to official notice of issuance) and shall maintain such listing or designation for quotation (as the case may be) of all Registrable Securities from time to time issuable under the terms of the Transaction Documents on such national securities exchange or automated quotation system. The Company shall maintain the Common Stock's listing or authorization for quotation (as the case may be) on the Principal Market, The New York Stock Exchange, the NYSE American, the Nasdaq Global Select Market or the Nasdaq Global Market (each, an "**Eligible Market**"). Neither the Company nor any of its Subsidiaries shall take any action which would be reasonably expected to result in the delisting or suspension of the Common Stock on an Eligible Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4(f).

(e) Fees. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, transfer agent fees, DTC (as defined below) fees or broker's commissions (other than for Persons engaged by any Buyer) relating to or arising out of the transactions contemplated hereby (including, without limitation, any fees or commissions payable to the Placement Agent, who is the Company's sole placement agent in connection with the transactions contemplated by this Agreement). The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, reasonable attorneys' fees and out-of-pocket expenses) arising in connection with any claim relating to any such payment. Except as otherwise set forth in the Transaction Documents, each party to this Agreement shall bear its own expenses in connection with the sale of the Securities to the Buyers.

(f) Pledge of Securities. Notwithstanding anything to the contrary contained in this Agreement, the Company acknowledges and agrees that the Securities may be pledged by a Buyer in connection with a bona fide margin agreement or other loan or financing arrangement that is secured by the Securities. The pledge of Securities shall not be deemed to be a transfer, sale or assignment of the Securities hereunder, and no Buyer effecting a pledge of Securities shall be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document, including, without limitation, Section 2(g) hereof; provided that a Buyer and its pledgee shall be required to comply with the provisions of Section 2(g) hereof in order to effect a sale, transfer or assignment of Securities to such pledgee. The Company hereby agrees to execute and deliver such documentation as a pledgee of the Securities may reasonably request in connection with a pledge of the Securities to such pledgee by a Buyer.

(g) Disclosure of Transactions and Other Material Information.

(i) Disclosure of Transaction. The Company shall, on or before 9:30 a.m., New York time, on the first (1st) Business Day after the date of this Agreement, issue a press release (the "**Press Release**") reasonably acceptable to the Buyers disclosing all the material terms of the transactions contemplated by the Transaction Documents. On or before 9:30 a.m., New York time, on the first (1st) Business Day after the date of this Agreement, the Company shall file a Current Report on Form 8-K describing all the material terms of the transactions contemplated by the Transaction Documents in the form required by the 1934 Act and attaching all the material Transaction Documents (including, without limitation, this Agreement (and all schedules to this Agreement), the form of Warrants, and the form of the Registration Rights Agreement) (including all attachments, the "**8-K Filing**"). From and after the filing of the 8-K Filing, the Company shall have disclosed all material, non-public information (if any) provided to any of the Buyers by the Company or any of its Subsidiaries or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. In addition, effective upon the filing of the 8-K Filing, 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, affiliates, employees or agents, on the one hand, and any of the Buyers or any of their affiliates, on the other hand, shall terminate.

(ii) Limitations on Disclosure. The Company shall not, and the Company shall cause each of its Subsidiaries and each of its and their respective officers, directors, employees and agents not to, provide any Buyer with any material, non-public information regarding the Company or any of its Subsidiaries from and after the date hereof without the express prior written consent of such Buyer (which may be granted or withheld in such Buyer's sole discretion). In the event of a breach of any of the foregoing covenants, or any of the covenants or agreements contained in any other Transaction Document, by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees and agents (as determined in the reasonable good faith judgment of such Buyer), in addition to any other remedy provided herein or in the Transaction Documents, such Buyer shall have the right to make a public disclosure, in the form of a press release, public advertisement or otherwise, of such breach or such material, non-public information, as applicable, without the prior approval by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees or agents. No Buyer shall have any liability to the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees, affiliates, stockholders or agents, for any such disclosure. To the extent that the Company delivers any material, non-public information to a Buyer without such Buyer's consent, the Company hereby covenants and agrees that such Buyer shall not have any duty of confidentiality with respect to, or a duty not to trade on the basis of, such material, non-public information. Subject to the foregoing, neither the Company, its Subsidiaries nor any Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, the Company shall be entitled, without the prior approval of any Buyer, to make the Press Release and any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law and regulations (provided that in the case of clause (i) each Buyer shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release). Notwithstanding anything contained in this Agreement to the contrary and without implication that the contrary would otherwise be true, the Company expressly acknowledges and agrees that no Buyer shall have (unless expressly agreed to by a particular Buyer after the date hereof in a written definitive and binding agreement executed by the Company and such particular Buyer (it being understood and agreed that no Buyer may bind any other Buyer with respect thereto)), any duty of confidentiality with respect to, or a duty not to trade on the basis of, any material, non-public information regarding the Company or any of its Subsidiaries.

(h) Additional Registration Statements. Until the Applicable Date (as defined below) and at any time thereafter while any Registration Statement is not effective or the prospectus contained therein is not available for use or any Current Public Information Failure (as defined in the Registration Rights Agreement) exists, the Company shall not file a registration statement or an offering statement under the 1933 Act relating to securities that are not the Registrable Securities (other than a registration statement on Form S-8 or such supplements or amendments to registration statements that are outstanding and have been declared effective by the SEC as of the date hereof (solely to the extent necessary to keep such registration statements effective and available and not with respect to any Subsequent Placement)). "**Applicable Date**" means the earlier of (x) the first date on which the resale by the Buyers of all the Registrable Securities required to be filed on the initial Registration Statement (as defined in the Registration Rights Agreement) pursuant to the Registration Rights Agreement is declared effective by the SEC (and each prospectus contained therein is available for use on such date) or (y) the first date on which all of the Registrable Securities are eligible to be resold by the Buyers pursuant to Rule 144 (or, if a Current Public Information Failure has occurred and is continuing, such later date after which the Company has cured such Current Public Information Failure).

(i) Additional Issuance of Securities. The Company agrees that for the period commencing on the date hereof and ending on the date immediately following the ninetieth (90th) calendar day after the Closing (the “**Restricted Period**”), neither the Company nor any of its Subsidiaries will, directly or indirectly issue, offer, sell, grant any option or right to purchase, or otherwise dispose of (or announce any issuance, offer, sale, grant of any option or right to purchase or other disposition of) any equity security or any equity-linked security (including, without limitation, any “equity security” (as that term is defined under Rule 405 promulgated under the 1933 Act), any Convertible Securities (as defined below), any preferred stock or any equity purchase rights) (any such issuance, offer, sale, grant, disposition or announcement (whether occurring during the Restricted Period or at any time thereafter) is referred to as a “**Subsequent Placement**”). Notwithstanding the foregoing, this Section 4(i) shall not apply in respect of the issuance of (i) shares of Common Stock or standard options to purchase Common Stock to directors, officers or employees of the Company in their capacity as such pursuant to an Approved Stock Plan (as defined below); (ii) shares of Common Stock issued upon exercise or conversion of Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Stock Plan that are covered by clause (i) above) issued prior to the date hereof, provided that the exercise or other method of issuance (as the case may be) of any such Convertible Security is made solely pursuant to the exercise or other method of issuance (as the case may be) provisions of such Convertible Security that were in effect on the date immediately prior to the date of this Agreement, the exercise or issuance price of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Stock Plan that are covered by clause (i) above) is not lowered at the Company’s discretion, none of such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Stock Plan that are covered by clause (i) above) are amended to increase the number of shares issuable thereunder and none of the terms or conditions of any such Convertible Securities (other than standard options to purchase Common Stock issued pursuant to an Approved Stock Plan that are covered by clause (i) above) are otherwise materially changed in any manner that adversely affects any of the Buyers; (iii) the Warrant Shares and (iv) any shares of Common Stock issued or issuable in connection with strategic or commercial alliances, acquisitions, mergers, and strategic partnerships, provided, that (x) the primary purpose of such issuance is not to raise capital as reasonably determined, (y) the purchaser or acquirer of the securities in such issuance solely consists of either (A) the actual participants in such strategic or commercial alliance or strategic or commercial partnership, (B) the actual owners of such assets or securities acquired in such acquisition or merger or (C) the stockholders, partners or members of the foregoing Persons, in each case, 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, and (z) the number or amount of securities issued to such Persons by the Company shall not be disproportionate to each such Person’s actual participation in such strategic or commercial alliance or strategic or commercial partnership or ownership of such assets or securities to be acquired by the Company, as applicable, (each of the foregoing in clauses (i) through (iv), collectively the “**Excluded Securities**”). “**Approved Stock Plan**” means any employee benefit plan which has been approved by the board of directors of the Company prior to or subsequent to the date hereof pursuant to which shares of Common Stock and standard options to purchase Common Stock may be issued to any employee, officer or director for services provided to the Company in their capacity as such. “**Convertible Securities**” means any capital stock or other security of the Company or any of its Subsidiaries that is at any time and under any circumstances directly or indirectly convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any capital stock or other equity security of the Company (including, without limitation, Common Stock) or any of its Subsidiaries. Notwithstanding anything to the contrary contained in this Agreement, the Company may offer and sell its interest in any Subsidiary, and any Subsidiary may offer and sell its interest in any other Subsidiary, including through a merger with one or more third parties, and the same shall not be considered a Subsequent Placement and such interest, and any securities issued in connection with any such merger, shall be deemed Excluded Securities.

(j) Reservation of Shares. So long as any of the Warrants remain outstanding, the Company shall take all action necessary to at all times have authorized, and reserved for the purpose of issuance, no less than 100% of the maximum number of shares of Common Stock issuable upon exercise of all the Warrants then outstanding (collectively, the “**Required Reserve Amount**”); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 4(j) be reduced other than proportionally in connection with any exercise, expiration or redemption, as applicable, of Warrants. If at any time the number of shares of Common Stock authorized and reserved for issuance is not sufficient to meet the Required Reserve Amount, the Company will promptly take all corporate action necessary to authorize and reserve a sufficient number of shares, including, without limitation, calling a special meeting of stockholders to authorize additional shares to meet the Company’s obligations pursuant to the Transaction Documents, in the case of an insufficient number of authorized shares, obtain stockholder approval of an increase in such authorized number of shares, and voting the management shares of the Company in favor of an increase in the authorized shares of the Company to ensure that the number of authorized shares is sufficient to meet the Required Reserve Amount.

(k) Conduct of Business. The business of the Company and its Subsidiaries shall, prior to the Closing Date, not be conducted in violation of any law, ordinance or regulation of any Governmental Entity, except where such violations would not reasonably be expected to result, either individually or in the aggregate, in a Material Adverse Effect.

(l) General Solicitation. None of the Company, any of its affiliates (as defined in Rule 501(b) under the 1933 Act) or any person acting on behalf of the Company or such affiliate will, during the Restricted Period (except as to the Excluded Securities), solicit any offer to buy or offer or sell the Securities by means of any form of general solicitation or general advertising within the meaning of Regulation D, including: (i) any advertisement, article, notice or other communication published in any newspaper, magazine or similar medium or broadcast over television or radio; and (ii) any seminar or meeting whose attendees have been invited by any general solicitation or general advertising.

(m) Integration. None of the Company, any of its affiliates (as defined in Rule 501(b) under the 1933 Act), or any person acting on behalf of the Company or such affiliate will sell, offer for sale, or solicit offers to buy or otherwise negotiate in respect of any security (as defined in the 1933 Act) which will be integrated with the sale of the Securities in a manner which would require the registration of the Securities under the 1933 Act or require stockholder approval under the rules and regulations of the Principal Market and the Company will take all action that is appropriate or necessary to assure that its offerings of other securities will not be integrated for purposes of the 1933 Act or the rules and regulations of the Principal Market, with the issuance of Securities contemplated hereby.

(n) Notice of Disqualification Events. The Company will notify the Buyers in writing, prior to the Closing Date of (i) any Disqualifying Event occurring prior to the Closing Date relating to any Covered Person of the Company (as such terms are used in Rule 506 of the 1933 Act) and (ii) any event occurring prior to the Closing Date that would, with the passage of time, become a Disqualifying Event relating to any Covered Person of the Company.

(o) Participation Right. At any time on or prior to the eighteen (18) month anniversary of the Closing Date, neither the Company nor any of its Subsidiaries shall, directly or indirectly, effect any Subsequent Placement unless the Company shall have first complied with this Section 4(o). This Section 4(o) will terminate upon the expiration of such period. The Company acknowledges and agrees that the right set forth in this Section 4(o) is a right granted by the Company, separately, to each Buyer.

(i) At least three (3) calendar days prior to any proposed or intended Subsequent Placement, the Company shall deliver to each Buyer a written notice (each such notice, a **"Pre-Notice"**), which Pre-Notice shall not contain any information (including, without limitation, material, non-public information) other than: (A) if the proposed Offer Notice (as defined below) constitutes or contains material, non-public information, a statement asking whether the Buyer is willing to accept material non-public information or (B) if the proposed Offer Notice does not constitute or contain material, non-public information, (x) a statement that the Company proposes or intends to effect a Subsequent Placement, (y) a statement that the statement in clause (x) above does not constitute material, non-public information and (z) a statement informing such Buyer that it is entitled to receive an Offer Notice (as defined below) with respect to such Subsequent Placement upon its written request. Upon the written request of a Buyer within one (1) calendar day after the Company's delivery to such Buyer of such Pre-Notice, and only upon a written request by such Buyer, the Company shall promptly, but no later than one (1) calendar day after such request, deliver to such Buyer an irrevocable written notice (the **"Offer Notice"**) of any proposed or intended issuance or sale or exchange (the **"Offer"**) of the securities being offered (the **"Offered Securities"**) in a Subsequent Placement, which Offer Notice shall (A) identify and describe the Offered Securities to the extent such information is then available to the Company, (B) describe the price and other terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, in each case to the extent such information is then available to the Company, (C) identify the Persons (if known) to which the Offered Securities are to be offered, issued or sold and (D) offer to issue and sell to such Buyer in accordance with the terms of the Offer such Buyer's pro rata portion of 30% of the Offered Securities, provided that the number of Offered Securities which such Buyer shall have the right to subscribe for under this Section 4(o) shall be based on such Buyer's pro rata portion of the aggregate amount of the Warrants purchased hereunder by all Buyers (the **"Basic Amount"**).

(ii) To accept an Offer, in whole or in part, such Buyer must deliver a written notice to the Company prior to the end of the third (3rd) calendar day after such Buyer's receipt of the Pre-Notice (the **"Offer Period"**), setting forth the portion of such Buyer's Basic Amount that such Buyer elects to purchase (the **"Notice of Acceptance"**). If a Buyer fails to duly respond to the Pre-Notice or the Offer Notice within one (1) calendar day thereof, or otherwise waives its participation right in writing, then the Company's obligations hereunder as to such Subsequent Placement shall be deemed waived and suspended for the period of ten (10) Trading Days following the expiration of the Offer Period. Notwithstanding the foregoing, if the Company desires to materially modify or amend the terms and conditions of the Offer prior to the expiration of the Offer Period, the Company may deliver to each Buyer a new Offer Notice and the Offer Period shall expire on the third (3rd) calendar day after such Buyer's receipt of such new Offer Notice.

(iii) The Company shall have ten (10) Trading Days following the expiration of the Offer Period above (A) to offer, issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by a Buyer (the “**Refused Securities**”) pursuant to a definitive agreement(s) (the “**Subsequent Placement Agreement**”), but only to the offerees described in the Offer Notice (if so described therein) and only upon terms and conditions (including, without limitation, unit prices and interest rates) that are not materially more favorable to the acquiring Person or Persons or materially less favorable to the Company than those set forth in the Offer Notice (to the extent described therein) and (B) to publicly announce (x) the execution of such Subsequent Placement Agreement, and (y) either (I) the consummation of the transactions contemplated by such Subsequent Placement Agreement or (II) the termination of such Subsequent Placement Agreement, which shall be filed with the SEC on a Current Report on Form 8-K with such Subsequent Placement Agreement and any documents contemplated therein filed as exhibits thereto.

(iv) In the event the Company shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Section 4(o)(iii) above), then each Buyer may, at its sole option and in its sole discretion, withdraw its Notice of Acceptance or reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that such Buyer elected to purchase pursuant to Section 4(o)(ii) above multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Company actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Buyers pursuant to this Section 4(o) prior to such reduction) and (ii) the denominator of which shall be the original amount of the Offered Securities. In the event that any Buyer so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Company may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Buyers in accordance with Section 4(o)(i) above.

(v) Upon the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, such Buyer shall acquire from the Company, and the Company shall issue to such Buyer, the number or amount of Offered Securities specified in its Notice of Acceptance, as reduced pursuant to Section 4(o)(iv) above if such Buyer has so elected, upon the terms and conditions specified in the Offer.

(vi) Any Offered Securities not acquired by a Buyer or other Persons in accordance with this Section 4(o) may not be issued, sold or exchanged until they are again offered to such Buyer under the procedures specified in this Agreement.

(vii) The Company and each Buyer agree that if any Buyer elects to participate in the Offer, neither the Subsequent Placement Agreement with respect to such Offer nor any other transaction documents related thereto (collectively, the “**Subsequent Placement Documents**”) shall include any term or provision whereby such Buyer shall be required to consent to any amendment to or termination of, or grant any waiver, release or the like under or in connection with, any agreement previously entered into with the Company or any instrument received from the Company.

(viii) Notwithstanding anything to the contrary in this Section 4(o) and unless otherwise agreed to by such Buyer, the Company shall either confirm in writing to such Buyer that the transaction with respect to the Subsequent Placement has been abandoned or shall publicly disclose its intention to issue the Offered Securities, in either case, in such a manner such that such Buyer will not be in possession of any material, non-public information, by the tenth (10th) Trading Day following delivery of the Offer Notice. If by such tenth (10th) Trading Day, no public disclosure regarding a transaction with respect to the Offered Securities has been made, and no notice regarding the abandonment of such transaction has been received by such Buyer, such transaction shall be deemed to have been abandoned and such Buyer shall not be in possession of any material, non-public information with respect to the Company or any of its Subsidiaries. Should the Company decide to pursue such transaction with respect to the Offered Securities, the Company shall provide such Buyer with another Offer Notice and such Buyer will again have the right of participation set forth in this Section 4(o).

(ix) The restrictions contained in this Section 4(o) shall not apply in connection with the issuance of any Excluded Securities. The Company shall not circumvent the provisions of this Section 4(o) by providing terms or conditions to one Buyer that are not provided to all Buyers.

5. REGISTER; TRANSFER AGENT INSTRUCTIONS; LEGEND.

(a) Register. The Company shall maintain at its principal executive offices (or such other office or agency of the Company as it may designate by notice to each holder of Securities), a register for the Warrants in which the Company shall record the name and address of the Person in whose name the Warrants have been issued (including the name and address of each transferee), the principal amount of the Warrants held by such Person and the number of Warrant Shares issuable pursuant to the terms of the Warrants. The Company shall keep the register open and available at all times during business hours for inspection of any Buyer or its legal representatives.

(b) Transfer Agent Instructions. The Company shall issue irrevocable instructions to its transfer agent and any subsequent transfer agent (as applicable, the “**Transfer Agent**”) in a form acceptable to each of the Buyers (the “**Irrevocable Transfer Agent Instructions**”) to issue certificates or credit shares to the applicable balance accounts at The Depository Trust Company (“**DTC**”), registered in the name of each Buyer or its respective nominee(s), for the Warrant Shares in such amounts as specified from time to time by each Buyer to the Company upon exercise of the Warrants. The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5(b), and stop transfer instructions to give effect to Section 2(g) hereof, will be given by the Company to its transfer agent with respect to the Securities, and that the Securities shall otherwise be freely transferable on the books and records of the Company, as applicable, to the extent provided in this Agreement and the other Transaction Documents. If a Buyer effects a sale, assignment or transfer of the Securities in accordance with Section 2(g), the Company shall permit the transfer and shall promptly instruct its transfer agent to issue one or more certificates or credit shares to the applicable balance accounts at DTC in such name and in such denominations as specified by such Buyer to effect such sale, transfer or assignment. In the event that such sale, assignment or transfer involves Warrant Shares sold, assigned or transferred pursuant to an effective registration statement or in compliance with Rule 144, the transfer agent shall issue such shares to such Buyer, assignee or transferee (as the case may be) without any restrictive legend in accordance with Section 5(d) below. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to a Buyer. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 5(b) will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 5(b), that a Buyer shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required. The Company shall cause its counsel to issue the legal opinion referred to in the Irrevocable Transfer Agent Instructions to the Company’s transfer agent on each Effective Date (as defined in the Registration Rights Agreement). Any fees (with respect to the transfer agent, counsel to the Company or otherwise) associated with the issuance of such opinion or the removal of any legends on any of the Securities shall be borne by the Company.

(c) Legends. Each Buyer understands that the Securities have been issued (or will be issued in the case of the Warrant Shares) pursuant to an exemption from registration or qualification under the 1933 Act and applicable state securities laws, and except as set forth below, the Securities shall bear any legend as required by the “blue sky” laws of any state and a restrictive legend in substantially the following form (and a stop-transfer order may be placed against transfer of such stock certificates):

[NEITHER THE ISSUANCE AND SALE OF THE SECURITIES REPRESENTED BY THIS CERTIFICATE NOR THE SECURITIES INTO WHICH THESE SECURITIES ARE CONVERTIBLE HAVE BEEN][THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN] REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR APPLICABLE STATE SECURITIES LAWS. THE SECURITIES MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED OR ASSIGNED (I) IN THE ABSENCE OF (A) AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR (B) AN OPINION OF COUNSEL TO THE HOLDER (IF REQUESTED BY THE COMPANY), IN A FORM REASONABLY ACCEPTABLE TO THE COMPANY, THAT REGISTRATION IS NOT REQUIRED UNDER SAID ACT OR (II) UNLESS SOLD OR ELIGIBLE TO BE SOLD PURSUANT TO RULE 144 OR RULE 144A UNDER SAID ACT. NOTWITHSTANDING THE FOREGOING, THE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN OR FINANCING ARRANGEMENT SECURED BY THE SECURITIES.

(d) Removal of Legends. Certificates evidencing Securities shall not be required to contain the legend set forth in Section 5(c) above or any other legend (i) while a registration statement (including a Registration Statement) covering the resale of such Securities is effective under the 1933 Act, (ii) following any sale of such Securities pursuant to Rule 144 (assuming the transferor is not an affiliate of the Company), (iii) if such Securities are eligible to be sold, assigned or transferred under Rule 144 (provided that a Buyer provides the Company with reasonable assurances that such Securities are eligible for sale, assignment or transfer under Rule 144 which shall not include an opinion of Buyer's counsel), (iv) in connection with a sale, assignment or other transfer (other than under Rule 144), provided that such Buyer provides the Company with an opinion of counsel to such Buyer, in a generally acceptable form, to the effect that such sale, assignment or transfer of the Securities may be made without registration under the applicable requirements of the 1933 Act or (v) if such legend is not required under applicable requirements of the 1933 Act (including, without limitation, controlling judicial interpretations and pronouncements issued by the SEC). If a legend is not required pursuant to the foregoing, the Company shall no later than two (2) Trading Days (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade initiated on the date such Buyer delivers such legended certificate representing such Securities to the Company) following the delivery by a Buyer to the Company or the transfer agent (with notice to the Company) of a legended certificate representing such Securities (endorsed or with stock powers attached, signatures guaranteed, and otherwise in form necessary to affect the reissuance and/or transfer, if applicable), together with any other deliveries from such Buyer as may be required above in this Section 5(d), as directed by such Buyer, either: (A) provided that the Company's transfer agent is participating in the DTC Fast Automated Securities Transfer Program and such Securities are Warrant Shares, credit the aggregate number of shares of Common Stock to which such Buyer shall be entitled to such Buyer's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian system or (B) if the Company's transfer agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver (via reputable overnight courier) to such Buyer, a certificate representing such Securities that is free from all restrictive and other legends, registered in the name of such Buyer or its designee (the date by which such credit is so required to be made to the balance account of such Buyer's or such Buyer's designee with DTC or such certificate is required to be delivered to such Buyer pursuant to the foregoing is referred to herein as the "**Required Delivery Date**", and the date such shares of Common Stock are actually delivered without restrictive legend to such Buyer or such Buyer's designee with DTC, as applicable, the "**Share Delivery Date**"). The Company shall be responsible for any transfer agent fees or DTC fees with respect to any issuance of Securities or the removal of any legends with respect to any Securities in accordance herewith.

(e) Failure to Timely Deliver; Buy-In. If the Company fails, for any reason or for no reason, to issue and deliver (or cause to be delivered) to a Buyer (or its designee) by the Required 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 Warrant Shares to which such Buyer is entitled and register such Warrant Shares on the Company's share register or, if the Transfer Agent is participating in the DTC Fast Automated Securities Transfer Program, to credit the balance account of such Buyer or such Buyer's designee with DTC for such number of Warrant Shares submitted for legend removal by such Buyer pursuant to Section 5(d) above or (II) if the Registration Statement covering the resale of the Warrant Shares submitted for legend removal by such Buyer pursuant to Section 5(d) above (the "**Unavailable Shares**") is not available for the resale of such Unavailable Shares and the Company fails to promptly, but in no event later than as required pursuant to the Registration Rights Agreement (x) so notify such Buyer and (y) deliver the Warrant Shares electronically without any restrictive legend by crediting such aggregate number of Warrant Shares submitted for legend removal by such Buyer pursuant to Section 5(d) above to such Buyer'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 to as a "**Notice Failure**" and together with the event described in clause (I) above, a "**Delivery Failure**"), and if on or after such Trading Day such Buyer purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by such Buyer of shares of Common Stock submitted for legend removal by such Buyer pursuant to Section 5(d) above that such Buyer is entitled to receive from the Company (a "**Buy-In**"), then the Company shall, within two (2) Trading Days after such Buyer's request and in such Buyer's discretion, either (i) pay cash to such Buyer in an amount equal to such Buyer'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 so deliver such certificate or credit such Buyer's balance account shall terminate and such shares shall be cancelled, or (ii) promptly honor its obligation to so deliver to such Buyer a certificate or certificates or credit the balance account of such Buyer or such Buyer's designee with DTC representing such number of shares of Common Stock that would have been so delivered if the Company timely complied with its obligations hereunder and pay cash to such Buyer in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Warrant Shares that the Company was required to deliver to such Buyer by the Required Delivery Date multiplied by (B) the lowest Closing Sale Price (as defined in the Warrants) of the Common Stock on any Trading Day during the period commencing on the date of the delivery by such Buyer to the Company of the applicable Warrant Shares and ending on the date of such delivery and payment under this clause (ii). Nothing shall limit such Buyer'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) as required pursuant to the terms hereof. Notwithstanding anything herein to the contrary, with respect to any given Notice Failure and/or Delivery Failure, this Section 5(e) shall not apply to the applicable Buyer the extent the Company has already paid such amounts in full to such Buyer with respect to such Notice Failure and/or Delivery Failure, as applicable, pursuant to the analogous sections of the Warrant held by such Buyer; and no Buyer shall receive both a Registration Delay Payment (as defined in the Registration Rights Agreement) and payment under this Section 7(e) as to any Notice Failure or Delivery Failure or in respect of the circumstances thereof.

(f) FAST Compliance. While any Warrants remain outstanding, the Company shall maintain a transfer agent that participates in the DTC Fast Automated Securities Transfer Program.

6. CONDITIONS TO THE COMPANY'S OBLIGATION TO SELL.

(a) The obligation of the Company hereunder to issue and sell the Warrants to each Buyer at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for the Company's sole benefit and may be waived by the Company at any time in its sole discretion by providing each Buyer with prior written notice thereof:

(i) The Subscription Date with respect to the Common Stock shall have occurred and the Offering thereof shall have simultaneously closed as of the Closing hereunder.

(ii) Such Buyer shall have executed each of the other Transaction Documents to which it is a party and delivered the same to the Company.

(iii) Such Buyer and each other Buyer shall have delivered to the Company the Purchase Price.

(iv) The representations and warranties of such Buyer shall be true and correct in all material respects as of the date when made and as of the Closing Date as though originally made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specific date), and such Buyer shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by such Buyer at or prior to the Closing Date.

7. CONDITIONS TO EACH BUYER'S OBLIGATION TO PURCHASE.

(a) The obligation of each Buyer hereunder to purchase its Warrant at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for each Buyer's sole benefit and may be waived by such Buyer at any time in its sole discretion by providing the Company with prior written notice thereof:

(i) The Subscription Date with respect to the Common Stock shall have occurred and the Offering thereof shall have simultaneously closed as of the Closing hereunder.

(ii) The Company and each Subsidiary (as the case may be) shall have duly executed and delivered to such Buyer each of the Transaction Documents to which it is a party and the Company shall have duly executed and delivered to such Buyer a Warrant in such amount as is set forth across from such Buyer's name in column (3) of the Schedule of Buyers as being purchased by such Buyer at the Closing pursuant to this Agreement.

(iii) The representations and warranties of the Company shall be true and correct in all material respects as of the date when made and as of the Closing Date as though originally made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specific date) and the Company shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required to be performed, satisfied or complied with by the Company at or prior to the Closing Date. Such Buyer shall have received a certificate, duly executed by the Chief Executive Officer of the Company, dated as of the Closing Date, to the foregoing effect and as to such other matters as may be reasonably requested by such Buyer in the form acceptable to such Buyer.

(iv) The Company shall have obtained all governmental, regulatory or third party consents and approvals, if any, necessary for the sale of the Securities, including without limitation, those required by the Principal Market, if any.

(v) No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or Governmental Entity of competent jurisdiction that prohibits the consummation of any of the transactions contemplated by the Transaction Documents.

(vi) Since the date of execution of this Agreement, no event or series of events shall have occurred that reasonably would have or result in a Material Adverse Effect.

(vii) The Company shall have obtained approval of the Principal Market to list or designate for quotation (as the case may be) the Warrant Shares.

(viii) The Company and its Subsidiaries shall have delivered to such Buyer such other documents, instruments or certificates relating to the transactions contemplated by this Agreement as such Buyer or its counsel may reasonably request.

8. TERMINATION.

In the event that the Closing shall not have occurred with respect to a Buyer within five (5) days of the date hereof, then such Buyer shall have the right to terminate its obligations under this Agreement with respect to itself at any time on or after the close of business on such date without liability of such Buyer to any other party; provided, however, (i) the right to terminate this Agreement under this Section 8 shall not be available to such Buyer if the failure of the transactions contemplated by this Agreement to have been consummated by such date is the result of such Buyer's breach of this Agreement and (ii) the abandonment of the sale and purchase of the Warrants shall be applicable only to such Buyer providing such written notice, provided further that no such termination shall affect any obligation of the Company under this Agreement to reimburse such Buyer for the expenses described in Section 4(g) above. Nothing contained in this Section 8 shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of its obligations under this Agreement or the other Transaction Documents.

9. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. All questions concerning the construction, validity, enforcement and interpretation of this Agreement 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 under any of the other Transaction Documents or with any transaction contemplated hereby or thereby, 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. Each party 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 such party at the address for such 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 manner permitted by law. Nothing contained herein shall be deemed or operate to preclude any Buyer from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to such Buyer or to enforce a judgment or other court ruling in favor of such Buyer. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR UNDER ANY OTHER TRANSACTION DOCUMENT OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT, ANY OTHER TRANSACTION DOCUMENT OR ANY TRANSACTION CONTEMPLATED HEREBY OR THEREBY.**

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party. In the event that any signature is delivered by facsimile transmission or by an e-mail which contains a portable document format (.pdf) file of an executed signature page, such signature page 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 signature page were an original thereof.

(c) Headings; Gender. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement. Unless the context clearly indicates otherwise, each pronoun herein shall be deemed to include the masculine, feminine, neuter, singular and plural forms thereof. The terms "including," "includes," "include" and words of like import shall be construed broadly as if followed by the words "without limitation." The terms "herein," "hereunder," "hereof" and words of like import refer to this entire Agreement instead of just the provision in which they are found.

(d) Severability; Maximum Payment Amounts. If any provision of this Agreement 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 Agreement so long as this Agreement 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). Notwithstanding anything to the contrary contained in this Agreement or any other Transaction Document (and without implication that the following is required or applicable), it is the intention of the parties that in no event shall amounts and value paid by the Company and/or any of its Subsidiaries (as the case may be), or payable to or received by any of the Buyers, under the Transaction Documents (including without limitation, any amounts that would be characterized as "interest" under applicable law) exceed amounts permitted under any applicable law. Accordingly, if any obligation to pay, payment made to any Buyer, or collection by any Buyer pursuant the Transaction Documents is finally judicially determined to be contrary to any such applicable law, such obligation to pay, payment or collection shall be deemed to have been made by mutual mistake of such Buyer, the Company and its Subsidiaries and such amount shall be deemed to have been adjusted with retroactive effect to the maximum amount or rate of interest, as the case may be, as would not be so prohibited by the applicable law. Such adjustment shall be effected, to the extent necessary, by reducing or refunding, at the option of such Buyer, the amount of interest or any other amounts which would constitute unlawful amounts required to be paid or actually paid to such Buyer under the Transaction Documents. For greater certainty, to the extent that any interest, charges, fees, expenses or other amounts required to be paid to or received by such Buyer under any of the Transaction Documents or related thereto are held to be within the meaning of "interest" or another applicable term to otherwise be violative of applicable law, such amounts shall be pro-rated over the period of time to which they relate.

(c) Entire Agreement; Amendments. This Agreement, the other Transaction Documents and the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein supersede all other prior oral or written agreements between the Buyers, the Company, its Subsidiaries, their affiliates and Persons acting on their behalf, including, without limitation, any transactions by any Buyer with respect to Common Stock or the Securities, and the other matters contained herein and therein, and this Agreement, the other Transaction Documents, the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein contain the entire understanding of the parties solely with respect to the matters covered herein and therein; provided, however, nothing contained in this Agreement or any other Transaction Document shall (or shall be deemed to) (i) have any effect on any agreements any Buyer has entered into with, or any instruments any Buyer has received from, the Company or any of its Subsidiaries prior to the date hereof with respect to any prior investment made by such Buyer in the Company or (ii) waive, alter, modify or amend in any respect any obligations of the Company or any of its Subsidiaries, or any rights of or benefits to any Buyer or any other Person, in any agreement entered into prior to the date hereof between or among the Company and/or any of its Subsidiaries and any Buyer, or any instruments any Buyer received from the Company and/or any of its Subsidiaries prior to the date hereof, and all such agreements and instruments shall continue in full force and effect. Except as specifically set forth herein or therein, neither the Company nor any Buyer makes any representation, warranty, covenant or undertaking with respect to such matters. For clarification purposes, the Recitals are part of this Agreement. No provision of this Agreement may be amended other than by an instrument in writing signed by the Company and the Required Holders (as defined below), and any amendment to any provision of this Agreement made in conformity with the provisions of this Section 9(e) shall be binding on all Buyers and holders of Securities, as applicable; provided that no such amendment shall be effective to the extent that it (A) applies to less than all of the holders of the Securities then outstanding or (B) imposes any obligation or liability on any Buyer without such Buyer's prior written consent (which may be granted or withheld in such Buyer's sole discretion). No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party, provided that the Required Holders may waive any provision of this Agreement, and any waiver of any provision of this Agreement made in conformity with the provisions of this Section 9(e) shall be binding on all Buyers and holders of Securities, as applicable, provided that no such waiver shall be effective to the extent that it (1) applies to less than all of the holders of the Securities then outstanding (unless a party gives a waiver as to itself only) or (2) imposes any obligation or liability on any Buyer without such Buyer's prior written consent (which may be granted or withheld in such Buyer's sole discretion). No consideration (other than reimbursement of legal fees) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of the Transaction Documents unless the same consideration also is offered to all of the parties to the Transaction Documents and all holders of the Warrants. From the date hereof and while any Warrants are outstanding, the Company shall not be permitted to receive any consideration from a Buyer or a holder of Warrants that is not otherwise contemplated by the Transaction Documents in order to, directly or indirectly, induce the Company or any Subsidiary (i) to treat such Buyer or holder of Warrants in a manner that is more favorable with respect to the Warrants or Warrant Shares than to other similarly situated Buyers or holders of Warrants, or (ii) to treat any Buyer(s) or holder(s) of Warrants in a manner that is less favorable with respect to the Warrants or Warrant Shares than the Buyer or holder of Warrants that is paying such consideration; provided, however, that the determination of whether a Buyer has been treated more or less favorably than another Buyer shall disregard any securities of the Company purchased or sold by any Buyer. The Company has not, directly or indirectly, made any agreements with any Buyers relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents. Without limiting the foregoing, the Company confirms that, except as set forth in this Agreement, no Buyer has made any commitment or promise or has any other obligation to provide any financing to the Company, any Subsidiary or otherwise. As a material inducement for each Buyer to enter into this Agreement, the Company expressly acknowledges and agrees that (x) no due diligence or other investigation or inquiry conducted by a Buyer, any of its advisors or any of its representatives shall affect such Buyer's right to rely on, or shall modify or qualify in any manner or be an exception to any of, the Company's representations and warranties contained in this Agreement or any other Transaction Document and (y) unless a provision of this Agreement or any other Transaction Document is expressly preceded by the phrase "except as disclosed in the SEC Documents," nothing contained in any of the SEC Documents shall affect such Buyer's right to rely on, or shall modify or qualify in any manner or be an exception to any of, the Company's representations and warranties contained in this Agreement or any other Transaction Document. "**Required Holders**" means (I) prior to the Closing Date, each Buyer entitled to purchase Warrants at the Closing and (II) on or after the Closing Date, holders of a majority of the Registrable Securities as of such time (excluding any Registrable Securities held by the Company or any of its Subsidiaries as of such time) issued or issuable hereunder or pursuant to the Warrants (or the Buyers, with respect to any waiver or amendment of Section 4(o)).

(f) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party) or electronic mail (provided that such sent email is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's email server that such e-mail could not be delivered to such recipient); or (iii) one (1) Business Day after deposit with an overnight courier service with next day delivery specified, in each case, properly addressed to the party to receive the same. The addresses, facsimile numbers and e-mail addresses for such communications shall be:

If to the Company:

Pacific Ethanol, Inc.
400 Capitol Mall, Suite 2060
Sacramento, California 95814
Telephone: (916) 403-2123
Attention: Chief Executive Officer

With a copy (for informational purposes only) to:

Troutman Pepper Hamilton Sanders LLP
5 Park Plaza, Suite 1400
Irvine, California 92614
Telephone: 949-622-2700
Attention: Larry A. Cerutti, Esq.
E-Mail: Larry.Cerutti@Troutman.com

If to the Transfer Agent:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Telephone: (212) 936-5100
Facsimile: (718) 765-8719
Attention: Felix Orihuela and William Torre

If to a Buyer, to its address, e-mail address and facsimile number set forth on the Schedule of Buyers, with copies to such Buyer's representatives as set forth on the Schedule of Buyers,

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including any purchasers of any of the Warrants. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Required Holders, including, without limitation, by way of a Fundamental Transaction (as defined in the Warrants) (unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Warrants). A Buyer may assign some or all of its rights hereunder in connection with any transfer of any of its Securities without the consent of the Company, in which event such assignee shall be deemed to be a Buyer hereunder with respect to such assigned rights.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, other than the Indemnitees referred to in Section 9(k).

(i) Survival. The representations, warranties, agreements and covenants shall survive the Closing. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder.

(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as any other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) Indemnification. In consideration of each Buyer's execution and delivery of the Transaction Documents and acquiring the Securities thereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless each Buyer and each holder of any Securities and all of their stockholders, partners, members, officers, directors, employees and direct or indirect investors and any of the foregoing Persons' agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the "**Indemnitees**") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnatee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys' fees and disbursements (the "**Indemnified Liabilities**"), incurred by any Indemnatee as a result of, or arising out of, or relating to (i) any misrepresentation or breach of any representation or warranty made by the Company or any Subsidiary in any of the Transaction Documents, (ii) any breach of any covenant, agreement or obligation of the Company or any Subsidiary contained in any of the Transaction Documents or (iii) any cause of action, suit, proceeding or claim brought or made against such Indemnatee by a third party (including for these purposes a derivative action brought on behalf of the Company or any Subsidiary) or which otherwise involves such Indemnatee that arises out of or results from (A) the execution, delivery, performance or enforcement of any of the Transaction Documents, (B) any transaction financed or to be financed in whole or in part, directly or indirectly, with the proceeds of the issuance of the Securities, (C) any disclosure properly made by such Buyer pursuant to Section 4(i), or (D) the status of such Buyer or holder of the Securities either as an investor in the Company pursuant to the transactions contemplated by the Transaction Documents or as a party to this Agreement (including, without limitation, as a party in interest or otherwise in any action or proceeding for injunctive or other equitable relief). To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law. Except as otherwise set forth herein, the mechanics and procedures with respect to the rights and obligations under this Section 9(k) shall be the same as those set forth in Section 6 of the Registration Rights Agreement.

(l) Construction. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party. No specific representation or warranty shall limit the generality or applicability of a more general representation or warranty. Each and every reference to share prices, shares of Common Stock and any other numbers in this Agreement that relate to the Common Stock shall be automatically adjusted for any stock splits, stock dividends, stock combinations, recapitalizations or other similar transactions that occur with respect to the Common Stock after the date of this Agreement. Notwithstanding anything in this Agreement to the contrary, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty against, or a prohibition of, any actions with respect to the borrowing of, arrangement to borrow, identification of the availability of, and/or securing of, securities of the Company in order for such Buyer (or its broker or other financial representative) to effect short sales or similar transactions in the future.

(m) Remedies. Each Buyer and in the event of assignment by Buyer of its rights and obligations hereunder, each holder of Securities, shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies which such holders have been granted at any time under any other agreement or contract and all of the rights which such holders have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law. Furthermore, the Company recognizes that in the event that it or any Subsidiary fails to perform, observe, or discharge any or all of its or such Subsidiary's (as the case may be) obligations under the Transaction Documents, any remedy at law would be inadequate relief to the Buyers. The Company therefore agrees that the Buyers shall be entitled to specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent jurisdiction in any such case without the necessity of proving actual damages and without posting a bond or other security. The remedies provided in this Agreement and the other Transaction Documents shall be cumulative and in addition to all other remedies available under this Agreement and the other Transaction Documents, at law or in equity (including a decree of specific performance and/or other injunctive relief).

(n) Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Buyer exercises a right, election, demand or option under a Transaction Document and the Company or any Subsidiary does not timely perform its related obligations within the periods therein provided, then such Buyer may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company or such Subsidiary (as the case may be), any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

(o) Payment Set Aside; Currency. To the extent that the Company makes a payment or payments to any Buyer hereunder or pursuant to any of the other Transaction Documents or any of the Buyers enforce or exercise their rights hereunder or 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, foreign, 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. Unless otherwise expressly indicated, all dollar amounts referred to in this Agreement and the other Transaction Documents are in United States Dollars ("**U.S. Dollars**"), and all amounts owing under this Agreement and all other Transaction Documents shall be paid in U.S. Dollars. All amounts denominated in other currencies (if any) shall be converted into the U.S. Dollar equivalent amount in accordance with the Exchange Rate on the date of calculation. "**Exchange Rate**" means, in relation to any amount of currency to be converted into U.S. Dollars pursuant to this Agreement, the U.S. Dollar exchange rate as published in the Wall Street Journal on the relevant date of calculation.

(p) Judgment Currency.

(i) If for the purpose of obtaining or enforcing judgment against the Company in connection with this Agreement or any other Transaction Document in any court in any jurisdiction it becomes necessary to convert into any other currency (such other currency being hereinafter in this Section 9(p) referred to as the "**Judgment Currency**") an amount due in U.S. Dollars under this Agreement, the Warrant shall be made at the Exchange Rate prevailing on the Trading Day immediately preceding:

(1) the date actual payment of the amount due, in the case of any proceeding in the courts of New York or in the courts of any other jurisdiction that will give effect to such Warrant being made on such date; or

(2) the date on which the foreign court determines, in the case of any proceeding in the courts of any other jurisdiction (the date as of which such Warrant is made pursuant to this Section 9(p)(i)(2) being hereinafter referred to as the "**Judgment Warrant Date**").

(ii) If in the case of any proceeding in the court of any jurisdiction referred to in Section 9(p)(i)(2) above, there is a change in the Exchange Rate prevailing between the Judgment Warrant Date and the date of actual payment of the amount due, the applicable party shall pay such adjusted amount as may be necessary to ensure that the amount paid in the Judgment Currency, when converted at the Exchange Rate prevailing on the date of payment, will produce the amount of U.S. Dollars which could have been purchased with the amount of Judgment Currency stipulated in the judgment or judicial order at the Exchange Rate prevailing on the Judgment Warrant Date.

(iii) Any amount due from the Company under this provision shall be due as a separate debt and shall not be affected by judgment being obtained for any other amounts due under or in respect of this Agreement or any other Transaction Document.

(q) Independent Nature of Buyers' Obligations and Rights. The obligations of each Buyer under the Transaction Documents are several and not joint with the obligations of any other Buyer, and no Buyer shall be responsible in any way for the performance of the obligations of any other Buyer under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Buyer pursuant hereto or thereto, shall be deemed to constitute the Buyers as, and the Company acknowledges that the Buyers do not so constitute, a partnership, an association, a joint venture or any other kind of group or entity, or create a presumption that the Buyers are in any way acting in concert or as a group or entity, and the Company shall not assert any such claim with respect to such obligations or the transactions contemplated by the Transaction Documents or any matters, and the Company acknowledges that the Buyers are not acting in concert or as a group, and the Company shall not assert any such claim, with respect to such obligations or the transactions contemplated by the Transaction Documents. The decision of each Buyer to purchase Securities pursuant to the Transaction Documents has been made by such Buyer independently of any other Buyer. Each Buyer acknowledges that no other Buyer has acted as agent for such Buyer in connection with such Buyer making its investment hereunder and that no other Buyer will be acting as agent of such Buyer in connection with monitoring such Buyer's investment in the Securities or enforcing its rights under the Transaction Documents. The Company and each Buyer confirms that each Buyer has independently participated with the Company and its Subsidiaries in the negotiation of the transaction contemplated hereby with the advice of its own counsel and advisors. Each Buyer shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement or out of any other Transaction Documents, and it shall not be necessary for any other Buyer to be joined as an additional party in any proceeding for such purpose. The use of a single agreement to effectuate the purchase and sale of the Securities contemplated hereby was solely in the control of the Company, not the action or decision of any Buyer, and was done solely for the convenience of the Company and its Subsidiaries and not because it was required or requested to do so by any Buyer. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company, each Subsidiary and a Buyer, solely, and not between the Company, its Subsidiaries and the Buyers collectively and not between and among the Buyers. Notwithstanding anything herein to the contrary, the parties hereto acknowledge and agree that, as of the Closing Date, CVI Investments, Inc. is the only Buyer of Warrants hereunder.

[signature pages follow]

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Agreement to be duly executed as of the date first written above.

COMPANY:

PACIFIC ETHANOL, INC.

By: /s/ Bryon T. McGregor
Name: Bryon T. McGregor
Title: CFO

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Agreement to be duly executed as of the date first written above.

BUYER:

CVI INVESTMENTS, INC.

By: Heights Capital Management, Inc., its authorized agent

By: /s/ Martin Kobinger

Name: Martin Kobinger

Title: Investment Manager

SCHEDULE OF BUYERS

(1) Buyer	(2) Address and Facsimile Number	(3) Warrants	(4) Purchase Price
CVI Investments, Inc.	c/o Heights Capital Management 101 California Street Suite 3250 San Francisco, CA 94111 Attention: Martin Kobinger, Investment Manager Facsimile: 415-403-6525 E-Mail: martin.kobinger@sig.com	8,900,493	\$ 57,849

EXHIBIT A

Form of Warrant

[attached hereto]

EXHIBIT B

Registration Rights Agreement

[attached hereto]

REGISTRATION RIGHTS AGREEMENT

This **REGISTRATION RIGHTS AGREEMENT** (this “**Agreement**”), dated as of October __, 2020, is by and among Pacific Ethanol, Inc., a Delaware corporation, with offices located at 400 Capitol Mall, Suite 2060, Sacramento, California (the “**Company**”), and the undersigned buyers (each, a “**Buyer**,” and collectively, the “**Buyers**”).

RECITALS

A. In connection with the Securities Purchase Agreement by and among the parties hereto, dated as of the date hereof (the “**Securities Purchase Agreement**”), the Company has agreed, upon the terms and subject to the conditions of the Securities Purchase Agreement, to issue and sell to each Buyer the Warrants (as defined in the Securities Purchase Agreement) which will be exercisable into Warrant Shares (as defined in the Securities Purchase Agreement) in accordance with the terms of the Warrants.

B. To induce the Buyers to consummate the transactions contemplated by the Securities Purchase Agreement, the Company has agreed to provide certain registration rights under the Securities Act of 1933, as amended, and the rules and regulations thereunder, or any similar successor statute (collectively, the “**1933 Act**”), and applicable state securities laws.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and each of the Buyers hereby agree as follows:

1. Definitions.

Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Securities Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

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

(b) “**Closing Date**” shall have the meaning set forth in the Securities Purchase Agreement.

(c) “**Effective Date**” means the date that the applicable Registration Statement has been declared effective by the SEC.

(d) “**Effectiveness Deadline**” means (i) with respect to the initial Registration Statement required to be filed pursuant to Section 2(a), the earlier of the (A) 6th calendar day after the Closing Date (or the 90th calendar day after the Closing Date if such Registration Statement is subject to a full review by the SEC) and (B) 2nd Business Day after the date the Company is notified (orally or in writing, whichever is earlier) by the SEC that such Registration Statement will not be reviewed or will not be subject to further review, and effectiveness may be immediately accelerated and (ii) with respect to any additional Registration Statements that may be required to be filed by the Company pursuant to this Agreement, the earlier of the (A) 60th calendar day following the date on which the Company was required to file such additional Registration Statement (or the 90th calendar day following the date on which the Company was required to file such additional Registration Statement if such additional Registration Statement is subject to a full review by the SEC) and (B) 2nd Business Day after the date the Company is notified (orally or in writing, whichever is earlier) by the SEC that such Registration Statement will not be reviewed or will not be subject to further review, and effectiveness may be immediately accelerated.

(e) “**Filing Deadline**” means (i) with respect to the initial Registration Statement required to be filed pursuant to Section 2(a), the 3rd calendar day after the Closing Date and (ii) with respect to any additional Registration Statements that may be required to be filed by the Company pursuant to this Agreement, the date on which the Company was required to file such additional Registration Statement pursuant to the terms of this Agreement.

(f) **“Investor”** means a Buyer or any transferee or assignee of any Registrable Securities or Warrants, as applicable, to whom a Buyer assigns its rights under this Agreement and who agrees to become bound by the provisions of this Agreement in accordance with Section 9 and any transferee or assignee thereof to whom a transferee or assignee of any Registrable Securities or Warrants, as applicable, assigns its rights under this Agreement and who agrees to become bound by the provisions of this Agreement in accordance with Section 9.

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

(h) **“register,” “registered,”** and **“registration”** refer to a registration effected by preparing and filing one or more Registration Statements in compliance with the 1933 Act and pursuant to Rule 415 and the declaration of effectiveness of such Registration Statement(s) by the SEC.

(i) **“Registrable Securities”** means (i) the Warrant Shares, and (ii) any capital stock of the Company issued or issuable with respect to the Warrant Shares or the Warrants, including, without limitation, (1) as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise and (2) shares of capital stock of the Company into which the shares of Common Stock (as defined in the Warrants) are converted or exchanged and shares of capital stock of a Successor Entity (as defined in the Warrants) into which the shares of Common Stock are converted or exchanged, in each case, without regard to any limitations on exercise of the Warrants.

(j) **“Registration Statement”** means a registration statement or registration statements of the Company filed under the 1933 Act covering Registrable Securities.

(k) **“Required Holders”** means, as of any given time, the holders of a majority of the Registrable Securities as of such time (excluding any Registrable Securities held by the Company or any of its Subsidiaries as of such time).

(l) **“Required Registration Amount”** means 100% of the maximum number of Warrant Shares issuable upon exercise of the Warrants.

(m) **“Rule 144”** means Rule 144 promulgated by the SEC under the 1933 Act, as such rule may be amended from time to time, or any other similar or successor rule or regulation of the SEC that may at any time permit the Investors to sell securities of the Company to the public without registration.

(n) **“Rule 415”** means Rule 415 promulgated by the SEC under the 1933 Act, as such rule may be amended from time to time, or any other similar or successor rule or regulation of the SEC providing for offering securities on a continuous or delayed basis.

(o) **“SEC”** means the United States Securities and Exchange Commission or any successor thereto.

2. Registration.

(a) **Mandatory Registration.** The Company shall prepare and, as soon as practicable, but in no event later than the Filing Deadline, file with the SEC an initial Registration Statement on Form S-3 covering the resale of all of the Registrable Securities, provided that such initial Registration Statement shall register for resale at least the number of shares of Common Stock equal to the Required Registration Amount as of the date such Registration Statement is initially filed with the SEC; provided further that if Form S-3 is unavailable for such a registration, the Company shall use such other form as is required by Section 2(c). Such initial Registration Statement, and each other Registration Statement required to be filed pursuant to the terms of this Agreement, shall contain (except if otherwise directed by the Required Holders or as required by applicable law, rule or regulation) the “Selling Stockholders” and “Plan of Distribution” sections in substantially the forms attached hereto as **Exhibit A**. The Company shall use its best efforts to have such initial Registration Statement, and each other Registration Statement required to be filed pursuant to the terms of this Agreement, declared effective by the SEC as soon as practicable, but in no event later than the applicable Effectiveness Deadline for such Registration Statement.

(b) Ineligibility to Use Form S-3. In the event that Form S-3 is not available for the registration of the resale of Registrable Securities hereunder, the Company shall (i) register the resale of the Registrable Securities on Form S-1 or another appropriate form reasonably acceptable to the Required Holders and (ii) undertake to register the resale of the Registrable Securities on Form S-3 as soon as such form is available, provided that the Company shall maintain the effectiveness of all Registration Statements then in effect until such time as a Registration Statement on Form S-3 covering the resale of all the Registrable Securities has been declared effective by the SEC and the prospectus contained therein is available for use.

(c) Sufficient Number of Shares Registered. In the event the number of shares available under any Registration Statement is insufficient to cover all of the Registrable Securities required to be covered by such Registration Statement or an Investor's allocated portion of the Registrable Securities pursuant to Section 2(h), the Company shall amend such Registration Statement (if permissible), or file with the SEC a new Registration Statement (on the short form available therefor, if applicable), or both, so as to cover at least the Required Registration Amount as of the Trading Day immediately preceding the date of the filing of such amendment or new Registration Statement, in each case, as soon as practicable, but in any event not later than thirty (30) days after the necessity therefor arises (but taking account of any Staff position with respect to the date on which the Staff will permit such amendment to the Registration Statement and/or such new Registration Statement (as the case may be) to be filed with the SEC). The Company shall use its best efforts to cause such amendment to such Registration Statement and/or such new Registration Statement (as the case may be) to become effective as soon as practicable following the filing thereof with the SEC, but in no event later than the applicable Effectiveness Deadline for such Registration Statement.

(d) Effect of Failure to Maintain Effectiveness of any Registration Statement. If the Company shall fail to satisfy any condition set forth in Rule 144(i)(2) (a "Current Public Information Failure") as a result of which any of the Investors are unable to sell Registrable Securities without restriction under Rule 144 (including, without limitation, volume restrictions), then, as partial relief for the damages to any holder by reason of any such delay in, or reduction of, its ability to sell the underlying shares of Common Stock (which remedy shall not be exclusive of any other remedies available at law or in equity, including, without limitation, specific performance), the Company shall pay to each holder of Registrable Securities relating to such Registration Statement an amount in cash equal to two percent (2%) of the amount, if any, by which the closing price of the Common Stock of the Company on the Principal Market or any successor market exceeds such Investor's exercise price under such Investor's Warrant, multiplied by the Warrant Shares then underlying such Investor's Warrant (1) on the date of such Current Public Information Failure, as applicable, and (2) on every thirty (30) day anniversary of a Current Public Information Failure until the earlier of (i) the date such Current Public Information Failure is cured and (ii) such time that such public information is no longer required pursuant to Rule 144 (in each case, pro rated for periods totaling less than thirty (30) days). The payments to which a holder of Registrable Securities shall be entitled pursuant to this Section 2(e) are referred to herein as "**Registration Delay Payments**." Following the initial Registration Delay Payment for any particular event or failure (which shall be paid on the date of such event or failure, as set forth above), without limiting the foregoing, if an event or failure giving rise to the Registration Delay Payments is cured prior to any thirty (30) day anniversary of such event or failure, then such Registration Delay Payment shall be made on the third (3rd) Business Day after such cure. In the event the Company fails to make Registration Delay Payments in a timely manner in accordance with the foregoing, such Registration Delay Payments shall bear interest at the rate of one percent (1%) per month (prorated for partial months) until paid in full. Notwithstanding the foregoing, no Registration Delay Payments shall be owed to an Investor (with respect to any period during which all of such Investor's Registrable Securities may be sold by such Investor without restriction under Rule 144 (including, without limitation, volume restrictions) and without the need for current public information required by Rule 144(c)(1) (or Rule 144(i)(2), if applicable). Notwithstanding anything herein to the contrary, no Investor shall receive both a Registration Delay Payment and payment under Section 7(e) of the Securities Purchase Agreement as to any Notice Failure or Delivery Failure (as such terms are defined in the Securities Purchase Agreement) or in respect of the circumstances thereof.

(e) Offering. Notwithstanding anything to the contrary contained in this Agreement, but subject to the payment of the Registration Delay Payments pursuant to Section 2(d), in the event the staff of the SEC (the “**Staff**”) or the SEC seeks to characterize any offering pursuant to a Registration Statement filed pursuant to this Agreement as constituting an offering of securities by, or on behalf of, the Company, or in any other manner, such that the Staff or the SEC do not permit such Registration Statement to become effective and used for resales in a manner that does not constitute such an offering and that permits the continuous resale at the market by the Investors participating therein (or as otherwise may be acceptable to each Investor) without being named therein as an “underwriter,” then the Company shall reduce the number of shares to be included in such Registration Statement by all Investors until such time as the Staff and the SEC shall so permit such Registration Statement to become effective as aforesaid. In making such reduction, the Company shall reduce the number of shares to be included by all Investors on a pro rata basis (based upon the number of Registrable Securities otherwise required to be included for each Investor) unless the inclusion of shares by a particular Investor or a particular set of Investors are resulting in the Staff or the SEC’s “by or on behalf of the Company” offering position, in which event the shares held by such Investor or set of Investors shall be the only shares subject to reduction (and if by a set of Investors on a pro rata basis by such Investors or on such other basis as would result in the exclusion of the least number of shares by all such Investors); provided, that, with respect to such pro rata portion allocated to any Investor, such Investor may elect the allocation of such pro rata portion among the Registrable Securities of such Investor. In addition, in the event that the Staff or the SEC requires any Investor seeking to sell securities under a Registration Statement filed pursuant to this Agreement to be specifically identified as an “underwriter” in order to permit such Registration Statement to become effective, and such Investor does not consent to being so named as an underwriter in such Registration Statement, then, in each such case, the Company shall reduce the total number of Registrable Securities to be registered on behalf of such Investor, until such time as the Staff or the SEC does not require such identification or until such Investor accepts such identification and the manner thereof. Any reduction pursuant to this paragraph will first reduce all Registrable Securities other than those issued pursuant to the Securities Purchase Agreement. In the event of any reduction in Registrable Securities pursuant to this paragraph, an affected Investor shall have the right to require, upon delivery of a written request to the Company signed by such Investor, the Company to file a registration statement within thirty (30) days of such request (subject to any restrictions imposed by Rule 415 or required by the Staff or the SEC) for resale by such Investor in a manner acceptable to such Investor, and the Company shall following such request cause to be and keep effective such registration statement in the same manner as otherwise contemplated in this Agreement for registration statements hereunder, in each case until such time as: (i) all Registrable Securities held by such Investor have been registered and sold pursuant to an effective Registration Statement in a manner acceptable to such Investor or (ii) all Registrable Securities may be resold by such Investor without restriction (including, without limitation, volume limitations) pursuant to Rule 144 (taking account of any Staff position with respect to “affiliate” status) and without the need for current public information required by Rule 144(c)(1) (or Rule 144(i)(2), if applicable) or (iii) such Investor agrees to be named as an underwriter in any such Registration Statement in a manner acceptable to such Investor as to all Registrable Securities held by such Investor and that have not theretofore been included in a Registration Statement under this Agreement (it being understood that the special demand right under this sentence may be exercised by an Investor multiple times and with respect to limited amounts of Registrable Securities in order to permit the resale thereof by such Investor as contemplated above).

(f) Piggyback Registrations. Without limiting any obligation of the Company hereunder or under the Securities Purchase Agreement, if there is not an effective Registration Statement covering all of the Registrable Securities or the prospectus contained therein is not available for use and the Company shall determine to prepare and file with the SEC a registration statement or offering statement relating to an offering for its own account or the account of others under the 1933 Act of any of its equity securities (other than on Form S-4 or Form S-8 (each as promulgated under the 1933 Act) or their then equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with the Company’s stock option or other employee benefit plans), then the Company shall deliver to each Investor a written notice of such determination and, if within five (5) days after the date of the delivery of such notice, any such Investor shall so request in writing, the Company shall include in such registration statement or offering statement all or any part of such Registrable Securities such Investor requests to be registered; provided, however, the Company shall not be required to register any Registrable Securities pursuant to this Section 2(g) that are eligible for resale pursuant to Rule 144 without restriction (including, without limitation, volume restrictions) and without the need for current public information required by Rule 144(c)(1) (or Rule 144(i)(2), if applicable) or that are the subject of a then-effective Registration Statement.

(g) Allocation of Registrable Securities. The initial number of Registrable Securities included in any Registration Statement and any increase in the number of Registrable Securities included therein shall be allocated pro rata among the Investors based on the number of Registrable Securities held by each Investor at the time such Registration Statement covering such initial number of Registrable Securities or increase thereof is declared effective by the SEC. In the event that an Investor sells or otherwise transfers any of such Investor's Registrable Securities, each transferee or assignee (as the case may be) that becomes an Investor shall be allocated a pro rata portion of the then-remaining number of Registrable Securities included in such Registration Statement for such transferor or assignee (as the case may be). Any shares of Common Stock included in a Registration Statement and which remain allocated to any Person which ceases to hold any Registrable Securities covered by such Registration Statement shall be allocated to the remaining Investors, pro rata based on the number of Registrable Securities then held by such Investors which are covered by such Registration Statement.

(h) No Inclusion of Other Securities. The Company shall in no event include any securities other than Registrable Securities on any Registration Statement filed in accordance herewith (except as contemplated in Section 2(f)) without the prior written consent of the Required Holders. Until the Applicable Date (as defined in the Securities Purchase Agreement), the Company shall not file any Registration Statement except with respect to the Registrable Securities, and except as otherwise permitted under the Securities Purchase Agreement.

3. Related Obligations.

The Company shall use its best efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof, and, pursuant thereto, the Company shall have the following obligations:

(a) The Company shall promptly prepare and file with the SEC a Registration Statement with respect to all the Registrable Securities (but in no event later than the applicable Filing Deadline) and use its best efforts to cause such Registration Statement to become effective as soon as practicable after such filing (but in no event later than the Effectiveness Deadline). Subject to Allowable Grace Periods, the Company shall keep each Registration Statement effective (and the prospectus contained therein available for use) pursuant to Rule 415 for resales by the Investors on a delayed or continuous basis at then-prevailing market prices (and not fixed prices) at all times until the earlier of (i) the date as of which all of the Investors may sell all of the Registrable Securities required to be covered by such Registration Statement (disregarding any reduction pursuant to Section 2(f)) without restriction pursuant to Rule 144 (including, without limitation, volume restrictions) and without the need for current public information required by Rule 144(c)(1) (or Rule 144(i)(2), if applicable) or (ii) the date on which the Investors shall have sold all of the Registrable Securities covered by such Registration Statement (the "**Registration Period**"). Notwithstanding anything to the contrary contained in this Agreement, the Company shall ensure that, when filed and at all times while effective, each Registration Statement (including, without limitation, all amendments and supplements thereto) and the prospectus (including, without limitation, all amendments and supplements thereto) used in connection with such Registration Statement (1) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein (in the case of prospectuses, in the light of the circumstances in which they were made) not misleading and (2) will disclose (whether directly or through incorporation by reference to other SEC filings to the extent permitted) all information required to be disclosed regarding the Company and its securities. The Company shall submit to the SEC, within one (1) Business Day after the later of the date that (i) the Company learns that no review of a particular Registration Statement will be made by the Staff or that the Staff has no further comments on a particular Registration Statement (as the case may be) and (ii) the consent of Legal Counsel is obtained pursuant to Section 3(c) (which consent shall be immediately sought), a request for acceleration of effectiveness of such Registration Statement to a time and date not later than twenty-four (24) hours after the submission of such request. The Company shall respond in writing to comments made by the SEC in respect of a Registration Statement as soon as practicable, but in no event later than fifteen (15) Business Days after the receipt of comments by or notice from the SEC that an amendment is required in order for a Registration Statement to be declared effective.

(b) Subject to Section 3(r) of this Agreement, the Company shall prepare and file with the SEC such amendments (including, without limitation, post-effective amendments) and supplements to each Registration Statement and the prospectus used in connection with each such Registration Statement, which prospectus is to be filed pursuant to Rule 424 promulgated under the 1933 Act, as may be necessary to keep each such Registration Statement effective at all times during the Registration Period for such Registration Statement, and, during such period, comply with the provisions of the 1933 Act with respect to the disposition of all Registrable Securities of the Company required to be covered by such Registration Statement until such time as all of such Registrable Securities shall have been disposed of in accordance with the intended methods of disposition by the seller or sellers thereof as set forth in such Registration Statement; provided, however, by 8:30 a.m. (New York time) on the Business Day immediately following each Effective Date, the Company shall file with the SEC in accordance with Rule 424(b) under the 1933 Act the final prospectus to be used in connection with sales pursuant to the applicable Registration Statement (whether or not such a prospectus is technically required by such rule). In the case of amendments and supplements to any Registration Statement which are required to be filed pursuant to this Agreement (including, without limitation, pursuant to this Section 3(b)) by reason of the Company filing a report on Form 8-K, Form 10-Q or Form 10-K or any analogous report under the Securities Exchange Act of 1934, as amended (the “1934 Act”), the Company shall, if permitted under the applicable rules and regulations of the SEC, have incorporated such report by reference into such Registration Statement, if applicable, or shall file such amendments or supplements with the SEC on the same day on which the 1934 Act report is filed which created the requirement for the Company to amend or supplement such Registration Statement.

(c) The Company shall (A) permit Legal Counsel and legal counsel for each other Investor to review and comment upon (i) each Registration Statement at least five (5) Business Days prior to its filing with the SEC and (ii) all amendments and supplements to each Registration Statement (including, without limitation, the prospectus contained therein) (except for Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any similar or successor reports) within a reasonable number of days prior to their filing with the SEC, and (B) not file any Registration Statement or amendment or supplement thereto in a form to which Legal Counsel or any legal counsel for any other Investor reasonably objects. The Company shall not submit a request for acceleration of the effectiveness of a Registration Statement or any amendment or supplement thereto or to any prospectus contained therein without the prior consent of Legal Counsel, which consent shall not be unreasonably withheld. The Company shall promptly furnish to Legal Counsel and legal counsel for each other Investor, without charge, (i) copies of any correspondence from the SEC or the Staff to the Company or its representatives relating to each Registration Statement, provided that such correspondence shall not contain any material, non-public information regarding the Company or any of its Subsidiaries (as defined in the Securities Purchase Agreement), (ii) after the same is prepared and filed with the SEC, one (1) copy of each Registration Statement and any amendment(s) and supplement(s) thereto, including, without limitation, financial statements and schedules, all documents incorporated therein by reference, if requested by an Investor, and all exhibits and (iii) upon the effectiveness of each Registration Statement, one (1) copy of the prospectus included in such Registration Statement and all amendments and supplements thereto. The Company shall reasonably cooperate with legal counsel for the Investor in performing the Company’s obligations pursuant to this Section 3.

(d) The Company shall promptly furnish to each Investor whose Registrable Securities are included in any Registration Statement, without charge and promptly at the Investor’s request, (i) after the same is prepared and filed with the SEC, at least one (1) copy of each Registration Statement and any amendment(s) and supplement(s) thereto, including, without limitation, financial statements and schedules, all documents incorporated therein by reference, if requested by an Investor, all exhibits and each preliminary prospectus, (ii) upon the effectiveness of each Registration Statement, ten (10) copies of the prospectus included in such Registration Statement and all amendments and supplements thereto (or such other number of copies as such Investor may reasonably request from time to time) and (iii) such other documents, including, without limitation, copies of any preliminary or final prospectus, as such Investor may reasonably request from time to time in order to facilitate the disposition of the Registrable Securities owned by such Investor.

(e) The Company shall use its best efforts to (i) register and qualify, unless an exemption from registration and qualification applies, the resale by Investors of the Registrable Securities covered by a Registration Statement under such other securities or “blue sky” laws of all applicable jurisdictions in the United States, (ii) prepare and file in those jurisdictions, such amendments (including, without limitation, post-effective amendments) and supplements to such registrations and qualifications as may be necessary to maintain the effectiveness thereof during the Registration Period, (iii) take such other actions as may be necessary to maintain such registrations and qualifications in effect at all times during the Registration Period, and (iv) take all other actions reasonably necessary or advisable to qualify the Registrable Securities for sale in such jurisdictions; provided, however, the Company shall not be required in connection therewith or as a condition thereto to (x) qualify to do business in any jurisdiction where it would not otherwise be required to qualify but for this Section 3(e), (y) subject itself to general taxation in any such jurisdiction, or (z) file a general consent to service of process in any such jurisdiction. The Company shall promptly notify Legal Counsel, legal counsel for each other Investor and each Investor who holds Registrable Securities of the receipt by the Company of any notification with respect to the suspension of the registration or qualification of any of the Registrable Securities for sale under the securities or “blue sky” laws of any jurisdiction in the United States or its receipt of actual notice of the initiation or threatening of any proceeding for such purpose.

(f) The Company shall notify Legal Counsel, legal counsel for each other Investor and each Investor in writing of the happening of any event, as promptly as practicable after becoming aware of such event, as a result of which the prospectus included in a Registration Statement, as then in effect, may include an untrue statement of a material fact or omission to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (provided that in no event shall such notice contain any material, non-public information regarding the Company or any of its Subsidiaries), and, subject to Section 3(r), promptly prepare a supplement or amendment to such Registration Statement and such prospectus contained therein to correct such untrue statement or omission and upon request deliver ten (10) copies of such supplement or amendment to Legal Counsel, legal counsel for each other Investor and each Investor (or such other number of copies as Legal Counsel, legal counsel for each other Investor or such Investor may reasonably request). The Company shall also promptly notify Legal Counsel, legal counsel for each other Investor and each Investor in writing (i) when a prospectus or any prospectus supplement or post-effective amendment has been filed, when a Registration Statement or any post-effective amendment has become effective (notification of such effectiveness shall be delivered to Legal Counsel, legal counsel for each other Investor and each Investor by facsimile or e-mail on the same day of such effectiveness and by overnight mail), and when the Company receives written notice from the SEC that a Registration Statement or any post-effective amendment will be reviewed by the SEC, (ii) of any request by the SEC for amendments or supplements to a Registration Statement or related prospectus or related information, (iii) of the Company's reasonable determination that a post-effective amendment to a Registration Statement would be appropriate; and (iv) of the receipt of any request by the SEC or any other federal or state governmental authority for any additional information relating to the Registration Statement or any amendment or supplement thereto or any related prospectus. The Company shall respond as promptly as practicable to any comments received from the SEC with respect to each Registration Statement or any amendment thereto (it being understood and agreed that the Company's response to any such comments shall be delivered to the SEC no later than fifteen (15) Business Days after the receipt thereof).

(g) The Company shall (i) use its best efforts to prevent the issuance of any stop order or other suspension of effectiveness of each Registration Statement or the use of any prospectus contained therein, or the suspension of the qualification, or the loss of an exemption from qualification, of any of the Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest possible moment and (ii) notify Legal Counsel, legal counsel for each other Investor and each Investor who holds Registrable Securities of the issuance of such order and the resolution thereof or its receipt of actual notice of the initiation or threat of any proceeding for such purpose.

(h) If any Investor may be required under applicable securities law to be described in any Registration Statement as an underwriter and such Investor consents to so being named an underwriter, at the request of any Investor, the Company shall furnish to such Investor, on the date of the effectiveness of such Registration Statement and thereafter from time to time on such dates as an Investor may reasonably request (i) a letter, dated such date, from the Company's independent certified public accountants in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the Investors, and (ii) an opinion, dated as of such date, of counsel representing the Company for purposes of such Registration Statement, in form, scope and substance as is customarily given in an underwritten public offering, addressed to the Investors.

(i) If any Investor may be required under applicable securities law to be described in any Registration Statement as an underwriter and such Investor consents to so being named an underwriter, upon the written request of such Investor, the Company shall make available for inspection by (i) such Investor, (ii) legal counsel for such Investor and (iii) one (1) firm of accountants or other agents retained by such Investor (collectively, the "**Inspectors**"), all pertinent financial and other records, and pertinent corporate documents and properties of the Company (collectively, the "**Records**"), as shall be reasonably deemed necessary by each Inspector, and cause the Company's officers, directors and employees to supply all information which any Inspector may reasonably request; provided, however, each Inspector shall agree in writing to hold in strict confidence and not to make any disclosure (except to such Investor) or use of any Record or other information which the Company's board of directors determines in good faith to be confidential, and of which determination the Inspectors are so notified, unless (1) the disclosure of such Records is necessary to avoid or correct a misstatement or omission in any Registration Statement or is otherwise required under the 1933 Act, (2) the release of such Records is ordered pursuant to a final, non-appealable subpoena or order from a court or government body of competent jurisdiction, or (3) the information in such Records has been made generally available to the public other than by disclosure in violation of this Agreement or any other Transaction Document (as defined in the Securities Purchase Agreement). Such Investor agrees that it shall, upon learning that disclosure of such Records is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt notice to the Company and allow the Company, at its expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, the Records deemed confidential. Nothing herein (or in any other confidentiality agreement between the Company and such Investor, if any) shall be deemed to limit any Investor's ability to sell Registrable Securities in a manner which is otherwise consistent with applicable laws and regulations.

(j) The Company shall hold in confidence and not make any disclosure of information concerning an Investor provided to the Company unless (i) disclosure of such information is necessary to comply with federal or state securities laws, (ii) the disclosure of such information is necessary to avoid or correct a misstatement or omission in any Registration Statement or is otherwise required to be disclosed in such Registration Statement pursuant to the 1933 Act, (iii) the release of such information is ordered pursuant to a subpoena or other final, non-appealable order from a court or governmental body of competent jurisdiction, or (iv) such information has been made generally available to the public other than by disclosure in violation of this Agreement or any other Transaction Document. The Company agrees that it shall, upon learning that disclosure of such information concerning an Investor is sought in or by a court or governmental body of competent jurisdiction or through other means, give prompt written notice to such Investor and allow such Investor, at such Investor's expense, to undertake appropriate action to prevent disclosure of, or to obtain a protective order for, such information.

(k) Without limiting any obligation of the Company under the Securities Purchase Agreement, the Company shall use its best efforts either to (i) cause all of the Registrable Securities covered by each Registration Statement to be listed on each securities exchange on which securities of the same class or series issued by the Company are then listed, if any, if the listing of such Registrable Securities is then permitted under the rules of such exchange, (ii) secure designation and quotation of all of the Registrable Securities covered by each Registration Statement on an Eligible Market (as defined in the Securities Purchase Agreement), or (iii) if, despite the Company's best efforts to satisfy the preceding clauses (i) or (ii) the Company is unsuccessful in satisfying the preceding clauses (i) or (ii), without limiting the generality of the foregoing, to use its best efforts to arrange for at least two market makers to register with the Financial Industry Regulatory Authority ("FINRA") as such with respect to such Registrable Securities. In addition, the Company shall cooperate with each Investor and any broker or dealer through which any such Investor proposes to sell its Registrable Securities in effecting a filing with FINRA pursuant to FINRA Rule 5110 as requested by such Investor. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 3(k).

(l) The Company shall cooperate with the Investors who hold Registrable Securities being offered and, to the extent applicable, facilitate the timely preparation and delivery of certificates (not bearing any restrictive legend) representing the Registrable Securities to be offered pursuant to a Registration Statement and enable such certificates to be in such denominations or amounts (as the case may be) as the Investors may reasonably request from time to time and registered in such names as the Investors may request.

(m) If requested by an Investor, the Company shall as soon as practicable after receipt of notice from such Investor and subject to Section 3(r) hereof, (i) incorporate in a prospectus supplement or post-effective amendment such information as an Investor reasonably requests to be included therein relating to the sale and distribution of Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being offered or sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities to be sold in such offering; (ii) make all required filings of such prospectus supplement or post-effective amendment after being notified of the matters to be incorporated in such prospectus supplement or post-effective amendment; and (iii) supplement or make amendments to any Registration Statement or prospectus contained therein if reasonably requested by an Investor holding any Registrable Securities.

(n) The Company shall use its best efforts to cause the Registrable Securities covered by a Registration Statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to consummate the disposition of such Registrable Securities.

(o) The Company shall make generally available to its security holders as soon as practical, but not later than ninety (90) days after the close of the period covered thereby, an earnings statement (in form complying with, and in the manner provided by, the provisions of Rule 158 under the 1933 Act) covering a twelve-month period beginning not later than the first day of the Company's fiscal quarter next following the applicable Effective Date of each Registration Statement.

(p) The Company shall otherwise use its best efforts to comply with all applicable rules and regulations of the SEC in connection with any registration hereunder.

(q) Within one (1) Business Day after a Registration Statement which covers Registrable Securities is declared effective by the SEC, the Company shall deliver, and shall cause legal counsel for the Company to deliver, to the transfer agent for such Registrable Securities (with copies to the Investors whose Registrable Securities are included in such Registration Statement) confirmation that such Registration Statement has been declared effective by the SEC.

(r) Notwithstanding anything to the contrary herein (but subject to the last sentence of this Section 3(r)), at any time after the Effective Date of a particular Registration Statement, the Company may delay the disclosure of material, non-public information concerning the Company or any of its Subsidiaries the disclosure of which at the time is not, in the good faith opinion of the board of directors of the Company, in the best interest of the Company and, in the opinion of counsel to the Company, otherwise required (a "**Grace Period**"), provided that the Company shall promptly notify the Investors in writing of the (i) existence of material, non-public information giving rise to a Grace Period (provided that in each such notice the Company shall not disclose the content of such material, non-public information to any of the Investors) and the date on which such Grace Period will begin and (ii) date on which such Grace Period ends, provided further that (I) no Grace Period shall exceed ten (10) consecutive days and during any three hundred sixty five (365) day period all such Grace Periods shall not exceed an aggregate of thirty (30) days, (II) the first day of any Grace Period must be at least five (5) Trading Days after the last day of any prior Grace Period and (III) no Grace Period may exist during the sixty (60) Trading Day period immediately following the Effective Date of such Registration Statement (provided that such sixty (60) Trading Day period shall be extended by the number of Trading Days during such period and any extension thereof contemplated by this proviso during which such Registration Statement is not effective or the prospectus contained therein is not available for use) (each, an "**Allowable Grace Period**"). For purposes of determining the length of a Grace Period above, such Grace Period shall begin on and include the date the Investors receive the notice referred to in clause (i) above and shall end on and include the later of the date the Investors receive the notice referred to in clause (ii) above and the date referred to in such notice. The provisions of Section 3(g) hereof shall not be applicable during the period of any Allowable Grace Period. Upon expiration of each Grace Period, the Company shall again be bound by the first sentence of Section 3(f) with respect to the information giving rise thereto unless such material, non-public information is no longer applicable. Notwithstanding anything to the contrary contained in this Section 3(r), the Company shall cause its transfer agent to deliver unlegended shares of Common Stock to a transferee of an Investor in accordance with the terms of the Securities Purchase Agreement in connection with any sale of Registrable Securities with respect to which such Investor has entered into a contract for sale, and delivered a copy of the prospectus included as part of the particular Registration Statement to the extent applicable, prior to such Investor's receipt of the notice of a Grace Period and for which the Investor has not yet settled.

(s) The Company shall take all other reasonable actions necessary to expedite and facilitate disposition by each Investors of its Registrable Securities pursuant to each Registration Statement.

(t) Neither the Company nor any Subsidiary or affiliate thereof shall identify any Investor as an underwriter in any public disclosure or filing with the SEC, the Principal Market or any Eligible Market without the Investor's consent and any Investor being deemed an underwriter by the SEC shall not relieve the Company of any obligations it has under this Agreement or any other Transaction Document (as defined in the Securities Purchase Agreement), except to the extent the Investor fails to so consent; provided, however, that the foregoing shall not prohibit the Company from including the disclosure found in the "Plan of Distribution" section attached hereto as Exhibit B in the Registration Statement.

(u) Neither the Company nor any of its Subsidiaries has entered, as of the date hereof, nor shall the Company or any of its Subsidiaries, on or after the date of this Agreement, enter into any agreement with respect to its securities, that would have the effect of impairing the rights granted to the Investors in this Agreement or otherwise conflicts with the provisions hereof.

4. Obligations of the Investors.

(a) At least five (5) Business Days prior to the first anticipated filing date of each Registration Statement, the Company shall notify each Investor in writing of the information the Company requires from each such Investor with respect to such Registration Statement. It shall be a condition precedent to the obligations of the Company to timely complete the registration pursuant to this Agreement with respect to the Registrable Securities of a particular Investor that such Investor shall promptly furnish to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it, as shall be reasonably required to effect and maintain the effectiveness of the registration of such Registrable Securities and shall promptly execute such documents in connection with such registration as the Company may reasonably request.

(b) Each Investor, by such Investor's acceptance of the Registrable Securities, agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of each Registration Statement hereunder, unless such Investor has notified the Company in writing of such Investor's election to exclude all of such Investor's Registrable Securities from such Registration Statement.

(c) Each Investor agrees that, upon receipt of any notice from the Company of the happening of any event of the kind described in Section 3(g) or the first sentence of 3(f), such Investor will immediately discontinue disposition of Registrable Securities pursuant to any Registration Statement(s) covering such Registrable Securities until such Investor's receipt of the copies of the supplemented or amended prospectus contemplated by Section 3(g) or the first sentence of Section 3(f) or receipt of notice that no supplement or amendment is required. Notwithstanding anything to the contrary in this Section 4(c), the Company shall cause its transfer agent to deliver unlegended shares of Common Stock to a transferee of an Investor in accordance with the terms of the Securities Purchase Agreement in connection with any sale of Registrable Securities with respect to which such Investor has entered into a contract for sale prior to the Investor's receipt of a notice from the Company of the happening of any event of the kind described in Section 3(g) or the first sentence of Section 3(f) and for which such Investor has not yet settled.

5. Expenses of Registration.

All reasonable expenses, other than underwriting discounts and commissions, incurred in connection with registrations, filings or qualifications pursuant to Sections 2 and 3, including, without limitation, all registration, listing and qualifications fees, printers and accounting fees, FINRA filing fees (if any) and fees and disbursements of counsel for the Company shall be paid by the Company. The Company shall reimburse Legal Counsel for its reasonable fees and disbursements in connection with registration and filing or qualification pursuant to Sections 2 and 3 of this Agreement which amount shall be limited to \$10,000 for each such registration and filing or qualification.

6. Indemnification.

(a) To the fullest extent permitted by law, the Company will, and hereby does, indemnify, hold harmless and defend each Investor and each of its directors, officers, shareholders, members, partners, employees, agents, advisors, representatives (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding the lack of such title or any other title) and each Person, if any, who controls such Investor within the meaning of the 1933 Act or the 1934 Act and each of the directors, officers, shareholders, members, partners, employees, agents, advisors, representatives (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding the lack of such title or any other title) of such controlling Persons (each, an “**Indemnified Person**”), against any losses, obligations, claims, damages, liabilities, contingencies, judgments, fines, penalties, charges, costs (including, without limitation, court costs, reasonable attorneys’ fees and costs of defense and investigation), amounts paid in settlement or expenses, joint or several, (collectively, “**Claims**”) incurred in investigating, preparing or defending any action, claim, suit, inquiry, proceeding, investigation or appeal taken from the foregoing by or before any court or governmental, administrative or other regulatory agency, body or the SEC, whether pending or threatened, whether or not an Indemnified Person is or may be a party thereto (“**Indemnified Damages**”), to which any of them may become subject insofar as such Claims (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon: (i) any untrue statement or alleged untrue statement of a material fact in a Registration Statement or any post-effective amendment thereto or in any filing made in connection with the qualification of the offering under the securities or other “blue sky” laws of any jurisdiction in which Registrable Securities are offered (“**Blue Sky Filing**”), or the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact contained in any preliminary prospectus if used prior to the effective date of such Registration Statement and contained in the final prospectus (as amended or supplemented, if the Company files any amendment thereof or supplement thereto with the SEC) or the omission or alleged omission to state therein any material fact necessary to make the statements made therein, in light of the circumstances under which the statements therein were made, not misleading or (iii) any violation or alleged violation by the Company of the 1933 Act, the 1934 Act, any other law, including, without limitation, any state securities law, or any rule or regulation thereunder relating to the offer or sale of the Registrable Securities pursuant to a Registration Statement or (iv) any violation of this Agreement (the matters in the foregoing clauses (i) through (iv) being, collectively, “**Violations**”). Subject to Section 6(c), the Company shall reimburse the Indemnified Persons, promptly as such expenses are incurred and are due and payable, for any legal fees or other reasonable expenses incurred by them in connection with investigating or defending any such Claim. Notwithstanding anything to the contrary contained herein, the indemnification agreement contained in this Section 6(a): (i) shall not apply to a Claim by an Indemnified Person arising out of or based upon a Violation which occurs in reliance upon and in conformity with information furnished in writing to the Company by such Indemnified Person for such Indemnified Person expressly for use in connection with the preparation of such Registration Statement or any such amendment thereof or supplement thereto, if such prospectus was timely made available by the Company pursuant to Section 3(d); and (ii) shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld or delayed. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Indemnified Person and shall survive the transfer of any of the Registrable Securities by any of the Investors pursuant to Section 9.

(b) In connection with any Registration Statement in which an Investor is participating, such Investor agrees to severally and not jointly indemnify, hold harmless and defend, to the same extent and in the same manner as is set forth in Section 6(a), the Company, each of its directors, each of its officers who signs the Registration Statement and each Person, if any, who controls the Company within the meaning of the 1933 Act or the 1934 Act (each, an “**Indemnified Party**”), against any Claim or Indemnified Damages to which any of them may become subject, under the 1933 Act, the 1934 Act or otherwise, insofar as such Claim or Indemnified Damages arise out of or are based upon any Violation, in each case, to the extent, and only to the extent, that such Violation occurs in reliance upon and in conformity with written information furnished to the Company by such Investor expressly for use in connection with such Registration Statement; and, subject to Section 6(c) and the below provisos in this Section 6(b), such Investor will reimburse an Indemnified Party any legal or other expenses reasonably incurred by such Indemnified Party in connection with investigating or defending any such Claim; provided, however, the indemnity agreement contained in this Section 6(b) and the agreement with respect to contribution contained in Section 7 shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of such Investor, which consent shall not be unreasonably withheld or delayed, provided further that such Investor shall be liable under this Section 6(b) for only that amount of a Claim or Indemnified Damages as does not exceed the net proceeds to such Investor as a result of the applicable sale of Registrable Securities pursuant to such Registration Statement. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Indemnified Party and shall survive the transfer of any of the Registrable Securities by any of the Investors pursuant to Section 9.

(c) Promptly after receipt by an Indemnified Person or Indemnified Party (as the case may be) under this Section 6 of notice of the commencement of any action or proceeding (including, without limitation, any governmental action or proceeding) involving a Claim, such Indemnified Person or Indemnified Party (as the case may be) shall, if a Claim in respect thereof is to be made against any indemnifying party under this Section 6, deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying party and the Indemnified Person or the Indemnified Party (as the case may be); provided, however, an Indemnified Person or Indemnified Party (as the case may be) shall have the right to retain its own counsel with the fees and expenses of such counsel to be paid by the indemnifying party if: (i) the indemnifying party has agreed in writing to pay such fees and expenses; (ii) the indemnifying party shall have failed promptly to assume the defense of such Claim and to employ counsel reasonably satisfactory to such Indemnified Person or Indemnified Party (as the case may be) in any such Claim; or (iii) the named parties to any such Claim (including, without limitation, any impleaded parties) include both such Indemnified Person or Indemnified Party (as the case may be) and the indemnifying party, and such Indemnified Person or such Indemnified Party (as the case may be) shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Person or such Indemnified Party and the indemnifying party (in which case, if such Indemnified Person or such Indemnified Party (as the case may be) notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, then the indemnifying party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the indemnifying party, provided further that in the case of clause (iii) above the indemnifying party shall not be responsible for the reasonable fees and expenses of more than one (1) separate legal counsel for such Indemnified Person or Indemnified Party (as the case may be). The Indemnified Party or Indemnified Person (as the case may be) shall reasonably cooperate with the indemnifying party in connection with any negotiation or defense of any such action or Claim by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnified Party or Indemnified Person (as the case may be) which relates to such action or Claim. The indemnifying party shall keep the Indemnified Party or Indemnified Person (as the case may be) reasonably apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall be liable for any settlement of any action, claim or proceeding effected without its prior written consent; provided, however, the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the prior written consent of the Indemnified Party or Indemnified Person (as the case may be), consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party or Indemnified Person (as the case may be) of a release from all liability in respect to such Claim or litigation, and such settlement shall not include any admission as to fault on the part of the Indemnified Party. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnified Party or Indemnified Person (as the case may be) with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action shall not relieve such indemnifying party of any liability to the Indemnified Person or Indemnified Party (as the case may be) under this Section 6, except to the extent that the indemnifying party is materially and adversely prejudiced in its ability to defend such action.

(d) The indemnification required by this Section 6 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 Indemnified Damages are incurred.

(e) The indemnity and contribution agreements contained herein shall be in addition to (i) any cause of action or similar right of the Indemnified Party or Indemnified Person against the indemnifying party or others, and (ii) any liabilities the indemnifying party may be subject to pursuant to the law.

7. Contribution.

To the extent any indemnification by an indemnifying party is prohibited or limited by law, the indemnifying party agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under Section 6 to the fullest extent permitted by law; provided, however: (i) no contribution shall be made under circumstances where the maker would not have been liable for indemnification under the fault standards set forth in Section 6 of this Agreement, (ii) no Person involved in the sale of Registrable Securities which Person is guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) in connection with such sale shall be entitled to contribution from any Person involved in such sale of Registrable Securities who was not guilty of fraudulent misrepresentation; and (iii) contribution by any seller of Registrable Securities shall be limited in amount to the amount of net proceeds received by such seller from the applicable sale of such Registrable Securities pursuant to such Registration Statement. Notwithstanding the provisions of this Section 7, no Investor shall be required to contribute, in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Investor from the applicable sale of the Registrable Securities subject to the Claim exceeds the amount of any damages that such Investor has otherwise been required to pay, or would otherwise be required to pay under Section 6(b), by reason of such untrue or alleged untrue statement or omission or alleged omission.

8. Reports Under the 1934 Act.

With a view to making available to the Investors the benefits of Rule 144, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144;

(b) file with the SEC in a timely manner all reports and other documents required of the Company under the 1933 Act and the 1934 Act so long as the Company remains subject to such requirements (it being understood and agreed that nothing herein shall limit any obligations of the Company under the Securities Purchase Agreement) and the filing of such reports and other documents is required for the applicable provisions of Rule 144; and

(c) furnish to each Investor so long as such Investor owns Registrable Securities, promptly upon request, (i) a written statement by the Company, if true, that it has complied with the reporting, submission and posting requirements of Rule 144, the 1933 Act and the 1934 Act, (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company with the SEC if such reports are not publicly available via EDGAR, and (iii) such other information as may be reasonably requested to permit the Investors to sell such securities pursuant to Rule 144 without registration.

9. Assignment of Registration Rights.

All or any portion of the rights under this Agreement shall be automatically assignable by each Investor to any transferee or assignee (as the case may be) of all or any portion of such Investor's Registrable Securities or Warrants if: (i) such Investor agrees in writing with such transferee or assignee (as the case may be) to assign all or any portion of such rights, and a copy of such agreement is furnished to the Company within a reasonable time after such transfer or assignment (as the case may be); (ii) the Company is, within a reasonable time after such transfer or assignment (as the case may be), furnished with written notice of (a) the name and address of such transferee or assignee (as the case may be), and (b) the securities with respect to which such registration rights are being transferred or assigned (as the case may be); (iii) immediately following such transfer or assignment (as the case may be) the further disposition of such securities by such transferee or assignee (as the case may be) is restricted under the 1933 Act or applicable state securities laws if so required; (iv) at or before the time the Company receives the written notice contemplated by clause (ii) of this sentence such transferee or assignee (as the case may be) agrees in writing with the Company to be bound by all of the provisions contained herein; (v) such transfer or assignment (as the case may be) shall have been made in accordance with the applicable requirements of the Securities Purchase Agreement and the Warrants (as the case may be); and (vi) such transfer or assignment (as the case may be) shall have been conducted in accordance with all applicable federal and state securities laws.

10. Amendment of Registration Rights.

Provisions of this Agreement may be amended and the observance thereof may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the Required Holders; provided that any such amendment or waiver that complies with the foregoing, but that disproportionately, materially and adversely affects the rights and obligations of any Investor relative to the comparable rights and obligations of the other Investors shall require the prior written consent of such adversely affected Investor. Any amendment or waiver effected in accordance with this Section 10 shall be binding upon each Investor and the Company, provided that no such amendment shall be effective to the extent that it (1) applies to less than all of the holders of Registrable Securities or (2) imposes any obligation or liability on any Investor without such Investor's prior written consent (which may be granted or withheld in such Investor's sole discretion). No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of this Agreement unless the same consideration (other than the reimbursement of legal fees) also is offered to all of the parties to this Agreement.

11. Miscellaneous.

(a) Solely for purposes of this Agreement, a Person is deemed to be a holder of Registrable Securities whenever such Person owns, or is deemed to own, of record such Registrable Securities. If the Company receives conflicting instructions, notices or elections from two or more Persons with respect to the same Registrable Securities, the Company shall act upon the basis of instructions, notice or election received from such record owner of such Registrable Securities.

(b) Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party) or electronic mail (provided that such sent email is kept on file (whether electronically or otherwise) by the sending party and the sending party does not receive an automatically generated message from the recipient's email server that such e-mail could not be delivered to such recipient); or (iii) one (1) Business Day after deposit with a nationally recognized overnight delivery service with next day delivery specified, in each case, properly addressed to the party to receive the same. The addresses, facsimile numbers and email addresses for such communications shall be:

If to the Company:

Pacific Ethanol, Inc..
400 Capitol Mall, Suite 2060
Sacramento, California 95814
Telephone: (916) 403-2123
Attention: Chief Executive Officer With a copy (for informational purposes only) to:

Troutman Pepper Hamilton Sanders LLP
5 Park Plaza, Suite 1400
Irvine, California 92614
Telephone: (949) 622-2700
Attention: Larry A. Cerutti, Esq.
Email: Larry.Cerutti@Troutman.com

If to the Transfer Agent:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
Telephone: (212) 936-5100
Facsimile: (718) 765-8719

Attention: Felix Orihuela and William Torrell to a Buyer, to its address, facsimile number and/or email address set forth on the Schedule of Buyers attached to the Securities Purchase Agreement, with copies to such Buyer's representatives as set forth on the Schedule of Buyers, or to such other address, facsimile number, and/or email address and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party five (5) days prior to the effectiveness of such change

(c) Failure of any party to exercise any right or remedy under this Agreement or otherwise, or delay by a party in exercising such right or remedy, shall not operate as a waiver thereof. The Company and each Investor acknowledge and agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that each party hereto shall be entitled to an injunction or injunctions to prevent or cure breaches of the provisions of this Agreement by any other party hereto and to enforce specifically the terms and provisions hereof (without the necessity of showing economic loss and without any bond or other security being required), this being in addition to any other remedy to which any party may be entitled by law or equity.

(d) All questions concerning the construction, validity, enforcement and interpretation of this Agreement 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. 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, 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. Each party 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 such party at the address for such 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 manner permitted by law. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.

(e) If any provision of this Agreement 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 Agreement so long as this Agreement 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).

(f) This Agreement, the other Transaction Documents, the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein constitute the entire agreement among the parties hereto and thereto solely with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein and therein. This Agreement, the other Transaction Documents, the schedules and exhibits attached hereto and thereto and the instruments referenced herein and therein supersede all prior agreements and understandings among the parties hereto solely with respect to the subject matter hereof and thereof; provided, however, nothing contained in this Agreement or any other Transaction Document shall (or shall be deemed to) (i) have any effect on any agreements any Investor has entered into with the Company or any of its Subsidiaries prior to the date hereof with respect to any prior investment made by such Investor in the Company, (ii) waive, alter, modify or amend in any respect any obligations of the Company or any of its Subsidiaries or any rights of or benefits to any Investor or any other Person in any agreement entered into prior to the date hereof between or among the Company and/or any of its Subsidiaries and any Investor and all such agreements shall continue in full force and effect or (iii) limit any obligations of the Company under any of the other Transaction Documents.

(g) Subject to compliance with Section 9 (if applicable), this Agreement shall inure to the benefit of and be binding upon the permitted successors and assigns of each of the parties hereto. This Agreement is not for the benefit of, nor may any provision hereof be enforced by, any Person, other than the parties hereto, their respective permitted successors and assigns and the Persons referred to in Sections 6 and 7 hereof.

(h) The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof. Unless the context clearly indicates otherwise, each pronoun herein shall be deemed to include the masculine, feminine, neuter, singular and plural forms thereof. The terms "including," "includes," "include" and words of like import shall be construed broadly as if followed by the words "without limitation." The terms "herein," "hereunder," "hereof" and words of like import refer to this entire Agreement instead of just the provision in which they are found.

(i) This Agreement may be executed in two or more identical counterparts, each of which shall be deemed an original, but all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party. In the event that any signature is delivered by facsimile transmission or by an email which contains a portable document format (.pdf) file of an executed signature page, such signature page 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 signature page were an original thereof.

(j) Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents as any other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent and no rules of strict construction will be applied against any party. Notwithstanding anything to the contrary set forth in Section 10, terms used in this Agreement but defined in the other Transaction Documents shall have the meanings ascribed to such terms on the Closing Date in such other Transaction Documents unless otherwise consented to in writing by each Investor.

(l) All consents and other determinations required to be made by the Investors pursuant to this Agreement shall be made, unless otherwise specified in this Agreement, by the Required Holders, determined as if all of the outstanding Warrants then held by the Investors have been converted for Registrable Securities without regard to any limitations on redemption, amortization and/or Warrant of the Warrants then held by Investors.

(m) This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

(n) The obligations of each Investor under this Agreement and the other Transaction Documents are several and not joint with the obligations of any other Investor, and no Investor shall be responsible in any way for the performance of the obligations of any other Investor under this Agreement or any other Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Investor pursuant hereto or thereto, shall be deemed to constitute the Investors as, and the Company acknowledges that the Investors do not so constitute, a partnership, an association, a joint venture or any other kind of group or entity, or create a presumption that the Investors are in any way acting in concert or as a group or entity with respect to such obligations or the transactions contemplated by the Transaction Documents or any matters, and the Company acknowledges that the Investors are not acting in concert or as a group, and the Company shall not assert any such claim, with respect to such obligations or the transactions contemplated by this Agreement or any of the other the Transaction Documents. Each Investor shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement or out of any other Transaction Documents, and it shall not be necessary for any other Investor to be joined as an additional party in any proceeding for such purpose. The use of a single agreement with respect to the obligations of the Company contained herein was solely in the control of the Company, not the action or decision of any Investor, and was done solely for the convenience of the Company and not because it was required or requested to do so by any Investor. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and an Investor, solely, and not between the Company and the Investors collectively and not between and among Investors.

[signature page follows]

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Registration Rights Agreement to be duly executed as of the date first written above.

COMPANY:
PACIFIC ETHANOL, INC.

By: _____
Name:
Title:

IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Registration Rights Agreement to be duly executed as of the date first written above.

BUYERS:

CVI INVESTMENTS, INC.

By: _____
Name:
Title:

SELLING STOCKHOLDERS

The shares of common stock being offered by the selling stockholders are those issuable to the selling stockholders upon exercise of the Warrants. For additional information regarding the issuance of the Warrants, see “Private Placement of Warrants” above. We are registering the shares of common stock in order to permit the selling stockholders to offer the shares for resale from time to time. Except for the ownership of the Warrants issued pursuant to the Securities Purchase Agreement [and a related offering], the selling stockholders have not had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder) of the shares of common stock held by each of the selling stockholders. The second column lists the number of shares of common stock beneficially owned by the selling stockholders, based on their respective ownership of shares of common stock, as of _____, 2020, assuming exercise of the Warrants held by each such selling stockholder on that date but taking account of any limitations on exercise set forth therein.

The third column lists the shares of common stock being offered by this prospectus by the selling stockholders and does not take in account any limitations on exercise of the Warrants set forth therein.

In accordance with the terms of a registration rights agreement with the holders of the Warrants, this prospectus generally covers the resale of 100% of the maximum number of shares of common stock issued or issuable pursuant to the Warrants, determined as if the outstanding Warrants were exercised in full (without regard to any limitations on exercise contained therein solely for the purpose of such calculation). The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of the Warrants, a selling stockholder may not convert the Warrants to the extent (but only to the extent) such selling stockholder or any of its affiliates would beneficially own a number of shares of our common stock which would exceed [4.99/9.99]% of the outstanding shares of the Company. The number of shares in the second column reflects these limitations. The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

Name of Selling Stockholder	Number of Shares of Common Stock Owned Prior to Offering	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Number of Shares of Common Stock of Owned After Offering
CVI Investments, Inc. (1)			

(1) []

PLAN OF DISTRIBUTION

We are registering the shares of common stock issuable upon Warrant of the Warrants to permit the resale of these shares of common stock by the holders of the Warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

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

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

The selling stockholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the selling stockholders may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

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

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

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

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

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

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$[] in total, including, without limitation, Securities and Exchange Commission filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, a selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

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



Pacific Ethanol, Inc.

Company IR Contact:
Pacific Ethanol, Inc.
916-403-2755
Investorrelations@pacificethanol.com

IR Agency Contact:
Moriah Shilton
LHA
415-433-3777

Media Contact:
Paul Koehler
Pacific Ethanol, Inc.
916-403-2790
paulk@pacificethanol.com

Pacific Ethanol Announces Strategic Realignment to Focus on Specialty Alcohols and Essential Ingredients, Intent to Change Corporate Name, Preliminary Third Quarter 2020 Results and Pricing of \$75 Million Equity Offering

Sacramento, CA, October 26, 2020 – Pacific Ethanol, Inc. (NASDAQ: PEIX) a leading producer of specialty alcohols and essential ingredients, today announced the company's strategic realignment to focus on specialty alcohols and essential ingredients as well as its intent to change its corporate name. The company also announced the pricing of a \$75 million equity offering and released certain preliminary results for the three months ended September 30, 2020.

"Our company was founded to supply low carbon renewable fuel for the transportation market. While we will continue to participate in that market, transportation fuels are no longer our primary focus. Beginning with our acquisition of Illinois Corn Processing, LLC in 2017 and continuing with our ongoing expansion of specialty alcohol production begun earlier this year, we have been making investments to transition our business from focusing on fuels to focusing on specialty alcohols and essential ingredients used in consumer products, including alcoholic beverages, personal care products, sanitizers, cleaners and pharmaceuticals. We recently obtained ISO 9001 certification for our largest specialty alcohols production facility, and we are pursuing additional qualifications that will enable us to supply specialty alcohols used in a wider range of consumer products. We believe focusing on products for these markets aligns us with strong secular growth trends that will enable us to deliver greater and more consistent profitability for our shareholders," stated Mike Kandris, Pacific Ethanol's Chief Executive Officer.

Strategic Realignment to Focus on Specialty Alcohols and Essential Ingredients

Over the past nine months, the company increased production of specialty alcohols used in consumer products and reduced fuel grade ethanol production. The company's production mix shifted from approximately 85% fuel grade ethanol and 15% specialty alcohols used in consumer products during 2019, to approximately 50% each for the three months ended September 30, 2020. Excluding sales of third-party ethanol marketed by the company's Kinergy subsidiary, specialty alcohols used in consumer products contributed approximately 45% of the company's revenues during the first nine months of 2020, compared with only 15% for all of 2019. Specialty alcohols used in consumer products sell at a premium to fuel grade ethanol and require systems, processes and certifications to produce them that are not required for fuel grade ethanol.



Pacific Ethanol, Inc.

Going forward, the company will focus on specialty alcohols and essential ingredients for four key markets: *Health, Home & Beauty; Food & Beverage; Essential Ingredients; and Renewable Fuels*. Products for the Health, Home & Beauty markets include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizer, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Essential Ingredients markets include yeast, corn gluten and distillers grains used in commercial animal feed and pet foods. Renewable Fuels includes fuel grade ethanol and distillers corn oil used as a feedstock for renewable diesel fuel.

As previously announced, the company idled its Magic Valley, Stockton and Madera fuel-grade ethanol distilleries earlier this year while continuing to operate its Columbia distillery. As part of the company's strategic realignment and new business focus, it intends to sell or repurpose these assets. Any proceeds from the sale of assets will be used to reduce debt, invest in core operations or for general corporate purposes. The company will provide a further update on its third quarter earnings conference call.

New Corporate Name and Brand Identity

In connection with the strategic realignment to focus on specialty alcohols and essential ingredients, the company will change its corporate name and introduce a new brand identity. The company's new name will reflect its focus on providing specialty alcohols and essential ingredients used in consumer products.

"The decision to rename our company is part of our transition from a transportation fuels-focused business to a consumer products and ingredients-focused business and reflects the fact that specialty alcohols used in consumer products are now the largest contributor to our revenues," said Kandris.



Pacific Ethanol, Inc.

Preliminary Third Quarter 2020 Results

For the three months ended September 30, 2020, the company generated net sales of approximately \$204 million and anticipates reporting net income of approximately \$15 million and Adjusted EBITDA of approximately \$34 million. This reflects a decrease in net sales of approximately \$161 million, an anticipated increase in net income of approximately \$43 million and an anticipated increase in Adjusted EBITDA of approximately \$46 million from the same period last year.

Total debt as of September 30, 2020, was approximately \$164 million, a decrease of \$29 million or 15% from total debt as of June 30, 2020. Cash as of September 30, 2020, was approximately \$39 million, an increase of approximately \$9 million or 30% from cash as of June 30, 2020. The company has reduced its net debt by approximately \$100 million from December 31, 2019, to September 30, 2020. Pacific Ethanol plans to issue a press release with its third quarter results on November 9, 2020, and hold a conference call on November 10, 2020, to discuss the results.

\$75 Million Equity Offering

Today, the company priced an underwritten public offering of 5,075,000 shares of its common stock at a price to the public of \$8.42 per share, representing a discount of approximately 5% to the closing price of \$8.87 on October 23, 2020. In lieu of common stock, certain investors will be issued 5-year pre-funded warrants to purchase 3,825,493 shares of common stock at a price of \$8.42 per pre-funded warrant. The total number of shares and pre-funded warrants being issued will be 8,900,493. In addition, in a concurrent private placement, the company also issued to investors, for a nominal price, warrants to purchase an additional 8,900,493 shares of common stock at an exercise price of \$9.757 per share. The warrants will become exercisable after the six-month anniversary of the offering and will expire on the 18-month anniversary of the offering. The aggregate gross proceeds from the offerings of common stock, pre-funded warrants and warrants is expected to be approximately \$75 million, before deducting underwriting discounts and commissions and estimated offering expenses payable by the company. The company intends to use the net proceeds from the offering to reduce debt, pay fees and expenses in connection with the offering and for general corporate purposes. Repaying a portion of the company's senior notes and term loans, which have interest rates of 15% and 7%, respectively, using proceeds from the equity offering is expected to be accretive to 2020 earnings per share on a pro forma basis. The offerings are expected to close on or about October 28, 2020, subject to customary closing conditions.



Pacific Ethanol, Inc.

“Over the past six months, we have made tremendous progress on our three key priorities —returning to profitability, reducing debt and repositioning to focus on differentiated, higher value-added products with favorable margins. The completion of the \$75 million equity offering improves the company’s balance sheet significantly and will enable us to pursue our growth initiatives. The entire organization has been energized by the changes we are making to our business, and our leadership team is dedicated to creating a company that can deliver consistent growth and profitability going forward. I am proud of what our team has achieved thus far this year and expect continued positive results into 2021 and beyond,” concluded Kandris.

Guggenheim Securities LLC is acting as the sole book-running manager for the equity offering. Craig-Hallum Capital Group LLC and H.C. Wainwright & Co. LLC are acting as co-managers for the equity offering.

The offering of common stock was made pursuant to Pacific Ethanol’s shelf registration statement filed with the Securities and Exchange Commission (SEC) and declared effective. This press release does not constitute an offer to sell, or the solicitation of an offer to buy, these securities, nor will there be any sale of these securities in any state or other jurisdiction in which such offer, solicitation or sale is not permitted.

A prospectus supplement and accompanying prospectus describing the terms of the proposed offering has been filed with the SEC. Copies of the final prospectus supplement and the accompanying prospectus relating to the securities being offered may also be obtained, when available, from Guggenheim Securities LLC, Attention: Syndicate Prospectus Department, 330 Madison Avenue, New York, NY 10017, or by telephone at (212) 518-9658 or by email at GSEquityProspectusDelivery@guggenheimpartners.com. Electronic copies of the final prospectus supplement and accompanying prospectus will also be available on the SEC's website at <http://www.sec.gov>.

Use of Non-GAAP Measures

Management believes that certain financial measures not in accordance with generally accepted accounting principles ("GAAP") are useful measures of operations. The company defines Adjusted EBITDA as unaudited net income (loss) attributed to Pacific Ethanol before interest expense, provision (benefit) for income taxes, asset impairments, loss on extinguishment of debt, purchase accounting adjustments, fair value adjustments, and depreciation and amortization expense. A reconciliation of Adjusted EBITDA to its most directly comparable GAAP measure, net income (loss) attributed to Pacific Ethanol, Inc. is included below. Management provides this non-GAAP measure so that investors will have the same financial information that management uses, which may assist investors in properly assessing the company's performance on a period-over-period basis. Adjusted EBITDA is not a measure of financial performance under GAAP and should not be considered as an alternative to net income (loss) or any other measure of performance under GAAP, or to cash flows from operating, investing or financing activities as an indicator of cash flows or as a measure of liquidity. Adjusted EBITDA has limitations as an analytical tool and you should not consider this measure in isolation or as a substitute for analysis of the company's results as reported under GAAP.



Pacific Ethanol, Inc.

Preliminary Reconciliation of Adjusted EBITDA to Net Income (Loss)

<i>(in thousands) (unaudited)</i>	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	2019	2020	2019
Net income (loss) attributed to Pacific Ethanol	\$ 15,215	\$ (27,326)	\$ 5,079	\$ (47,862)
Adjustments:				
Interest expense*	4,003	5,163	13,785	15,014
Fair value adjustments	6,856	—	7,497	—
Benefit for income taxes	—	—	—	—
Depreciation and amortization expense*	8,049	9,751	24,254	29,232
Total adjustments	18,908	14,914	45,536	44,246
Adjusted EBITDA	<u>\$ 34,123</u>	<u>\$ (12,412)</u>	<u>\$ 50,615</u>	<u>\$ (3,616)</u>

* Adjusted for non-controlling interests.

About Pacific Ethanol, Inc.

Pacific Ethanol, Inc. (PEIX) is a leading producer of specialty alcohols and essential ingredients. The company is focused on products for four key markets: Health, Home & Beauty, Food & Beverage, Essential Ingredients and Renewable Fuels. The company's customers include major food and beverage companies and consumer products companies. Pacific Ethanol's subsidiary, Kinergy Marketing LLC, markets all specialty alcohol products for Pacific Ethanol's distilleries as well as fuel grade ethanol for third parties. Pacific Ethanol's subsidiary, Pacific Ag. Products LLC, markets wet and dry distillers grains. For more information please visit www.pacificethanol.com.



Pacific Ethanol, Inc.

Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995

Statements and information contained in this communication that refer to or include Pacific Ethanol's estimated or anticipated future results or other non-historical expressions of fact are forward-looking statements that reflect Pacific Ethanol's current perspective of existing trends and information as of the date of the communication. Forward looking statements generally will be accompanied by words such as "anticipate," "believe," "plan," "could," "should," "estimate," "expect," "forecast," "outlook," "guidance," "intend," "may," "might," "will," "possible," "potential," "predict," "project," or other similar words, phrases or expressions. Such forward-looking statements include, but are not limited to, statements concerning future market conditions; Pacific Ethanol's new business focus and its effects; Pacific Ethanol's ability to obtain additional regulatory qualifications and their effects; Pacific Ethanol's intentions to remain in the transportation fuel market and sell or repurpose its Western assets; Pacific Ethanol's expectations of generating net income and Adjusted EBITDA in the stated amounts for the third quarter; Pacific Ethanol's expectations for continued positive performance into 2021 and beyond; and Pacific Ethanol's other plans, objectives, expectations and intentions. It is important to note that Pacific Ethanol's plans, objectives, expectations and intentions are not predictions of actual performance. Actual results may differ materially from Pacific Ethanol's current expectations depending upon a number of factors affecting Pacific Ethanol's business. These factors include, among others, adverse economic and market conditions, including for specialty alcohols and essential ingredients; export conditions and international demand for the company's products; fluctuations in the price of and demand for oil and gasoline; raw material costs, including production input costs, such as corn and natural gas; the effects – both positive and negative – of the novel coronavirus; and the ability of Pacific Ethanol to timely and successfully execute on its strategic realignment and new business focus. These factors also include, among others, the inherent uncertainty associated with financial and other projections; the anticipated size of the markets and continued demand for Pacific Ethanol's products; the impact of competitive products and pricing; the risks and uncertainties normally incident to the specialty alcohol production and marketing industries; changes in generally accepted accounting principles; successful compliance with governmental regulations applicable to Pacific Ethanol's distilleries, products and/or businesses; changes in laws, regulations and governmental policies; the loss of key senior management or staff; and other events, factors and risks previously and from time to time disclosed in Pacific Ethanol's filings with the Securities and Exchange Commission including, specifically, those factors set forth in the "Risk Factors" section contained in Pacific Ethanol's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 13, 2020.



Pacific Ethanol, Inc.

Specialty Alcohols and Essential Ingredients

INVESTOR PRESENTATION
Fall 2020



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Management Presenters



Mike Kandris
*President and
Chief Executive Officer*

- Named CEO in May 2020
- Director since June 2008 and COO from January 2013 to May 2020
- Previously served as an independent contractor to the Company with focus on plant operations
- 30 Years of general management experience in the transportation and logistics industry, including as President and COO of Ruan Transportation Management Systems
- B.S. in Business from California State University, Hayward

RUAN



Bryon McGregor
Chief Financial Officer

- 30 Years of treasury and finance experience
- Prior to joining Pacific Ethanol in 2008 as CFO, served as Brokerage Treasurer for E*TRADE Financial with responsibility for U.S. and international brokerage treasury operations, corporate finance and investor relations
- Prior to E*TRADE, project finance head for BP (formerly ARCO) and prior to that a Director at Credit Suisse
- B.S. degree in Business Management from Brigham Young University

E*TRADE



CREDIT SUISSE

Table of Contents

1. Company Overview
2. Industry & Markets
3. Strategy
4. Financial Overview



1. Company Overview



Who We Are

- Major producer of specialty alcohols and essential ingredients
 - 180 Acre campus in Pekin, IL
 - 250 mmgy of alcohol production capacity
- Focused on four key markets
 - Health, Home & Beauty
 - Food & Beverage
 - Essential Ingredients
 - Renewable Fuels
- Unique capabilities to produce specialty alcohols – *~50% of production from GNS, USP, API and Industrial grades*
- Customers include major food & beverage and consumer products companies
- Publicly traded with ~\$690 million market capitalization⁽¹⁾

(1) Based on \$10.83 share price and 63.5mm shares outstanding as of October 19, 2020

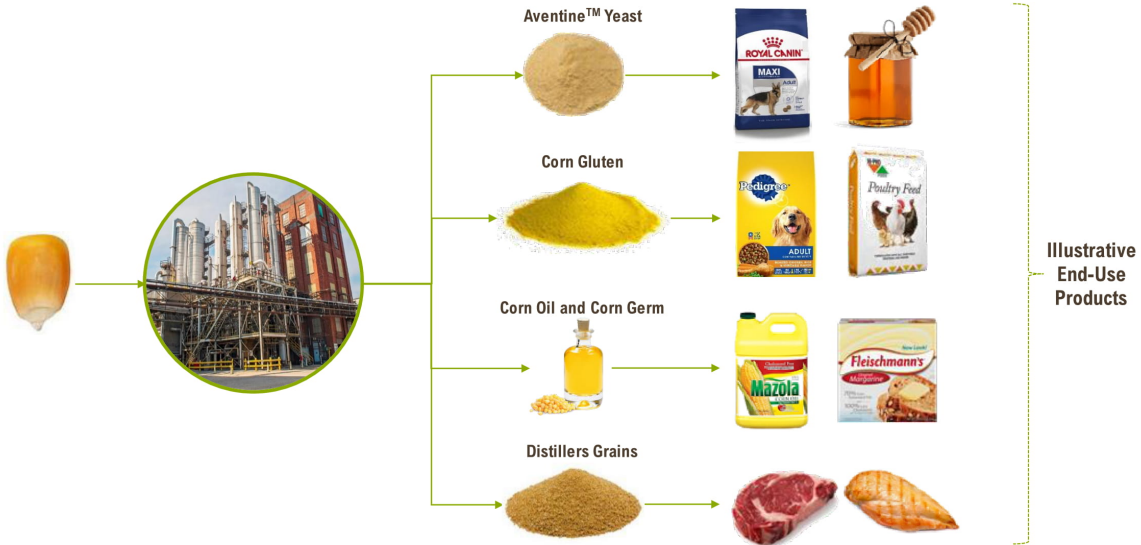
What We Do – Alcohols



We transform corn into specialty alcohols used in a wide range of consumer and commercial products

Note: API certification will be attained by year-end 2020

What We Do – *Essential Ingredients*



We transform corn into high value essential ingredients used in a wide range of consumer and commercial products

Our Four Focus Areas

High value products...			
Health, Home & Beauty	Food & Beverage	Essential Ingredients	Renewable Fuels
<ul style="list-style-type: none"> • API Grade Ethyl Alcohol <ul style="list-style-type: none"> • Mouthwash • Cosmetics • Pharmaceuticals • USP Grade Ethyl Alcohol <ul style="list-style-type: none"> • Hand Sanitizer • Disinfectant • Cleaning Products • Industrial Grade Ethyl Alcohol 	<ul style="list-style-type: none"> • Grain Neutral Spirits <ul style="list-style-type: none"> • Alcoholic Beverages • Vinegar • Corn Oil and Corn Germ • Carbon Dioxide <ul style="list-style-type: none"> • Beverage Carbonation • Dry Ice 	<ul style="list-style-type: none"> • Aventine™ Yeast • Corn Gluten • Corn Condensed Distillers Solubles • Corn Oil and Corn Germ • Distillers Grains 	<ul style="list-style-type: none"> • Ethanol <ul style="list-style-type: none"> • Transportation Fuels • Corn Oil and Corn Germ <ul style="list-style-type: none"> • Biodiesel Feedstock
			
...used by "Blue Chip" customers			

Our Transformation

July 2017 **Acquired Illinois** **Corn Processing**

- Enabled entry into specialty alcohols sector
- Created integrated Pekin campus delivering significant synergies

April 2020 **Divested Aurora Fuel** **Ethanol Plant**

- Sold remaining 74% interest in 145 mmgy fuel ethanol plant for \$52.8 million
- Plants had EBITDA losses ranging from \$3-20 million annually during prior 3 years

July 2020 **Specialty Alcohol** **Capacity Expansion**

- 55 mmgy expansion of specialty alcohol capacity announced, **increasing output by 65%**

Q4-2020 **Announcing New Company** **Name and Brand Identity**

- Retiring Pacific Ethanol name
- New name will reflect change in business mix and strategy

March 2020 **Idled Western Plants**

- Responded to lower fuel demand and a negative margin environment by idling over 60% of fuel grade ethanol capacity
- Currently evaluating sale or repurposing of the plants

May 2020 **Leadership Transition**

- Retirement of Neil Koehler announced
- Mike Kandris named CEO
- Additional changes in plant and sales management
- Established strong interdisciplinary team

Q3-2020 **Debt Reduction**

- Reduced net debt by nearly \$100 million from year end 2019 to September 30, 2020
- Settled long running litigation with major supplier and received settlement for \$11.8 million

2021 and Beyond

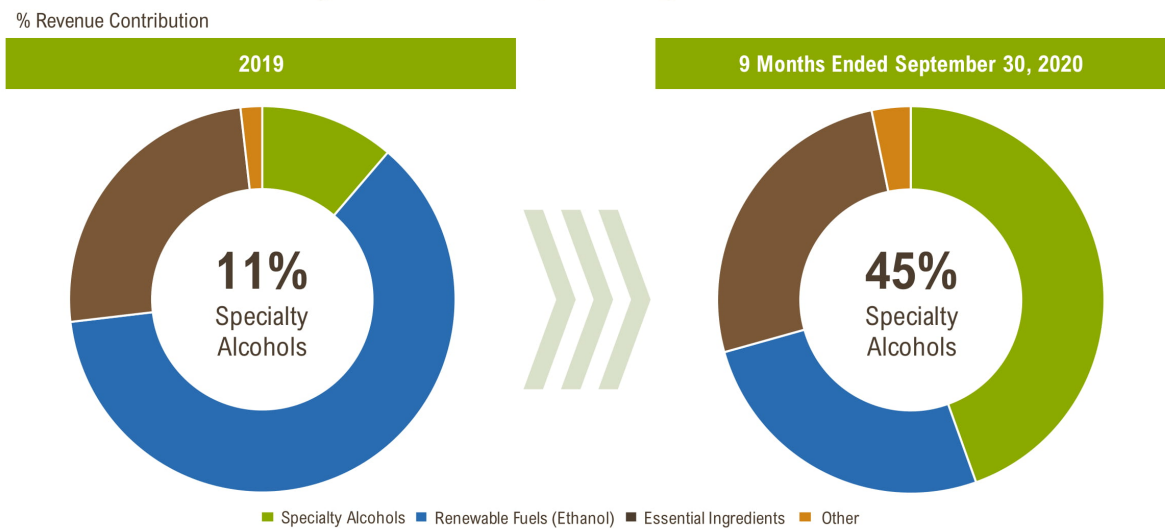
- Focus on specialty alcohols used in beverages and consumer products
- Expand into new, high value essential ingredients
- Make investments in productivity and efficiency
- Deliver consistent results

Specialty Alcohols *versus* Fuel Grade Ethanol

	Fuel Grade Ethanol	Specialty Alcohols
Market Size	<ul style="list-style-type: none"> • Large 	<ul style="list-style-type: none"> • Niche
Market Growth Drivers	<ul style="list-style-type: none"> • Regulatorily-driven • Renewable fuels standard 	<ul style="list-style-type: none"> • Consumer-driven • Alcoholic beverages • Cosmetics • Cleaning products • Pharmaceuticals
Product Pricing	<ul style="list-style-type: none"> • Commodity / Transparent 	<ul style="list-style-type: none"> • Specialized / Opaque
Price Volatility	<ul style="list-style-type: none"> • High 	<ul style="list-style-type: none"> • Low
Visibility	<ul style="list-style-type: none"> • 3 Month contracts • Fixed volume • Index pricing 	<ul style="list-style-type: none"> • 6-12 Month contracts • Fixed volume • Fixed price
Barriers to Entry	<ul style="list-style-type: none"> • Low 	<ul style="list-style-type: none"> • Special equipment and processes • Regulatory requirements • Certification regimes • Customer relationships

Specialty alcohols is a very different market than fuel grade ethanol

From Commodity Fuels to Specialty Alcohols



We have successfully transformed our business from a fuels focus to a specialty alcohols focus

Note: Excludes revenues from brokering third party gallons through Kinergy

What Makes Us Unique

Focus on Specialty Alcohols

- ~50% of production is specialty alcohols
- High margin products with low price volatility
- Significant barriers to entry – *regulation, certifications and customer relationships*

Strategic Location

- Location in the corn belt provides access to abundant, low cost corn feedstock
- Ability to ship by truck, barge or rail
 - Direct access to the Mississippi River system – *creates economical access to international markets*
 - Connected to all major Class I railroads

Beneficiary of COVID

- Established producer of alcohol used in hand sanitizer with longstanding reputation for safe products
- Strong demand for hand sanitizers and disinfecting cleaners for the foreseeable future
- Increasing regulation of hand sanitizers favors incumbent producers

Good Visibility

- 12 months of visibility on specialty alcohol demand
- Historically 80% of next year's specialty alcohol revenues contracted during Q4 of the prior year
- Majority of 2021 specialty alcohol production already contracted at fixed prices

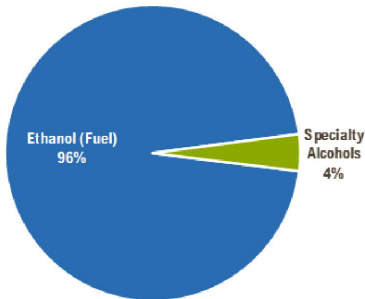


2. Industry & Markets

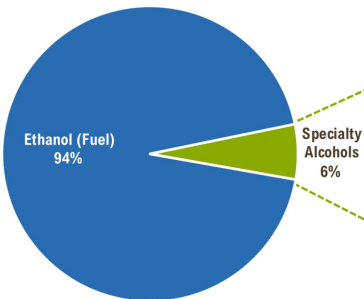


Specialty Alcohols Market

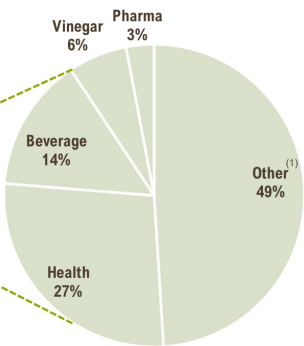
Ethyl Alcohol Market By Volume
15.9 bngy



Ethyl Alcohol Market By Value
\$23.5bn



Specialty Alcohol Market by End-Use



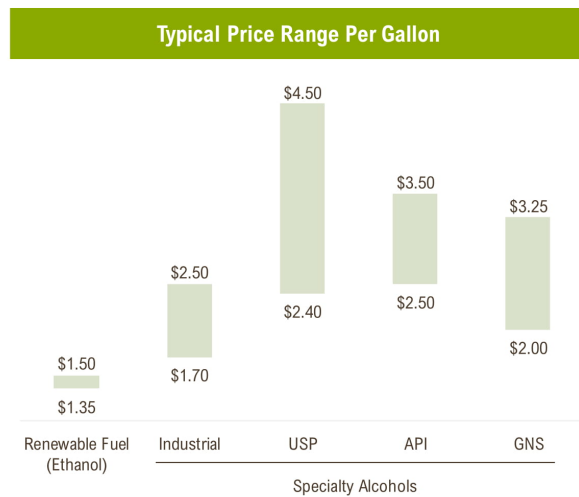
Specialty alcohols are small volume...

...but bigger dollars...

...used in a wide range of products

Source: EIA September Short-Term Energy Outlook, Distilled Spirits Council and Pacific Ethanol. Data is estimated for 2021
(1) Other includes Chemical Intermediaries and Toiletries & Cosmetics

Specialty Alcohols Sell at a Premium to Fuel Grade Ethanol

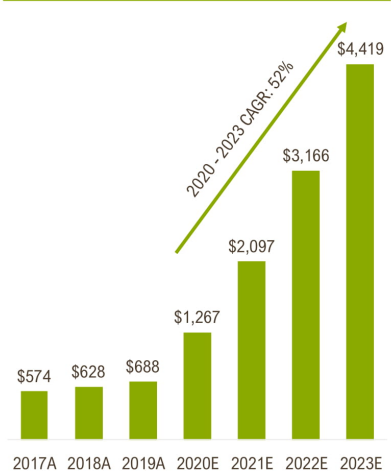


- Key Drivers of Price Premium Over Ethanol**
- More complex products to manufacture
 - Greater investments in QA and certifications required
 - Quality and consistency is very important
 - End-products are for human consumption or applied to the skin
 - Product recall averse
 - Customers less price sensitive than fuel buyers
 - Alcohol is a small portion of the total cost of the end-product
 - Used to secular rather than cyclical price movements (i.e. modest annual increases)
 - Opaque pricing – *not quoted commodities*

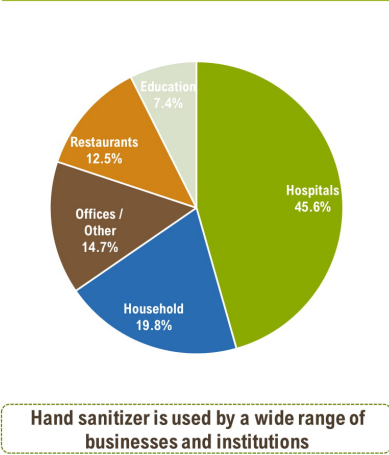
Note: Ranges represent Pacific Ethanol management estimates for average delivered price

Increasing Use of Hand Sanitizer Driving Incremental Demand

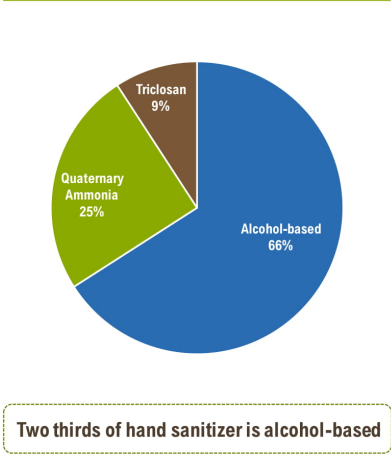
U.S. Hand Sanitizer Sales (\$mm)



Hand Sanitizer Sales by Application



Hand Sanitizer Sales by Type



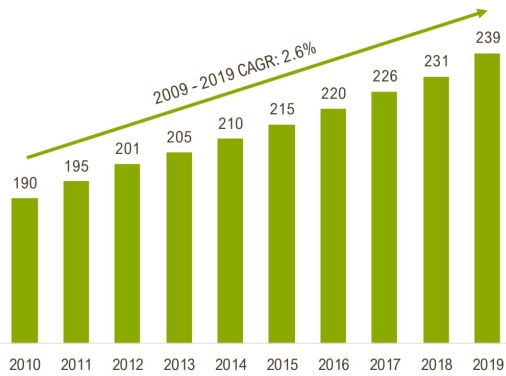
Growth in hand sanitizer sales could provide a powerful tailwind to specialty alcohol sales for the foreseeable future and demand may *increase* as schools, businesses and entertainment venues reopen

Source: The Insight Partners Analysis

Alcoholic Beverage Consumption Continues to Grow

U.S. Distilled Spirits Sales by Volume

Millions of 9-Liter Case Shipments



Key Drivers

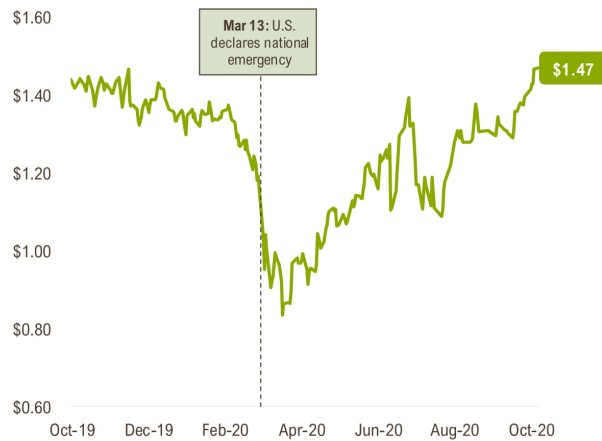
- Social currency of brand authenticity and heritage
- Modern consumers seeking unique and personalized experiences
- Millennials drawn to the cache of luxury brands including super premium spirits
- Improved consumer access to spirits products
- Growth of craft distillers building excitement and increasing spirits consumer base
- Diversity of spirits categories and cocktails meet wide-ranging consumer preferences

Distilled spirits share of the alcoholic beverage market has grown every year for 10 years – 38% share in 2019 vs. 33% in 2010

Source: Distilled Spirits Council

Ethanol Prices Have Largely Recovered to Pre-COVID Levels

LTM Ethanol Price / Gallon



Key Trends

- Market faced major challenges over past several years
 - Reduced export demand resulting from Trump Trade War with China
 - Reduced domestic demand and inventory build caused by unfavorable changes in the application of regulations and political machinations
 - Lower crush spreads in Summer of 2019 due to high ethanol inventories and higher corn prices resulting from extreme rains and flooding
 - Drop in transportation fuel demand by over 50% due to COVID 19 in 1H-20
- Partial recovery expected in 2021, but the industry environment remains challenging
 - While regulatory outlook is improving, material decisions and directions from EPA remain unresolved
 - Exports to China are expected to resume in 2021 and increase but trade disputes continue to temper demand

Ethanol prices have recovered to pre-COVID levels which creates upside to margins

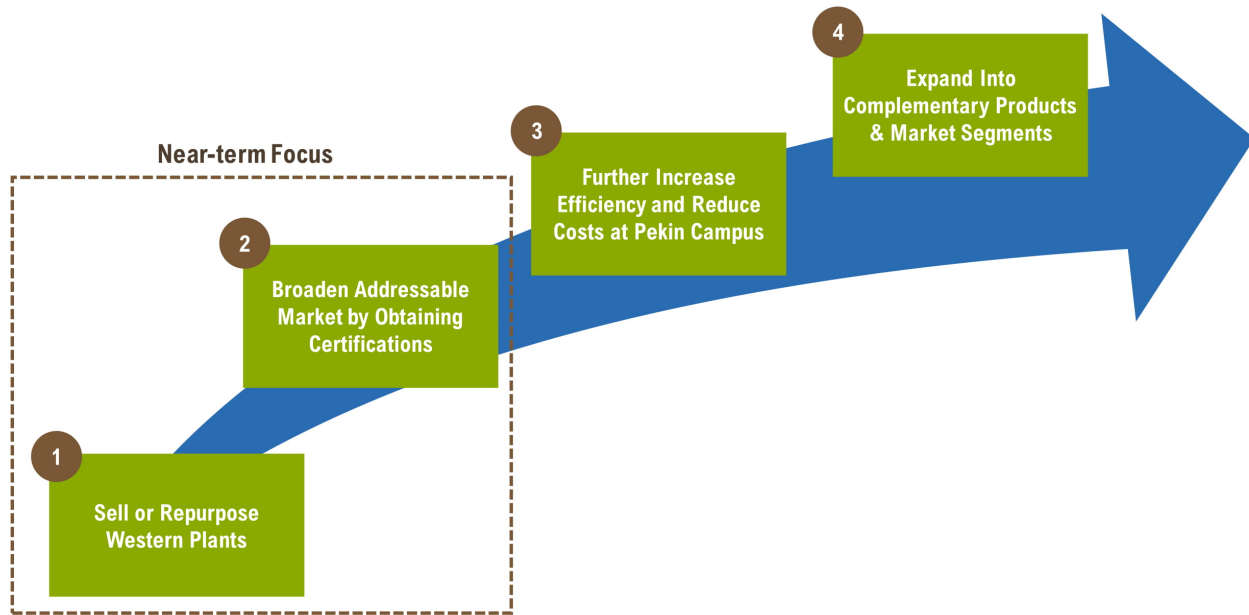
Source: NASDAQ market data as of October 19, 2020



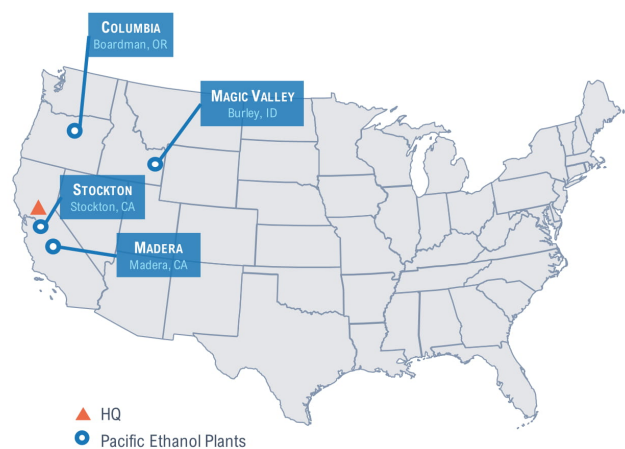
3. Strategy



The “Four Pillars” of Our Go Forward Strategy



1. Sell or Repurpose Western Plants



Plant	Fuel Grade Ethanol Capacity (mmgy)	Status	NBV PP&E (\$mm)
Magic Valley	60	Idled	\$26
Columbia	40	Operating	\$17
Stockton	60	Idled	\$38
Madera	40	Idled	\$34
TOTAL	200		\$115

Currently in the process of selling or repurposing fuel grade ethanol plants

2. Broaden Addressable Market by Obtaining Certifications

Certification	Description	Required For	Number of North American Holders (Alcohol Producers)	Status
ISO9001	<ul style="list-style-type: none"> World's most widely recognized quality management system certification 	<ul style="list-style-type: none"> Prerequisite for ICH Q7 and EXCiPACT certifications 	N/A	Certification attained on October 14, 2020
ICH Q7	<ul style="list-style-type: none"> International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) is a non-profit organization that brings together regulators and industry to develop and implement guidelines for the manufacturing and registration of medicines Q7 is a quality guideline that sets forth good manufacturing practices for active pharmaceutical ingredients 	<ul style="list-style-type: none"> Alcohol used as an ingredient in any pharmaceutical Includes: hand sanitizer, cough medicine, mouthwash, etc. 	0	Final certification audit by year end
EXCiPACT	<ul style="list-style-type: none"> EXCiPACT is a non-profit organization that sets standards for excipient safety and quality 	<ul style="list-style-type: none"> Alcohol used as an excipient in a drug An excipient is a substance formulated alongside the active ingredient of a medication, included for the purpose of long-term stabilization, bulking up solid formulations that contain potent active ingredients in small amounts, or to confer a therapeutic enhancement on the active ingredient 	1	Final certification audit by year end

Invested over \$1 million in obtaining certifications that will open up additional applications for our specialty alcohols with existing and new customers

Recent FDA Action Favors Incumbent Alcohol Suppliers

Recent FDA Announcements Regarding Hand Sanitizer

- 8/27/2020 – FDA warns consumers about hand sanitizer packaged in food and drink containers
- 8/24/2020 – FDA provides testing method to assess the quality of hand sanitizer products for impurities
- 8/12/2020 – FDA expands hand sanitizer warnings to include 1-propanol contamination
- 8/7/2020 – FDA includes methanol testing in temporary policies for alcohol-based hand sanitizers
- 7/31/2020 – FDA continues to find issues with certain hand sanitizer products
- 7/27/2020 – FDA reiterates warning about dangerous alcohol-based hand sanitizers containing methanol, takes additional action to address concerning products
- 7/2/2020 – FDA warns consumers of risk of methanol contamination in certain hand sanitizers
- 7/2/2020 – FDA takes action to warn, protect consumers from dangerous alcohol-based hand sanitizers containing methanol
- 6/19/2020 – FDA advises consumers not to use hand sanitizer products manufactured by Eskbiochem

Hand Sanitizer in the News

“The Food and Drug Administration has added to its list of hand sanitizers to avoid because they may contain **methanol, a toxic substance when absorbed through skin or ingested.**

Methanol is used industrially as a **solvent, pesticide and alternative fuel source**, according to the Centers for Disease Control and Prevention.

Exposure to it can cause **nausea, vomiting, headache, blurred vision, permanent blindness, seizures, coma, permanent damage to the nervous system and death**”

The products were added to **a list of more than 130 potentially dangerous or ineffective hand sanitizers** that have flooded the market since the start of the COVID-19 pandemic...”

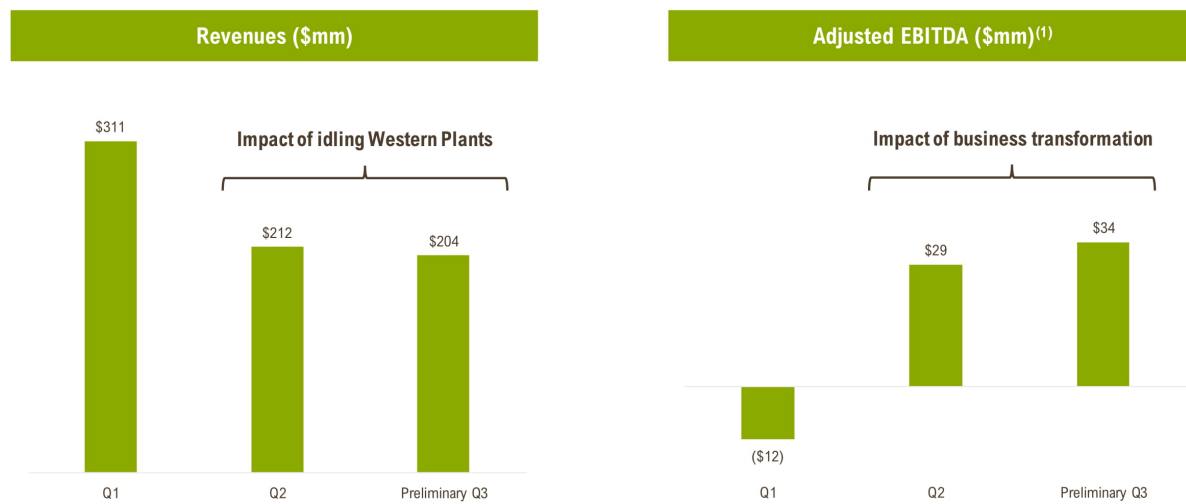




4. Financial Overview



2020 Quarterly Financial Summary



(1) Please see Appendix for information related to use of non-GAAP measures

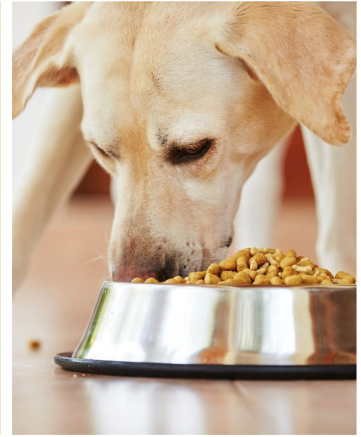
Significantly Improved Balance Sheet

Summary Debt Capitalization		
	Maturity Date	As of 30-Sept-20
Cash and Equivalents		\$38.7
Debt		
Kinergy Line of Credit	2-Aug-22	\$38.8
Pekin Term Loan	20-Aug-21	8.5
Pekin Revolver	1-Feb-22	32.0
ICP Term Loan	20-Sept-21	-
ICP Revolver	1-Sept-22	14.4
PEDE Senior Notes	15-Dec-21	60.3
PPP Loan	May-22	9.9
Total Debt		\$163.8
Net Debt		\$125.1

- Proceeds from the common stock offering will be used to (i) retire a material portion of our Senior Notes and term loans; (ii) pay transaction fees and expenses and (iii) for general corporate purposes
- Senior Notes have a 15% interest rate so redeeming them is accretive to EPS
- Potential to be “Net Debt Free” in 2021



Summary & Wrap-up



Key Takeaways

1

Transitioning to More Stable, Higher Margin Businesses

- Successfully transitioned production to ~50% specialty alcohols
- Focused on health and essential ingredients markets going forward
- Investing in QA / certifications to expand addressable customers and markets

2

Good Visibility on Near-Term Results

- Specialty alcohol sales contracted 12 months in advance
- Majority of 2021 specialty alcohol production already contracted at fixed prices
- Long-term tailwinds from hand sanitizer and beverage demand

3

Improving Balance Sheet and Conservative Financial Policies

- Reduced Net Debt by \$100 million from December 31, 2019 through September 30, 2020
- Targeting repayment of term loans by year end with free cash flow and the proceeds of this offering
- Potential to be "Net Debt free" in 2021



Appendix



Production Facilities – *Pekin Campus Overview*

- 180 Acre campus in Pekin, IL with 100 years of operating history
 - One wet mill
 - Two dry mills – *one dry grind ethanol plant; one distillery*
 - Yeast plant
 - ~275 Employees
- 250 mmgy⁽¹⁾ total alcohol production capacity
 - ~50% Specialty Alcohols
 - ~50% Fuel Grade Ethanol
- Located on the Illinois River with dedicated barge loading facility
 - Creates economical access to domestic and international markets
- Access to all Class 1 railroads via short line connection
- Opportunities for further integration, optimization and expansion
 - 50 Acres available for expansion
 - Near-term grain storage and handling improvements
- \$195 million of gross PP&E

(1) Excludes Western plants



Pekin Wet

Pekin, IL

Wet Mill/Yeast

Annual Capacity: 100mmgy/55mmby
(specialty & fuel grade alcohols)

Products: Corn gluten feed, corn germ & meal, CO₂, yeast



Pekin Dry

Pekin, IL

Dry Mill

Annual Capacity: 60mmgy
(fuel grade alcohol)

Products: DDG, corn oil



ICP

Pekin, IL

Dry Mill

Annual Capacity: 90mmgy
(specialty & fuel grade alcohols)

Products: DDG, corn oil, CO₂

Use of Non-GAAP Measures

Management believes that certain financial measures not in accordance with generally accepted accounting principles ("GAAP") are useful measures of operations. The company defines Adjusted EBITDA as unaudited net income (loss) attributed to Pacific Ethanol, Inc. before interest expense, provision (benefit) for income taxes, asset impairments, loss on extinguishment of debt, purchase accounting adjustments, fair value adjustments, and depreciation and amortization expense. A table is provided at the end of this release that provides a reconciliation of Adjusted EBITDA to its most directly comparable GAAP measure, net income (loss) attributed to Pacific Ethanol, Inc. Management provides this non-GAAP measure so that investors will have the same financial information that management uses, which may assist investors in properly assessing the company's performance on a period-over-period basis. Adjusted EBITDA is not a measure of financial performance under GAAP and should not be considered as an alternative to net income (loss) attributed to Pacific Ethanol, Inc. or any other measure of performance under GAAP, or to cash flows from operating, investing or financing activities as an indicator of cash flows or as a measure of liquidity. Adjusted EBITDA has limitations as an analytical tool and you should not consider this measure in isolation or as a substitute for analysis of the company's results as reported under GAAP.