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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same

offering: []

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: []

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

Large accelerated filer [] Accelerated filer []
 Non-accelerated filer [] Smaller reporting company [X]
 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 7(a)(2)(B) of the Securities Act. []

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be Registered ⁽¹⁾	Proposed maximum offering price per share	Proposed maximum aggregate offering price ⁽²⁾	Amount of registration fee
Non-transferable Rights (3)	N/A	N/A	N/A	N/A (4)
Common Stock, \$0.01 par value per share, underlying Rights		\$ []	\$2,400,000	\$ 291

In the event of a stock split, stock dividend or similar transaction involving our common stock, the number of (1) shares registered shall automatically be increased to cover the additional shares of common stock issuable pursuant to Rule 416 under the Securities Act of 1933, as amended.

(2) The offering price has been estimated solely for the purpose of computing the amount of the registration fee in accordance with Rule 457(o).

(3) We are granting, for no consideration, to our securityholders non-transferable Rights to purchase shares of our common stock.

(4)

The non-transferable Rights are being issued without consideration. Pursuant to Rule 457(g), no separate registration fee is payable with respect to the Rights being offered hereby because the Rights are being registered in the same registration statement as the securities being offered upon exercise of the Rights.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed without notice. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale of these securities is not permitted.

**PRELIMINARY PROSPECTUS
SUBJECT TO COMPLETION, DATED MAY 3, 2019**

Acorn Energy, Inc.

**Rights to Purchase Shares of Common Stock
[] Shares of Common Stock**

We are distributing, at no charge, to holders of our outstanding Common Stock and to certain holders of outstanding warrants to purchase shares of our Common Stock, non-transferable subscription rights, which we refer to as the “Rights,” to purchase in the aggregate up to [] shares of our Common Stock at a cash subscription price of \$[] per whole share. We refer to the offering of our Common Stock through the Rights as the “Rights Offering.”

In the Rights Offering, you will receive one (1) Right for each one (1) share of our Common Stock you hold as of 5:00 p.m. Eastern Daylight Time, on [], 2019, the record date for the Rights Offering. If you hold warrants to purchase shares of our Common Stock, you will also receive one (1) Right for each one (1) share of our Common Stock that you could purchase as of 5:00 p.m. EDT on the record date by exercising your warrants. You will not need to exercise your warrants in order to receive Rights.

Each Right will entitle you to purchase [] of a share of our Common Stock at a subscription price of \$[] per whole share. The subscription price was determined by our Board of Directors. We will not issue fractional shares in the Rights Offering. You will not receive any Rights in our Rights Offering unless you hold, as of 5:00 p.m. EDT on the record date, shares of our Common Stock or warrants to purchase shares of our Common Stock.

You may exercise your Rights at any time beginning on the effective date of this prospectus and before the expiration of the Rights Offering, on [], 2019, at 5:00 p.m., Eastern Daylight Time, which is [] calendar days after the

effective date of this prospectus, unless we extend the Rights Offering period, as determined at our sole discretion, for up to [] calendar days.

We reserve the right to cancel the Rights Offering for any reason at our sole discretion any time before the expiration date. If we cancel the Rights Offering, any and all subscription payments that have been received by our Subscription Agent will be returned as soon as reasonably possible, without interest or penalty.

American Stock Transfer & Trust Company, LLC (referred to in this prospectus as the “Subscription Agent”) will serve as the Subscription Agent for the Rights Offering. The Subscription Agent will hold in escrow the funds we receive from subscribers until we complete or cancel the Rights Offering.

[] (referred to in this prospectus as the “Information Agent”) will act as our Information Agent in connection with the Rights Offering. You may contact them directly with any questions or comments toll-free at [].

We are directly offering the Rights and the shares of Common Stock issuable upon exercise of the Rights, all of which are covered by this Registration Statement. We have not engaged the services of any underwriters or selling agents. We will bear all costs, expenses and fees in connection with the registration of the shares of Common Stock issuable upon exercise of the Rights.

Our Common Stock is traded on the OTCQB marketplace under the symbol ACFN. The shares of Common Stock that we issue in connection with the Rights Offering will also trade on the OTCQB marketplace under the same symbol. The Rights will not be listed for trading on the OTCQB marketplace or any other stock exchange or market. On May [], 2019, the last reported sale price for our Common Stock was \$[] per share. As of the record date for the Rights Offering, our company had [] shares of Common Stock issued and outstanding, and warrants to purchase 2,357,142 shares of our Common Stock held by warrant holders who will receive Rights.

Neither our Board of Directors nor our management has made any recommendations regarding the exercise of your Rights. You may not revoke or revise any exercises of Rights once made, unless we cancel or make a fundamental change to the terms and conditions of the Rights Offering. You should carefully read this entire prospectus and all information that we incorporate by reference before you make any investment decision. See the section in this prospectus under the caption: “Incorporation of Certain Information by Reference.” **Investing in our Common Stock involves certain risks. See “Risk Factors” beginning on page 14 to read about factors you should consider before exercising your Rights.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2019.

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ABOUT THIS PROSPECTUS

In considering any decision regarding an investment in the shares of our Common Stock which are the subject of this prospectus, you should rely only upon the information contained in this prospectus and the information that we incorporate by reference into this prospectus. We have not authorized any persons to provide you with information which is different from the information contained in this prospectus or the information that we incorporate by reference into this prospectus. We take no responsibility for, and can provide no assurances as to the reliability of, any other information that you may obtain from other sources. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus. Any and all information that we incorporate by reference is accurate only as of the date of the referenced document so incorporated.

This prospectus is an offer to sell only the securities that are offered hereby, and only where it is lawful to do so. This prospectus does not offer to sell, or ask for offers to buy, any shares of our Common Stock in any state or jurisdiction (within or outside the United States) where it would not be lawful or where the person making the offer is not qualified to do so.

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the "SEC"). Please carefully read both this entire prospectus together with all information that we incorporate by reference. See the section of this prospectus under the caption: "Incorporation of Certain Information by Reference."

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to "Acorn Energy," "Acorn," "the Company," "we," "us," "our," and similar references refer to Acorn Energy, Inc. and its subsidiaries. References in this prospectus to "Subscription Agent" refer to American Stock Transfer & Trust Company, LLC. References in this prospectus to "Information Agent" refer to [].

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we incorporate by reference into this prospectus may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, about the us and our subsidiaries. We intend the coverage of our forward-looking statements to be within the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not statements of historical fact, and can be identified by the use of forward-looking terminology such as "believes," "expects," "may," "will," "could," "should," "projects," "plans," "goal," "target," "potential," "estimates," "pro forma," "seeks," "intends," or "anticipates" or the negative form of these terms or comparable qualifying words. The basis for our forward-looking statements includes our current expectations and a number of known and unknown risks and uncertainties that could cause actual outcomes to differ materially from our

forward-looking statements. We caution readers not to place undue reliance on our forward-looking statements. In light of inherent uncertainties in forward-looking statements, the reader should not interpret inclusion of these statements as any representation by us or any other person that we will achieve or accomplish any of the matters expressed within the scope of any of our forward-looking statements. We assume no obligation to publicly update or revise our forward-looking statements or to advise of any changes regarding the basis of our assumptions and other factors relating to the forward-looking statements.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary is not complete and may not contain all of the information that you should consider before making any decision to invest in our Common Stock. Prior to making any investment decision, we encourage you to read the entire prospectus carefully, including the risks discussed in the “Risk Factors” section, as well as risk factors incorporated into this prospectus by reference to other documents. We also encourage you to review our financial statements and the other information that we provide in our periodic reports and other documents that we file with the SEC, as described under the caption: “Where You Can Find More Information.”

Our Company

Acorn Energy, Inc. is a holding company focused on technology driven solutions for energy infrastructure asset management. We provide the following services and products through our OmniMetrix™, LLC subsidiary:

Power Generation (“PG”) monitoring. OmniMetrix’s PG activities provide wireless remote monitoring and control systems and services for critical assets as well as Internet of Things applications.

Cathodic Protection (“CP”) monitoring. OmniMetrix’s CP activities provide for remote monitoring of cathodic protection systems on gas pipelines for gas utilities and pipeline companies.

Our Common Stock is traded on the OTCQB marketplace under the symbol ACFN. The address of our principal executive office is 1000 N West Street, Suite 1200, Wilmington, Delaware 19801.

The Rights Offering

Securities Offered

We are distributing, at no charge, to holders of our outstanding Common Stock and to certain holders of outstanding warrants to purchase shares of our Common Stock, non-transferable subscription rights (which we refer to as the “Rights”) to purchase in the aggregate up to [] shares of our Common Stock, \$0.01 par value per share. You will receive one (1) Right for each one (1) share of our Common Stock you hold as of 5:00 p.m. EDT on the record date. If you hold warrants to purchase shares of our Common Stock, you will also receive one (1) Right for each one (1) share of our Common Stock that you could purchase as of 5:00 p.m. EDT on the record date by exercising your warrants. You will not need to exercise your warrants in order to receive Rights. Each Right will entitle you to purchase [] of a share of our Common Stock.

<i>Subscription Price</i>	<p>The subscription price is \$[] per whole share, payable in cash. The subscription price was determined by our Board of Directors based upon a []% discount [expected to be between 15% and 20%] to the closing price of our Common Stock on the record date. To be effective, any payment related to the exercise of a Right must be received by the Subscription Agent before the expiration of the Rights Offering as described below.</p>
	<p>After the date of this prospectus, our Common Stock may trade at prices below the subscription price. In that event, our Board of Directors may change the subscription price of this offering or determine to cancel or otherwise alter the terms of the Rights Offering.</p>
<i>Subscription Right</i>	<p>Each Right will entitle you to purchase [] of a share of our Common Stock at a subscription price of \$[] per whole share. See the section in this prospectus under the caption: “The Rights Offering—The Rights.”</p>
<i>Record Date</i>	<p>5:00 p.m., Eastern Daylight Time, on [], 2019.</p>
<i>Expiration of the Offering Period</i>	<p>5:00 p.m., Eastern Daylight Time, on [], 2019 which is [] calendar days after the effective date of this prospectus. We may extend, in our sole discretion, the expiration of the offering period for exercising your Rights for a period not to exceed [] calendar days.</p>
<i>No Fractional Shares</i>	<p>We will not issue any fractional shares in the Rights Offering. You may only exercise your Rights to purchase shares in whole numbers.</p>
<i>Use of Proceeds</i>	<p>We intend to use the net proceeds from the Rights Offering to finance our contemplated reacquisition of the outstanding 20% minority interest in our OmniMetrix LLC subsidiary and to support the growth of our OmniMetrix business, with any net proceeds not so utilized to be used for general working capital purposes. See the section in this prospectus under the caption: “Use of Proceeds.”</p>
<i>Non-transferability of Rights</i>	<p>The Rights that we issue in the Rights Offering may not be sold, transferred or subject to any other disposition. See the section in this prospectus under the caption: “The Rights Offering—Non-transferability of Rights.”</p>
<i>No Board Recommendation</i>	<p>Our Board of Directors is making no recommendation regarding your exercise of the Rights. You should carefully consider all relevant facts and circumstances in determining whether or not to exercise your Rights. See the section in this prospectus under the caption: “Risk Factors” for a discussion of some of the risks related to exercising your Rights and investing in our Common Stock.</p>

No Revocation Except in the event we make a fundamental change to the terms and conditions of our Rights Offering, your exercise of Rights will be irrevocable, even if you later change your mind about exercising your Rights. The irrevocability of your exercise will apply even if new information comes to your attention or if the market price of our Common Stock falls below the subscription price of \$[] per whole share. Your exercise of the Rights will also remain irrevocable if the authorized period for the Rights Offering is extended by our Board of Directors. You should not exercise your Rights unless you are certain that you wish to purchase shares of our Common Stock at the subscription price of \$[] per whole share.

Extension We reserve the right to extend the Rights Offering period for a period not to exceed [] calendar days. If we decide to extend the Rights Offering period, we will issue a press release announcing the extension in advance of the expiration of the Rights Offering period. We may also extend the duration of the Rights Offering period if applicable law or regulations require us to do so. Our Board of Directors has broad discretion regarding any and all determinations whether or not to extend the Rights Offering period. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”

Cancellation Our Board of Directors may at its sole discretion cancel the Rights Offering at any time before the expiration of the Rights Offering period. If we cancel the Rights Offering, we will issue a press release notifying all of our securityholders of the cancellation. If we cancel the Rights Offering, the Subscription Agent will promptly return all subscription payments, without interest or penalty, as soon as reasonably possible after the cancellation date. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”

Amendment Our Board of Directors reserves the right to amend or modify the terms of the Rights Offering. The amendments or modifications may be made for any reason. These changes may include, for example, changes to the subscription price or other matters that may induce greater participation by our securityholders in the Rights Offering. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”

- Fundamental Changes*** If we make any fundamental change to the terms of the Rights Offering after the date of effectiveness of this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included and offer subscribers the opportunity to cancel their subscriptions. In such event, if you have subscribed to purchase shares in the Rights Offering and request a refund, we will issue the refund to you and recirculate an amended prospectus after the post-effective amendment is declared effective with the SEC. If we extend the expiration date of the Rights Offering period in connection with any post-effective amendment, we will allow holders of Rights a reasonable period of additional time to make new investment decisions on the basis of the new information set forth in the amended prospectus that will form a part of the post-effective amendment registration statement. In such event, we will issue a press release announcing the changes to the Rights Offering and the new expiration date. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”
- Procedures for Exercising Rights*** To exercise your Rights, you must complete the Rights certificate and deliver the certificate to the Subscription Agent before the expiration of the offering period. Your subscription must include full payment for the exercise of all of your Rights that you wish to exercise. For details regarding the procedure and requirements for exercising your Rights, see the section in this prospectus under the caption: “The Rights Offering—Method of Exercising Rights”
- You may deliver the subscription documents and payments by mail or overnight commercial carrier. If regular mail is used for this purpose, we recommend that you use registered mail, properly insured, with return receipt requested.
- Brokerage Account Stockholders*** If you are a beneficial owner of shares that are registered in the name of a broker, dealer, bank or other nominee, and you wish to participate in the Rights Offering, you should immediately instruct your broker, dealer, bank or other nominee to exercise your Rights on your behalf and deliver all required documents and payment before the expiration of the Rights Offering period.
- Guaranteed Delivery Procedures*** If you are not able to deliver your Rights certificate to the Subscription Agent before the expiration of the Rights Offering period, you may follow the procedures that we describe in the section of this prospectus under the caption: “The Rights Offering—Guaranteed Delivery Procedures.”

Minimum Subscription Requirement We have not set any minimum subscription amount. You may exercise your Rights in the full amount of your allocation or in any partial amount that you determine. You may also choose not to exercise any of your Rights.

No Obligation to Participate in the Rights Offering You are under no obligation to exercise your Rights to subscribe for any shares in the Rights Offering. If you choose not to participate in the Rights Offering, you do not have to take any special action to decline to participate.

Backstop Purchasers We have entered into a Backstop Agreement with Leap Tide Capital Management LLC (“Leap Tide”), Michael Osterer (one of our Directors), and Gary Mohr (one of our Directors and, together with Leap Tide and Mr. Osterer, the “Backstop Purchasers”), pursuant to which each Backstop Purchaser has agreed to exercise in full all of the Rights distributed for the shares of Common Stock that they beneficially own and, upon expiration of the Rights Offering, to purchase from the Company (directly or through an affiliate), at the price per share equal to the subscription price of \$[] per share, any and all shares of Common Stock that other securityholders do not subscribe for in our Rights Offering (“Unsubscribed Rights Shares”), subject to the respective terms, conditions and limitations of the Backstop Agreement. Jan H. Loeb, our President and Chief Executive Officer, is the sole manager of Leap Tide, with sole voting and dispositive power over the securities held by such entity.

Backstop Agreement We have entered into a Backstop Agreement with the Backstop Purchasers. The Backstop Purchasers’ obligations under the Backstop Agreement are subject to various conditions as described in the section of this prospectus under the caption: “The Backstop Agreement.”

Commitments to Exercise Rights in Full Pursuant to the Backstop Agreement, each of the Backstop Purchasers has agreed to exercise in full all of the Rights distributed for the shares of Common Stock that they beneficially own. In addition, Mr. Loeb has agreed to exercise all of his Rights in full.

<i>Backstop Commitments</i>	Subject to the terms and conditions set forth in the Backstop Agreement, the Backstop Purchasers have agreed to purchase from us, substantially simultaneously with the completion of the Rights Offering, any and all of the Unsubscribed Rights Shares. The Backstop Agreement provides that, first, the three Backstop Purchasers shall each purchase one-third of the first \$300,000 of aggregate subscription price of Unsubscribed Rights Shares, and that Leap Tide shall then purchase any and all remaining Unsubscribed Rights Shares.
<i>The Backstop Closing</i>	The transactions contemplated by the Backstop Agreement will close substantially simultaneously with the completion of the Rights Offering, thus assuring the sale of all Unsubscribed Rights Shares.
<i>Backstop Consideration</i>	The Backstop Purchasers will not receive any compensation or other consideration for entering into the Backstop Agreement.
<i>Backstop Purchasers' Share Ownership</i>	As of the record date for the Rights Offering: (1) Leap Tide beneficially owned less than 1% of our Common Stock, and Mr. Loeb beneficially owned approximately []% of our Common Stock (including all of the shares beneficially owned by Leap Tide); (2) Michael Osterer beneficially owned approximately []% of our Common Stock; and (3) Gary Mohr owned approximately []% of our Common Stock.
<i>Exclusion from Registration of shares sold pursuant to Backstop Agreement and upon Exercise of Rights by Mr. Loeb</i>	We will sell the shares to the Backstop Purchasers pursuant to the Backstop Agreement, and to Mr. Loeb (our President and Chief Executive Officer and the sole manager of one of the Backstop Purchasers) upon the exercise of his Rights, on a private basis in transactions exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"). We are not registering in the registration statement of which this prospectus forms a part any of the shares sold pursuant to the Backstop Agreement or pursuant to the exercise by Mr. Loeb of his Rights.
<i>Registration Rights</i>	We have entered into a Registration Rights Agreement with the Backstop Purchasers (the "Registration Rights Agreement"). Under the terms of the Registration Rights Agreement, Backstop Purchasers holding an aggregate of at least 1 million shares of our Common Stock may request that we register for resale the shares purchased pursuant to the Backstop Agreement.
<i>Shares of Common Stock Outstanding as of the Record Date</i>	[] shares of our Common Stock were outstanding as of the record date.

***Warrants Outstanding
as of the Record Date
For Which
Warrantholders Will
Receive Rights***

As of the record date, we had outstanding warrants to purchase 2,357,142 shares of our Common Stock for which the warrantholders will receive Rights.

***Shares of Common
Stock Outstanding
After Completion of
the Rights Offering***

Upon completion of the Rights Offering and issuance of the shares pursuant to the Backstop Agreement, if any, we will have approximately [] shares of Common Stock issued and outstanding.

Delivery of Shares

Any shares you elect to purchase in the Rights Offering will be delivered to you or your broker as soon as reasonably possible following the closing of the Rights Offering.

***Market for Common
Stock***

Our Common Stock trades on the OTCQB marketplace under the symbol ACFN.

***U.S. Federal Income
Tax Considerations***

It is the opinion of our outside counsel, Eilenberg & Krause LLP, that the distribution of Rights to U.S. holders of our Common Stock or of rights to acquire shares of our Common Stock should be treated, for U.S. federal income tax purposes, as a non-taxable distribution under Section 305(a) of the Internal Revenue Code of 1986, as amended (the "Code"), and the Treasury Regulations promulgated thereunder. However, there is a lack of authority addressing the application of the Code to distributions of Rights and your receipt of Rights may be treated as a taxable distribution. We urge you to consult with your own tax advisor regarding the facts and circumstances of your own tax situation. See, "Risk Factors—The receipt of Rights may be treated as a taxable distribution to you." See also, "Material U.S. Federal Income Tax Consequences."

Subscription Agent

American Stock Transfer & Trust Company, LLC, will act as our Subscription Agent in connection with the Rights Offering. You may contact them directly with any questions or comments toll-free at [].

Information Agent

[] will act as our Information Agent in connection with the Rights Offering. You may contact them directly with any questions or comments toll-free at [].

The Subscription Agent will not mail Rights certificates to you if your address is outside the United States or if you have an Army Post Office or a Fleet Post Office address.

Foreign Holders of Registered Common Stock Certificates

Foreign securityholders will receive written notice of the Rights Offering. The Subscription Agent will hold the Rights to which those subscription certificates pertain for those securityholders' accounts until instructions are received to exercise the Rights, subject to applicable law.

Risk Factors

If you are considering making an investment by exercising Rights in the Rights Offering, you should carefully read the risks and other information set forth in this prospectus in the section under the caption: "Risk Factors" beginning on page 14 of this prospectus. You should also carefully review the documents incorporated by reference into this prospectus, and the risks that we discuss in other sections of this prospectus.

Questions

We answer some of the common questions that we anticipate securityholders may ask about the Rights Offering in the section below. See the section in this prospectus under the caption: "Questions and Answers About the Rights Offering." You may also contact the Information Agent if you have any questions at: [].

Escrow of Funds

The Subscription Agent will hold in escrow the funds we receive from subscribers until we complete or cancel the Rights Offering. If you are the record holder of your shares, or if you hold warrants, and you wish to participate in the Rights Offering, you must submit all of your subscription documents to the Subscription Agent in a timely manner and assure receipt of payment by the Subscription Agent prior to the expiration of the Rights Offering.

QUESTIONS AND ANSWERS ABOUT THE RIGHTS OFFERING

The following are examples of common questions that we expect to receive from securityholders and their representatives regarding our Rights Offering. The following questions and answers are inherently limited in scope and do not contain all of the information that may be important to you and may not address all of the questions that you may have about the Rights Offering. This prospectus and the documents that we incorporate by reference herein contain many details regarding the terms and conditions of our Rights Offering and provide additional information about us and our business, including potential risks related to subscribing for shares in our Rights Offering, the shares of our Common Stock and our business.

What is the Rights Offering?

The Rights Offering is our distribution, at no charge, to holders of our outstanding Common Stock and to certain holders of outstanding warrants to purchase shares of our Common Stock, of non-transferable Rights to purchase additional shares of our Common Stock. The price for exercise of the Rights and subscription for the purchase of shares of our Common Stock is \$[] per whole share, which was set by our Board of Directors based on a []% discount [expected to be between 15% and 20%] to the closing market price of our Common Stock on the record date. There is no charge to securityholders related to the distribution of the Rights. All references in this prospectus to the Rights Offering subscription price of \$[] per share refer to the price per whole share.

Why are we conducting the Rights Offering?

We are conducting the Rights Offering to finance our contemplated reacquisition of the outstanding 20% minority interest in our OmniMetrix LLC subsidiary and to support the growth of our OmniMetrix business, with any net proceeds not so utilized to be used for general working capital purposes. See the section of this prospectus under the caption: "Use of Proceeds."

Who may participate in our Rights Offering?

Only securityholders of our Company as of 5:00 pm Eastern Daylight Time on the record date of [], 2019, may participate in the Rights Offering.

How many Rights will I receive?

On the record date, we will grant you one (1) Right for each one (1) share of our Common Stock you hold as of 5:00 p.m. Eastern Daylight Time, on [], 2019, the record date for the Rights Offering. If you hold warrants to purchase shares of our Common Stock, you will also receive one (1) Right for each one (1) share of our Common Stock that you could purchase as of 5:00 p.m. EDT on the record date by exercising your warrants. You will not need to exercise your warrants in order to receive Rights. Each Right will entitle you to purchase [] of a share of our Common Stock at a subscription price of \$[] per whole share. At your own choosing, you may exercise some or all of your Rights. You may also elect not to exercise any Rights at all.

How many warrant holders are receiving Rights?

Under the terms of certain of our outstanding warrants, the warrant holders have the right to receive the Rights being distributed in the Rights Offering, based on the number of shares of our Common Stock they could purchase as of the record date by exercising their warrants. As of the record date, we had outstanding warrants to purchase 2,357,142 shares of our Common Stock for which the warrant holders will receive Rights. Warrant holders will not need to exercise their warrants in order to receive Rights.

Will fractional shares of Common Stock be issued upon exercise of the Rights?

No. We will not issue fractional shares of Common Stock. If you exercise your Rights in a manner that would result in the issuance of fractions of a share, the number of shares that you may purchase will be rounded down to the nearest share.

What if I own my stock through a brokerage account or similar nominee account?

If you hold your shares in the name of a broker, dealer, bank or other nominee and you wish to participate in the Rights Offering and purchase shares of our Common Stock, please contact your broker, dealer, bank or other nominee as soon as possible. You should complete and return to your nominee the form captioned: "Beneficial Owner Election Form." You should receive the form from your broker, dealer, bank or other nominee with the other Rights Offering materials. We assume no responsibility in respect of the timely administration of your broker, dealer, bank or other nominee to perform its obligations on your behalf.

How was the subscription price determined?

The subscription price was determined by our Board of Directors on the basis of a []% discount [expected to be between 15% and 20%] to the closing price of our Common Stock on the record date. In making its determination, the Board considered many factors, including the historical and current trading prices of our Common Stock, as well as current trends and conditions in capital markets. The subscription price was not determined on the basis of any investment bank or third-party valuation that was commissioned by our company. The Board of Directors reserves the right, exercisable in its sole discretion, to change the subscription price of the Rights Offering or determine to cancel or otherwise alter the terms of the Rights Offering. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”

May I transfer my Rights?

No. The Rights are not transferable by you. You may not sell, give away or otherwise transfer your Rights. However, Rights may be assigned to family members or family trusts. The Rights are also subject to transfer by operation of law (such as testate or intestate succession). The sale of any of your shares of Common Stock prior to the expiration of the Rights Offering period will not result in the transfer of any Rights.

Are there any limitations on the number of my Rights that I may exercise?

There are no restrictions on the number of your Rights that you may exercise. At your own choosing, you may exercise some or all of your Rights. You may also elect not to exercise any Rights at all.

When can I exercise my Rights?

You may exercise your Rights at any time commencing on the effective date of this prospectus and ending at the expiration time and date of the Rights Offering period, at 5:00 p.m. Eastern Daylight Time on [], 2019, which is [] calendar days after the effective date of this prospectus. If you elect to exercise any Rights, the Subscription Agent must receive all documents from you completely and properly completed, and your payment must fully clear, before the expiration of the offering period.

If your subscription exercise documentation is received by the Subscription Agent after the expiration of the Rights Offering period, we may, in our sole discretion, make an accommodation to accept your subscription, but we shall not be under any obligation to do so.

See the section in this prospectus under the caption: “The Rights Offering” for further information regarding the requirements and procedures for exercising your Rights.

If you hold your shares through a broker, dealer, bank, or other nominee, your broker, dealer, bank or other nominee holder may impose separate deadlines prior to the expiration of the Rights Offering. In such case, if you wish to participate in the Rights Offering, we urge you to contact your broker, dealer, bank, or other nominee and coordinate all procedures with them as soon as reasonably possible.

How do I exercise my Rights?

If you wish to participate in the Rights Offering, you must deliver to the Subscription Agent before the expiration of the Rights Offering, all of the following which the Subscription Agent must receive (and funds must clear) prior to 5:00 p.m., Eastern Daylight Time, on [], 2019, which is [] calendar days after the effective date of this prospectus:

1. Your payment for exercise of the Rights. See the section in this prospectus under the caption: “The Rights Offering—Method of Exercising Rights” and “The Rights Offering—Form of Payment.”
2. Your complete and fully executed Rights certificate.

If you cannot deliver your Rights certificate to the Subscription Agent before the expiration of the Rights Offering, you may use the procedures for guaranteed delivery as described in this prospectus in the section under the caption: “The Rights Offering—Guaranteed Delivery Procedures.”

If you hold your shares through your broker, dealer, bank or other nominee, complete and return to such broker, dealer, bank or other nominee the form captioned: “Beneficial Owner Election Form” or use the forms provided to you by your broker, dealer, bank or other nominee in accordance with their stated procedures and prior to their stated deadlines.

Where do I deliver my forms and the payment for exercise of the Rights?

If your shares are held in the name of a broker, dealer, bank or other nominee, then you must coordinate with your broker, dealer, bank or other nominee regarding delivery of your subscription documents, Rights certificate, notice of guaranteed delivery (if applicable) and your subscription payment.

If you are a stockholder of record, or hold warrants, and you wish to exercise your Rights, then you must send your subscription documents, Rights certificate, notices of guaranteed delivery (if applicable) and subscription payment to the Subscription Agent at the following address: []

All deliveries to the Subscription Agent should only be made by registered first class mail or overnight courier service. Please allow adequate time for delivery of your subscription to the Subscription Agent by you or by your broker, dealer, custodian bank or other nominee, as applicable.

We do not take any responsibility for completion of your subscription documents, Rights certificate and payment to the Subscription Agent or, if you are not a record holder to your broker, dealer, custodian bank or other nominee. If you wish to exercise your Rights, please assure that you properly complete all documents and that you provide responses to all requested information. If you have any questions or comments regarding completion of the materials, please contact the Information Agent.

If the payment you remit does not cover the total purchase price for the number of shares of Common Stock for which you are subscribing, or if the number of shares of Common Stock for which you are subscribing is not properly specified, then the funds will be applied to the exercise of Rights only to the extent of the payment actually received by the Subscription Agent.

After I deliver my payment and Rights certificate, may I cancel my exercise of Rights?

No. Except in the event we make a fundamental change to the terms and conditions of the Rights Offering, all exercises of Rights are irrevocable, even if you later change your mind. The irrevocability of your exercise will apply even if new information comes to your attention or if the market price of our Common Stock falls below the Rights Offering subscription price of \$[] per share. Your exercise of the Rights will also remain irrevocable if the authorized period for the Rights Offering is extended by our Board of Directors. See the section in this prospectus under the caption: “The Rights Offering—No Revocation or Change.”

What if I do not exercise my Rights?

In addition to the holders of our [] shares of Common Stock outstanding on the record date, we are distributing Rights to holders of outstanding warrants to purchase an additional 2,357,142 shares of our Common Stock. Warrantheolders will not need to exercise their warrants in order to receive Rights. As a result, the total number of Rights distributed will exceed the number of shares of our Common Stock outstanding on the record date. This means that even if you exercise all of your Rights, your percentage ownership of our Common Stock will likely decrease and your voting and other equity rights will be diluted by the issuance of shares in the Rights Offering to subscribers and the Backstop Purchasers. The more of your Rights you exercise, the less your voting and other equity rights will be diluted. If you do not exercise your Rights before the expiration of the Rights Offering period your Rights will automatically terminate.

Are there risks in exercising my Rights?

Yes. You must carefully consider all known risks of investment prior to the exercise of your Rights. The risks of investment loss apply to all subscribers. We cannot provide any assurance that the shares of our Common Stock sold at the Rights Offering subscription price of \$[] per share will in the future maintain their value or increase in value. You should carefully read this entire prospectus and consider all of the risks described in the section of this prospectus under the caption: “Risk Factors.” You should also carefully review documents incorporated by reference into this prospectus. See the section in this prospectus under the caption: “Incorporation of Certain Information by Reference.”

How are the shares of Common Stock delivered?

At the completion of the Rights Offering, we will issue the shares of Common Stock in book-entry form to each subscriber. We will not issue any stock certificates. If you are a holder of record of our Common Stock or hold warrants, shortly after the expiration of the Rights Offering you will receive a statement of ownership from our transfer agent, American Stock Transfer & Trust Company, LLC, reflecting the shares of Common Stock that you have purchased in the Rights Offering. If your shares of Common Stock are held in the name of a broker, dealer, bank or other nominee, your shares of Common Stock will be issued to the same account. You may request a statement of ownership from the broker or nominee following the completion of the Rights Offering.

Will my subscription payment be refunded to me if the Rights Offering is not completed?

Yes. If the we do not complete the Rights Offering, all subscription payments received by the Subscription Agent will be returned, without penalty or interest, as soon as reasonably possible. If you hold your shares of Common Stock through your broker, dealer, bank or other nominee, the Subscription Agent will return the payment to the broker, dealer, bank or other nominee holding your shares.

If I live outside the United States does that affect my exercise of Rights?

For purposes of assuring that we will not breach the laws of any country outside of the United States, we will not mail this prospectus or the Rights certificates to securityholders whose addresses are outside the United States or who have an army post office or foreign post office address. The Subscription Agent will hold the Rights certificates on behalf of such securityholders. If you live outside of the United States and wish to exercise your Rights, you must notify the Subscription Agent on or before 5:00 p.m., Eastern Daylight Time, on [], 2019, which is [] business days

prior to the expiration date of the Rights Offering. See the section in this prospectus under the caption: “The Rights Offering—Foreign Stockholders.”

Will any fees or charges apply to me if I exercise my Rights?

If you wish to exercise your Rights, the only cost to you will be the payment of the subscription price for purchase of the Rights Offering shares. We will not charge any fees or commissions in connection with the issuance of the Rights to you or the exercise of your Rights for Rights Offering shares. If you hold your shares of Common Stock through your broker, dealer, bank or other nominee, you may be required to pay the broker or nominee certain service or administration fees in connection with the exercise of your Rights. Please check with your broker, dealer, bank or other nominee in such regard. We are not responsible for covering or reimbursing any such fees.

What are the U.S. federal income tax consequences of exercising Rights?

It is the opinion of our outside counsel, Eilenberg & Krause LLP, that for U.S. federal income tax purposes, our U.S. securityholders should not be subject to recognition of income or loss in connection with the receipt or exercise of Rights. However, there is a lack of authority directly addressing the application of the Internal Revenue Code to distributions of Rights and your receipt of Rights may be treated as a taxable distribution. We therefore recommend that you consult with your own tax advisor regarding your own specific tax situation and to assess the potential adverse tax consequences resulting from the receipt and exercise of Rights and the receipt, ownership and disposition of Common Stock. See, “Risk Factors—The receipt of Rights may be treated as a taxable distribution to you.” See also, “Material U.S. Federal Income Tax Consequences.”

Will our directors, officers, or any significant stockholders participate in the Rights Offering?

Our directors and officers who own shares of our Common Stock as of the record date will be eligible to participate in the Rights Offering. Pursuant to the Backstop Agreement, Michael Osterer (one of our Directors) and Gary Mohr (one of our Directors) have agreed to exercise in full all of the Rights distributed for the shares of Common Stock that they beneficially own. In addition, Jan H. Loeb, our President and CEO and the sole manager of Backstop Purchaser Leap Tide, has agreed to exercise all of his Rights in full. Other than these three officers and directors, we have not received any indication from any of our directors, officers or other stockholders as to whether they plan to subscribe for shares of our Common Stock in the Rights Offering.

How many shares of our Common Stock will be outstanding after the Rights Offering?

As of the record date, we had [] shares of our Common Stock issued and outstanding. We are offering up to [] shares of Common Stock in the Rights Offering. In reliance on the Backstop Agreement, we expect to issue all of the shares of Common Stock in the Rights Offering. We therefore anticipate that if we complete the Rights Offering, we will have an aggregate of [] shares of Common Stock issued and outstanding following completion of the Rights Offering.

Can we extend, cancel or amend the Rights Offering?

Yes. We reserve the right to extend the Rights Offering period for a period not to exceed [] calendar days. If we decide to extend the Rights Offering period, we will issue a press release announcing the extension in advance of the expiration of the then-effective Rights Offering period. We may also extend the duration of the Rights Offering period

if applicable law or regulations require us to do so. Our Board of Directors has broad discretion regarding any and all determinations whether or not to extend the Rights Offering period. The Board of Directors may also cancel the Rights Offering at any time before the expiration of the Rights Offering for any reason. In addition, we may amend or modify the terms of the Rights Offering for any reason. See the section in this prospectus under the caption: “The Rights Offering—Expiration Date, Extension, and Amendments.”

What happens if the Rights Offering is not fully subscribed by our securityholders?

We have entered into a Backstop Agreement with Leap Tide Capital Management LLC (“Leap Tide”), Michael Osterer (one of our Directors) and Gary Mohr (one of our Directors and, together with Leap Tide and Mr. Osterer, the “Backstop Purchasers”), pursuant to which each Backstop Purchaser has agreed to exercise its/his Rights in full in the Rights Offering and, upon expiration of the Rights Offering, to purchase from the Company, at the price per share equal to the subscription price of \$[] per share, any and all shares of Common Stock that other securityholders do not subscribe for in our Rights Offering, subject to the respective terms, conditions and limitations of the Backstop Agreement. The Backstop Purchasers’ obligations under the Backstop Agreement are subject to various conditions as described in the section of this prospectus under the caption: “The Backstop Agreement.”

Why are there Backstop Purchasers?

Our objective is to raise the full \$2,400,000 in gross proceeds from our Rights Offering. In the event that all Rights are not exercised, we would fall short of that objective. We have therefore obtained a commitment from the Backstop Purchasers in order to establish a higher likelihood of receiving the full amount of our Rights Offering objective.

Will the Backstop Purchasers receive any compensation for entering into the Backstop Agreement?

No. The Backstop Purchasers will not receive any compensation for entering into the Backstop Agreement.

Are there any conditions to the Backstop Purchasers' obligations under the Backstop Agreement?

Yes. The obligations of the Backstop Purchasers to consummate the transactions under the Backstop Agreement are subject to the satisfaction or waiver of specified conditions, including, but not limited to, compliance with covenants and the accuracy of various representations and warranties set forth in the Backstop Agreement.

How will the Rights Offering affect the ownership of our largest beneficial owners?

As of the record date, Michael Osterer, one of our Directors, beneficially owned approximately []% of our Common Stock, and Jan H. Loeb, our President and CEO, beneficially owned approximately []% of our Common Stock. No other stockholders beneficially owned more than 1% of our Common Stock as of the record date. Upon the closing of the Rights Offering and consummation of the transaction contemplated by the Backstop Agreement, Mr. Osterer would beneficially own approximately []% of our Common Stock, and Mr. Loeb would beneficially own approximately []% of our Common Stock.

Whom should I contact if I have other questions?

If you have other questions or need assistance, please contact our Information Agent at: [].

RISK FACTORS

Investing in shares of our Common Stock involves a high degree of risk. Before making any investment decision, you should carefully consider the risks described under “Risk Factors” in our most recent Annual Report on Form 10-K, and any updates in our Quarterly Reports on Form 10-Q, and current Reports on Form 8-K, together with all of the other information appearing in or incorporated into this prospectus by reference. The risks described in this prospectus and our periodic reports are not the only risks that you should consider. Our future business, financial condition and results of operations could be materially and adversely affected by any of the risks discussed in this prospectus and the risks in the documents incorporated herein by reference, as well as many other unpredictable economic, business, competitive, regulatory and other factors. Past performance is no guarantee of future results. The market price of our shares of Common Stock could lose value and you could correspondingly lose some or all of your investment. See the section in this prospectus under the caption: “Disclosure Regarding Forward-Looking Statements.”

Risks Relating to the Rights Offering

You must act promptly and follow all instructions carefully if you wish to exercise your Rights to purchase shares.

If you wish to purchase shares of Common Stock in our Rights Offering, you must promptly act to complete and properly deliver all applicable documentation and certificates, and assure that payment for your subscription is received by the Subscription Agent prior to the expiration of the Rights Offering at 5:00 p.m., Eastern Daylight Time on [], 2019, which is [] calendar days after the effective date of this prospectus. The time available during which you may exercise your Rights is very limited. If you do not properly complete and sign your Rights certificate, or if you deliver late or deficient payment, or if you do not properly follow the procedures applicable to the exercise of your Rights, we may at our discretion either reject your subscription in its entirety or accept only the portion of your subscription corresponding to the amount of payment actually received. We are not responsible for remediating any incomplete or incorrect documents or deficient payment that you submit. We have no obligation to contact you or any broker, dealer, bank or other nominee that holds Rights on your behalf regarding any deficiencies. We reserve the right to determine, at our sole discretion, whether the materials and payments that you submit are complete and if they follow the applicable procedures pertaining to exercise of your Rights. The risk of delivery of all documents and payments is borne solely by you or your nominee, not by the Subscription Agent or us.

We reserve the right to cancel the Rights Offering at any time prior to the expiration of the offering period.

We reserve the right, exercisable at our sole determination at any time prior to the expiration of the offering period, to cancel and terminate the Rights Offering. If we cancel and terminate the Rights Offering, we will not have any obligation to you other than to have the Subscription Agent return payments for your subscription. The return of your payments in the event of cancellation of the Rights Offering will be made by the Subscription Agent without charge of any interest, penalties or deductions.

The subscription price for our shares does not necessarily represent the value of our Company or the value of our Common Stock, and our Common Stock may trade at prices below the subscription price.

Our Rights Offering subscription price was set by our Board of Directors at \$[] per share. The subscription price was determined by our Board of Directors based upon a []% discount [expected to be between 15% and 20%] to the closing price of our Common Stock on the record date. The subscription price does not bear any particular relationship to the book value of our assets, past operations, cash flows, losses, financial condition or other criteria for ascertaining value. You should not consider the subscription price as an indication of the value of our company or any inherent value of shares of our Common Stock. After the date of this prospectus, our Common Stock may trade at prices below the Rights Offering subscription price.

We may amend or modify the terms of the Rights Offering at any time before the expiration of the Rights Offering that could adversely affect your investment.

Our Board of Directors reserves the right to amend or modify the terms of the Rights Offering. The amendments or modifications may be made for any reason. These changes may include, for example, changes to the subscription price or other matters that may induce greater participation by our securityholders in the Rights Offering. If we make any fundamental change to the terms of the Rights Offering after the date of effectiveness of this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included and offer subscribers the opportunity to cancel their subscriptions. In such event, we will issue subscription refunds to each securityholder subscribing to purchase shares in the Rights Offering and recirculate an amended prospectus after the post-effective amendment is declared effective with the SEC. If we extend the expiration date of the Rights Offering period in connection with any post-effective amendment, we will allow holders of Rights reasonable period of additional time to make new investment decisions on the basis of the new information set forth in the prospectus that will form a part of the post-effective amendment. In such event, we will issue a press release announcing the changes to the Rights Offering and the new expiration date. Even if an amendment does not rise to the level that is fundamental and would thus require us to offer to return your subscription payment, the amendment may nonetheless adversely affect your Rights and any prospective return on your investment.

The market price of our Common Stock may be subject to significant volatility before and after the completion of our Rights Offering which could result in an unrealized investment loss for you.

The market price of our Common Stock could be subject to significant volatility before and after the completion of our Rights Offering due to many factors that we cannot control. Some of these factors include, for example, competitive pressures, the unpredictability of orders from customers, industry trends and general economic conditions. If you elect to participate in our Rights Offering, your subscription price may be higher than the market price after the Rights Offering completion date. That could result in an immediate unrealized investment loss for you. We can provide no assurance or guarantees that you will be able to sell your Common Stock at a price equal to or greater than the Rights Offering subscription price.

The Rights Offering may cause the price of our Common Stock to decrease which could result in an investment loss for you.

The Rights Offering may cause a decrease the market price of our Common Stock. The decrease in the market price of our Common Stock may continue after the completion of the Rights Offering. Future prices of the shares of our Common Stock may adjust negatively depending on various factors, including future losses or speculation in the trade or business press about our operations, and overall conditions affecting our businesses, economic trends and the securities markets. Following the exercise of your Rights, you may not be able to sell your shares of Common Stock at a price equal to or greater than the Rights Offering subscription price which could result in an investment loss for you.

Our management will retain broad discretion over the use of the proceeds from the Rights Offering; utilization of the proceeds may not increase the value of our company.

While we currently intend to use the net proceeds from the Rights Offering to finance our contemplated reacquisition of the outstanding 20% minority interest in our OmniMetrix LLC subsidiary and to support the growth of our OmniMetrix business, with any net proceeds not so utilized to be used for general working capital purposes, our management team will have broad discretion to allocate the proceeds from the Rights Offering as circumstances warrant. In addition, there is no assurance that utilization of the proceeds will increase the value of our company and/or your investment.

You may not revoke your subscription and the shares of Common Stock that you purchase in the Rights Offering may be above the market price at the expiration date which could result in an immediate loss.

The subscription price for the exercise of your Rights has been set by the Board of Directors on the record date for the Rights Offering. The market price of our Common Stock on the offering expiration date will not be known on the record date. After you exercise your Rights, you may not revoke your subscription unless the Rights Offering is fundamentally amended or canceled by the Board of Directors. If our Board of Directors extends the expiration date of the Rights Offering without any fundamental amendment, you will not be able to revoke your subscription. Our Common Stock trades on the OTCQB marketplace under the symbol ACFN, and the last reported sales price of our Common Stock on [], 2019 was \$[] per share. If you exercise your Rights and the public trading market price of our Common Stock thereafter decreases below the Rights Offering subscription price of \$[] per share, you will buy shares of our Common Stock at a price above the trading market price. In such event, you would incur an immediate loss with respect to your investment.

You may be required to allocate a portion of your tax basis in our Common Stock to the Rights received in the Rights Offering.

If you determine that the value of the Rights equals or exceeds 15% of the fair market value of our Common Stock on the date we distribute the Rights to you, you will be required to allocate a portion of your tax basis in your Common Stock to the Rights we distribute to you in the Rights Offering. We will not undertake any appraisal regarding the fair market value of the Rights. See the section in the prospectus under the caption: “Material U.S. Federal Income Tax Consequences” for further information on the tax treatment of the Rights Offering.

You will not have any rights in the shares of Common Stock that you purchase until you actually receive such shares of Common Stock.

You will not have any rights in the shares of Common Stock that you purchase in the Rights Offering until such shares of Common Stock are actually issued and received by you. We intend to issue the shares as soon as reasonably possible after the expiration of the Rights Offering, however, there may be a delay between the expiration date of the Rights Offering and the date the shares of Common Stock are actually issued and delivered to you. You may not be able to resell the shares of Common Stock that you purchase in the Rights Offering until you, or your broker, custodian bank or other nominee, if applicable, have actually received those shares.

The receipt of Rights may be treated as a taxable distribution to you.

It is the opinion of our outside counsel, Eilenberg & Krause LLP, that the distribution of Rights to a holder of shares of our Common Stock or of rights to acquire shares of our Common Stock should be treated, for U.S. federal income tax purposes, as a non-taxable distribution under Section 305(a) of the Code and the Treasury Regulations promulgated thereunder. However, there is a lack of authority addressing the application of the Code to distributions of Rights. The Internal Revenue Service (the “IRS”) could come to different conclusions than our tax counsel regarding the tax treatment for the receipt and exercise of Rights. The opinion of our tax counsel regarding the tax-free treatment of the Rights distribution is not binding on the IRS, or the courts. As such, there is significant uncertainty in regard to the tax treatment of the receipt and exercise of Rights. For example, if our Rights Offering is deemed to be part of a “disproportionate distribution” under Section 305 of the Code, your receipt of Rights may be treated as the receipt of a taxable distribution to you. A “disproportionate distribution” is a distribution or a series of distributions, including deemed distributions, that would have the effect of the receipt of cash or other property by some securityholders and an increase in the proportionate interest of other securityholders in the company’s assets or earnings and profits. Due to the lack of authority on the part of the IRS and the courts in regard to interpreting Code Section 305 with respect to distributions of Rights, it is not reasonably possible to quantify the degree of uncertainty and risk to the recipients of the Rights regarding potential adverse tax effects. If our tax counsel’s opinion is finally determined by the IRS or a court to be incorrect, whether on the basis that the issuance of the Rights is a “disproportionate distribution” or otherwise, the fair market value of the Rights would be taxable to holders of our Common Stock as a dividend to the extent of the holder’s pro rata share of our current and accumulated earnings and profits, if any, with any excess being treated as a return of capital to the extent thereof and then as capital gain. Each holder of our shares of Common Stock considering participating in our Rights Offering is urged to consult with his, her or its own tax advisor prior to making any investment determination in order to assess possible adverse tax consequences. Please see the section in this prospectus under the caption: “Material U.S. Federal Income Tax Consequences.”

The Rights are not transferable, and there are no means for you to obtain any value associated with the Rights other than to exercise your Rights.

The Rights are not transferrable. You may not sell, transfer, assign or give away your Rights. There is no market or other permissible means for you to obtain any value associated with the Rights other than to exercise your Rights. In order to realize any potential value from your Rights, you would have to exercise the Rights. You should not exercise the Rights without careful consideration of all risks discussed in this prospectus and in the documents contained herein by reference.

We do not know how many securityholders will participate in the Rights Offering.

Apart from the Backstop Purchasers, who have agreed in the Backstop Agreement to exercise in full all of the Rights distributed for the shares of Common Stock that they beneficially own, and Jan H. Loeb, our President and CEO and the sole manager of Backstop Purchaser Leap Tide, who has agreed to exercise all of his Rights, we have no other agreements or understandings with any persons or entities with respect to their exercise of Rights or their participation as an underwriter, broker or dealer in the Rights Offering. We therefore do not know how many other securityholders, if any, will participate in our Rights Offering. Assuming that securityholders exercise all Rights we are offering, and/or the transaction contemplated by the Backstop Agreement is consummated, we would receive the full gross proceeds from our Rights Offering of approximately \$2,400,000 and net proceeds of approximately \$[]. If the closing of the transaction contemplated by the Backstop Agreement does not occur due to a default by Leap Tide, we will not have the capital necessary to fund our contemplated uses of the net proceeds of the Rights Offering and might need to look to other sources of funding for these contemplated uses. There is no assurance that these alternative sources will be available and at what cost.

We cannot guarantee that the transaction contemplated by the Backstop Agreement will be consummated.

The closing of the transaction contemplated by the Backstop Agreement is subject to satisfaction or waiver of customary terms and conditions contained in the Backstop Agreement. We cannot guarantee that the transaction contemplated by the Backstop Agreement will close in a timely manner. If the closing of the transaction contemplated by the Backstop Agreement does not occur as anticipated, we may not have sufficient capital to repurchase the outstanding minority interest in our OmniMetrix LLC subsidiary, to continue to support the growth of OmniMetrix and/or to continue our operations.

The Backstop Purchasers may acquire up to approximately []% of our outstanding shares of Common Stock if no other securityholders participate in the Rights Offering. The interests of the Backstop Purchasers and Mr. Loeb, who is our President and Chief Executive Officer and the sole manager of one of the Backstop Purchasers, in the Rights Offering may be different from yours.

As of the record date, the Backstop Purchasers, two of whom are Directors of our company, beneficially owned an aggregate of [] shares, or approximately []%, of our Common Stock. In addition, Jan H. Loeb, our President and Chief Executive Officer, is the sole manager of Leap Tide, one of the Backstop Purchasers, with sole voting and dispositive power over the securities held by such entity. As of the record date, Mr. Loeb beneficially owned [] shares, or approximately []%, of our Common Stock (including all of the shares beneficially owned by Leap Tide). Each of the Backstop Purchasers and Mr. Loeb have agreed to exercise their respective Rights in full. In the event that no other securityholders participate in the Rights Offering and the transaction contemplated by the Backstop Agreement is consummated, the Backstop Purchasers would beneficially own an aggregate of approximately []%, and Mr. Loeb would beneficially own approximately []%, of our outstanding Common

Stock at the completion of the Rights Offering. The Backstop Purchasers' and/or Mr. Loeb's influence over decision-making with respect to our business direction may increase to the extent the Backstop Purchasers acquire additional shares of our Common Stock upon consummation of the transaction contemplated by the Backstop Agreement. The interests of the Backstop Purchasers and Mr. Loeb in the Rights Offering may be different from yours.

USE OF PROCEEDS

We expect to raise gross proceeds of approximately \$2,400,000 and net proceeds of approximately \$[] from our Rights Offering. On the basis of the commitment received from our Backstop Purchasers (discussed in detail below), we anticipate completing the sale of all shares of Common Stock that are available for subscription in our Rights Offering.

We intend to use the net proceeds from the Rights Offering to finance our contemplated reacquisition of the outstanding 20% minority interest in our OmniMetrix LLC subsidiary and to provide OmniMetrix with additional sales and marketing resources to facilitate expansion into additional geographic markets and new product applications, as well as next-generation product development. Any net proceeds not so utilized will be used for general working capital purposes.

THE BACKSTOP AGREEMENT

On [], 2019, we entered into a Backstop Agreement with Leap Tide Capital Management LLC (“Leap Tide”), Michael Osterer (one of our Directors), and Gary Mohr (one of our Directors and, together with Leap Tide and Mr. Osterer, the “Backstop Purchasers”), pursuant to which each Backstop Purchaser has agreed to exercise its/his Rights in full in the Rights Offering and, upon expiration of the Rights Offering, to purchase from the Company (directly or through an affiliate), at the price per share equal to the subscription price of \$[] per share, any and all shares of Common Stock that other securityholders do not subscribe for in the Rights Offering (“Unsubscribed Rights Shares”), subject to the respective terms, conditions and limitations of the Backstop Agreement. The Backstop Agreement provides that, first, the three Backstop Purchasers shall each purchase one-third of the first \$300,000 of aggregate subscription price of Unsubscribed Rights Shares, and that Leap Tide shall then purchase any and all remaining Unsubscribed Rights Shares. Should Mr. Osterer and/or Mr. Mohr fail to purchase their respective contractual portion of Unsubscribed Rights Shares in full, Leap Tide would purchase such unpurchased Unsubscribed Rights Shares as well.

As of the record date for the Rights Offering, Mr. Osterer beneficially owned approximately []% of our Common Stock, and Mr. Mohr beneficially owned less than 1% of our Common Stock. As of the record date for the Rights Offering, Leap Tide beneficially owned less than 1% of our Common Stock, and Jan H. Loeb, our President and Chief Executive Officer and the sole manager of Leap Tide, with sole voting and dispositive power over the securities held by such entity, beneficially owned approximately []% of our Common Stock as of the record date.

The purchase of shares of our Common Stock by the Backstop Purchasers pursuant to the Backstop Agreement would be effectuated in a transaction exempt from the registration requirements of the Securities Act and would not be registered pursuant to the registration statement of which this prospectus forms a part. Nothing herein shall be construed as any offer or solicitation for the sale or purchase of any of the shares of Common Stock that we issue to Leap Tide and Messrs. Osterer and Mohr in connection with the Backstop Agreement.

Closing Conditions

The closing of the transactions contemplated by the Backstop Agreement is subject, in each case, to the satisfaction or waiver of customary conditions, including (i) receipt of all applicable regulatory approvals, (ii) compliance with covenants, (iii) the accuracy of representations and warranties set forth in the Backstop Agreement, (iv) the absence of a material adverse effect on the Company or on the ability of the Backstop Purchasers to perform their obligations under the Backstop Agreement, (v) satisfaction of conditions, and the effectiveness of the registration statement related to the Rights Offering and (vi) consummation of the Rights Offering.

Termination of the Backstop Agreement

The Backstop Agreement may be terminated at any time prior to the closing of the transactions contemplated by the Backstop Agreement as follows:

- by mutual written agreement of the Backstop Purchasers and us;
- by any party, in the event the closing of the transactions contemplated by the Backstop Agreement are not consummated within 180 days of the execution of the Backstop Agreement;
- by the Backstop Purchasers, if we materially breach any of our obligations under the Backstop Agreement, and such breach is not cured within five business days of receipt of written notice by the Backstop Purchasers to us;
- by the Backstop Purchasers, upon the occurrence of a suspension of trading in our Common Stock by the OTCQB; or
- by us, if our Board of Directors, in its reasonable judgment, determines that it is not in the best interests of the Company and our stockholders to proceed with the Rights Offering;
- by us, if consummation of the Rights Offering is prohibited by applicable law, rules or regulations; or
- by us, if any Backstop Purchaser materially breaches its obligations set forth in the Backstop Agreement, and such breach is not cured within five business days of receipt of written notice by us.

Indemnification

The Company has agreed to indemnify each Backstop Purchaser and their affiliates and each of their respective officers, directors, partners, employees, agents and representatives for losses arising out of this offering and the related registration statement and prospectus and claims, suits or proceedings challenging the authorization, execution, delivery, performance or expiration of the Rights Offering, the Backstop Agreement and certain ancillary agreements and/or any of the transactions contemplated thereby, other than losses arising out of or related to any breach by the Backstop Purchaser of the Backstop Agreement.

Each Backstop Purchaser has agreed to indemnify the Company and its affiliates and each of their respective officers, directors, partners, employees, agents and representatives for losses arising out of or relating to statements or omissions in the registration statement or prospectus for this offering (or any amendment or supplement thereto) made in reliance on or in conformity with written information relating to the Backstop Purchaser furnished to us by or on behalf of the Backstop Purchaser expressly for use therein.

Registration Rights

The purchase of shares of our Common Stock by the Backstop Purchasers under the Backstop Agreement would be effectuated in a transaction exempt from the registration requirements of the Securities Act and would not be registered pursuant to the registration statement of which this prospectus forms a part. As a condition of the Backstop Agreement, we have entered into a Registration Rights Agreement with each of the Backstop Purchasers pursuant to which Backstop Purchasers holding an aggregate of at least one million shares of our Common Stock may request that we register for resale the shares of Common Stock that the Backstop Purchasers acquire pursuant to the Backstop Agreement. The Backstop Purchasers may exercise their registration rights at any time after the expiration date of the Rights Offering. We have agreed to reimburse each Backstop Purchaser for certain fees and expenses (including attorneys' fees and expenses) incurred by them in connection with exercise of their registration rights.

CAPITALIZATION

Set forth below is our cash and liquid assets and capitalization as of December 31, 2018:

on an actual basis; and

on a pro forma as adjusted basis, reflecting the issuance of shares of Common Stock offered by this prospectus, at \$[] per share, assuming net proceeds of approximately \$[] after offering expenses payable by us.

The information below should be read in conjunction with our audited consolidated financial statements for the year ended December 31, 2018, which are incorporated by reference in this prospectus. Our financial statements should also be read in conjunction with the “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” which is included in our Annual Report on Form 10-K for the year ended December 31, 2018, which is incorporated by reference in this prospectus. See the sections in this prospectus under the captions: “Incorporation of Certain Information by Reference” and “Where You Can Find More Information.”

	As of December 31, 2018 (1)	Pro Forma
	Actual	As Adjusted
Cash and cash equivalents	\$973	
Restricted cash	290	
Total long-term liabilities	1,362	
Shareholders' equity		
Common Stock, \$0.01 par value per share: Authorized - 42,000,000 shares; Issued – 30,357,706 and [] shares on an actual and pro forma as adjusted basis, respectively	304	
Treasury stock, at cost – 801,920 shares	(3,036)	
Additional paid-in capital	100,340	
Warrants	1,118	
Accumulated deficit	(100,064)	
Non-controlling interests	108	
Total (deficit)/equity	(1,230)	
Total capitalization	132	

(1) In thousands, except for share and per share amounts.

THE RIGHTS OFFERING

The Rights

We are distributing, at no charge, to holders of our outstanding Common Stock and to certain holders of outstanding warrants to purchase shares of our Common Stock, non-transferable Rights to purchase in the aggregate up to [] shares of our Common Stock at the cash subscription price of \$[] per share. We expect to raise approximately \$2,400,000 in gross proceeds and \$[] in net proceeds from the offering of Rights and subscriptions for the purchase of shares of Common Stock thereunder.

As of the record date, we had [] shares of our Common Stock outstanding. Under the terms of certain of our outstanding warrants, the warrant holders have the right to receive the Rights being distributed in the Rights Offering, based on the number of shares of our Common Stock they could purchase as of the record date by exercising their warrants. As of the record date, we had outstanding warrants to purchase 2,357,142 shares of our Common Stock for which the warrant holders will receive Rights.

If you are a stockholder of record, or if you are a beneficial owner of shares held on your behalf through a broker, dealer, bank or other nominee, you will receive one (1) Right for each one (1) share of Common Stock owned at 5:00 p.m., Eastern Daylight Time, on [], 2019, which is the record date for our Rights Offering. If you hold warrants to purchase shares of our Common Stock, you will also receive one (1) Right for each one (1) share of our Common Stock that you could purchase as of 5:00 p.m. EDT on the record date by exercising your warrants. You will not need to exercise your warrants in order to receive Rights. Each subscription right will entitle you to purchase [] of a share of our Common Stock at a subscription price of \$[] per whole share of Common Stock. We are not offering, and we will not accept, any subscriptions for fractional shares.

You may exercise some, all or none of your Rights.

The Reasons for our Rights Offering

We are conducting the Rights Offering to finance our contemplated reacquisition of the outstanding 20% minority interest in our OmniMetrix LLC subsidiary and to provide OmniMetrix with additional sales and marketing resources to facilitate expansion into additional geographic markets and new product applications, as well as next-generation product development, with any net proceeds not so utilized to be used for general working capital purposes. Our Board of Directors has carefully evaluated financing alternatives and concluded that raising the required funding through a Rights Offering in which all our stockholders would have the opportunity to participate was in the best interests of our stockholders.

Subscription Price

The subscription price was determined by our Board of Directors on the basis of a []% discount [expected to be between 15% and 20%] to the closing price of our Common Stock on the record date. In making its determination, the Board considered many factors, including the historical and current trading prices of our Common Stock, as well as current trends and conditions in capital markets. The subscription price was not determined on the basis of any investment bank or third-party valuation that was commissioned by our company. We cannot assure you that the market price of our Common Stock during or after the Rights Offering period will be greater than the subscription price.

Method of Exercising Rights

You may exercise your Rights as follows:

1. **Subscription by Registered Stockholders of Record.** If you are the holder of record of shares of our Common Stock and you wish to exercise your Rights, you must complete and sign your Rights certificate, together with any required signature guarantees, and deliver them to the Subscription Agent, with a notice of guaranteed delivery (if applicable) and an IRS Form W-9, and your payment for the number of shares of Common Stock for which you are subscribing. The address of the Subscription Agent is set forth below in this prospectus under the caption: “Where to Submit Subscriptions.” You must deliver all materials in a timely manner and assure that your payment clears in full prior to the expiration of the Rights Offering.

2. **Subscription by Beneficial Owners holding shares through a broker, dealer, bank or other nominee.** If you are a beneficial owner of shares of our Common Stock that are registered in the name of a broker, dealer, bank or other

nominee, and you wish to exercise your Rights, you must instruct your broker, dealer, bank or other nominee to exercise your Rights on your behalf and deliver all documents and payment before the expiration of the Rights Offering. Your subscription will only be valid if the Subscription Agent receives all of the required documents and the full subscription payment prior to the Rights Offering expiration date. Your broker, dealer, bank or other nominee may establish a deadline that is significantly in advance of the Rights Offering expiration period at 5:00 p.m., Eastern Daylight Time, on [], 2019, which is [] calendar days after the effective date of this prospectus. If you wish to subscribe for shares of our Common Stock in the Rights Offering, you should immediately notify your broker, dealer, bank or other nominee.

3. *Subscription by Holders of Warrants.* If you are the holder of warrants to purchase shares of our Common Stock and you wish to exercise your Rights, you must complete and sign your Rights certificate, together with any required signature guarantees, and deliver them to the Subscription Agent, with a notice of guaranteed delivery (if applicable) and an IRS Form W-9, and your payment for the number of shares of Common Stock for which you are subscribing. The address of the Subscription Agent is set forth below in this prospectus under the caption: “Where to Submit Subscriptions.” You must deliver all materials in a timely manner and assure that your payment clears in full prior to the expiration of the Rights Offering. You do not need to exercise your warrants in order to exercise your Rights.

Form of Payment

If you wish to exercise your Rights, you must make payment for your subscription in accordance with the following:

[]

Where to Submit Subscriptions

You must deliver all subscription documents, Rights certificates, notices of guaranteed delivery (if applicable) and subscription payments other than wire transfers to the Subscription Agent at the following address:

[]

Any deficiency or irregularity with respect to delivery of your subscription documents, Rights certificates and/or notices of guaranteed delivery may invalidate the exercise of your Rights.

If you have any questions or if you need assistance in completing any of the subscription documents, Rights certificates and/or notices of guaranteed delivery, you may contact the Information Agent at:

[].

Missing or Incomplete Subscription Information

If your Rights certificate is not complete and properly signed, or if you deliver deficient payment, or if you do not properly follow the procedures applicable to your exercise of your Rights, we may at our discretion either reject your subscription in its entirety or accept only the portion of your subscription corresponding to the amount of payment actually received. We are not responsible for remediating any incomplete or incorrect documents or deficient payment that you submit. We will not contact you or any broker, dealer, bank or other nominee that holds rights on your behalf regarding any deficiencies. We reserve the right to determine, at our sole discretion, whether the materials and payments that you submit are complete and follow the applicable procedures pertaining to exercise of your rights.

Delivery of Subscriptions

DO NOT SEND YOUR SUBSCRIPTION RIGHTS CERTIFICATES OR PAYMENTS TO THE COMPANY. ALL DELIVERIES AND PAYMENTS MUST BE MADE ONLY TO THE SUBSCRIPTION AGENT.

Please carefully read the instruction letter accompanying the Rights certificate and follow the procedures as specified.

Your subscription will not be deemed to be received until the Subscription Agent has received delivery of your completed and properly signed Rights certificate and received the full subscription amount which has cleared prior to the expiration of the Rights Offering. The only exceptions for late delivery will be in the case of delivery in accordance with the “Guaranteed Delivery Procedures” described below. Notwithstanding the foregoing, we may, at our sole discretion, determine to accept late subscriptions on a case-by-case basis.

The risk of delivery of all documents and payments is borne by you or your nominee, not by the Subscription Agent or us.

All deliveries to the Subscription Agent should only be made by registered first class mail or overnight courier service. Please allow an adequate number of days for delivery of your materials to the Subscription Agent by you or your broker, dealer, custodian bank or other nominee, as applicable. We do not take any responsibility for completion of your subscription documents, Rights certificate and payment to the Subscription Agent or, if you are not a holder of record, to your broker, dealer, custodian bank or other nominee. If you wish to exercise your Rights, please assure that you properly complete all documents and that you provide comprehensive responses to all information on the forms. If you have any questions or comments regarding completion of the materials, please contact the Information Agent.

Notice to Nominees

If you are a broker, dealer, bank or other nominee that holds shares of our Common Stock for the account of one or more of our stockholders on the record date, you should contact such beneficial owners as soon as possible regarding our Rights Offering. If a beneficial owner of our Common Stock so instructs, you should complete the Rights certificate and submit it to the Subscription Agent with the proper subscription payment prior to the expiration date. You may exercise the number of Rights to which all beneficial owners in the aggregate otherwise would have been entitled had they been direct holders of our Common Stock on the record date, provided that you, as a nominee record holder, make a proper showing to the Subscription Agent by submitting the form captioned: "Nominee Holder Election Form," which is included with your Rights Offering materials. You may contact the Subscription Agent directly to request the form if not provided in the materials delivered to you.

Beneficial Owners

If your shares of our Common Stock are held in the name of a broker, dealer, bank or other nominee, you will not receive a Rights certificate and you will need to coordinate with your broker, dealer, bank or other nominee to act for you. To exercise your Rights, you will need to complete and return to your broker, dealer, bank or other nominee the form captioned: "Beneficial Owner Election Form." You should receive the form from your broker, dealer, bank or other nominee with the other Rights Offering materials. You should contact your broker, dealer, bank or other nominee if you do not receive the form and other Rights Offering material. We are not responsible if you do not receive the form from your broker, dealer, bank or other nominee or if you receive the form without sufficient time to respond by the deadline established by your nominee, which deadline may be prior to 5:00 p.m., Eastern Daylight Time, on [], 2019, which is [] calendar days after the effective date of this prospectus.

Guaranteed Delivery Procedures

If you do not have adequate time to deliver the Rights certificate evidencing your Rights to the Subscription Agent prior to the expiration of the Rights Offering, you may still participate in the Rights Offering if you follow the

guaranteed delivery procedures set forth below prior to the expiration of the Rights Offering:

deliver your subscription payment to the Subscription Agent covering all Rights that you are exercising, in accordance with the procedures set forth in the section of the prospectus under the caption: "Method of Exercising Subscription Rights;"

deliver your "Notice of Guaranteed Delivery" to the Subscription Agent; and

within [] business days following the date you submit your Notice of Guaranteed Delivery, deliver to the Subscription Agent the complete and properly signed Rights certificate (together with your nominee holder election form, if applicable), including any signature guarantees if necessary.

All Notices of Guaranteed Delivery must include a signature guarantee from an eligible guarantor institution.

If you have any questions or comments regarding completion or delivery of the Notice of Guaranteed Delivery, please contact the Subscription Agent.

Non-transferability of Rights

The Rights are not transferable by you. You may not sell, give away or otherwise transfer your Rights. However, Rights may be assigned to family members or family trusts. The Rights are also subject to transfer by operation of law (such as testate or intestate succession). The sale of any of your shares prior to the expiration of the Rights Offering period will not result in the transfer of any Rights.

No Fractional Shares

We will not issue fractional shares of Common Stock in the Rights Offering. You may only exercise your Rights to purchase shares in whole numbers. Any excess funds insufficient to purchase one whole share will be returned to you by the Subscription Agent without penalty or interest.

Validity of Subscriptions

We reserve the right to resolve at our sole discretion all deficiencies, irregularities and questions regarding the validity of the exercise of your Rights. Such determinations may include, without limitation, the time of receipt and eligibility to participate in the Rights Offering. In resolving all such matters, we will review the relevant facts. We may, at our discretion, also consult with our legal advisors and request input from the relevant parties. Our determination will be final and binding.

We will not accept any alternative, conditional or contingent subscriptions or instructions of any nature or kind. We reserve the absolute right to reject any subscriptions not submitted in accordance with the requisite time periods or procedures specified for the Rights Offering. We may also decline to accept any subscriptions which we believe may contravene applicable laws or regulations. We are not responsible for remediating any incomplete or incorrect documents or deficient payment that you submit. We will not contact you or any broker, dealer, bank or other nominee that holds rights on your behalf regarding any deficiencies or irregularities with respect to your subscription. Our interpretations, exercisable at our sole discretion, regarding your satisfaction of all requisite terms and conditions applicable to our Rights Offering will be final and binding.

Except in the event we make a fundamental change to the terms and conditions of the Rights Offering, once you submit your subscription and payment, the subscription will be irrevocable, even if you later change your mind for any reason and even if the Rights Offering is extended by the Board of Directors.

Escrow Arrangements; Return of Funds

The Subscription Agent will hold all Rights Offering subscription funds in a segregated account pending completion of our Rights Offering. The Subscription Agent will hold the funds in escrow until we complete or cancel the Rights Offering. If we cancel the Rights Offering, the Subscription Agent will return to you all of your respective subscription payments, without interest or penalty, as soon as reasonably possible.

If there is a fundamental change to the Rights Offering and if you decide to cancel your exercise of Rights, then the Subscription Agent will return your payment without charge of any interest, penalties or deductions. If you hold your shares through your broker, dealer, bank or other nominee, then the cancellation of any exercise of Rights would have to be initiated by your broker, dealer, bank or other nominee.

If the Subscription Agent returns payments to you through your broker, dealer, bank or other nominee, then such broker, dealer, bank or other nominee may charge you separate service or administration fees. We are not responsible for covering or reimbursing any such fees.

Expiration Date, Extension, and Amendments

If you wish to purchase shares of Common Stock in our Rights Offering, you must promptly act to complete and properly deliver all applicable documentation and certificates, and assure that payment for your subscription is received by the Subscription Agent prior to the expiration of the Rights Offering on [], 2019, at 5:00 p.m., Eastern Daylight Time, which is [] calendar days after the effective date of this prospectus. We are not responsible for remediating any incomplete or incorrect documents or deficient payment that you submit. We have no obligation to contact you or any broker, dealer, bank or other nominee that holds Rights on your behalf regarding any deficiencies or irregularities. We reserve the right to determine, at our sole discretion, whether the materials and payments that you submit are complete and follow the applicable procedures pertaining to exercise of your Rights. The risk of delivery of all documents and payments is borne by you or your nominee, not by the Subscription Agent or us.

We reserve the right to extend the Rights Offering period for a period not to exceed 30 calendar days. If we extend the Rights Offering period, we will issue a press release announcing the extension in advance of the expiration of the then-effective Rights Offering period. We may extend the duration of the Rights Offering period if applicable laws or regulations require us to do so. Our Board of Directors has broad discretion regarding any and all determinations whether or not to extend the Rights Offering period. The Board of Directors may also cancel the Rights Offering at any time, for any reason, before the expiration of the Rights Offering period.

Our Board of Directors reserves the right to amend or modify the terms of the Rights Offering. The amendments or modifications may be made for any reason. These changes may include, for example, changes to the subscription price or other matters that may induce greater participation by our securityholders in the Rights Offering. If we make any fundamental change to the terms of the Rights Offering after the date of effectiveness of this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included and offer subscribers the opportunity to cancel their subscriptions. In such event, we will issue subscription refunds to each securityholder subscribing to purchase shares in the Rights Offering and recirculate an amended prospectus after the post-effective amendment is declared effective with the SEC. If we extend the expiration date of the Rights Offering period in connection with any post-effective amendment, we will allow holders of Rights reasonable period of additional time to make new investment decisions on the basis of the new information set forth in the amended prospectus that will form a part of the post-effective amendment. In such event, we will issue a press release announcing the changes to the Rights Offering and the new Rights Offering expiration date. The terms and conditions of our Rights Offering cannot be modified or amended after the expiration date.

Cancellation of Some or All of the Rights Offering

We reserve the right, exercisable at our sole discretion for any reason, to cancel some or all of the Rights Offering before the expiration date. If we cancel and terminate some or all of the Rights Offering, we will issue a press release

advising our securityholders of the cancelation and all Rights will expire without value. The Subscription Agent will return to subscribers, without interest or penalty, any respective subscription payments that it is holding in escrow as soon as reasonably possible following the cancelation date.

No Revocation or Change

Except in the event we make a fundamental change to the terms and conditions of the Rights Offering, your exercise of Rights will be irrevocable, even if you later change your mind about exercising your Rights. The irrevocability of your exercise will apply even if new information comes to your attention or if the market price of our Common Stock falls below the subscription price of \$[] per share. Your exercise of the Rights will also remain irrevocable if the authorized period for the Rights Offering is extended by our Board of Directors. You should not exercise your Rights unless you are certain that you wish to purchase shares of our Common Stock at the subscription price of \$[] per share.

If we make any fundamental change to the terms of the Rights Offering after the date of effectiveness of this prospectus, we will file a post-effective amendment to the registration statement in which this prospectus is included and offer you the opportunity to cancel your subscription. In such event, if you have subscribed to purchase shares in the Rights Offering and request a refund, we will issue subscription refunds to you and recirculate an amended prospectus after the post-effective amendment is declared effective with the SEC. If we extend the expiration date of the Rights Offering period in connection with any post-effective amendment, we will allow holders of Rights reasonable period of additional time to make new investment decisions on the basis of the new information set forth in the prospectus that will form a part of the post-effective amendment. In such event, we will issue a press release announcing the changes to the Rights Offering and the new expiration date.

Dilutive Effects of the Rights Offering

In addition to the holders of our [] shares of Common Stock outstanding on the record date, we are distributing Rights to holders of outstanding warrants to purchase an additional 2,357,142 shares of our Common Stock. Warrantheolders will not need to exercise their warrants in order to receive Rights. As a result, the total number of Rights distributed will exceed the number of shares of our Common Stock outstanding on the record date. This means that even if you exercise all of your Rights, your percentage ownership of our Common Stock will likely decrease and your voting and other equity rights will be diluted by the issuance of shares in the Rights Offering to subscribers and the Backstop Purchasers. Rights not exercised prior to the expiration of the Rights Offering will automatically terminate.

Stockholder Rights

You will not have any rights in the shares that you purchase in the Rights Offering until the shares are actually received by you. We intend to issue and deliver the shares as soon as reasonably possible after completion of the Rights Offering, however, there may be a delay between the expiration date of the Rights Offering and the date and time that the shares are issued and delivered to you or your broker, custodian bank or other nominee, if applicable.

Issuance of Shares Acquired in the Rights Offering

At the completion of the Rights Offering, the Company will issue the shares of Common Stock in book-entry form to each subscriber. The Company will not issue any stock certificates. If you are the holder of record of our Common Stock, shortly after the expiration of the Rights Offering you will receive a statement of ownership from our transfer agent, American Stock Transfer & Trust Company, LLC, reflecting the shares of Common Stock that you have purchased in the offering. If your shares of Common Stock are held in the name of a broker, dealer, bank or other nominee, your shares of Common Stock will be issued to the same account. You may request a statement of ownership from the broker or nominee following the completion of the Rights Offering.

Foreign Stockholders

For purposes of assuring that we will not breach the laws of any country outside of the United States, we will not mail this prospectus or the Rights certificates to securityholders whose addresses are outside the United States or who have an army post office or foreign post office address. The Subscription Agent will hold the Rights certificates on behalf of each such stockholder.

If you live outside of the United States and wish to exercise your Rights, you must notify the Subscription Agent on or before 5:00 p.m. EDT at least [] business days prior to the expiration date of the Rights Offering. You must satisfy the Subscription Agent that your exercise of Rights does not violate any laws applicable to you in your locality. All other deadlines with respect to the delivery of subscription materials and payment will apply to you,

Third-Party Consents or Approvals

We will have no obligation to accept your subscription to the Rights Offering if we determine, at our sole discretion, that any third-party consents or approvals would be necessary for you to own or control such shares, including, without limitation, any regulatory authorities of any state or federal agency, and we have not received satisfactory evidence of such consent or approval prior to the expiration of the offering period.

Fees and Expenses

We will pay all fees, costs and expenses due to the Subscription Agent, the Information Agent and any other expenses we that we may incur in connection with the Rights Offering. You are solely responsible for paying your own commissions, fees, taxes or other expenses that you may incur in connection with the exercise of your Rights, your subscription and your purchase of our shares of Common Stock in the Rights Offering. Without limiting the foregoing, you will be solely responsible for any and all fees, costs, expenses and disbursements charged by your broker, dealer, bank or other nominee, if applicable.

No Board of Directors Recommendation to Rights Holders

Neither our Board of Directors nor our management has made any recommendations regarding the exercise of your Rights. You should carefully consider all relevant facts and circumstances in determining whether or not to exercise your Rights on the basis of your own assessment. Except in the event we make a fundamental change to the terms and conditions of the Rights Offering, you may not revoke or revise any exercises of Rights once made, unless we cancel and terminate the Rights Offering. See the section in this prospectus under the caption: "Risk Factors."

Shares of Our Common Stock Outstanding After the Rights Offering

As of the record date, we have [] shares of our Common Stock issued and outstanding. We are offering up to [] shares of Common Stock in the Rights Offering. In reliance on the Backstop Commitments, we expect to issue all of the shares of Common Stock offered in the Rights Offering. We therefore anticipate that if we complete the Rights Offering, we will have an aggregate of [] shares of Common Stock issued and outstanding following completion of the Rights Offering.

No Unlawful Subscriptions

We reserve the absolute right to reject any subscriptions not properly submitted or the acceptance of which would be unlawful. We are not soliciting, selling or accepting any offers to participate in our Rights Offering in any jurisdictions where such actions are prohibited. No offers to purchase any shares of our Common Stock are made to rights holders who are residents of such jurisdictions and we will not sell or accept offers for the purchase of our Common Stock from such Rights holders.

PLAN OF DISTRIBUTION

On or about [], 2019, which is the [] business day after the date of effectiveness of this prospectus, we plan to distribute the Rights, Rights certificates and copies of this prospectus to holders of shares of our Common Stock as of the record date. If you have made a determination to exercise your rights, you must comply in a timely manner with the exercise procedures set forth in the section of this prospectus under the caption: “The Rights Offering—Method of Exercising Rights.”

You may contact the Information Agent if you have any questions at: []

Some of our officers and directors may solicit responses from you as a holder of Rights. We will not pay our officers and directors any commissions or compensation for such services, other than their normal employment or director compensation.

In connection with our Rights Offering, we have agreed to pay our Subscription Agent and Information Agent their customary fees, plus certain expenses.

No brokers, dealers or underwriters are acting on our behalf in connection with the solicitation or exercise of Rights. We are not paying any commissions, underwriting fees or discounts in connection with the Rights Offering or the shares that we will issue upon exercise of the Rights held by our securityholders. We are not aware of any third-party agreements in such regard.

DESCRIPTION OF OUR COMMON STOCK

The following is only a summary of the terms and conditions applicable to our Common Stock and it not intended to be complete. Our company is a Delaware corporation and our Common Stock is subject to the provisions of our Amended and Restated Certificate of Incorporation and our By Laws.

General

We are authorized to issue 42,000,000 shares of Common Stock, par value \$0.01 per share. As of the record date, we have [] shares of our Common Stock issued and outstanding.

The holders of our Common Stock:

have equal ratable rights to dividends from funds legally available if and when declared by our Board of Directors;

do not have cumulative voting rights;

are entitled to share ratably in all of our assets available for distribution to holders of Common Stock upon liquidation, dissolution or winding up of our affairs; and

do not have preemptive, subscription or conversion rights and there are no redemption or sinking fund provisions or rights.

All shares of Common Stock now issued and outstanding are fully paid for and non-assessable. The full scope of the terms, rights and liabilities applicable to holders of our securities are set forth in (i) our Amended and Restated Certificate of Incorporation and By Laws, which are incorporated by reference as exhibits into the Registration Statement of which this prospectus is part; and (ii) the applicable statutes of the State of Delaware.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is American Stock Transfer & Trust Company, LLC

Listing

Our Common Stock is traded on the OTCQB marketplace under the symbol ACFN.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a summary of the material U.S. federal income tax consequences of the receipt of rights in our Rights Offering and the exercise (or expiration) of those rights as applied to U.S. holders (as defined below) of our Common Stock that hold such stock as a capital asset for federal income tax purposes and, insofar as it relates to matters of U.S. federal income tax law and regulations or legal conclusions with respect thereto, constitutes the opinion of our outside counsel, Eilenberg & Krause LLP. This discussion is based upon existing U.S. federal income tax law, which is subject to differing interpretations or change (possibly with retroactive effect). The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. We therefore recommend that each holder of our Common Stock consult its own tax advisor with respect to the particular tax consequences of this offering or the related share issuance to such holder.

This discussion is based upon the U.S. Internal Revenue Code of 1986, as amended, or Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (“IRS”), in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a holder of the Rights or shares of our Common Stock acquired pursuant to exercise of the Rights.

This summary deals only with U.S. holders that acquire Rights in our Rights Offering and assumes that the Rights or shares of Common Stock issued upon exercise of the Rights will be held as capital assets within the meaning of Section 1221 of the Code.

This summary does not address all aspects of federal income taxation that may be important or consequential to various holders responsive to specific facts or circumstances or to holders who may be subject to special tax rules, including, without limitation, the following, all of whom may be subject to tax rules that differ significantly from those summarized in this discussion:

- U.S. expatriates and former citizens or long-term residents of the United States;

- persons holding the Rights or shares of our Common Stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;

- banks, insurance companies, and other financial institutions;

- brokers, dealers or traders in securities;

- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;

- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);

- tax-exempt organizations or governmental organizations;

- persons deemed to sell the Rights, shares of Common Stock under the constructive sale provisions of the Code;

- persons for whom our stock constitutes “qualified small business stock” within the meaning of Section 1202 of the Code;

- persons who hold or receive the Rights, shares of our Common Stock pursuant to the exercise of any employee stock option or otherwise as compensation; and

- tax-qualified retirement plans.

We have not sought, and we will not seek, any rulings from the IRS regarding the federal income tax consequences of this offering or the related share issuances.

For purposes of this summary, a “U.S. holder” is a holder that is for U.S. federal income tax purposes:

an individual who is a citizen or resident of the U.S.;

a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;

an estate the income of which is subject to U.S. federal income taxation regardless of its source; or

a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more United States persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has made a valid election under applicable Treasury Regulations to continue to be treated as a United States person.

THE FOLLOWING IS A DISCUSSION OF THE MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS OF THE RECEIPT OF RIGHTS IN THIS OFFERING AND OF THE EXERCISE, SALE OR OTHER DISPOSITION AND EXPIRATION OF THOSE RIGHTS. EACH INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR AS TO PARTICULAR TAX CONSEQUENCES TO IT OF THE RECEIPT OF RIGHTS IN THIS OFFERING AND OF THE EXERCISE, SALE OR OTHER DISPOSITION AND EXPIRATION OF THOSE RIGHTS, INCLUDING THE APPLICABILITY AND EFFECTS OF ANY STATE, LOCAL OR FOREIGN TAX LAWS, AND OF ANY PROPOSED CHANGES IN APPLICABLE LAWS.

Receipt of the Rights

It is the opinion of our outside counsel, Eilenberg & Krause LLP, that the distribution of the Rights should be treated as a non-taxable stock dividend under Section 305(a) of the Code. However, there is a lack of authority directly addressing the application of Section 305(a) of the Code to distributions of Rights, including ones that incorporate backstop commitments by certain securityholders, and thus the application of Section 305(a) of the Code to the distribution of the Rights in our offering is uncertain. In addition, our counsel's position is not binding on the IRS, or the courts. If this position is finally determined by the IRS or a court to be incorrect, the fair market value of the rights would be taxable to participants in the Rights Offering as a dividend to the extent of our current and accumulated earnings and profits, with any excess being treated as a return of basis to the extent thereof and then as capital gain. Due to the lack of authority on the part of the IRS and the courts in regard to interpreting Code Section 305 as applied to distributions of Rights, it is not reasonably possible to quantify the degree of uncertainty and risk to the recipients of the Rights regarding potential adverse tax effects. *See*, "Risk Factors—The receipt of Rights may be treated as a taxable distribution to you."

The distribution of the rights would be taxable under Section 305(b) of the Code if the Rights Offering were to be treated as a distribution or part of a series of distributions that have the effect of the receipt of cash or other property by some of our securityholders and an increase in the proportionate interest of our other securityholders in our assets or earning and profits. Distributions having that effect are referred to as "disproportionate distributions." For purposes of the definition of "disproportionate distributions", the term "property" includes money, securities and any other property, except that "property" does not include stock in the corporation making the distribution or rights to acquire such stock. The reference to a "series of distributions" encompasses all distributions of stock made or deemed made by a corporation which have the result of receipt of cash or property by some securityholders and an increase in the proportionate interests of other securityholders. Under the Treasury Regulations applicable to Section 305(b), where the receipt of cash or property occurs more than 36 months following a distribution or series of distributions of stock, or where a distribution is made more than 36 months following the receipt of cash or property, such distribution or distributions will be presumed not to result in the receipt of cash or property by some securityholders and an increase in the proportionate interest of other securityholders, unless the receipt of cash or property by some securityholders and the distribution or series of distributions are made pursuant to a plan. During the last 36 months, we have not made any distributions of cash or non-stock property with respect to our Common Stock. In addition, within the last 36 months, we have not made any payments in cash or non-stock property of interest on previously outstanding convertible notes or of dividends on previously outstanding preferred stock. Currently, we do not intend to pay any dividends on our Common Stock (other than the issuance of the Rights in connection with this offering). In addition, many forms of taxable distributions under Section 305(b) of the Code involve preferred stock, such as the distribution

of convertible preferred stock in certain circumstances pursuant to Section 305(b). Currently, we do not have any convertible debt or preferred stock outstanding, nor do we currently intend to issue any convertible debt or preferred stock.

On the basis of the relevant facts discussed in the paragraph above, together with analysis of Section 305(b) of the Code and corresponding Treasury Regulations, it is the opinion of our outside counsel, Eilenberg & Krause LLP, that the distribution of the Rights in the Rights Offering should not constitute an increase in the proportionate interest of some securityholders in the assets or earnings and profits of the Company and that the Rights Offering should therefore not constitute part of a “disproportionate distribution,” pursuant to Section 305(b) of the Code. However, due to lack of authority, the actual application of the Code Section 305 rules to the Rights Offering (and any interest therein or obtained thereby) is uncertain. If our tax counsel’s opinion is determined by the IRS or a court to be incorrect, whether on the basis that the issuance of the Rights is a “disproportionate distribution” or otherwise, the fair market value of the Rights would be taxable to you. *See*, “Risk Factors—The receipt of Rights may be treated as a taxable distribution to you.”

The remaining description assumes that holders of our Common Stock will not be subject to U.S. federal income tax on the receipt of Rights.

Tax Basis and Holding Period of the Rights

Your tax basis of the Rights you receive with respect to your shares of commons stock for U.S. federal income tax purposes will depend on the fair market value of the Rights you receive and the fair market value of your existing shares of Common Stock on the date you receive the Rights.

If the fair market value of the Rights you receive is less than 15% of the fair market value of your existing shares of Common Stock on the date you receive your Rights, your Rights will have a zero basis, unless you choose to allocate your basis in the shares of Common Stock you own prior to the expiration date of the Rights Offering between your existing shares of Common Stock and the Rights in proportion to the relative fair market values of those existing shares of Common Stock and the Rights, as determined on the date of receipt of the Rights.

However, if the fair market value of the Rights a U.S. holder receives is 15% or more of the fair market value of their existing shares of Common Stock on the date the U.S. holder receives the Rights, then the U.S. holder must allocate its tax basis in its existing shares of Common Stock between those shares and the Rights the U.S. holder receives in proportion to their fair market values determined on the date the U.S. holder receives the Rights.

The fair market value of the Rights on the date of distribution of the Rights is inherently uncertain. We have not obtained any fair market value appraisal, and we do not plan to commission any appraisal regarding the fair market value of the Rights. In ascertaining fair market value of the Rights, you should consider all relevant facts and circumstances, including any difference between the subscription price of the Rights and the trading price of our Common Stock on the date that the Rights are distributed, the length of the period during which the Rights may be exercised and the fact that the Rights are non-transferable.

Expiration of the Rights

If your rights expire without exercise while you continue to hold the shares of our Common Stock with respect to which the rights are granted to you, we do not expect that you will recognize any gain or loss, and your tax basis in the shares of Common Stock on which your rights were granted should equal the tax basis prior to the date of your receipt of the Rights. If the rights expire without exercise after you have disposed of any shares of our Common Stock with respect to which your rights have been granted, you should consult your tax advisor regarding recognition of any

possible gain or loss upon the expiration of your rights.

Exercise of the Rights; Tax Basis and Holding Period of the Shares

The exercise of the rights that you receive in this offering should not result in any gain or loss to you. The tax basis of our Common Stock that you acquire through exercise of the rights should be equal to the sum of:

the subscription price per share; and

the basis, if any, in the rights that you exercised, determined as described in “—Tax Basis of the Rights” above.

The holding period for the shares of our Common Stock that you acquire upon exercise of a right should begin with the date of exercise of the rights.

If you exercise the rights received in this offering after disposing of the shares of our Common Stock with respect to which the rights are received, you should consult your tax advisor regarding the potential application of the “wash sale” rules under Section 1091 of the Code.

Sale or Other Disposition of the Rights Shares

If you sell, transfer or dispose of the shares that you acquire in respect of the exercise of your rights, the recognition of the gain or loss upon the sale, transfer or disposition of such shares should be a capital gain or loss, assuming the shares are held as capital assets at the time of sale. If you hold your shares for more than one year, the treatment of the gain or loss should be long-term.

Information Reporting and Backup Withholding

You may be subject to information reporting to the IRS and/or U.S. federal backup withholding with respect to dividend payments on or the gross proceeds from the disposition of our shares of Common Stock that you acquire through the exercise of Rights. Backup withholding should not apply if you furnish a correct taxpayer identification number (certified on the IRS Form W-9) or otherwise establish that you are exempt from backup withholding. Backup withholding is not an additional tax. Backup withholding may apply if you (i) fail to furnish your social security or other taxpayer identification number (“TIN”), (ii) furnish an incorrect TIN, (iii) fail to report interest or dividends properly, or (iv) fail to provide a certified statement, signed under penalty of perjury, that the TIN provided is correct, that you are not subject to backup withholding and that you are a U.S. person. Amounts withheld as backup withholding may be credited against your U.S. federal income tax liability. You may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS and furnishing the applicable information.

LEGAL MATTERS

The validity of the Common Stock offered by this prospectus will be passed upon for us, and certain matters regarding the material U.S. federal income tax consequences of the Rights Offering have been passed upon for us, by Eilenberg & Krause LLP.

EXPERTS

Our consolidated financial statements incorporated in this prospectus by reference from our Annual Report on Form 10-K for the year ended December 31, 2018, were audited by Friedman LLP, an independent registered public accounting firm, as stated in their report which is incorporated herein by reference. Such consolidated statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are an SEC reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the Common Stock and Rights being offered under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities being offered under this prospectus, we refer you to the complete registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The SEC's Internet site can be found at <http://www.sec.gov>. You can also obtain copies of materials we file with the SEC from our Internet website found at <http://www.acornenergy.com> under the heading "Investor Relations." The information contained in our website is not a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus contain important information that you should read about us. The following documents are incorporated by reference into this prospectus:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on March 27, 2019.

All documents subsequently filed by us (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, including those made after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the Common Stock made by this prospectus, are deemed to be incorporated by reference into this prospectus. Such future filings will become a part of this prospectus from the respective dates that such documents are filed with the SEC.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof to the extent that such statement contained herein or in any other subsequently filed document, which is also incorporated or deemed to be incorporated herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

The documents incorporated by reference into this prospectus are also available on our corporate website at <http://www.acornenergy.com> under the heading “Investor Relations.” Information contained on, or that can be accessed through, our website is not part of this prospectus, and you should not consider information on our website to be part of this report unless specifically incorporated herein by reference. You may obtain copies of any or all of the documents incorporated by reference in this prospectus from us free of charge by requesting them in writing or by telephone at the following address:

Acorn Energy, Inc.
1000 N West Street, Suite 1200
Wilmington, Delaware 19801
(302) 656-1708

Acorn Energy, Inc.

Rights to Purchase Shares of Common Stock

[] Shares of Common Stock

PROSPECTUS

We have not authorized any dealer, salesperson or other person to give you written information other than this prospectus or to make representations as to matters not stated in this prospectus. You must not rely on unauthorized information. This prospectus is not an offer to sell these securities or our solicitation of your offer to buy these securities in any jurisdiction where that would not be permitted or legal. Neither the delivery of this prospectus nor any sales made hereunder after the date of this prospectus shall create an implication that the information contained herein or the affairs of our company have not changed since the date of this prospectus.

PART II—INFORMATION NOT REQUIRED IN PROSPECTUS**Item 13. Other Expenses of Issuance and Distribution.**

The following is an itemization of all expenses (subject to future contingencies) incurred or to be incurred by us in connection with the issuance and distribution of the securities being offered. All items below are estimates. The registrant will pay all of such expenses.

Securities and Exchange Commission registration fee	\$
Accounting fees and expenses	\$
Legal fees and expenses	\$
Subscription Agent and Information Agent fees and expenses	\$
Printing fees	\$
Total	\$

Item 14. Indemnification of Directors and Officers.

The Certificate of Incorporation, as amended, and the Amended Bylaws of the Registrant provide that the Registrant shall indemnify its officers, directors and certain others to the fullest extent permitted by the General Corporation Law of Delaware (“DGCL”). Section 145 of the DGCL provides that the Registrant, as a Delaware corporation, is empowered, subject to certain procedures and limitations, to indemnify any person against expenses (including attorney’s fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with any threatened, pending or completed action, suit or proceeding (including a derivative action) in which such person is made a party by reason of his being or having been a director, officer, employee or agent of the Registrant (each, an “Indemnitee”); provided that the right of an Indemnitee to receive indemnification is subject to the following limitations: (i) an Indemnitee is not entitled to indemnification unless he acted in good faith and in a manner that he reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such conduct was unlawful and (ii) in the case of a derivative action, an Indemnitee is not entitled to indemnification in the event that he is judged to be liable to the Company (unless and only to the extent that the court determines that the Indemnitee is fairly and reasonably entitled to indemnification for such expenses as the court deems proper). The statute provides that indemnification pursuant to its provisions is not exclusive of other rights of indemnification to which a person may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise.

Pursuant to Section 145 of the DGCL, the Registrant has purchased insurance on behalf of its present and former directors and officers against any liability asserted against or incurred by them in such capacity or arising out of their status as such.

In accordance with Section 102(b)(7) of the DGCL, the Certificate of Incorporation of the Registrant eliminates personal liability of the Registrant's directors to the Registrant or its stockholders for monetary damages for breach of their fiduciary duties as a director, with certain limited exceptions set forth in Section 102(b) (7) of the DGCL.

The Registrant has entered into an indemnification agreement with all of its present officers and directors and plans to enter into such agreements with all future officers and directors. The terms of the agreement require that the Registrant maintain a minimum level of insurance coverage for claims against officers and directors and that the Registrant indemnify the officer and/or director against claims against them that arise in their service on behalf of the Registrant.

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Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is therefore unenforceable.

Item 15. Recent Sales of Unregistered Securities

None.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits and financial statement schedules filed as part of this registration statement are as follows:

(a) *List of Exhibits.*

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

(b) *Financial Statement Schedules.*

No financial statement schedules are filed because the required information is not applicable or is included in the consolidated financial statements or related notes.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the expiration of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(7) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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EXHIBIT INDEX

- 4.1 Form of Rights Certificate*
- 4.2 Form of Notice to Stockholders who are Record Holders*
- 4.3 Form of Notice to Stockholders who are Acting as Nominees*
- 4.4 Form of Notice to Clients of Stockholders who are Acting as Nominees*
- 4.5 Form of Notice of Guaranteed Delivery*
- 4.6 Form of Beneficial Owner Election Form*
- 4.7 Form of Nominee Holder Election Form*
- 5.1 Legal Opinion of Eilenberg & Krause LLP*
- 8.1 Opinion re tax matters (included in opinion filed as Exhibit 5.1).
- 10.1 Backstop Agreement between Acorn Energy, Inc. and the Backstop Purchasers*
- 10.2 Registration Rights Agreement between Acorn Energy, Inc. and the Backstop Purchasers*
- 23.1 Consent of Friedman LLP**

* To be filed by amendment.

** Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Wilmington, State of Delaware, on May 3, 2019.

ACORN ENERGY, INC.

By: */s/ Jan H. Loeb*

Jan H. Loeb

President and Chief Executive Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints each of Jan H. Loeb and Tracy S. Clifford as his/her true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him/her and in his/her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act, as amended, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the SEC, granting unto each said attorney-in-fact and agents full power and authority to do and perform each and every act in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or either of them or their or his or her substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<i>/s/ Jan H. Loeb</i> Jan H. Loeb	President, Chief Executive Officer, and Director (Principal Executive Officer)	May 3, 2019
<i>/s/ Tracy S. Clifford</i> Tracy S. Clifford	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 3, 2019
<i>/s/ Gary Mohr</i> Gary Mohr	Director	May 3, 2019

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/s/ Michael F. Osterer Director
Michael F. Osterer

May 3, 2019

/s/ Samuel M. Zentman Director
Samuel M. Zentman

May 3, 2019

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