

TECOGEN INC.
Form S-4/A
March 27, 2017
Table of Contents

As filed with the Securities and Exchange Commission on March 24, 2017
Registration No. 333-215231

U.S. SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Amendment No. 2 to

Form S-4

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Tecogen Inc.

(Exact name of registrant as specified in its charter)

Delaware

3585

04-3536131

(State or other jurisdiction of (Primary Standard Industrial
incorporation or organization) Classification Code Number) (I.R.S. Employer Identification No.)

45 First Avenue

Waltham, MA 02451

(781) 466-6400

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

John N. Hatsopoulos

Co-Chief Executive Officer

Tecogen Inc.

45 First Avenue

Waltham, MA 02451

(781) 466-6400

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies of communications to:

Edwin L. Miller Jr.	David A. White	Neil H. Aronson
Sullivan & Worcester LLP	White White & Van Etten PC	Gennari Aronson, LLP
One Post Office Square	45 School Street	300 First Avenue, Suite 102
Boston, MA 02109	Boston, MA 02108	Needham, MA 02494
Tel: 617.338.2800	Tel: 617.350.9281	Tel: 781.719.9803
Fax: 617.338.2880	Fax: 617.225.0205	Fax: 781.719.9853
Email: emiller@sandw.com	Email: daw@wwvlaw.com	Email: naronson@galawpartners.com

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective and all other conditions to the transactions contemplated by the Agreement and Plan of Merger described in the included proxy statement/prospectus have been satisfied or waived.

If the securities being registered on this form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, 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, 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 or a smaller reporting company. Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
 If applicable, place an x in the box to designate the appropriate rule provision relied upon in conducting this transaction:

Exchange Act Rule 13e-4(i) (Cross-Border Issuer Tender Offer)

Exchange Act Rule 14d-1(d) (Cross-Border Third Party Tender Offer)

Title of each class

of securities to be registered	Amount to be registered ⁽¹⁾	Proposed maximum offering price per unit ⁽¹⁾	Proposed maximum aggregate offering price ⁽²⁾	Amount of registration fee ⁽³⁾
Common Stock	5,098,950 shares	Not applicable	\$20,880,200	\$2,420.02

⁽¹⁾ Represents the estimated maximum number of shares of common stock of the registrant issuable to holders of common stock, options to purchase common stock, and warrants to purchase common stock of American DG Energy Inc. pursuant to the Merger Agreement described herein and assumes no adjustment to the exchange ratio described in the Merger Agreement. Pursuant to Rule 416, this registration statement also covers an indeterminate number of shares of common stock as may become issuable as a result of stock splits, stock dividends or similar transactions.

⁽²⁾ Estimated solely for the purposes of calculating the registration fee pursuant to Rule 457(f) of the Securities Act of 1933. The proposed maximum aggregate offering price calculated pursuant to Rule 457(f) of the Securities Act represents the product of (a) the sum of (i) 50,684,095 issued and outstanding shares of American DG Energy Inc. ("ADGE") common stock as of March 21, 2017, (ii) an aggregate of 1,797,000 shares issuable in respect of outstanding ADGE stock options to purchase common stock; and (iii) an aggregate of 2,942,270 shares issuable upon exercise of outstanding ADGE common stock purchase warrants, and (b) 0.092 (which is the exchange ratio) and (c) \$4.095 (which is the average of the high and low trading prices for shares of the registrant's common stock, as reported on the Nasdaq Capital Market on December 19, 2016).

⁽³⁾ The registrant previously paid \$2,325.16 of the filing fee.

Table of Contents

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 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this preliminary joint proxy statement/prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary joint proxy statement/prospectus is not an offer to sell these securities nor should it be considered a solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. Subject to completion, dated [*]

JOINT PROXY STATEMENT/PROSPECTUS

To: The Stockholders of Tecogen Inc. and American DG Energy Inc.

Tecogen Inc., or Tecogen, American DG Energy Inc., or ADGE, and Tecogen.ADGE Acquisition Corp., a Delaware corporation and a wholly-owned subsidiary of Tecogen formed for the purpose of effecting the merger described herein, or Merger Sub, have entered into an Agreement and Plan of Merger dated as of November 1, 2016, as amended on March 23, 2017 by Amendment No. 1 to the Agreement and Plan of Merger, or the Merger Agreement, pursuant to which Merger Sub will merge with and into ADGE, or the Merger. Following the Merger, ADGE will be the surviving entity in its Merger with Merger Sub and will become a wholly-owned subsidiary of Tecogen. The Tecogen Board of Directors and the ADGE Board of Directors have unanimously approved the Merger Agreement and the transactions contemplated by the Merger Agreement. A copy of the Merger Agreement is attached as Annex A to this joint proxy statement/prospectus.

This document is a prospectus relating to the proposed issuance by Tecogen of shares of its common stock to ADGE stockholders pursuant to the Merger Agreement. If the Merger is completed, each share of ADGE common stock issued and outstanding immediately prior to the merger effective time will be exchanged for the right to receive 0.092 of a share, or the Exchange Ratio, of Tecogen common stock. The Exchange Ratio is fixed and will not be adjusted to reflect stock price changes prior to the closing of the Merger. No fractional shares will be issued in the Merger, and cash will be paid in lieu thereof. Tecogen common stock is listed and traded on the Nasdaq Capital Market under the ticker symbol "TGEN" and ADGE common stock is listed and traded on the NYSE MKT under the ticker symbol "ADGE." Based on the closing price of Tecogen common stock on the Nasdaq Capital Market on November 1, 2016 of \$4.03, the last trading day before public announcement of the Merger, the Exchange Ratio represented approximately \$0.37 in Tecogen common stock for each share of ADGE common stock. Tecogen stockholders will continue to own their existing Tecogen shares of common stock following the consummation of the Merger. Based on the closing price of Tecogen common stock on the Nasdaq Capital Market of \$3.85 on March 17, 2017, the last practicable date before the date of this joint proxy statement/prospectus, the Exchange Ratio represented approximately \$0.35 in Tecogen common stock for each share of ADGE common stock. We urge you to obtain current market quotations for Tecogen common stock and ADGE common stock.

Based on the number of shares of ADGE common stock outstanding on the record date for the stockholder meetings related to the Merger, Tecogen expects to issue approximately 5,098,950 shares of Tecogen common stock to ADGE stockholders in the Merger, and expects to reserve approximately 165,324 additional shares of Tecogen common stock for issuance in connection with outstanding ADGE equity awards, restricted stock grants and warrants to purchase common stock that Tecogen will assume in connection with the Merger. Upon completion of the Merger, Tecogen estimates that current Tecogen stockholders will own approximately 81% of Tecogen's issued and outstanding common stock and former ADGE stockholders will own approximately 19% of Tecogen's issued and outstanding common stock.

This document is also a joint proxy statement of Tecogen and ADGE for soliciting proxies for their respective special meetings of stockholders. At Tecogen's special meeting of stockholders, Tecogen common stockholders will be asked to consider and vote on a proposal to approve the issuance of Tecogen common stock pursuant to the Merger Agreement, or the Tecogen Share Issuance Proposal.

The Tecogen special meeting of stockholders will be held on [*], at [*], local time, at Tecogen's principal executive offices at 45 First Avenue, Waltham, MA 02451.

The Tecogen Board of Directors unanimously recommends that Tecogen stockholders vote "FOR" the Tecogen Share Issuance Proposal.

Edgar Filing: TECOGEN INC. - Form S-4/A

The ADGE special meeting of stockholders will be held on [*], at [*], local time, at ADGE's principal executive offices at 45 First Avenue, Waltham, MA 02451. At ADGE's special meeting of stockholders, ADGE common stockholders will be asked to consider and vote on a proposal to adopt the Merger Agreement and approve the Merger, or the ADGE Merger Approval Proposal.

The ADGE Board of Directors unanimously recommends that ADGE common stockholders vote "FOR" the ADGE Merger Approval Proposal.

Table of Contents

This joint proxy statement/prospectus contains important information about Tecogen, ADGE, the Merger, the Merger Agreement and the matters to be considered and voted upon by Tecogen stockholders and by ADGE stockholders as part of the special meetings. We encourage you to read this joint proxy statement/prospectus carefully before voting, including the section entitled “Risk Factors” beginning on page 27.

YOUR VOTE IS IMPORTANT. We cannot complete the Merger and the merger consideration will not be issued to ADGE stockholders unless (i) Tecogen's stockholders approve the stock issuance and (ii) ADGE's stockholders adopt the Merger Agreement and approve the Merger. Adoption of the Merger Agreement requires the affirmative vote of holders of at least a majority of the outstanding shares of ADGE common stock entitled to vote thereon. Whether or not you plan to attend Tecogen's special meeting or ADGE's special meeting, as applicable, please authorize a proxy to vote your shares as promptly as possible. To authorize a proxy, please complete, sign, date and mail your proxy in the pre-addressed postage-paid envelope provided or authorize your proxy by one of the other methods specified in this joint proxy statement/prospectus or the accompanying notices. If your shares of common stock are held in “street name” by your broker or other nominee, only your broker or other nominee can vote your shares and the vote cannot be cast unless you provide instructions to your broker or other nominee on how to vote or you obtain a legal proxy from your broker or other nominee. You should follow the directions provided by your broker or other nominee regarding how to instruct your broker or other nominee to vote your shares. You may revoke your proxy at any time before it is voted. Please review this joint proxy statement/prospectus for more complete information regarding the merger and the special meetings.

We look forward to the successful combination of Tecogen and ADGE.

Sincerely,

Sincerely,

John N. Hatsopoulos Benjamin Locke
Co-Chief Executive Officer Co-Chief Executive Officer
American DG Energy Inc. Tecogen Inc.

Neither the Securities and Exchange Commission nor any state securities regulatory authority has approved or disapproved of the merger or the securities to be issued under this joint proxy statement/prospectus or has passed upon the adequacy or accuracy of the disclosure in this joint proxy statement/prospectus. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated [*], and is first being mailed to the Tecogen and ADGE common stockholders on or about [*].

Table of Contents

TECOGEN INC.

45 First Avenue

Waltham, Massachusetts 02451

(781) 466-6400

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON [*]

To the Stockholders of Tecogen Inc.:

We are pleased to invite you to attend a special meeting of the stockholders of Tecogen Inc., or Tecogen, a Delaware corporation, which will be held at our corporate headquarters at 45 First Avenue, Waltham, Massachusetts on [*], commencing at [*] a.m., local time, or such other date, time and place to which such meeting may be adjourned or postponed. The special meeting of stockholders has been called in connection with the Agreement and Plan of Merger dated as of November 1, 2016, as amended on March 23, 2017 by Amendment No. 1 to the Agreement and Plan of Merger, or the Merger Agreement, by and among Tecogen, American DG Energy Inc., a Delaware corporation, or ADGE, and Tecogen.ADGE Acquisition Corp., a Delaware corporation formed for the purpose of effecting the merger and a wholly-owned subsidiary of Tecogen, or the Merger Sub, pursuant to which Merger Sub will merge with and into ADGE, or the Merger, with ADGE continuing as the surviving entity. Tecogen stockholders are being asked to consider and vote on the following:

- 1) to approve the issuance of the shares of common stock, par value \$.001 per share, of Tecogen in the Merger contemplated by the Merger Agreement. This proposal is referred to as the Tecogen Share Issuance Proposal; and
- 2) to transact any other business as may properly be brought before the Tecogen special meeting or any adjournments or postponements thereof.

This joint proxy statement/prospectus contains important information about the proposal to be voted on at the Tecogen special meeting. We encourage you to read this joint proxy statement/prospectus carefully before voting, including the section entitled “Risk Factors” beginning on page 27.

The Tecogen Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously (i) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, including the issuance of the shares of Tecogen common stock pursuant to the Merger Agreement, (ii) determined and declared that the Merger and the other transactions contemplated by the Merger are advisable, fair to and in the best interest of Tecogen, and (iii) directed that the Tecogen Share Issuance Proposal be submitted for consideration at the Tecogen special meeting. The Tecogen Board of Directors unanimously recommends that the Tecogen stockholders vote “FOR” the Tecogen Share Issuance Proposal. The Merger cannot be completed without the approval by the Tecogen stockholders of the Tecogen Share Issuance Proposal.

The Tecogen Board of Directors has fixed the close of business on [*], as the record date for determination of Tecogen common stockholders entitled to receive notice of, and to vote at, Tecogen’s special meeting and any postponements or adjournments of the special meeting.

The Tecogen Share Issuance Proposal requires the affirmative vote of a majority of the votes cast by the holders of all of the shares of Tecogen common stock present in person or represented by proxy at the special meeting at which a quorum is present. This means the number of shares voted “FOR” the Tecogen Share Issuance Proposal must exceed the number of shares voted “AGAINST” the Tecogen Share Issuance Proposal. Abstentions and broker non-votes are not considered votes cast for the foregoing purpose, and will have no effect on the vote for this proposal.

A complete list of Tecogen stockholders of record entitled to vote at the Tecogen special meeting will be available for ten days before the Tecogen special meeting at the principal executive offices of Tecogen for inspection by stockholders during ordinary business hours for any purpose germane to the Tecogen special meeting.

YOUR VOTE IS IMPORTANT

Whether or not you plan to attend the special meeting, please authorize a proxy to vote your shares as promptly as possible. To authorize a proxy, complete, sign, date and mail your proxy card in the pre-addressed postage-paid envelope provided or, if the option is available to you, call the toll free telephone number listed on your proxy card or use the Internet as described in the instructions on the enclosed proxy card to authorize your proxy. Authorizing a

Edgar Filing: TECOGEN INC. - Form S-4/A

proxy will assure that your vote is counted at the special meeting if you do not attend in person. If your shares of Tecogen common stock are held in “street name” by your broker or other nominee, only your broker or other nominee can vote your shares of Tecogen common stock and the vote cannot be cast unless you provide instructions to your broker or other nominee on how to vote or obtain a legal proxy from your broker or other nominee. You should follow the directions provided by your broker or other nominee regarding how to instruct your broker or other nominee to vote your shares of Tecogen common stock. You may revoke your proxy at any time before it is voted.

Table of Contents

Please review the joint proxy statement/prospectus accompanying this notice for more complete information regarding the Merger, the Tecogen Share Issuance Proposal and Tecogen's special meeting.

By Order of the Board of Directors,

Benjamin Locke

Co-Chief Executive Officer

IF YOU RETURN A SIGNED PROXY CARD WITHOUT AN INDICATION OF HOW YOU WISH TO VOTE,
YOUR SHARES WILL BE VOTED IN FAVOR OF THE PROPOSAL.

Table of Contents

AMERICAN DG ENERGY INC.

45 First Avenue
Waltham, Massachusetts 02451
(781) 522-6000

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD ON [*]

To the Stockholders of American DG Energy Inc.:

We are pleased to invite you to attend a special meeting of the stockholders of American DG Energy Inc., or ADGE, a Delaware corporation, which will be held at our corporate headquarters at 45 First Avenue, Waltham, Massachusetts, on [*], commencing at [*] a.m., local time, or such other date, time and place to which such meeting may be adjourned or postponed, to consider and vote upon the following:

- 1) to adopt the Agreement and Plan of Merger dated as of November 1, 2016, as amended on March 23, 2017 by Amendment No. 1 to the Agreement and Plan of Merger, or the Merger Agreement, by and among ADGE, Tecogen Inc., a Delaware corporation, or Tecogen, and Tecogen.ADGE Acquisition Corp., a Delaware corporation formed for the purpose of effecting the merger and a wholly-owned subsidiary of Tecogen, or the Merger Sub, pursuant to which Merger Sub will merge with and into ADGE, or the Merger, with ADGE continuing as the surviving entity, and approve the Merger. This proposal is referred to as the ADGE Merger Approval Proposal; and
- 2) to transact any other business as may properly be brought before the ADGE special meeting or any adjournments or postponements thereof.

This joint proxy statement/prospectus contains important information about the matters to be voted upon at the ADGE special meeting. We encourage you to read this joint proxy statement/prospectus carefully before voting, including the section entitled "Risk Factors" beginning on page 31.

The ADGE Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously (i) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, (ii) determined and declared that the Merger and the other transactions contemplated by the Merger are advisable, fair to and in the best interest of ADGE, and (iii) directed that the foregoing proposal be submitted for consideration at the ADGE special meeting. The ADGE Board of Directors unanimously recommends that the ADGE stockholders vote "FOR" the ADGE Merger Approval Proposal. The Merger cannot be completed without the approval by ADGE stockholders of the ADGE Merger Approval Proposal.

The ADGE Board of Directors has fixed the close of business on [*] as the record date for the determination of ADGE common stockholders entitled to receive notice of, and to vote at, ADGE's special meeting and any postponements or adjournments of the special meeting.

The ADGE Merger Approval Proposal requires the affirmative vote of a majority of the outstanding shares of ADGE common stock entitled to vote on the proposal, assuming that a quorum is present at the special meeting.

A complete list of ADGE stockholders of record entitled to vote at the ADGE special meeting will be available for ten days before the ADGE special meeting at the principal executive offices of ADGE for inspection by stockholders during ordinary business hours for any purpose germane to the ADGE special meeting.

YOUR VOTE IS IMPORTANT

Whether or not you plan to attend the special meeting, please authorize a proxy to vote your shares as promptly as possible. To authorize a proxy, complete, sign, date and mail your proxy card in the pre-addressed postage-paid envelope provided or, if the option is available to you, call the toll free telephone number listed on your proxy card or use the Internet as described in the instructions on the enclosed proxy card to authorize your proxy. If your shares of ADGE common stock are held in "street name" by your broker or other nominee, only your broker or other nominee can vote your shares of ADGE common stock and the vote cannot be cast unless you provide instructions to your broker or other nominee on how to vote or obtain a legal proxy from your broker or other nominee. You should follow the directions provided by your broker or other nominee regarding how to instruct your broker or other nominee to vote your shares of ADGE common stock. You may revoke your proxy at any time before it is voted. Please review the joint proxy statement/prospectus accompanying this notice for more complete information regarding the Merger, the

Edgar Filing: TECOGEN INC. - Form S-4/A

Merger Agreement, the ADGE Merger Approval Proposal and ADGE's special meeting.

By Order of the Board of Directors

John N. Hatsopoulos

Co-Chief Executive Officer

IF YOU RETURN A SIGNED PROXY CARD WITHOUT AN INDICATION OF HOW YOU WISH TO VOTE,
YOUR SHARES WILL BE VOTED IN FAVOR OF THE PROPOSAL.

Table of Contents

ABOUT THIS JOINT PROXY STATEMENT/PROSPECTUS

This joint proxy statement/prospectus, which forms part of a registration statement on Form S-4 (Registration No. 333-215231) filed with the SEC by Tecogen, constitutes a prospectus of Tecogen under the Securities Act of 1933, as amended, or the Securities Act, with respect to the shares of Tecogen common stock to be issued to ADGE stockholders pursuant to the Merger Agreement. This joint proxy statement/prospectus also constitutes a proxy statement under the Securities Exchange Act of 1934, as amended, or the Exchange Act, with respect to the Tecogen special meeting and the ADGE special meeting. It also includes a notice of meeting with respect to each of the Tecogen and the ADGE special meetings.

You should rely only on the information contained in this joint proxy statement/prospectus. No one has been authorized to provide you with information that is different from that contained in this joint proxy statement/prospectus. This joint proxy statement/prospectus is dated [*]. You should not assume that the information contained in this joint proxy statement/prospectus is accurate as of any date other than the date of this document. Neither our mailing of this joint proxy statement/prospectus to Tecogen stockholders or ADGE stockholders nor the issuance by Tecogen of common stock in connection with the Merger will create any implication to the contrary. This joint proxy statement/prospectus does not constitute an offer to sell, or a solicitation of an offer to buy, any securities, or the solicitation of a proxy, in any jurisdiction in which or from any person to whom it is unlawful to make any such offer or solicitation in such jurisdiction. Information contained in this joint proxy statement/prospectus regarding Tecogen has been provided by Tecogen, and information contained in this joint proxy statement/prospectus regarding ADGE has been provided by ADGE.

Table of Contents

TABLE OF CONTENTS

	Page #
<u>QUESTIONS AND ANSWERS ABOUT THE MERGER AND THE SPECIAL MEETINGS</u>	1
<u>SUMMARY</u>	2
<u>The Companies</u>	2
<u>The Merger and the Merger Agreement</u>	3
<u>Recommendation of the Tecogen Board of Directors</u>	4
<u>Recommendation of the ADGE Board of Directors</u>	4
<u>Summary of the Risk Factors Related to the Merger</u>	4
<u>The Special Meetings</u>	4
<u>Opinion of Tecogen's Financial Advisor Regarding the Merger</u>	5
<u>Opinion of ADGE's Financial Advisor Regarding the Merger</u>	5
<u>Stock Ownership of Directors and Executive Officers of Tecogen</u>	6
<u>Stock Ownership of Directors and Executive Officers of ADGE</u>	6
<u>Interests of Tecogen's Directors and Executive Officers in the Merger</u>	6
<u>Interests of ADGE's Directors and Executive Officers in the Merger</u>	7
<u>Listing of Tecogen Common Shares</u>	8
<u>No Appraisal Rights</u>	8
<u>Expected Timing of the Merger</u>	8
<u>Conditions to Completion of the Merger</u>	8
<u>Regulatory Approvals Required for the Merger</u>	8
<u>No Deal Protection Devices: Termination of the Merger Agreement</u>	8
<u>Expenses: No Termination Fees</u>	9
<u>Certain United States Federal Income Tax Consequences of the Merger</u>	9
<u>Accounting Treatment of the Merger</u>	9
<u>Litigation Relating to the Merger</u>	9
<u>Comparison of Rights of Tecogen and ADGE Stockholders</u>	10
<u>Selected Historical Financial Information of Tecogen</u>	10
<u>Selected Historical Financial Information of ADGE</u>	11
<u>Summary Unaudited Pro Forma Condensed Combined Financial Information</u>	12
<u>Unaudited Pro Forma Condensed Consolidated Financial Information</u>	13
<u>Unaudited Pro Forma Condensed Combined Balance Sheet</u>	15
<u>Unaudited Pro Forma Condensed Combined Statement of Operations</u>	16
<u>Notes to the Unaudited Pro Forma Condensed Combined Financial Statements</u>	17
<u>Equivalent and Comparative Per Share Information</u>	24
<u>Comparative Tecogen and ADGE Market Price and Distribution Information</u>	25
<u>RISK FACTORS</u>	27
<u>Risks Relating to the Merger</u>	27
<u>Risks Relating to an Investment in Tecogen Following the Merger</u>	31
<u>Risks Relating to Tecogen and its Operations After the Merger</u>	31
<u>Risks Relating to Tecogen</u>	32
<u>Risks Relating to ADGE</u>	39
<u>CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING INFORMATION</u>	44
<u>THE TECOGEN SPECIAL MEETING</u>	45
<u>Date, Time, Place and Purpose of Tecogen's Special Meeting</u>	45
<u>Recommendation of the Tecogen Board</u>	45
<u>Record Date: Who Can Vote at Tecogen's Special Meeting</u>	45

Table of Contents

<u>Vote Required for Approval; Quorum</u>	45
<u>Manner of Voting</u>	45
<u>Shares Held in "Street Name"</u>	46
<u>Revocation of Proxies or Voting Instructions</u>	46
<u>Tabulation of the Votes</u>	46
<u>Stockholder Proposals for the Next Annual Meeting</u>	46
<u>PROPOSAL SUBMITTED TO TECOGEN STOCKHOLDERS</u>	47
<u>Approval of the Tecogen Share Issuance Proposal</u>	47
<u>Required Vote</u>	47
<u>THE ADGE SPECIAL MEETING</u>	48
<u>Date, Time, Place and Purpose of ADGE's Special Meeting</u>	48
<u>Recommendation of the ADGE Board</u>	48
<u>Record Date; Who Can Vote at ADGE's Special Meeting</u>	48
<u>Vote Required for Approval; Quorum</u>	48
<u>Manner of Voting</u>	48
<u>Shares Held in "Street Name"</u>	49
<u>Revocation of Proxies or Voting Instructions</u>	49
<u>Tabulation of the Votes</u>	49
<u>Stockholder Proposals for the Next Annual Meeting</u>	49
<u>PROPOSAL SUBMITTED TO ADGE STOCKHOLDERS</u>	50
<u>Approval of the Merger</u>	50
<u>Required Vote</u>	50
<u>THE MERGER</u>	51
<u>Effects of the Merger</u>	51
<u>Background of the Merger</u>	51
<u>Tecogen's Reasons for the Merger; Recommendation by the Tecogen Board of Directors</u>	54
<u>Negative Considerations to be Considered by Tecogen Stockholders</u>	55
<u>Relationships and Overlaps</u>	55
<u>Additional Considerations</u>	56
<u>ADGE's Reasons for the Merger; Recommendation by the ADGE Board of Directors</u>	58
<u>Litigation Relating to the Merger</u>	59
<u>Opinion of Tecogen's Financial Advisor to the Tecogen Special Committee</u>	60
<u>Opinion of ADGE's Financial Advisor to the ADGE Special Committee</u>	64
<u>Certain Unaudited Prospective Financial Information of Tecogen</u>	69
<u>Certain Unaudited Prospective Financial Information of ADGE</u>	70
<u>Interests of Tecogen's Directors and Executive Officers in the Merger</u>	72
<u>Interests of ADGE's Directors and Executive Officers in the Merger</u>	73
<u>Regulatory Approvals in Connection with the Merger</u>	73
<u>Accounting Treatment</u>	73
<u>Listing of Tecogen Common Stock</u>	74
<u>Deregistration and Delisting of ADGE Common Stock</u>	74
<u>Restrictions on Sales of Shares of Tecogen Common Stock Received in the Merger</u>	74
<u>No Appraisal Rights</u>	74
<u>THE MERGER AGREEMENT</u>	75
<u>Form, Effective Time and Closing</u>	75
<u>Organizational Documents, Directors and Officers of the Surviving Entity</u>	75

Table of Contents

<u>Consideration to be Received in the Merger</u>	<u>76</u>
<u>Treatment of Stock Options</u>	<u>76</u>
<u>Treatment of Outstanding Warrants</u>	<u>77</u>
<u>Representations and Warranties</u>	<u>77</u>
<u>Covenants and Agreements</u>	<u>78</u>
<u>Absence of Lock-up Provisions</u>	<u>80</u>
<u>ADGE Go-Shop Right</u>	<u>80</u>
<u>No Requirement of Minority Stockholder Approval</u>	<u>80</u>
<u>Takeover Statutes</u>	<u>80</u>
<u>Employee Benefits</u>	<u>80</u>
<u>Other Covenants and Agreements</u>	<u>81</u>
<u>Conditions to Completion of the Merger</u>	<u>81</u>
<u>Termination of the Merger Agreement by Either Tecogen or ADGE</u>	<u>82</u>
<u>Miscellaneous Provisions</u>	<u>82</u>
<u>MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE MERGER</u>	<u>84</u>
<u>General</u>	<u>84</u>
<u>U.S. Federal Income Tax Consequences of the Merger to U.S. Holders of ADGE Common</u>	<u>85</u>
<u>INFORMATION ABOUT TECOGEN</u>	<u>86</u>
<u>Business</u>	<u>86</u>
<u>Properties</u>	<u>98</u>
<u>Legal Proceedings</u>	<u>99</u>
<u>Market Price and Dividends of Tecogen's Common Equity</u>	<u>99</u>
<u>Management Discussion & Analysis</u>	<u>99</u>
<u>Changes in Accountants</u>	<u>105</u>
<u>Management of Tecogen</u>	<u>105</u>
<u>Compensation of Directors and Executive Officers</u>	<u>108</u>
<u>Executive Compensation</u>	<u>108</u>
<u>Executive Officer Equity Awards at Fiscal Year-End</u>	<u>109</u>
<u>Director Compensation</u>	<u>109</u>
<u>Director Outstanding Equity Awards at Fiscal Year-End</u>	<u>110</u>
<u>Employment Contracts and Termination of Employment and Change of Control Arrangements</u>	<u>110</u>
<u>Security Ownership of Certain Beneficial Owners</u>	<u>112</u>
<u>Certain Relationships and Related Transactions</u>	<u>113</u>
<u>INFORMATION ABOUT ADGE</u>	<u>114</u>
<u>Business</u>	<u>114</u>
<u>Properties</u>	<u>122</u>
<u>Legal Proceedings</u>	<u>122</u>
<u>Market for ADGE's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>122</u>
<u>Management Discussion & Analysis</u>	<u>123</u>
<u>Changes in Accountants</u>	<u>131</u>
<u>Management of ADGE</u>	<u>132</u>
<u>Compensation of Directors and Executive Officers</u>	<u>135</u>
<u>Executive Compensation</u>	<u>135</u>
<u>Executive Officer Equity Awards at Fiscal Year-End</u>	<u>135</u>
<u>Director Compensation</u>	<u>136</u>
<u>Director Outstanding Equity Awards at Fiscal Year-End</u>	<u>136</u>

Table of Contents

<u>Employment Contracts and Termination of Employment and Change of Control Arrangements</u>	<u>137</u>
<u>Security Ownership of Certain Beneficial Owners</u>	<u>138</u>
<u>Certain Relationships and Related Transactions</u>	<u>139</u>
<u>DESCRIPTION OF TECOGEN SHARES</u>	<u>140</u>
<u>Authorized and Issued Common Stock</u>	<u>140</u>
<u>Common Stock</u>	<u>140</u>
<u>Transfer Agent and Registrar</u>	<u>140</u>
<u>Listing</u>	<u>140</u>
<u>COMPARISON OF STOCKHOLDER RIGHTS</u>	<u>140</u>
<u>LEGAL MATTERS</u>	<u>140</u>
<u>EXPERTS</u>	<u>140</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>141</u>
<u>INDEX TO FINANCIAL STATEMENTS</u>	<u>F-1</u>
<u>ANNEX A - AGREEMENT AND PLAN OF MERGER</u>	<u>A-1</u>
<u>ANNEX B - OPINION OF SCARSDALE EQUITIES</u>	<u>B-1</u>
<u>ANNEX C - OPINION OF CASSEL SALPETER & CO., LLC</u>	<u>C-1</u>
<u>Part II - INFORMATION NOT REQUIRED BY PRESPECTUS</u>	<u>II- 1</u>
<u>Item 20. Indemnification of Directors and Officers</u>	<u>II- 1</u>
<u>Item 21. Exhibits and Financial Statement Schedules</u>	<u>II- 1</u>
<u>Item 22. Undertakings</u>	<u>II- 2</u>
<u>SIGNATURES</u>	<u>II- 4</u>
<u>POWER OF ATTORNEY</u>	<u>II- 4</u>
<u>EXHIBIT LIST</u>	<u>II- 5</u>

Table of Contents

QUESTIONS AND ANSWERS ABOUT THE MERGER AND THE SPECIAL MEETINGS

The following questions and answers are intended to briefly address some commonly asked questions regarding the Merger, the Merger Agreement and the Tecogen and ADGE special meetings of stockholders including the proposals to be considered at each meeting. Please refer to the section entitled "Summary" in this joint proxy statement/prospectus and the more detailed information contained elsewhere in this joint proxy statement/prospectus, including the Annexes, financial statements and the other documents to which this joint proxy statement/prospectus refers which you should read carefully and in their entirety because the information in this section does not provide all the information that might be important to you.

Questions and Answers about the Merger

Q: What is the proposed transaction?

A: On November 1, 2016, Tecogen, Inc., a Delaware corporation, or Tecogen, and Tecogen.ADGE Acquisition Corp., a Delaware corporation and wholly-owned subsidiary of Tecogen formed for the purpose of effecting the merger, or Merger Sub, and American DG Energy, Inc., a Delaware corporation, or ADGE, entered into an Agreement and Plan of Merger and, as of March 23, 2017, entered into Amendment No. 1 to the Agreement and Plan of Merger, or the Merger Agreement. Pursuant to the Merger Agreement, Merger Sub will be merged with and into ADGE, or the Merger, with ADGE continuing as the surviving company in the Merger. Following the Merger, ADGE will be a wholly-owned subsidiary of Tecogen. The Merger Agreement sets forth the terms and conditions of Tecogen's proposed acquisition of ADGE. See "The Merger" and "The Merger Agreement." In this joint proxy statement/prospectus, references to the Merger Agreement relating to the period prior to its amendment are to the original Agreement and Plan of Merger, and references to the Merger Agreement relating to the period from and after its amendment are to the Agreement and Plan of Merger as amended by Amendment No. 1.

Q: Why is Tecogen proposing the Merger?

A: The Tecogen Board of Directors believes that the Merger will create value for the existing Tecogen stockholders. It believes that the Merger is important for competitive reasons and will also enhance Tecogen's financial stability and growth prospects, as described more fully in "The Merger - Tecogen's Reasons for the Merger: Recommendation by the Tecogen Board of Directors."

Q: Why is ADGE proposing the Merger?

A: ADGE believes that the shares of Tecogen common stock to be received by ADGE stockholders will enhance the value of the equity interest of ADGE stockholders by participation in the growth of Tecogen. In addition to competitive, financial and investment advantages of the Merger, the ADGE Board of Directors also believes the Merger will eliminate inefficient organizational complexities as described more fully in "The Merger - ADGE's Reasons for the Merger: Recommendation by the ADGE Board of Directors."

Q: If I am an ADGE stockholder, what will I receive in the proposed transaction?

A: If the Merger is completed, each share of ADGE common stock issued and outstanding immediately prior to the effective time of the Merger will be exchanged for the right to receive 0.092 of a share of Tecogen common stock, or the Exchange Ratio, as set forth in the Merger Agreement. No fractional shares of Tecogen common stock will be issued in the Merger. Instead, ADGE stockholders will be paid cash (without interest) in lieu of any fractional share interest to which they would otherwise be entitled. See "The Merger Agreement - Consideration to be Received in the Merger."

Q: What happens if the market price of Tecogen common stock or ADGE common stock changes before the closing of the Merger?

A: No change will be made to the Exchange Ratio due to a change in the market price of Tecogen common stock or ADGE common stock before the Merger. Because the Exchange Ratio is fixed, the value of the consideration to be received by ADGE stockholders in the Merger will not depend on the market price of shares of Tecogen common stock at the time of the Merger. See "The Merger Agreement - Consideration to be Received in the Merger Agreement."

Q: If I am a Tecogen stockholder, how will I be affected by the Merger and the issuance of shares of Tecogen common stock to ADGE stockholders in the Merger?

A: After the Merger, each Tecogen stockholder will continue to own the shares of Tecogen common stock that the stockholder held immediately prior to the Merger effective time. As a result, each Tecogen stockholder will own shares of common stock in a larger company with more assets. Because Tecogen will be issuing new shares of Tecogen common stock to ADGE stockholders in the Merger, each outstanding share of Tecogen common stock immediately prior to the Merger effective time will represent a smaller percentage of the aggregate number of shares of the combined company outstanding after the Merger. Upon completion of the Merger, Tecogen estimates that Tecogen stockholders will own approximately 81% of the issued and outstanding shares of Tecogen common stock and former ADGE stockholders will own approximately 19% of the issued and outstanding shares of Tecogen common stock after giving effect to various assumptions regarding share issuances by Tecogen prior to the Merger effective time. See “Risk Factors - Risks Relating to the Merger.”

Q: Who will be the Board of Directors and management of Tecogen if the Merger is completed?

A: It is not anticipated that the Board of Directors of Tecogen will change.

Concurrent with the closing, Tecogen’s Chief Financial Officer will be replaced with ADGE’s Chief Financial Officer. None of the other executive officers of Tecogen are expected to change.

Q: Do stockholders have appraisal rights in connection with the Merger?

A: No. Under the Delaware General Corporation Law, or the DGCL, neither Tecogen nor ADGE stockholders are entitled to exercise the right of objecting stockholders to receive payment of the fair value of their shares. See “The Merger - No Appraisal Rights.”

Q: What conditions must be satisfied to complete the Merger?

A: The Merger Agreement contains a number of closing conditions, including the approval by Tecogen stockholders of the issuance of the shares of Tecogen common stock pursuant to the Merger Agreement; the adoption of the Merger Agreement and approval of the Merger by ADGE stockholders; the absence of any law or order prohibiting, restraining, enjoining, or making illegal the consummation of the Merger or the other transactions contemplated by the Merger Agreement; the Tecogen registration statement of which this joint proxy statement/prospectus is a part shall have become effective and no stop order suspending the effectiveness of the registration statement shall have been issued; and the shares of Tecogen common stock to be issued in connection with the Merger shall have been approved for listing on the Nasdaq Capital Market, subject only to official notice of issuance. For further information about the conditions that must be satisfied or waived prior to completion of the Merger, see “The Merger Agreement - Conditions to Completion of the Merger.”

Q: What are the anticipated material United States federal income tax consequences of the proposed Merger?

A: The Merger is intended to qualify as a reorganization, within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended, or the Internal Revenue Code. Assuming the Merger qualifies as a reorganization, a U.S. holder of ADGE common stock generally will not recognize any gain or loss upon receipt of Tecogen common stock in exchange for ADGE common stock in the Merger.

Tax matters are very complicated and the tax consequences of the Merger to each ADGE stockholder may depend on such stockholder’s particular facts and circumstances. ADGE stockholders are urged to consult their tax advisors to understand fully the tax consequences of the Merger. See “Material U.S. Federal Income Tax Consequences of the Merger.”

Q: When is the proposed transaction expected to close?

A: The closing of the Merger will take place after both ADGE and Tecogen stockholder meetings have taken place, assuming that the requisite stockholder approvals have been obtained and the other conditions to closing have been satisfied or waived or such other date as agreed to by ADGE and Tecogen in writing. See “The Merger Agreement - Conditions to Completion of the Merger.”

Q: Are there risks associated with the Merger that I should consider in deciding how to vote?

A: Yes. You should read and carefully consider the risk factors set forth in the section hereof entitled “Risk Factors.”

Q: What happens if the Merger is not completed?

A: If the Tecogen Share Issuance Proposal or the ADGE Merger Approval Proposal is not approved by the respective Tecogen and ADGE stockholders or if the Merger is not completed for any other reason, ADGE stockholders will not receive the Merger consideration for their shares of ADGE common stock.

Q: May the Merger Agreement be terminated?

A: Yes. Prior to the approval of the Tecogen Share Issuance Proposal and the ADGE Merger Approval Proposal by stockholders of Tecogen and ADGE, respectively, the Merger Agreement and Merger may be abandoned by either ADGE or Tecogen pursuant to a resolution of the respective board of directors of such company to withdraw or fail to make when required under the Merger Agreement or fail to include in this joint proxy statement/prospectus for the Merger, a recommendation that the stockholders of such company approve the proposals discussed herein. The Merger Agreement does not provide for the payment by one party to the other of a breakup or termination fee in the event of such a termination.

Also, ADGE may terminate the Merger Agreement, prior to the approval of the Tecogen Share Issuance Proposal and the ADGE Merger Approval Proposal by the stockholders of Tecogen and ADGE, respectively, in the event the ADGE board approves, recommends or declares advisable, or proposes publicly to approve, recommend or declare advisable a competing proposal or offer by a third party to purchase 20% or more of the assets or outstanding capital stock, other equity securities, or voting power, of ADGE, or any merger, business combination, consolidation, share exchange, recapitalization or similar transaction as a result of which the holders of ADGE's common stock immediately prior to the transaction do not thereafter own at least 80% of the outstanding voting power of the surviving or resulting entity.

Further, the Merger Agreement provides that at any time before the closing of the Merger, either ADGE's or Tecogen's board of directors may terminate the Merger Agreement if such board (or a committee of such board) has determined in good faith, after consultation with its financial advisors and legal counsel, that there is a reasonable probability the failure to take such action would cause the board of ADGE or Tecogen, as the case may be, to violate its fiduciary duties to its stockholders under applicable law.

See "The Merger Agreement - Termination of the Merger Agreement by Either Tecogen or ADGE."

Q: How will I receive the Merger consideration to which I am entitled?

A: ADGE stockholders holding physical share certificates of ADGE common stock, promptly after the Merger effective time, will receive from the exchange agent a letter of transmittal and instructions for effecting the surrender of the certificates representing such shares. See "The Merger Agreement -- Consideration to be Received in the Merger."

Q: Will my rights as a stockholder of Tecogen or ADGE change as a result of the Merger?

A: The rights of Tecogen stockholders will be unchanged as a result of the Merger. Because the governing documents of Tecogen and ADGE are substantially the same, the rights of ADGE stockholders will not be changed in any material respect as a result of the Merger. At the Merger effective time, the existing charter and bylaws of Tecogen will remain unchanged. For more information regarding stockholder rights, see "Comparison of Rights of Tecogen Stockholders and ADGE Stockholders."

Q: Where will my shares of Tecogen common stock be listed?

A: The shares of Tecogen common stock are currently listed on the Nasdaq Capital Market under the symbol "TGEN." Tecogen will apply to have the new shares of Tecogen common stock issued as consideration in the Merger listed on the Nasdaq Capital Market prior to the Merger effective time, subject to official notice of issuance.

Q: If I am an ADGE stockholder that holds certificated shares of ADGE common stock, do I need to do anything now with my common stock certificates?

A: No, not at the present time.

Q: If I am a Tecogen stockholder, do I need to do anything with respect to my common stock certificates or book-entry shares?

A: No, you are not required to take any action with respect to your Tecogen shares.

Questions and Answers About the Special Meetings

Q: What am I being asked to vote on at the special meeting?

A: ADGE stockholders are being asked to consider and vote to adopt the Merger Agreement and approve the Merger, or the ADGE Merger Approval Proposal, and Tecogen stockholders are being asked to consider and vote to approve the issuance of shares of common stock of Tecogen upon closing of the Merger, or the Tecogen Share Issuance Proposal.

Tecogen and ADGE will hold separate special meetings to obtain the approval of the foregoing proposals. This joint proxy statement/prospectus contains important information about the proposals and the special meetings, which you should read carefully. The enclosed voting materials allow you to vote your shares without attending your respective meeting.

Your vote is important. Please authorize a proxy to vote your shares as promptly as possible.

Q: When and where will the Tecogen special meeting be held?

A: The Tecogen special meeting will be held on [*], beginning at [*], local time, at Tecogen's principal executive offices at 45 First Avenue, Waltham, MA 02451, or such other date, time and place to which such meeting may be adjourned or postponed. See "[The Tecogen Special Meeting - Date, Time, Place and Purpose of Tecogen's Special Meeting.](#)"

Q: When and where will the ADGE special meeting be held?

A: The ADGE special meeting will be held on [*], beginning at [*], local time, at ADGE's principal executive offices at 45 First Avenue, Waltham, MA 02451, or such other date, time and place to which such meeting may be adjourned or postponed. See "[The ADGE Special Meeting - Date, Time, Place and Purpose of ADGE's Special Meeting.](#)"

Q: Who can vote at the Tecogen special meeting?

A: All holders of record of Tecogen common stock as of the close of business on [*], the record date for determining Tecogen stockholders entitled to notice of and to vote at the Tecogen special meeting, are entitled to receive notice of and to vote at the Tecogen special meeting.

As of the record date, there were [*] shares of Tecogen common stock issued and outstanding and entitled to vote at the Tecogen special meeting, held by approximately [*] holders of record. Each share of Tecogen common stock is entitled to one vote on each proposal presented at the Tecogen special meeting. See "[The Tecogen Special Meeting - Record Date; Who Can Vote at Tecogen's Special Meeting.](#)"

Q: Who can vote at the ADGE special meeting?

A: All holders of record of ADGE common stock as of the close of business on [*], the record date for determining ADGE stockholders entitled to notice of and to vote at the ADGE special meeting, are entitled to receive notice of and to vote at the ADGE special meeting.

As of the record date, there were [*] shares of ADGE common stock issued and outstanding and entitled to vote at the ADGE special meeting, held by approximately [*] holders of record. Each share of ADGE common stock is entitled to one vote on each proposal presented at the ADGE special meeting. See "[The ADGE Special Meeting - Record Date; Who Can Vote at ADGE's Special Meeting.](#)"

Q: What constitutes a quorum for the Tecogen special meeting?

A: At the Tecogen special meeting, the presence of holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, or represented by proxy, shall constitute a quorum for the transaction of business. Abstentions will be counted in determining whether a quorum is present at the Tecogen special meeting. Failures to vote, which include failure to provide instructions to your broker or other nominee if your shares are held in "street name," will not be counted in determining whether a quorum is present. See "[The Tecogen Special Meeting - Vote Required for Approval; Quorum.](#)"

Q: What constitutes a quorum for the ADGE special meeting?

A: At the ADGE special meeting, the presence of the holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, or represented by proxy, shall constitute a quorum for the transaction of business. Abstentions will be counted in determining whether a quorum is present at the ADGE special meeting. Failures to vote, which include failure to provide instructions to your broker or other nominee if your shares are held in "street name," will not be counted in determining whether a quorum is present. See "[The ADGE Special Meeting - Vote Required for Approval; Quorum.](#)"

Q: What vote is required to approve each proposal at the Tecogen special meeting?

A: The Tecogen Share Issuance Proposal requires the affirmative vote of a majority of the votes cast by the holders of all of the shares of Tecogen common stock present in person or represented by proxy at the special meeting at which a quorum is present. This means the number of shares voted "FOR" the Tecogen Share Issuance Proposal must exceed the number of shares voted "AGAINST" the Tecogen Share Issuance Proposal. Abstentions and failures to vote are not considered votes cast for the foregoing purpose, and will have no effect on the vote for this proposal. See "[The Tecogen special meeting - Vote Required for Approval; Quorum.](#)"

Q: What vote is required to approve each proposal at the ADGE special meeting?

A: The ADGE Merger Approval Proposal requires the affirmative vote of a majority of the outstanding shares of ADGE common stock entitled to vote on such proposal, assuming that a quorum is present at the ADGE special meeting. Abstentions and failures to vote will have the same effect as a vote against the ADGE Merger Approval

Proposal. See “The ADGE special meeting - Vote Required for Approval: Quorum.”

Q: How do I vote?

A: If you are a stockholder of record of Tecogen as of the record date for the Tecogen special meeting or a stockholder of record of ADGE as of the record date for the ADGE special meeting, you may vote in person by attending your special meeting or, to ensure your shares are represented at the meeting, you may authorize a proxy by:

- accessing the Internet website specified on your proxy card;
- calling the toll-free number specified on your proxy card; or
- signing and returning the enclosed proxy card in the postage-paid envelope provided.

If you hold shares of common stock of Tecogen or ADGE in the name of a broker, bank or nominee, please follow the voting instructions provided by your broker, bank or nominee to ensure that your shares are represented at the applicable special meeting. If you are a Tecogen stockholder, see “The Tecogen Special Meeting - Manner of Voting.” If you are an ADGE stockholder, see “The ADGE Special Meeting - Manner of Voting.”

Q: If my shares of Tecogen common stock are held in “street name” by my broker or other nominee, will my broker or other nominee vote my shares of Tecogen common stock for me? What happens if I abstain or my broker does not vote my shares?

A: Your shares will NOT be voted unless you instruct your broker or other nominee how to vote your shares of Tecogen common stock held in street name. In accordance with the rules of the New York Stock Exchange, banks, brokerage firms and other nominees who hold shares of common stock in street name for their customers are precluded from exercising their voting discretion with respect to non-routine matters, such as the Tecogen Share Issuance Proposal. If you hold your shares in a stock brokerage account or if your shares are held by a bank or other nominee (that is, in street name), you must provide your broker or other nominee with instructions on how to vote your shares in accordance with the information and procedures provided to you by your broker, bank or nominee. If you do not provide instructions with your proxy, your bank, broker or other nominee, your broker will not vote your shares which will not have an effect on the Tecogen Share Issuance Proposal. You should instruct your broker to vote your shares in accordance with directions you provide.

You may not vote shares of Tecogen common stock held in street name by returning a proxy card directly to Tecogen or by voting in person at the Tecogen special meeting unless you provide a “legal proxy,” which you must obtain from your broker or other nominee.

See “The Tecogen Special Meeting - Vote Required for Approval: Quorum.”

Q: If my shares of ADGE common stock are held in “street name” by my broker or other nominee, will my broker or other nominee vote my shares of ADGE common stock for me? What happens if I abstain or my broker does not vote my shares?

A: Your shares will NOT be voted unless you instruct your broker or other nominee how to vote your shares of ADGE common stock held in street name. In accordance with the rules of the New York Stock Exchange, banks, brokerage firms and other nominees who hold shares of common stock in street name for their customers are precluded from exercising their voting discretion with respect to non-routine matters, such as the ADGE Merger Approval Proposal. If you hold your shares in a stock brokerage account or if your shares are held by a bank or other nominee (that is, in street name), you must provide your broker or other nominee with instructions on how to vote your shares in accordance with the information and procedures provided to you by your broker, bank or nominee. If you do not provide instructions with your proxy, your bank, broker or other nominee, your broker will not vote your shares which will have the effect of a vote “against” the proposal. You should instruct your broker to vote your shares in accordance with directions you provide.

You may not vote shares of ADGE common stock held in street name by returning a proxy card directly to ADGE or by voting in person at the ADGE special meeting unless you provide a “legal proxy,” which you must obtain from your broker or other nominee.

See “The ADGE Special Meeting - Vote Required for Approval: Quorum.”

Q: How does the Tecogen Board of Directors recommend that Tecogen stockholders vote on the Tecogen Share Issuance Proposal?

A: The Tecogen Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously approved the Merger Agreement and the transactions contemplated by the Merger Agreement, including the issuance of the shares of Tecogen common stock in the Merger.

The Tecogen Board of Directors unanimously recommends that Tecogen stockholders vote “FOR” the Tecogen Share Issuance Proposal. The Merger cannot be completed without the approval by the Tecogen stockholders of the Tecogen Share Issuance Proposal. See “The Tecogen Special Meeting - Recommendation of the Tecogen Board.”

Q: How does the ADGE Board of Directors recommend that ADGE stockholders vote on the ADGE Merger Approval Proposal?

A: The ADGE Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously (i) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, (ii) determined and declared that the Merger and the other transactions contemplated by the Merger are advisable, fair to and in the best interest of ADGE, and (iii) directed that the ADGE Merger Approval Proposal be submitted for consideration at the ADGE special meeting.

The ADGE Board of Directors unanimously recommends that ADGE stockholders vote “FOR” the ADGE Merger Approval Proposal. The Merger cannot be completed without the approval by ADGE stockholders of the ADGE Merger Approval Proposal. See “The ADGE Special Meeting - Recommendation of the ADGE Board.”

Q: What do I need to do now?

A: After you have carefully read this joint proxy statement/prospectus, please complete, sign and date your proxy card or voting instruction form and return it in the enclosed pre-addressed postage-paid envelope or, by authorizing your proxy by one of the other methods specified in your proxy card or voting instruction form as promptly as possible so that your shares of Tecogen common stock or ADGE common stock will be represented and voted at the Tecogen special meeting or the ADGE special meeting, as applicable.

Please refer to your proxy card, which is included with this joint proxy statement/prospectus, or the voting instruction form forwarded by your broker or other nominee to see which voting options are available to you.

The method by which you authorize your proxy will in no way limit your right to vote at the Tecogen special meeting or the ADGE special meeting if you later decide to attend the meeting in person. However, if your shares of Tecogen common stock or ADGE common stock are held in the name of a broker or other nominee, you must obtain a “legal proxy,” executed in your favor, from your broker or other nominee, to be able to vote in person at the Tecogen special meeting or the ADGE special meeting, as applicable. Obtaining a legal proxy may take several days.

Q: How will my proxy be voted?

A: All shares of Tecogen common stock entitled to vote and which are represented by properly completed proxies received prior to the Tecogen special meeting, which are not revoked, will be voted at the Tecogen special meeting as instructed on the proxies. If you properly submit a proxy card, but do not indicate how your shares of Tecogen common stock should be voted on a matter, the shares of Tecogen common stock represented by your proxy card will be voted as the Tecogen Board of Directors unanimously recommends and therefore “FOR” the Tecogen Share Issuance Proposal. Failures to vote, which include failures to provide instructions to your broker or other nominee if your shares are held in “street name,” your shares of Tecogen common stock will NOT be voted at the Tecogen special meeting and will not have an effect on the Tecogen Share Issuance Proposal. See “The Tecogen Special Meeting - Manner of Voting.”

All shares of ADGE common stock entitled to vote and which are represented by properly completed proxies received prior to the ADGE special meeting, which are not revoked, will be voted at the ADGE special meeting as instructed on the proxies. If you properly submit a proxy card, but do not indicate how your shares of ADGE common stock should be voted on a matter, the shares of ADGE common stock represented by your proxy card will be voted as the ADGE Board of Directors unanimously recommends and therefore “FOR” the ADGE Merger Approval Proposal.

Failures to vote, which include failures to provide instructions to your broker or other nominee if your shares are held in “street name,” your shares of ADGE common stock will NOT be voted at the ADGE special meeting and will have the same effect as a vote “AGAINST” the ADGE Merger Approval Proposal. See “The ADGE Special Meeting - Manner of Voting.”

Q: Can I change my vote after I have returned a proxy or voting instruction card?

A: Yes. You may revoke your proxy or change your vote at any time before your proxy is voted at the Tecogen special meeting or the ADGE special meeting, as applicable. If you are a holder of record, you can do this in any of the three following ways:

by sending a written notice to the Secretary of Tecogen or the Secretary of ADGE, as applicable, at the applicable address set forth below, in time to be received before the Tecogen special meeting or the ADGE special meeting, as

applicable, stating that you would like to revoke your proxy;
by completing, signing and dating another proxy card and returning it by mail in time to be received before the Tecogen special meeting or the ADGE special meeting, as applicable, or by completing a later dated proxy over the Internet or by telephone, in which case your later dated proxy will be recorded and your earlier proxy revoked; or if you are a holder of record, you can attend the Tecogen special meeting or the ADGE special meeting, as applicable, and vote in person, which will automatically cancel any proxy previously given, or you may revoke your proxy in person, but your attendance alone at the special meeting will not revoke any proxy that you have previously given. If you choose either of the first two methods, you must submit your notice of revocation or your new proxy to the Corporate Secretary of Tecogen or the Corporate Secretary of ADGE, as appropriate, no later than the beginning of the applicable special meeting. If your shares are held in street name by your broker or nominee, you should contact them to change your vote. If you are a Tecogen stockholder see “The Tecogen Special Meeting - Revocation of Proxies or Voting Instructions.” If you are an ADGE stockholder see “The ADGE Special Meeting - Revocation of Proxies or Voting Instructions.”

Q: What should I do if I receive more than one set of voting materials for Tecogen’s special meeting and/or ADGE’s special meeting?

A: You may receive more than one set of voting materials for Tecogen’s special meeting and/or ADGE’s special meeting, including multiple copies of this joint proxy statement/prospectus and multiple proxy cards or voting instruction cards. For example, if you hold your shares of Tecogen common stock and/or ADGE common stock in more than one brokerage account, you will receive a separate voting instruction card for each brokerage account in which you hold shares of Tecogen common stock and/or ADGE common stock. If you are a holder of record and your shares of Tecogen common stock or ADGE common stock are registered in more than one name, you may receive more than one proxy card. Please complete, sign, date and return each proxy card and voting instruction card that you receive or, please authorize your proxy by telephone, or over the Internet.

Q: What happens if I am a stockholder of both Tecogen and ADGE?

A: You will receive separate proxy cards for each of Tecogen and ADGE and you must complete, sign and date each proxy card and return each proxy card in the appropriate pre-addressed postage-paid envelope or, by authorizing a proxy by one of the other methods specified in your proxy card or voting instruction card for each of Tecogen and ADGE.

Q: Do I need identification to attend Tecogen or the ADGE special meeting in person?

A: Yes. Please bring proper identification, together with proof that you are a record owner of Tecogen or ADGE common stock, as the case may be. If your shares are held in street name, please bring acceptable proof of ownership, such as a letter from your broker or an account statement showing that you beneficially owned shares of Tecogen or ADGE common stock, as applicable, on the applicable record date.

Q: Who can help answer my questions?

A: If you have questions about the Merger or the other matters to be voted on at the special meetings or desire additional copies of this joint proxy statement/prospectus or additional proxy or voting instruction cards, please contact:

Tecogen common stockholders:	ADGE common stockholders:
Tecogen Inc.	American DG Energy Inc.
Attention: Investor Relations	Attention: Investor Relations
45 First Avenue	45 First Avenue
Waltham, MA 02451	Waltham, MA 02451
(781) 466-6413	(781) 522-6000
www.tecogen.com	www.americandg.com

Table of Contents

SUMMARY

The following summary highlights some of the information contained elsewhere in this joint proxy statement/prospectus and may not contain all the information that is important to you. For a more complete description of the Merger Agreement and the transactions contemplated by the Merger Agreement, Tecogen and ADGE encourage you to carefully read this entire joint proxy statement/prospectus, including the attached Annexes. We also encourage you to read the information incorporated by reference into this joint proxy statement/prospectus, which includes important business and financial information filed with the SEC regarding Tecogen and ADGE. You may obtain the information incorporated by reference into this joint proxy statement/prospectus without charge by following the instructions described under “Where You Can Find More Information.”

The Companies

Tecogen Inc.

Tecogen designs, manufactures, sells, and services systems that produce electricity, hot water, and air conditioning for commercial installations and buildings and industrial processes. Tecogen’s systems, powered by natural gas engines, drive electricity generators or compressors, which reduce the amount of electricity purchased from local utilities. Because Tecogen’s systems are designed to capture waste engine heat, they tend to be more energy efficient since otherwise-wasted energy can be used for water heating, space heating and/or air conditioning. The relative costs of natural gas and electricity at a proposed system site determine whether a system is economically efficient as well as energy efficient. This type of cogeneration technology is referred to as combined heat and power, or CHP.

Tecogen manufactures three types of CHP products:

- Cogeneration units that supply electricity and hot water;
- Chillers that provide air-conditioning and hot water; and
- High-efficiency water heaters.

All of Tecogen’s products are standardized, modular, small-scale CHP products that reduce energy costs, carbon emissions, and dependence on the electric grid. Market drivers include the price of natural gas, local electricity costs, and governmental energy policies, as well as customers’ desire to become more socially responsible. Traditional customers for our cogeneration and chiller systems include hospitals and nursing homes, colleges and universities, health clubs and spas, hotels and motels, office and retail buildings, food and beverage processors, multi-unit residential buildings, laundries, ice rinks, swimming pools, factories, municipal buildings, and military installations; however, the economic feasibility of using our systems is not limited to these customer types. Tecogen has shipped approximately 2,500 units, some of which have been operating for almost 25 years. As of December 31, 2016, Tecogen employed 83 full-time employees and three part-time employees, including seven sales and marketing personnel and 35 service personnel.

Tecogen was incorporated in the State of Delaware on September 15, 2000. Its offices are located at 45 First Avenue, Waltham, Massachusetts 02451, and its telephone number is 781-466-6400. Tecogen's Internet address is www.tecogen.com. That website address is a textual reference only and the information on the website is not incorporated by reference herein.

American DG Energy Inc.

ADGE distributes, owns and operates clean, on-site energy systems that produce electricity, hot water, heat and cooling. ADGE’s business model is to own the equipment that it installs at customers' facilities and to sell the energy produced by these systems to the customer on a long-term contractual basis. ADGE calls this business the ADGE “On-Site Utility”. ADGE installs, owns, operates and maintains complete distributed generation, or DG systems or energy systems, and other complementary systems at customer sites and sell electricity, hot water, heat and cooling energy under long-term contracts at prices guaranteed to the customer to be below conventional utility rates. As of December 31, 2016, ADGE had 92 installed energy systems, representing an aggregate of approximately 5,445 kilowatts, or kW, 41.6 million British thermal units, or MMBtu's, of heat and hot water and 4,500 tons of cooling, kW is a measure of electricity generated, MMBtu is a measure of heat generated and a ton is a measure of cooling generated.

ADGE offers natural gas powered cogeneration systems that are highly reliable and energy efficient. Its cogeneration systems produce electricity from an internal combustion engine driving a generator, and the heat from the engine and exhaust is recovered and typically used to produce heat and hot water for use at the site. ADGE also distributes and operates water chiller systems for building cooling applications that operate in a similar manner, except that the engine's power drives a large air-conditioning compressor while recovering heat for hot water. Cogeneration systems reduce the amount of electricity that the customer must purchase from the local utility and produce valuable heat and hot water for the site to use as required. By simultaneously providing electricity, hot water and heat, cogeneration systems also have a significant, positive impact on the environment by reducing the carbon, or CO₂, produced by offsetting the traditional energy supplied by the electric grid and conventional hot water boilers.

Table of Contents

Distributed Generation of electricity, or DG, often referred to as cogeneration systems, or combined heat and power systems, or CHP, is an attractive option for reducing energy costs and increasing the reliability of available energy. DG has been successfully implemented by others in large industrial installations over 10 Megawatts, or MW, where the market has been growing for several years, and is increasingly being accepted in smaller size units because of technology improvements, increased energy costs and better economics. ADGE believes that its target market (users of up to 1 MW) has been barely penetrated and that the reduced reliability of the utility grid, increasing cost pressures experienced by energy users, advances in new, low cost technologies and DG-favorable legislation and regulation at the state and federal level will drive our near-term growth and penetration into our target market. ADGE maintains a website at www.americandg.com, but that website address is a textual reference only and the information on the website is not incorporated by reference herein.

ADGE was incorporated as a Delaware corporation on July 24, 2001. Its offices are located at 45 First Avenue4, Waltham, Massachusetts 02451 and its telephone number is (781) 522-6000. ADGE's internet address is www.americandg.com. That website address is a textual reference only and the information on the website is not incorporated by reference herein.

Tecogen.ADGE Acquisition Corp.

Tecogen.ADGE Acquisition Corp., or Merger Sub, is a recently organized Delaware corporation formed for the purpose of effecting the Merger. Upon completion of the Merger, Merger Sub will be merged with and into ADGE with ADGE surviving the Merger as a wholly-owned subsidiary of Tecogen. Merger Sub has not conducted any activities other than those incidental to its formation and the matters contemplated by the Merger Agreement.

The Merger and the Merger Agreement

Subject to the terms and conditions of the Merger Agreement, at the Merger effective time, Merger Sub will merge with and into ADGE. ADGE will be the surviving entity in the Merger and, following completion of the Merger, ADGE will become a wholly-owned subsidiary of Tecogen.

Upon completion of the Merger, each share of ADGE common stock issued and outstanding immediately prior to the Merger effective time will be exchanged for the right to receive 0.092 of a share of Tecogen common stock, or the Exchange Ratio. The Exchange Ratio is fixed and will not be adjusted to reflect stock price changes prior to the closing of the Merger. No fractional shares will be issued in the Merger, and cash will be paid in lieu thereof. See "The Merger Agreement - Consideration to be Received in the Merger ." Tecogen common stock is listed and traded on the Nasdaq Capital Market, and ADGE common stock is listed and traded on the NYSE MKT under the ticker symbols "TGEN" and "ADGE," respectively. Based on the closing price of Tecogen common stock on the Nasdaq National Market of \$4.03 on November 1, 2016, the last trading day before public announcement of the Merger, the Exchange Ratio represented approximately \$0.37 in Tecogen common stock for each share of ADGE common stock. Based on the closing price of Tecogen common stock on the Nasdaq Capital Market of \$3.85 on March 17, 2017, the last practicable date before the date of this joint proxy statement/prospectus, the Exchange Ratio represented approximately \$0.35 in Tecogen common stock for each share of ADGE common stock. Tecogen stockholders will continue to own their existing Tecogen shares of common stock following the consummation of the Merger. See "Comparative Tecogen and ADGE Market Price and Distribution Information" below. The value of the Merger consideration will fluctuate with changes in the market price of Tecogen and ADGE common stock. We urge you to obtain current market quotations of Tecogen common stock and ADGE common stock.

Each option to acquire shares of ADGE common stock, and each restricted stock award relating to ADGE common stock, granted before the Merger closing date under ADGE's equity plans to an employee or a non-employee director, or a participant, will remain in effect and will be exercisable for or relate to shares of Tecogen common stock based on the Exchange Ratio (with similar adjustment to the exercise price per share of each stock option). All restricted stock awards and all stock options will become 100% vested.

For a description of the treatment of all outstanding ADGE equity awards, see "The Merger Agreement - Consideration to be Received in the Merger - Treatment of Stock Options and Restricted Stock Awards."

A copy of the Merger Agreement is attached as Annex A to this joint proxy statement/prospectus and is incorporated herein by reference. We encourage you to carefully read the Merger Agreement in its entirety as it is the principal

document governing the Merger.

Directors Following the Merger

The Board of Directors of Tecogen is not expected to change as a result of the Merger.

3

Table of Contents

Recommendation of the Tecogen Board of Directors

The Tecogen Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously (i) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, and (ii) directed that the Tecogen Share Issuance Proposal be submitted for consideration at the Tecogen special meeting.

The Tecogen Board of Directors unanimously recommends that Tecogen stockholders vote "FOR" the Tecogen Share Issuance Proposal. The Merger cannot be completed without the approval by Tecogen stockholders of the Tecogen Share Issuance Proposal.

Recommendation of ADGE Board of Directors

The ADGE Board of Directors has carefully considered the terms of the Merger Agreement and has unanimously (i) approved the Merger Agreement and the transactions contemplated by the Merger Agreement, (ii) determined and declared that the Merger and the other transactions contemplated by the Merger are advisable, fair to and in the best interest of ADGE, and (iii) directed that the ADGE Merger Approval Proposal be submitted for consideration at the ADGE special meeting.

The ADGE Board of Directors unanimously recommends that ADGE stockholders vote "FOR" the ADGE Merger Approval Proposal. The Merger cannot be completed without the approval by ADGE stockholders of the ADGE Merger Approval Proposal.

Summary of the Risk Factors Related to the Merger

You should consider carefully all of the risk factors and other information included or otherwise incorporated by reference in this joint proxy statement/prospectus before deciding how to vote. Certain of the risks related to the Merger and the related transactions are described under "Risk Factors." The principal risks relating to the Merger include the following:

Completion of the Merger is subject to conditions to closing and if these conditions are not satisfied or waived, the Merger will not be completed. Failure to complete the Merger could have material adverse effects on Tecogen and ADGE.

The Exchange Ratio is fixed and will not be adjusted in the event of any change in either Tecogen's or ADGE's stock price.

Failure to complete the Merger could negatively impact the stock prices and future business and financial results of Tecogen and ADGE.

The pendency of the Merger could adversely affect the business and operations of Tecogen and ADGE.

The ownership percentage of Tecogen and ADGE common stockholders will be diluted by the Merger.

Certain of Tecogen's and ADGE's respective directors and executive officers have interests in the transactions contemplated by the Merger Agreement that are different from, or in addition to, the interests of Tecogen's and ADGE's stockholders generally.

If the Merger is approved, the date on which ADGE common stockholders will receive the Merger consideration is uncertain.

See "Risk Factors," "The Merger - Interests of Tecogen's Directors and Executive Officers in the Merger," "The Merger - Interests of ADGE's Directors and Executive Officers in the Merger" and "The Merger Agreement - Conditions to Completion of the Merger."

The Special Meetings

Tecogen

Holders of shares of Tecogen common stock at the close of business on [*], or the Tecogen record date, are entitled to notice of, and to vote at, the Tecogen special meeting. On the Tecogen record date, there were [*] shares of Tecogen common stock outstanding and entitled to vote at the Tecogen special meeting, held by approximately [*] holders of record. Each share of Tecogen common stock is entitled to one vote.

At the Tecogen special meeting, holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, or represented by proxy, shall constitute a quorum for the transaction of business. Abstentions will be counted in determining whether a quorum is present at the Tecogen special meeting.

At the Tecogen special meeting, Tecogen stockholders will be asked to consider and vote on the Tecogen Share Issuance Proposal. The Tecogen Share Issuance Proposal requires the affirmative vote of a majority of the votes cast by the holders of the shares of Tecogen common stock present in person or represented by proxy at the special meeting, assuming a quorum is present at the special meeting.

Your vote is very important. You are encouraged to authorize your proxy to vote your shares as promptly as possible. If you are a stockholder of record and you properly sign, date and return a proxy card, but do not indicate how your shares of Tecogen stock should be voted on a matter, the shares of Tecogen stock represented by your proxy cannot be voted. If you are a “street name” holder and you do not provide voting instructions to your broker or other nominee, your shares of Tecogen stock will NOT be voted at the Tecogen special meeting and will have no effect on the Tecogen Share Issuance Proposal.

Table of Contents

ADGE

Holders of shares of ADGE common stock at the close of business on [*], or the ADGE record date, are entitled to notice of, and to vote at, the ADGE special meeting. On the ADGE record date, there were [*] shares of ADGE common stock outstanding and entitled to vote at the ADGE special meeting, held by approximately [*] holders of record. Each share of ADGE common stock is entitled to one vote on each proposal to be voted on at the ADGE special meeting.

At the ADGE special meeting, holders of a majority in voting power of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person, or represented by proxy, shall constitute a quorum for the transaction of business. Abstentions will be counted in determining whether a quorum is present at the ADGE special meeting.

At the ADGE special meeting, ADGE stockholders will be asked to consider and vote on the ADGE Merger Approval Proposal. The ADGE Merger Approval Proposal requires the affirmative vote of a majority of the outstanding shares of ADGE common stock entitled to vote on such proposal, assuming a quorum is present at the special meeting. Your vote is very important. You are encouraged to authorize your proxy to vote your shares as promptly as possible. If you are a stockholder of record and you properly sign, date and return a proxy card, but do not indicate how your shares of ADGE stock should be voted on a matter, the shares of ADGE stock represented by your proxy cannot be voted. If you are a “street name” holder and you do not provide voting instructions to your broker or other nominee, your shares of ADGE stock will NOT be voted at the ADGE special meeting and will have the same effect as a vote “AGAINST” the ADGE Merger Approval Proposal.

Opinion of Tecogen’s Financial Advisor Regarding the Merger

In connection with the Merger, at the meeting of the Tecogen Board of Directors on November 1, 2016, Tecogen’s financial advisor, Scarsdale Equities LLC, or Scarsdale, delivered to the Tecogen Board of Directors its oral opinion, later confirmed by delivery of a written opinion dated November 10, 2016, that, based upon and subject to the various assumptions made, procedures followed, matters considered and qualifications and limitations on the scope of review undertaken by Scarsdale as set forth in its written opinion, the Exchange Ratio of 0.092 of a share of Tecogen common stock for each share of ADGE common stock pursuant to the Merger Agreement was fair, from a financial point of view, to Tecogen.

The full text of the written opinion of Scarsdale is attached to this proxy statement/prospectus as Annex B and is incorporated herein by reference. The summary of the opinion of Scarsdale in this proxy statement/prospectus is qualified in its entirety by reference to the full text of the opinion and you should read the opinion in its entirety for a discussion of the assumptions made, procedures followed, matters considered and qualifications and limitations upon the review undertaken by Scarsdale in rendering its opinion. Scarsdale’s opinion addresses only the fairness from a financial point of view of the exchange ratio pursuant to the Merger Agreement to Tecogen as of the date of such opinion and does not address any other aspect of the Merger. The opinion did not in any manner address the prices at which Tecogen common stock will trade following consummation of the Merger or at any time. Scarsdale’s opinion does not constitute a recommendation to any holder of Tecogen common stock or ADGE common stock as to how to vote at the special meetings to be held in connection with the Merger or whether to take any other action with respect to the Merger. See “The Merger - Opinion of Tecogen’s Financial Advisor.”

Opinion of Financial Advisor to the ADGE Special Committee

At the meeting of the ADGE Special Committee on October 31, 2016, the financial advisor to the ADGE Special Committee, Cassel Salpeter & Co., LLC, or Cassel Salpeter, delivered its oral opinion to the ADGE Special Committee, which was later confirmed by delivery of a written opinion dated October 31, 2016, that, as of such date, and based upon and subject to the factors, assumptions and limitations set forth therein, the Exchange Ratio of 0.092 of a share of Tecogen common for each share of ADGE common stock in the Merger pursuant to the Merger Agreement was fair from a financial point of view to the holders ADGE common stock other than John Hatsopoulos, George Hatsopoulos and their respective affiliates (the “Unaffiliated Holders”).

The full text of the written opinion of Cassel Salpeter, dated October 31, 2016, which sets forth assumptions made, procedures followed, matters considered and limitations on the review undertaken in connection with the opinion, is

attached to this proxy statement as Annex C. The summary of the Cassel Salpeter opinion provided in this proxy statement is qualified in its entirety by reference to the full text of the written opinion. Cassel Salpeter provided its opinion for the information and assistance of the ADGE Special Committee and, with the consent of the ADGE Special Committee, ADGE's Board of Directors in connection with the ADGE Special Committee's and, as applicable, the ADGE Board of Directors' consideration of the Merger. The Cassel Salpeter opinion is not a recommendation as to how any holder of ADGE's common stock should vote with respect to the transaction contemplated by the Merger Agreement or any other matter. See "The Merger - Opinion of Financial Advisor to the ADGE Special Committee."

Table of Contents

Stock Ownership of Directors and Executive Officers of Tecogen

At the close of business on Tecogen's record date, Tecogen's directors and executive officers held and were entitled to vote 3,604,558 shares of Tecogen common stock, collectively representing 17.98% of the shares of Tecogen common stock issued and outstanding and entitled to vote on that date. John N. Hatsopoulos, Co-CEO and a director of Tecogen, owns 3,252,395 shares or 16.28% of the issued and outstanding shares of Tecogen common stock. The Tecogen Share Issuance Proposal requires the affirmative vote of a majority of the votes cast by the holders of all of the shares of Tecogen common stock present in person or represented by proxy at the special meeting at which a quorum is present. Tecogen's directors and executive officers have indicated that they expect to vote "FOR" the Tecogen Share Issuance Proposal. See "The Tecogen Special Meeting - Vote Required for Approval; Quorum."

Tecogen is not aware of any agreement between any shareholders of the company to vote their stock as a group.

For a discussion of the interests of Tecogen's directors and executive officers in the Merger, see "The Merger - Interests of Tecogen's Directors and Executive Officers in the Merger."

Stock Ownership of Directors and Executive Officers of ADGE

At the close of business on the ADGE record date, ADGE's directors and executive officers held and were entitled to vote 4,468,413 shares of ADGE common stock, collectively representing 8.82% of the shares of ADGE common stock issued and outstanding and entitled to vote on that date. John N. Hatsopoulos, co-CEO and a director of ADGE, beneficially owns 514,546 shares or 1.02% of the issued and outstanding shares of ADGE common stock. The ADGE Merger Approval Proposal requires the affirmative vote of a majority of the issued and outstanding shares of common stock of ADGE to be approved. ADGE's directors and executive officers have indicated that they expect to vote "FOR" the ADGE Merger Approval Proposal. See "The ADGE Special Meeting - Vote Required for Approval; Quorum."

For a discussion of the interests of ADGE's directors and executive officers in the Merger, see "The Merger - Interests of ADGE's Directors and Executive Officers in the Merger."

Interests of Tecogen's Directors and Executive Officers in the Merger

In considering the recommendation of Tecogen's Board of Directors to approve the Tecogen Share Issuance Proposal, Tecogen's stockholders should be aware that Tecogen's directors and executive officers have interests in the Merger that are different from, or in addition to, the interests of Tecogen stockholders generally as summarized below.

Board and Executive Officers

The following Tecogen directors and executive officers also serve as directors and/or officers of ADGE:

John Hatsopoulos serves as Tecogen's and ADGE's co-chief executive officer and director;

Benjamin Locke serves as Tecogen's and ADGE's co-chief executive officer and director; and

Charles Maxwell serves as a director of Tecogen and ADGE.

Following the Merger, the directors and executive officers of ADGE are expected to resign. The directors and executive officers of Tecogen are expected to remain the same except that it is expected that Bonnie Brown, the current Chief Financial Officer of ADGE, will also serve as the Principal Accounting Officer of Tecogen in place of the current Tecogen Chief Financial Officer. The current Tecogen CFO, David Garrison, will resign from Tecogen.

See "Directors and Executive Officers of Tecogen", "Directors and Executive Officers of ADGE," Executive Compensation of Tecogen" and "Executive Compensation of ADGE."

Stock Ownership

The following directors and executive officers of Tecogen own shares of ADGE common stock pre-Merger which are convertible, in accordance with the Exchange Ratio, upon consummation of the Merger into shares of Tecogen common stock (without giving effect to the exercise of outstanding options to acquire common stock) as follows:

John Hatsopoulos owns 514,546 shares of ADGE common stock convertible to 47,338 shares of Tecogen common stock;

Benjamin Locke owns 15,418 shares of ADGE common stock convertible to 1,418 shares of Tecogen common stock; and

Charles Maxwell owns 1,275,232 shares of ADGE common stock convertible to 117,321 shares of Tecogen common stock.

Table of Contents

Stock Options

The following table indicates as of March 17, 2017, the directors and executive officers of Tecogen who own stock options to purchase ADGE common stock pre-Merger which will become, upon consummation of the Merger, vested options to acquire shares of Tecogen common stock, with adjustments to the number of shares to reflect the Exchange Ratio, as follows:

Name	Vested/unvested Options to Acquire ADGE common stock pre-Merger	Vested Options to Acquire Tecogen common stock post-Merger
Charles Maxwell	200,000/0	18,400
Benjamin Locke	287,500/262,500	50,600

See "[The Merger - Interests of ADGE's Directors and Executive Officers in the Merger](#)" for further information, including information with respect to the adjustment of the exercise prices of the options.

Indemnification

Each of the current directors and executive officers of Tecogen and ADGE will be entitled pursuant to the Merger Agreement to continued indemnification by Tecogen and the purchase of a "tail" or "runoff" insurance policy of directors' and officers' liability insurance after the Merger.

The Tecogen Board of Directors was aware of and considered these interests, among other matters, in evaluating and negotiating the Merger Agreement and the Merger, approving the Merger Agreement, and recommending that Tecogen stockholders approve the Tecogen Share Issuance Proposal.

Interests of ADGE's Directors and Executive Officers in the Merger

In considering the recommendation of ADGE's Board of Directors to approve the ADGE Merger Approval Proposal, ADGE's stockholders should be aware that ADGE's directors and executive officers have financial interests in the Merger that are different from, or in addition to, the interests of ADGE stockholders generally as set forth below.

Board and Executive Officers

The following ADGE directors and executive officers also serve as directors and/or officers of Tecogen:

John Hatsopoulos serves as ADGE's and Tecogen's co-chief executive officer and director;

Benjamin Locke serves as ADGE's and Tecogen's co-chief executive officer and director; and

Charles Maxwell serves as a director of ADGE and Tecogen.

Following the Merger, the directors and executive officers of ADGE are expected to resign. The directors and executive officers of Tecogen are expected to remain the same except that it is expected that Bonnie Brown, the current Chief Financial Officer of ADGE, will also serve as the Principal Accounting Officer of Tecogen in place of the current Tecogen Chief Financial Officer. See "Directors and Executive Officers of ADGE", "Directors and Executive Officers of Tecogen," "Executive Compensation of ADGE," "Executive Compensation of Tecogen," "Executive Compensation of Tecogen" and "Executive Compensation of ADGE."

Stock Options

The following table indicates as of March 17, 2017, the ADGE director and/or executive officer who owns vested and unvested options to acquire ADGE common stock pre-Merger which will become, upon consummation of the Merger, vested options to acquire shares of Tecogen common stock, with adjustments to the number of shares to reflect the Exchange Ratio, as follows:

Name	Vested/unvested Options to Acquire ADGE common stock pre-Merger	Vested Options to Acquire Tecogen common stock post-Merger
Bonnie Brown	25,000/75,000	9,200
Christine Klaskin	0/100,000	9,200
Benjamin Locke	287,500/262,500	50,600
	200,000/0	18,400

Edgar Filing: TECOGEN INC. - Form S-4/A

Charles Maxwell		
Deanna Petersen	0/100,000	9,200
John Rowe	70,000/30,000	9,200
Elias Samaras	0/100,000	9,200

Table of Contents

See "The Merger - Interests of ADGE's Directors and Executive Officers in the Merger - Treatment of Outstanding Equity Awards" for further information, including information with respect to the adjustment of the exercise prices of the options.

Indemnification

In addition, the Merger Agreement provides for the continued indemnification of current directors and executive officers of ADGE and Tecogen and the purchase of a "tail" or "runoff" insurance policy of directors' and officers' liability insurance after the Merger. See "The Merger - Interests of ADGE's Directors and Executive Officers in the Merger." The ADGE Board of Directors was aware of and considered these interests, among other matters, in evaluating and negotiating the Merger Agreement and the Merger, approving the Merger Agreement and recommending that ADGE stockholders approve the ADGE Merger Approval Proposal.

Listing of Tecogen Common Shares

Approval of the listing on the Nasdaq Capital Market of the shares of Tecogen common stock to be issued as consideration for the Merger, subject to official notice of issuance, is a condition precedent to each party's obligation to complete the Merger. Tecogen has agreed to use its reasonable best efforts to cause such shares of Tecogen common stock to be approved for listing on the Nasdaq Capital Market prior to the Merger effective time, subject to official notice of issuance. See "The Merger - Listing of Tecogen Common Stock."

No Appraisal Rights

No appraisal, dissenters or similar rights will be available in connection with the Merger or other transactions contemplated by the Merger Agreement. See "The Merger - No Appraisal Rights."

Expected Timing of the Merger

Tecogen and ADGE currently expect to complete the Merger as soon as practicable following the special meetings of Tecogen and ADGE stockholders, subject to receipt of required stockholder approvals and the satisfaction or waiver of other closing conditions.

Conditions to Completion of the Merger

As more fully described elsewhere in this joint proxy statement/prospectus and in the Merger Agreement, the completion of the Merger depends on a number of conditions being satisfied or, where legally permissible, waived. These conditions include, among others:

- adoption of the Merger Agreement and approval of the Merger by ADGE common stockholders;
- approval of the issuance of the shares of common stock of Tecogen in the Merger contemplated by the Merger Agreement by Tecogen common stockholders;
- the absence of any law or order by any governmental entity prohibiting, restraining, enjoining or making illegal the consummation of the Merger or the other transactions contemplated by the Merger Agreement;
- the Form S-4 of which this joint proxy statement/prospectus is a part shall have been declared effective and no stop order suspending the effectiveness of the Form S-4 shall have been issued by the SEC and shall remain in effect and no proceeding to that effect shall have been commenced; and
- the shares of Tecogen common stock to be issued in connection with the Merger shall have been approved for listing on the Nasdaq Capital Market, subject only to official notice of issuance.

Neither Tecogen nor ADGE can give any assurance as to when or if all of the conditions to the completion of the Merger will be satisfied or waived, or that the Merger will occur. See "The Merger Agreement - Conditions to Completion of the Merger."

Regulatory Approvals Required for the Merger

Neither Tecogen nor ADGE is aware of any regulatory approvals that are expected to prevent the consummation of the Merger other than approval of the listing on Nasdaq of the Tecogen shares to be issued in the Merger. See "The Merger Agreement - Other Covenants and Agreements."

No Deal Protection Devices; Termination of the Merger Agreement

The Merger Agreement does not contain any so-called "deal protection devices" such as a no-shop provision or a termination fee. Prior to obtaining ADGE stockholder approval, ADGE may withdraw or modify its recommendation to ADGE stockholders with respect to the Merger, terminate the Merger Agreement and enter into an agreement with

respect to a competing acquisition proposal with a third party. In addition, Tecogen and ADGE may mutually agree to terminate the Merger Agreement at any time prior to the Merger effective date, regardless of whether Tecogen or ADGE stockholder approval has been obtained. See “The Merger Agreement - Termination of the Merger Agreement by Either Tecogen or ADGE.”

Table of Contents

Expenses; No Termination Fees

Generally, all fees and expenses incurred in connection with the Merger and the transactions contemplated by the Merger Agreement will be paid by the party incurring those expenses. See “The Merger Agreement - Termination of the Merger Agreement by Either Tecogen or ADGE.”

Certain United States Federal Income Tax Consequences of the Merger

The Merger is intended to qualify as a reorganization, within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended, which we refer to as the Internal Revenue Code. Assuming the Merger qualifies as a reorganization, a U.S. holder of ADGE common stock generally will not recognize any gain or loss upon receipt of Tecogen common stock in exchange for ADGE common stock in the Merger.

Tax matters are very complicated and the tax consequences of the Merger to each ADGE stockholder may depend on such stockholder’s particular facts and circumstances. ADGE stockholders are urged to consult their tax advisors to understand fully the tax consequences of the Merger. For more information see “Material U.S. Federal Income Tax Consequences of the Merger.”

Accounting Treatment of the Merger

In accordance with U.S. generally accepted accounting principles, or GAAP, Tecogen will account for the Merger as a business combination with Tecogen treated as the acquirer of ADGE for accounting purposes. Under business combination accounting rules, the assets acquired and liabilities assumed will be recorded as of the Merger effective time at their respective fair values, which may be more or less than the book value, and added to those of Tecogen. Any excess of purchase price over the fair values will be recorded as goodwill. Tecogen’s consolidated financial statements issued after the Merger will include ADGE assets acquired and retained by Tecogen in the Merger from the Merger effective time, but not for periods prior to the completion of the Merger. See “The Merger - Accounting Treatment.”

Litigation Relating to the Merger

Massachusetts Superior Court Action

On or about February 6, 2017, ADGE, John Hatsopoulos, George N. Hatsopoulos, Charles T. Maxwell, Deanna M. Petersen, Christine Klaskin, John Rowe, Joan Giacinti, Elias Samaras, Tecogen, and ADGE.Acquisition Corp., were served with a Verified Complaint by William C. May, individually and on behalf of the other shareholders of ADGE as a class. The action was commenced in the Business Litigation Section of the Superior Court of the Commonwealth of Massachusetts, Civil Action No. 17-0390. The complaint alleges the proposed Merger is subject to certain conflicts of interest; that ADGE's board failed to protect our stockholders by failing to conduct an auction or market check; that the Exchange Ratio undervalues ADGE's outstanding shares; that ADGE's directors breached their fiduciary duties in approving the Merger proposal; that Tecogen’s registration statement on Form S-4 contained material omissions; that Tecogen aided and abetted ADGE's board’s breaches of its fiduciary duties; and other claims. The plaintiff is seeking preliminary and permanent injunctions related to the Merger, rescissory damages, compensatory damages, accounting, and other relief.

United States District Court Action

On or about February 15, 2017, a lawsuit was filed in the United States District Court for the District of Massachusetts by Lee Vardakas (“Vardakas”), individually and on behalf of other shareholders of ADGE, naming ADGE, John N. Hatsopoulos, George N. Hatsopoulos, Benjamin Locke, Charles T. Maxwell, Deanne M. Petersen, Christine M. Klaskin, John Rowe, Joan Giacinti, Elias Samaras, Tecogen Inc., Tecogen.ADGE Acquisition Corp., and Cassel Salpeter & Co., LLC, as defendants. Among other things, the complaint alleges that (1) the merger is the result of a flawed and conflicted sales process and that the Exchange Ratio undervalues ADGE’s outstanding shares and (2) the registration statement on Form S-4 contains materially incomplete and misleading information concerning: (a) the financial analyses performed by ADGE’s financial advisor, (b) financial projections for ADGE and Tecogen, and (c) conflicts of interest in the sales process. The complaint asserts that defendants violated Section 14(a)(1) of the Securities Exchange Act of 1934, as amended (“Exchange Act”), and Rule 14a-9 thereunder, as a result of the alleged materially incomplete and misleading information; that the directors and officers of ADGE have control person liability for the alleged material misstatements and omissions pursuant to Section 20(a) of the Exchange Act; that the

directors of ADGE breached their fiduciary duties to ADGE's stockholders related to the merger, including that they failed to take steps to obtain the highest possible consideration for ADGE shareholders in the transaction; that Mr. John Hatsopoulos and Mr. George Hatsopoulos, acting in concert and as a group, as controlling shareholders of ADGE, violated their fiduciary duties to the shareholders of ADGE; and that Mr. George Hatsopoulos, Tecogen.ADGE Acquisition Corp., and ADGE's financial advisor aided and abetted breaches of fiduciary duties by the directors and officers of ADGE. Vardakas is seeking to certify a class action, a preliminary injunction,

Table of Contents

damages, costs and disbursements, including reasonable attorneys' fees, and such other relief as the court deems just and proper. As of the date of this report, none of the defendants in this action have been served with the complaint in the matter.

Comparison of Rights of Tecogen and ADGE Stockholders

ADGE stockholders will have substantially the same rights once they become Tecogen stockholders following the Merger due to similarity between the governing documents of Tecogen and ADGE. See "Summary - Comparison of Rights of Tecogen Stockholders and ADGE Stockholders."

Selected Historical Financial Information of Tecogen

The following selected historical financial information of Tecogen as of December 31, 2016 and 2015 and for each of the years in the two year period ended December 31, 2016 has been derived from Tecogen's audited consolidated financial statements included elsewhere herein.

You should read this selected historical financial information together with the financial statements included elsewhere in this joint proxy statement/prospectus and their accompanying notes together with Tecogen's management's discussion and analysis of operations and financial condition of Tecogen. See "Information About Tecogen -- Management's Discussion and Analysis of Financial Condition and Results of Operations of Tecogen."

	Years Ended December 31,	
	2016	2015
Statements of Operations Data:		
Revenues	\$24,490,386	\$21,442,657
Cost of sales	15,189,708	13,809,431
Gross profit	9,300,678	7,633,226
Operating expenses	10,298,129	10,276,576
Loss from operations	(997,451)	(2,643,350)
Other expense, net	(163,794)	(157,610)
Consolidated net loss	(1,161,245)	(2,800,960)
Loss attributable to the noncontrolling interest	64,962	73,547
Net loss attributable to Tecogen Inc.	\$(1,096,283)	\$(2,727,413)
Net loss attributable to Tecogen Inc. per share - basic and diluted	\$(0.06)	\$(0.16)
Weighted average shares outstanding - basic and diluted	19,295,922	16,860,453

	As of December 31,	
	2016	2015
Financial Position Data:		
Cash and cash equivalents	\$3,721,765	\$5,486,526
Working capital ⁽¹⁾	14,436,452	14,027,370
Total Assets	23,741,361	21,090,640
Total current liabilities	5,622,504	5,375,610
Total non-current liabilities	3,607,784	3,273,162
Total shareholders' equity	14,511,073	12,441,868

⁽¹⁾ Tecogen defines working capital as total current assets minus total current liabilities

Table of Contents

Selected Historical Financial Information of ADGE

The following selected historical financial information of ADGE as of December 31, 2016 and 2015 and for each of the years in the two year period ended December 31, 2016 has been derived from ADGE's audited consolidated financial statements included elsewhere herein.

You should read this selected historical financial information together with the financial statements included elsewhere in this joint proxy statement/prospectus and their accompanying notes together with management's discussion and analysis of operations and financial condition of ADGE. See "Information About ADGE -- Management's Discussion and Analysis of Financial Condition and Results of Operations of ADGE."

	Years Ended December	
	31,	
	2016	2015
Statements of Operations Data:		
Revenues	\$6,141,749	\$6,358,196
Cost of sales	6,012,757	6,411,568
Gross profit (loss)	128,992	(53,372)
Operating expenses	2,568,693	3,386,362
Loss from operations	(2,439,701)	(3,439,734)
Other income (expense), net	2,285,470	(1,034,254)
Loss from continuing operations	(214,803)	(4,501,593)
Loss from discontinued operations	(1,219,256)	(1,384,122)
Consolidated net loss	(1,434,059)	(5,885,715)
Loss attributable to the noncontrolling interest	675,612	455,312
Net loss attributable to ADGE Inc.	\$(758,447)	\$(5,430,403)
Income (loss) per share from continuing operations - basic and diluted	\$0.01	\$(0.09)
Net loss per share - basic and diluted	\$(0.01)	\$(0.11)
Weighted average shares outstanding - basic and diluted	50,684,095	50,689,633

	As of December 31,	
	2016	2015
Financial Position Data:		
Cash and cash equivalents	\$338,627	\$4,999,709
Working capital ⁽¹⁾	1,715,740	6,210,765
Total Assets	19,105,058	84,022,378
Total current liabilities	920,507	2,291,735
Total non-current liabilities	850,000	20,615,334
Total shareholders' equity	17,334,551	11,115,309

⁽¹⁾ ADGE defines working capital as total current assets minus total current liabilities

Table of Contents

Summary Unaudited Pro Forma Condensed Combined Financial Information

The following table shows summary unaudited pro forma condensed combined financial information, which we refer to as the summary pro forma financial information, about the financial position and results of operations of Tecogen, after giving effect to the Merger, which were prepared using the acquisition method of accounting with Tecogen designated as the accounting acquirer of ADGE. See “Unaudited Pro Forma Condensed Combined Financial Information” for more information.

The summary pro forma financial information is presented for informational purposes only and are not necessarily indicative of what the combined company’s financial position actually would have been had the Merger been completed on date indicated or what the combined company's results of operations actually would have been had the Merger been completed as of the beginning of the periods indicated. In addition, the pro forma financial statements do not purport to project the future financial position or operating results of the combined company. The summary pro forma financial information includes adjustments which are preliminary and may be revised. There can be no assurance that such revisions will not result in material changes to the information presented.

The summary pro forma financial information has been derived from and should be read in conjunction with the consolidated financial statements and the related notes of Tecogen, including the notes thereto, appearing elsewhere in this joint proxy statement/prospectus. See “Unaudited Pro Forma Condensed Combined Financial Information.”

As of or for
the Year
Ended
December
31, 2016
(Unaudited)

Pro Forma Condensed Combined Statement of Operation Data:

Net sales and gross revenues	\$29,645,932
Loss from continuing operations	(3,476,161)
Net loss attributable to Tecogen Inc. shareholders	(2,735,587)
Loss per share - basic and diluted	\$(0.11)

Pro Forma Condensed Combined Balance Sheet

Data:

Total assets	\$52,804,252
Total liabilities	20,065,694
Total equity	\$32,738,558

Table of Contents

Unaudited Pro Forma Condensed Combined Financial Information

On November 1, 2016, Tecogen, Merger Sub and ADGE entered into the Merger Agreement, as amended. Subject to the terms and conditions of the Merger Agreement, Merger Sub will merge with and into ADGE with ADGE surviving as a wholly-owned subsidiary of Tecogen.

The following unaudited pro forma condensed combined financial statements, which we refer to as the pro forma financial statements, present the combination of the historical consolidated financial statements of Tecogen and ADGE, adjusted to give effect to the Merger.

The unaudited pro forma condensed combined balance sheet, which we refer to as the pro forma balance sheet, combines the audited historical consolidated balance sheets of Tecogen and ADGE as of December 31, 2016, giving effect to the Merger as if it had been consummated on December 31, 2016.

The unaudited pro forma condensed combined statement of operations, which we refer to as the pro forma statement of operations, for the fiscal year ended December 31, 2016 combines the audited historical consolidated statements of operations of Tecogen and ADGE for the fiscal year ended December 31, 2016, giving effect to the Merger as if it had been consummated on January 1, 2016.

The historical consolidated financial information of Tecogen and ADGE has been adjusted in the pro forma financial statements to give effect to pro forma events that are (1) directly attributable to the Merger, (2) factually supportable, and (3) with respect to the pro forma statements of income, expected to have a continuing impact on the combined results. The pro forma financial statements should be read in conjunction with the accompanying notes to the pro forma financial statements. In addition, the pro forma financial statements were based on and should be read in conjunction with the following historical consolidated financial statements and accompanying notes of Tecogen and ADGE for the applicable periods:

- Separate historical financial statements of Tecogen as of and for the year ended December 31, 2016 and the related notes included elsewhere herein; and

- Separate historical financial statements of ADGE as of and for the year ended December 31, 2016 and the related notes included elsewhere herein.

The pro forma financial statements have been presented for informational purposes only and are not necessarily indicative of what the combined company's financial position or results of operations actually would have been had the Merger been completed as of the dates indicated. In addition, the pro forma financial statements do not purport to project the future financial position or operating results of the combined company. Transactions between Tecogen and ADGE during the period presented in the pro forma financial statements have been eliminated as if Tecogen and ADGE were consolidated during the period.

The pro forma financial statements have been prepared using the acquisition method of accounting under existing U.S. GAAP, which requires that one of the two companies in a merger be designated as the acquirer for accounting purposes. Based on the evidence available, Tecogen has been designated as the acquirer in the Merger for accounting purposes. The acquisition accounting is dependent upon certain valuations and other studies that have yet to progress to a stage where there is sufficient information for a definitive measurement. Tecogen intends to complete the valuations and other studies upon completion of the Merger and will finalize the allocation of consideration as soon as practicable within the measurement period in accordance with ASC 805, but in no event later than one year following the effective date of the Merger. The assets and liabilities of ADGE have been measured based on various preliminary estimates using assumptions that Tecogen believes are reasonable based on information that is currently available. In addition, the proposed Merger has not yet received all necessary approvals from governmental authorities. Under the HSR Act and other relevant laws and regulations, there are significant limitations regarding the information Tecogen and ADGE can share with each other prior to the closing. Accordingly, the pro forma adjustments are preliminary and have been made solely for the purpose of providing pro forma financial statements prepared in accordance with the rules and regulations of the SEC. Differences between these preliminary estimates and the final acquisition accounting may occur and these differences could have a material impact on the accompanying pro forma financial statements and the combined company's future results of operations and financial position.

The unaudited pro forma condensed combined financial statements set forth below primarily give effect to the following:

• application of the acquisition method of accounting in connection with the Merger to reflect the aggregate purchase consideration;

• the issuance of Tecogen common shares to the shareholders of ADGE as a portion of the merger consideration;

• the assumption of equity awards for holders of ADGE's outstanding equity awards; and

• transaction costs in connection with the Merger.

Upon completion of the Merger, Tecogen will perform a detailed review of ADGE's accounting policies. As a result of that review, Tecogen may identify differences between the accounting policies of the two companies that, when conformed, could have a material impact on the consolidated financial statements of the combined company. At this time, Tecogen is not aware of any significant accounting policy differences.

Table of Contents

The pro forma financial statements do not reflect any cost or growth synergies that the combined company may achieve as a result of the Merger, or the costs to combine the operations of Tecogen and ADGE, or the costs necessary to achieve these cost or growth synergies.

Additional Events

Additionally, the historical consolidated financial information of Tecogen and ADGE has been adjusted in the pro forma financial statements to give effect to the extinguishment of indebtedness of ADGE through a series of exchange transactions which occurred during the year ended December 31, 2016. Those transactions resulted in the elimination of a significant majority of ADGE's outstanding convertible indebtedness in exchange for a significant majority of ADGE's interest in one of its previously consolidated subsidiaries. The operating results of that previously consolidated subsidiary are reflected as discontinued operations in ADGE's historical financial statements. The historical consolidated financial information of Tecogen and ADGE has been adjusted in the pro forma financial statements to give effect to the exchange transactions as if they had occurred on January 1, 2016. The effects of those adjustments are separately identified in the unaudited pro forma condensed combined financial statements set forth below.

Table of Contents

TECOGEN INC.
Pro Forma Condensed Combined Balance Sheet
As of December 31, 2016
(Unaudited)

	Historical		Merger		Tecogen Pro
	Tecogen	ADGE	Related Pro	Notes	Forma
			Forma		Condensed
			Adjustments		Combined
Assets					
Current assets:					
Cash and cash equivalents	\$3,721,765	\$338,627	\$—		\$4,060,392
Accounts receivable, net	8,630,418	815,748	—		9,446,166
Unbilled revenue	2,269,645	18,797	—		2,288,442
Inventory, net	4,774,264	128,680	—		4,902,944
Due from related party	260,988	87,845	(167,726)	) 5(a)	181,107
Assets held for sale	—	946,883	—		946,883
Prepaid and other current assets	401,876	299,667	—		701,543
Total current assets	20,058,956	2,636,247	(167,726)	)	22,527,477
Property, plant and equipment, net	517,143	15,831,160	(859,438)	) 5(b)	15,488,865
Intangible assets, net	1,065,967	—	1,450,278	5(d)	2,516,245
Excess of cost over fair value of net assets acquired	40,870	—	9,534,719	3,4	9,575,589
Investment in Ultra Emissions Technologies Limited	2,000,000	—	—		2,000,000
Investment securities	—	637,651	—		637,651
Other assets	58,425	—	—		58,425
Total assets	\$23,741,361	\$19,105,058	\$9,957,833		\$52,804,252
Liabilities and stockholders' equity					
Current liabilities:					
Accounts payable	\$3,367,481	\$270,078	\$(39,822)	) 5(a)	\$3,597,737
Accrued expenses	1,378,258	522,525	370,000	5(c)	2,270,783
Due to related party	—	127,904	(127,904)	) 5(a)	—
Deferred revenue	876,765	—	—		876,765
Total current liabilities	5,622,504	920,507	202,274		6,745,285
Deferred revenue, net of current portion	459,275	—	—		459,275
Loan due to related party	—	850,000	—		850,000
Unfavorable contract liability	—	—	8,862,625	5(d)	8,862,625
Senior convertible promissory note, related party	3,148,509	—	—		3,148,509
Total liabilities	9,230,288	1,770,507	9,064,899		20,065,694
Stockholders' equity:					
Tecogen Inc shareholders' equity	14,511,073	—	17,670,021	5(e)	32,181,094
American DG Energy Inc. shareholders' equity	—	17,356,319	(17,356,319)	5(f)	—
Noncontrolling interest	—	(21,768)	) 579,232	5(g)	557,464
Total stockholders' equity	14,511,073	17,334,551	892,934		32,738,558
Total liabilities and stockholders' equity	\$23,741,361	\$19,105,058	\$9,957,833		\$52,804,252

The accompanying notes are an integral part of the unaudited pro forma condensed combined financial statements.

Table of Contents

TECOGEN INC.
Pro Forma Condensed Combined Statement of Operations
For the Year Ended December 31, 2016
(Unaudited)

	Historical		Merger Related Pro Forma Adjustments	Notes	Pro Forma Results of Acquisition of American DG	Exchange Transactions Pro Forma Adjustments	Notes	Tecogen Pro Forma Condensed Combined
	Tecogen	ADGE						
Net sales and gross revenues	\$24,490,386	\$6,141,749	\$(986,203)	6(a)	\$29,645,932	\$—		\$29,645,932
Cost and expenses applicable to sales and revenues	15,189,708	6,012,757	(1,893,247)	6(b)	19,309,218	—		19,309,218
Gross profit	9,300,678	128,992	907,044		10,336,714	—		10,336,714
Selling, general and administrative expenses	9,631,065	2,568,693	(528,327)	6(c)	11,671,431	—		11,671,431
Research and development	667,064	—	—		667,064	—		667,064
Loss from operations	(997,451)	(2,439,701)	1,435,371		(2,001,781)	—		(2,001,781)
Interest and other income	11,988	21,837	—		33,825	—		33,825
Interest and other expenses	(175,782)	(1,062,582)	—		(1,238,364)	534,501	8	(703,863)
Gain on extinguishment of debt	—	182,887	—		182,887	(182,887)	8	—
Gain on deconsolidation of subsidiary	—	3,887,098	—		3,887,098	(3,887,098)	8	—
Held for sale fair value adjustment	—	(743,770)	—		(743,770)	—		(743,770)
Loss from continuing operations before income taxes	(1,161,245)	(154,231)	1,435,371		119,895	(3,535,484)		(3,415,589)
Provision for income taxes on continuing operations	—	(60,572)	—		(60,572)	—		(60,572)
Loss from continuing	(1,161,245)	(214,803)	1,435,371		59,323	(3,535,484)		(3,476,161)

Edgar Filing: TECOGEN INC. - Form S-4/A

operations						
Loss attributable to noncontrolling interest	64,962	675,612	—	740,574	—	740,574
Net income (loss) attributable to Tecogen Inc. shareholders	\$(1,096,283)	\$460,809	\$1,435,371	\$799,897	\$(3,535,484)	\$(2,735,587)
Per common share data (Note 7)						
Net income (loss) per share - basic	\$(0.06)			\$0.03		\$(0.11)
Net income (loss) per share - diluted	\$(0.06)			\$0.03		\$(0.11)
Weighted average shares outstanding - basic	19,295,922			23,958,859		23,958,859
Weighted average shares outstanding - diluted	19,295,922			23,958,859		23,958,859

The accompanying notes are an integral part of the unaudited pro forma condensed combined financial statements.

Table of Contents

Notes to Unaudited Pro Forma Condensed Combined Financial Statements

Note 1. Description of the Transaction

Tecogen Inc. and ADGE have agreed to the strategic combination of Tecogen and ADGE under the terms of the Merger Agreement that is described in this joint proxy statement/prospectus. On November 1, 2016, Tecogen Inc. (NASDAQ: TGEN), a Delaware corporation ("Tecogen"), entered into an Agreement and Plan of Merger, as amended by Amendment No. 1 (the "Merger Agreement") by and among, Tecogen and American DG Energy Inc. (NYSE MKT: ADGE), a Delaware corporation ("ADGE"), and Tecogen.ADGE Acquisition Corp., a Delaware corporation and a wholly-owned subsidiary of Tecogen ("Merger Sub").

Under the terms of the Merger Agreement, Merger Sub will merge with and into ADGE, with ADGE becoming a wholly-owned subsidiary of Tecogen, and the surviving corporation of the transaction (the "Merger"). The Merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986. Subject to the terms and conditions of the Merger Agreement and shareholder approval, at the closing of the Merger, each outstanding share of ADGE common stock will be converted into the right to receive approximately 0.092 shares of common stock of Tecogen (the "Exchange Ratio"). Consummation of the Merger is subject to customary closing conditions, including, among other things, approval by the stockholders of Tecogen and ADGE of the respective proposals described herein. The Merger Agreement does not contain any termination, prohibitions on termination, no-shop clause, or reimbursements of Merger related expenses. As part of the Merger Agreement, ADGE and Tecogen have made customary mutual representations and warranties.

Also in connection with the Merger, Tecogen will, at the effective time of the Merger, assume the (a) outstanding stock options of ADGE and (b) outstanding warrants to purchase common stock of ADGE, each as adjusted pursuant to the Exchange Ratio and subject to the terms of the Merger Agreement. All outstanding stock options and restricted stock units of ADGE will continue to exist with the right however to be exercised for Tecogen common stock at the effective time of the Merger.

Note 2. Basis of Pro Forma Presentation

The accompanying pro forma financial statements were prepared in accordance with Article 11 of Regulation S-X using the acquisition method of accounting in accordance with ASC 805, and are based on the historical consolidated financial information of Tecogen and ADGE. The historical consolidated financial information has been adjusted in the accompanying pro forma financial statements to give effect to pro forma events that are (i) directly attributable to the merger, (ii) factually supportable, and (iii) with respect to the unaudited pro forma condensed combined statements of operation, expected to have a continuing impact on the consolidated results.

U.S. GAAP requires that one of the two companies in the merger be designated as the acquirer for accounting purposes based on the evidence available. In identifying Tecogen as the acquiring entity for accounting purposes, the companies took into account the voting rights of all equity instruments, the intended corporate governance structure of the combined company, and the size of each of the companies. In assessing the size of each of the companies, the companies evaluated various metrics, including, but not limited to: assets, revenue, operating income (loss), EBITDA, adjusted EBITDA, market capitalization and enterprise value. No single factor was the sole determinant in the overall conclusion that Tecogen is the acquirer for accounting purposes; rather, all factors were considered in arriving at the conclusion. Under ASC 805, Tecogen, as the accounting acquirer, will account for the transaction by using Tecogen historical information and accounting policies and adding the assets and liabilities of ADGE as of the closing date at their respective fair values.

The acquisition method of accounting uses the fair value concepts defined in ASC 820, Fair Value Measurements and Disclosures (ASC 820). Fair value is defined in ASC 820 as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value measurements can be highly subjective and it is possible the application of reasonable judgment could develop different assumptions resulting in a range of alternative estimates using the same facts and circumstances. The allocation of the estimated consideration is preliminary, pending finalization of various estimates and analyses. Since these pro forma financial statements have been prepared based on preliminary estimates of consideration and fair values attributable to the Merger, the actual amounts eventually recorded for the Merger, including goodwill, may

differ materially from the information presented.

17

Table of Contents

The initial allocation of the preliminary consideration in these pro forma financial statements is based upon an estimated preliminary consideration of approximately \$18.0 million. This amount is based on approximately 4.7 million shares of common stock that Tecogen would expect to issue to holders of ADGE common stock in connection with the Merger, based on the number of shares of ADGE common stock outstanding as of March 17, 2017 and the ADGE Exchange Ratio of 0.092 provided in the Merger Agreement. The preliminary consideration has been prepared based on the share price of Tecogen common stock on March 17, 2017 (the latest practicable date prior to the date of this document), equal to \$3.85 per share. The actual number of shares of Tecogen common stock issued to holders of ADGE common stock will be based upon the actual number of ADGE shares issued and outstanding immediately prior to the effective time of the Merger. Additional consideration, currently estimated at approximately \$0.1 million is expected for equity-based awards of ADGE as all awards will vest immediately upon the close of the Merger under a preexisting provision and Tecogen is obligated in the Merger Agreement to be assumed by Tecogen. The Merger Agreement does not contain any provision that would adjust the Exchange Ratio based on the fluctuations in the market value of either the Tecogen common stock or ADGE common stock. As a result, the implied value of the Merger consideration to the Tecogen stockholders and ADGE stockholders will fluctuate between now and the closing date of the Merger.

One-time transaction-related expenses anticipated to be incurred prior to, or concurrent with, the closing are not included in the pro forma statements of operations. However, the impact of such transaction expenses is reflected in the pro forma balance sheet as an increase to accumulated deficit and an increase to accrued expenses and other current liabilities.

The pro forma statement of operations for the fiscal year ended December 31, 2016 combines the audited historical consolidated statements of operations of Tecogen and ADGE for the fiscal year ended December 31, 2016, giving effect to the Merger as if it had been consummated on January 1, 2016.

The pro forma balance sheet combines the unaudited historical consolidated balance sheets of Tecogen and ADGE as of December 31, 2016, giving effect to the Merger as if it had been consummated on December 31, 2016.

Note 3. Preliminary Consideration

The preliminary consideration is calculated as follows:

ADGE common shares outstanding as of March 17, 2017	50,684,095
ADGE Exchange Ratio	0.092
Tecogen common shares issued in exchange	4,662,937
Tecogen closing share price on March 17, 2017	3.85
Fair value of Tecogen common shares issued in exchange	17,952,306
Fair value of ADGE vested equity awards	67,715
Preliminary consideration	\$18,020,021

As there is no required service condition in the assumed equity-based awards, 100% of the fair value of the ADGE equity-based awards at the date of the Merger is considered attributable to pre-combination service and accordingly is included in the preliminary consideration.

The preliminary value of the consideration does not purport to represent the actual value of the total consideration that will be received by the ADGE stockholders when the Merger is completed. In accordance with U.S. GAAP, the fair value of the equity securities comprising the consideration will be measured on the closing date of the Merger at the then-current market price per share of Tecogen common stock. This requirement will likely result in a difference from the \$3.85 per share on March 17, 2017, assumed in the calculation, and that difference may be material. For example, an increase or decrease of 30% in the price of Tecogen's common stock on the closing date of the Merger from the price of Tecogen common stock assumed in these pro forma financial statements would change the value of the preliminary consideration by approximately \$5.4 million, which would be reflected as a corresponding increase or decrease to goodwill. Based on Tecogen's annual historical stock price volatility of approximately 32%, a 30% change in Tecogen common share price is reasonably possible during the period between the date of this joint proxy statement/prospectus and the expected closing date of the Merger.

The purchase price was determined primarily based on the projected future cash flows of ADGE. Projected cash flows include an expectation of further and continued improvement under ADGE's initiative ("initiative") to increase the productivity of its existing sites' operations thereby optimizing margins and increasing cash flows. This initiative began in 2015, and as described elsewhere herein is comprised of several phases which include various analysis and evaluations followed by certain dependent actions aimed at optimizing the long-term profitability of each site's operations. The positive results of ADGE's initiative have only recently begun to be realized and are evidenced in its most recent annual results. Tecogen's understanding of the operational and economic dynamics of these sites offers Tecogen the unique ability to evaluate the feasibility of the actions necessary and related profitability improvements. See "Information About ADGE -- Business of ADGE."

Table of Contents

Notwithstanding contractual terms, in respect to pricing the energy generated by the ADGE sites that cause the contracts related to the majority of the sites to be unfavorable to the market due to decreased electrical utility rates (see Note 5(d)), projected future cash flows for ADGE are supportive of both the purchase price and the expected level of resultant goodwill. This incorporates the expectation of further and continued improvement under ADGE's initiative and includes the elimination of certain duplicative personnel and administrative functions as well as other cost savings.

Note 4. Fair Value Estimate of Assets to be Acquired and Liabilities to be Assumed

The table below represents an allocation of the preliminary consideration to ADGE's tangible and intangible assets acquired and liabilities assumed based on management's preliminary estimate of their respective fair values as of December 31, 2016. The final consideration and determination of the allocation of that consideration may be materially different than the preliminary estimates used in these pro forma financial statements. Any consideration in excess of the fair value of assets acquired less liabilities assumed is recognized as goodwill. Goodwill is primarily attributable to the going concern element of ADGE's business, including its assembled workforce and the long-term contractual nature of its business, as well as expected cost synergies from the merger related primarily to the elimination of administrative overhead and duplicative personnel.

	ADGE	Fair Value Adjustment	Fair Value	Goodwill Calculation	Notes
Preliminary consideration	\$—	\$—	\$ 18,020,021		3
Noncontrolling interest	(21,768)	579,232	557,464		5(g)
Total	\$(21,768)	\$579,232	\$ 18,577,485	\$ 18,577,485	
Net properties	15,831,160	(859,438)	14,971,722		5(b)
Intangibles	—	1,450,278	1,450,278		5(d)
All other assets (excluding goodwill) (i)	3,273,898	—	3,273,898		
Total assets (excluding goodwill)	\$ 19,105,058	\$ 590,840	\$ 19,695,898		
Accrued expenses and other current liabilities	\$ 522,525	\$ 20,000	\$ 542,525		5(c)
Unfavorable contract liability	—	8,862,625	8,862,625		5(d)
All other liabilities (i)	1,247,982	—	1,247,982		
Total liabilities	\$ 1,770,507	\$ 8,882,625	\$ 10,653,132		
Fair value of net assets (excluding goodwill)				9,042,766	
Tecogen goodwill attributable to ADGE				\$ 9,534,719	3

(i) Management determined the carrying values approximated fair value.

Note 5. Adjustments to Pro Forma Balance Sheet

Explanations of the adjustments to the pro forma balance sheet are as follows:

(a) Represents elimination of amounts due to and amounts due from and between Tecogen and ADGE as if they were intercompany balances normally subject to elimination in consolidation.

(b) Represents the preliminary fair value and resulting adjustment to net property. The preliminary amounts assigned to net property and estimated weighted average useful lives are as follows:

	Preliminary Fair Value	Estimated Weighted Average Useful Life (in years)
Energy systems	\$ 13,000,426	10.35
Computer equipment and software	17,268	1.15
Furniture and fixtures	21,035	1.25
Vehicles	28,000	2.75
Construction in process	1,904,993	NA
Total fair value of ADGE net property	\$ 14,971,722	
Less: ADGE's historical net property	(15,831,160)	
Pro forma adjustment	\$(859,438)	

The preliminary fair values of the net property were estimated by asset group using a replacement-cost approach which considered the depreciated cost of a replacement equivalent and factors for functional obsolescence. The downward adjustment to the carrying value of ADGE's net property considers recent innovation and economies inherent in Tecogen's current technologies and that equivalent capacity replacements are at a nominally lower cost than has historically been available. Newer component

Table of Contents

parts used in site installations have been configured in a manner which both simplifies site design and reduces installation costs. Estimated design and installation costs included in the cost of a replacement equivalent are assumed to be marginally lower than has been historically experienced due to the experience and expertise gained from past design and installation efforts. These factors, combined, result in an estimated depreciated cost of a replacement equivalent or fair value nominally lower than the carrying value at December 31, 2016.

The preliminary estimate of the fair value of net property is lower than the carrying value of net property at December 31, 2016. When ADGE identifies events or changes in circumstances which might represent an indicator of impairment, a test for impairment is performed using an undiscounted cash flow analysis to determine the recoverability of the carrying value of the property. This undiscounted cash flow analysis may result in a different amount than a fair value analysis.

(c) Represents an estimate of the fair value of the liability related to the non-contingent aspect of the obligation under ADGE's guarantee of certain outstanding obligations and guarantees of performance under certain operating agreements of one of its former subsidiaries of \$20,000 and an estimate of merger related costs of \$350,000 to be incurred subsequent to December 31, 2016. The obligations guaranteed include: 1.) certain long term unsecured convertible indebtedness, with a remaining principal amount outstanding subject to the guarantee at December 31, 2016 of \$300,000 with a maturity date of June 17, 2017, 2.) a payment performance guarantee in respect of collateralized equipment financing loans, with a remaining principal amount outstanding subject to the guarantee at December 31, 2016 of approximately \$322,000 due ratably in equal installments through September 2021, and 3.) certain guarantees of performance in respect of certain customer contracts, which amounts are not quantifiable until performance under the guarantees with respect to a particular contract becomes probable of occurrence.

The aforementioned guarantees were issued by ADGE in order to secure the respective borrowings and contracts during periods when the former subsidiary, EuroSite Power, was considered to be a subsidiary of ADGE. The determination of the fair value of the liability related to these guarantees at December 31, 2016 considered the former subsidiary's current financial position, that no known situations were evident which may suggest performance under any of the guarantees was probable of occurrence, and that the issuances and existence of the guarantees represent non-contingent obligations to perform under the guarantees over the terms of the respective guarantees. The value ascribed to the liability related to the guarantees of the outstanding debt obligations of approximately \$10,000 was calculated as a 1.5% premium on the outstanding balances of the debt with an equal amount of \$10,000 subjectively ascribed to the obligations under the guarantees of performance in respect of customer contracts. The latter amount is subject to revision pending further analysis however, based on current understanding, the revised value ascribed should not differ materially.

The estimate of the future merger related costs of \$350,000 is comprised of legal fees for both Tecogen's and ADGE's outside counsel, financial advisor fees for both Tecogen and ADGE as well as legal fees associated with each of the advisor's outside counsel, accounting, valuation and consulting fees associated with the merger as well as the cost related to professional opinions required and various printing and mailing costs.

(d) Represents the estimated fair value of ADGE's customer contracts. These contracts are long-term and provide customers with an alternative source of electrical power in addition to that provided by the local power utility, at rates that are lower than local utilities. This alternative electrical power is typically produced by ADGE owned, operated and maintained natural gas powered systems installed at the customers' sites, with ADGE bearing all costs of operation and maintenance. In addition to the alternative source of electrical power provided by ADGE's systems, customers can opt to add and take advantage of the heat generated in the electrical production process in the form of hot water and/or space heating. Pricing to the customer for electrical power produced and supplied by ADGE under the contracts is under a fixed formula which requires the customer to pay for the kilowatts of electrical power provided at a fixed percentage discount to the local utility's electric rate for that period. As a result, as utility rates for electrical power change, the amount ADGE is able to charge the customer under the contract also changes. There has been a sharp decrease in electric rates over the past several years, subsequent to the vast majority of customer contract dates, causing the billable value of the electrical power generated by ADGE's systems to decrease, resulting in a deterioration of expected profitability. Current utility electric rates remain significantly below the level anticipated at

the time the fixed percentage discounts contained in the vast majority of ADGE's customer contracts were contracted for, thus these contract terms, although they produce cash flow, are considered to be off market in the vast majority of ADGE's customer contracts. Additionally, the demand and volume of kilowatts produced and billed for vary by contract and by period and in certain instances have been significantly below what was originally expected such that had it been known at the time the contract(s) were negotiated, it would have influenced ADGE's determination of the level of the fixed percentage discount in those contracts.

The determination of fair value requires development of an estimate of the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions. Contracts are considered to be assets or liabilities by virtue of the rights and obligations inherent in the contract terms. Typically, contracts with terms considered to be at market are considered to have no fair value as in order to be entitled to the rights under the contract performance must occur for which a market rate of return is earned due to the at market terms. The fair value of a contract is primarily a measurement of its off market terms. The obligation to perform under a contract with terms that are unfavorable to market results in a liability to the extent its terms are off market. The resulting liability is an estimate of the

Table of Contents

price that would need to be paid to a willing market participant to assume the obligations under the contract in order for them to receive a market rate of return for their remaining performance obligation under the contract. The exact opposite holds true in instances where the terms of a contract are considered to be favorable to market. In that case an asset would exist as an estimate of the price that would be received from a willing market participant in order to be entitled to the rights under the contract.

In determining the estimate of fair value of ADGE's customer contracts, the measure of at market, and thus the baseline to measure the amount related to any of off market terms or conditions with respect to the contracts, was considered best determined, given the nature of the services provided under the contracts, by utilizing a benchmark level of margin contribution, in this case 35% on revenue. It is believed that a market participant would utilize a similar margin in arriving at a buy price for the contract(s). Specifically, in determining the estimate of fair value of ADGE's customer contracts, the actual margin contribution percentages by contract for the twelve month period ended September 30, 2016 were individually compared to the benchmark 35% and any excess or shortfall quantified by contract. It is believed that utilization of a recent twelve month period appropriately considers variations in results due to seasonality while still reflecting an acceptable approximation of the impact of current electrical rates.

The annual excesses or shortfalls in margin contribution were discounted at a rate of 5.6% by year, by contract for the period October 1, 2016 through the end of the term of the contract in order to determine the present value of such excesses and shortfalls with such discounted amounts summed by contract and then summed in the aggregate with favorable amounts classified as intangible assets and unfavorable amounts classified as unfavorable contract liabilities.

The benchmark contribution margin of 35% was determined as the amount required to provide a return on revenue, based on current market conditions and current contract terms, consistent with the average return on revenue of US investor owned public utilities. Electrical utilities are ADGE's primary competitors and potential market participants. It is believed that current market participants would require a return substantially consistent with that described in the foregoing for the remaining performance obligations under the contracts.

The discount rate of 5.6% recognizes the time value of money by including a risk free rate of 2.1% based on an average of 5 and 10 year US treasury bond yields, by including a rate of 2.5% for future inflation based on recent CPI factors, and an additional factor of 1.0% related to the risk of default by the customer under the contracts. It is believed that this rate appropriately considers those factors and values that a market participant would use in the process of discounting the annual differential between projected profitability and a market level of profitability, over the remaining term of a contract, in order to arrive at an amount to be paid to acquire a contract with terms favorable to market, or to be received to assume a contract with terms unfavorable to market.

The pro forma adjustment includes amounts related to contracts with terms favorable to the current market as well as contracts with terms unfavorable to the current market as follows:

Contracts with terms unfavorable to market - Unfavorable contract liability	\$8,862,625
Contracts with terms favorable to market - Intangible asset	(1,450,278)
Fair value of contracts	\$7,412,347

Table of Contents

Amortization of the aggregate fair value assigned to customer contracts is calculated using the straight line method by year and is estimated to be as follows:

Year 1	\$874,025
Year 2	844,933
Year 3	776,630
Year 4	731,889
Year 5	729,661
Year 6	712,572
Year 7	677,485
Year 8	640,297
Year 9	511,059
Year 10	320,207
Year 11	206,400
Year 12	151,376
Year 13	104,120
Year 14	83,826
Year 15	47,867
	\$7,412,347

(e) Represents the preliminary consideration above in Note 3, less expected merger costs to be incurred and expensed subsequent to December 31, 2016 as follows:

Preliminary consideration	\$18,020,021
Less: Estimated merger costs	(350,000)
Pro forma adjustment	\$17,670,021

(f) Represents elimination of ADGE's historical equity.

(g) Represents an estimate of the adjustment necessary to the historical noncontrolling interest to reflect the 49% common equity ownership interest in American DG New York, LLC, a partially owned subsidiary of ADGE, at fair value. The total fair value of American DG New York, LLC was estimated for purposes of these pro forma financial statements using a discounted cash flow analysis of the combined sites owned by American DG New York, LLC. That analysis utilized the expected cash flows of the sites over the expected terms of the contracts related to the sites, including expected extensions, discounted at a rate of 6% per annum, which is an estimate of the rate a market participant would use in valuing this entity on a stand-alone basis.

No deferred tax assets have been included as an adjustment in the pro forma balance sheet related to the foregoing fair value adjustments as it not considered more likely than not that any such deferred tax assets would be realizable.

Note 6. Adjustments to Pro Forma Income Statements

Explanations of the adjustments to the pro forma income statements are as follows:

(a) Represents elimination of sales and service revenue by Tecogen to ADGE as if they were intercompany transactions normally subject to elimination in consolidation.

(b) Represents amortization of the fair value of customer contracts in Note 5(d), elimination of purchase and operating cost from Tecogen recognized by ADGE (see Note 6(a)), and an adjustment to depreciation expense related to the fair value adjustment to net property (see Note 5(b)) as follows:

	Year Ended December 31, 2016
Amortization of the fair value of customer contracts	\$(874,025)
Elimination of ADGE purchases and service costs from Tecogen	(986,203)
Adjustment for depreciation for fair value adjustment to net property	(33,019)
Pro forma adjustment	\$(1,893,247)

Table of Contents

The pro forma adjustment reducing historical depreciation expense was calculated by asset category as reflected in Note 5(b) above utilizing the estimated weighted average useful life applied to the pro forma adjustment to historical fixed asset costs by asset category.

(c) Represents the elimination of one-time transaction costs incurred and expensed during the year ended December 31, 2016 directly attributable to the Merger as such costs are not expected to have a continuing impact on combined results.

Note 7. Tecogen Earnings Per Share Information

The weighted average shares used in determining earnings or loss per share in the accompanying pro forma statement of operations are shown in the following table.

	Tecogen Historical	Pro Forma Results of Acquisition of ADGE	Tecogen Pro Forma Condensed Combined
Year ended ended December 31, 2016:			
Historical Tecogen weighted average shares outstanding	19,295,922	19,295,922	19,295,922
Tecogen shares issuable to the shareholders of ADGE in connection with the merger	—	4,662,937	4,662,937
Denominator for basic earnings (loss) per share	19,295,922	23,958,859	23,958,859
Common stock equivalents related to stock options	—	—	—
Common stock equivalents related to convertible debt	—	—	—
Denominator for diluted earnings (loss) per share	19,295,922	23,958,859	23,958,859

Common stock equivalents are anti-dilutive in a period of loss.

Note 8. Exchange Transactions

These adjustments to the pro forma statement of operations for the year ended December 31, 2016 are not related to or directly attributable to the merger of Tecogen and ADGE. Rather they relate to certain events and transactions which occurred with ADGE during the year ended December 31, 2016. Through a series of exchange transactions, ADGE extinguished a significant majority of its convertible indebtedness in exchange for a significant majority of ADGE's interest in one of its previously consolidated subsidiaries. The operating results of that previously consolidated subsidiary are reflected as discontinued operations in ADGE's historical financial statements. The historical financial statements of ADGE also include a gain related to the extinguishment of that convertible indebtedness as a result of the exchange transactions as well as the historical interest expense related to the indebtedness which was extinguished as a result of the exchange transactions. The pro forma statement of operations includes only amounts relating to the continuing operations of ADGE as required by Article 11 of regulation S-X. Additionally, during the period between the exchange transactions, ADGE ceased to be the primary beneficiary of the same consolidated subsidiary causing it to deconsolidate that subsidiary resulting in a gain on deconsolidation. These adjustments serve to eliminate the gains recognized in ADGE's historical financial statements that were a result of these transactions and events and the interest cost associated with the convertible indebtedness which was extinguished in order to reflect the continuing impact of that extinguishment as if the exchange transactions had occurred on January 1, 2016.

The amount of historical interest expense eliminated in the pro forma statement of operations for the year ended December 31, 2016 was calculated in a manner so as to leave only the remaining debts' proportionate share of interest cost in the pro forma total of interest expense. Specifically, actual interest expense related to the entire issue of debt was apportioned between that which was extinguished and that which remained, by month, based on the respective principal amounts with the amount allocated to the debt which was extinguished being eliminated from the historical total.

Table of Contents

Equivalent and Comparative Per Share Information

The following table sets forth, for the fiscal year ended December 31, 2016, selected per share information for shares of Tecogen common stock on a historical and pro forma combined basis and for shares of ADGE common stock on a historical and pro forma equivalent basis, each on an unaudited basis for the twelve months ended December 31, 2016 and after giving effect to the Merger. Tecogen will account for the Merger as a business combination with Tecogen treated as the acquirer of ADGE for accounting purposes. The data is derived from and should be read in conjunction with Tecogen and ADGE audited consolidated financial statements and related notes of Tecogen and ADGE and related notes, and the unaudited pro forma condensed combined financial information and related notes, which are included elsewhere in this joint proxy statement/prospectus.

The pro forma consolidated ADGE equivalent information shows the effect of the Merger from the perspective of an owner of shares of ADGE common stock and was calculated by multiplying the Tecogen pro forma combined per share amounts by the Exchange Ratio.

The unaudited pro forma combined per share data is presented for illustrative purposes only and is not necessarily indicative of the operating results or financial position that would have occurred if the transactions had been completed at the beginning of the earliest period presented, nor is it necessarily indicative of future operating results or financial position. The pro forma adjustments are estimates based upon information and assumptions available at the time of the filing of this joint proxy statement/prospectus.

The pro forma income from continuing operations per share includes the combined income (loss) from continuing operations of Tecogen and ADGE on a pro forma basis as if the Merger was completed on January 1, 2016.

	Tecogen		ADGE	
For the year ended December 31, 2016	Historical	Pro Forma Combined	Historical	Pro Forma Equivalent
Income (loss) from continuing operations attributable to common shareholders per share - basic	\$(0.06)	\$ (0.11)	\$0.01	\$ (0.01)
Income (loss) from continuing operations attributable to common shareholders per share - diluted	(0.06)	(0.11)	\$0.01	(0.01)
Dividends per common share	—	NA	—	NA
Book value per common share	\$0.73	\$ 1.33	\$0.34	\$ 0.12

Table of Contents

Comparative Tecogen and ADGE Market Price and Distribution Information

Tecogen and ADGE Recent Closing Prices

The following table sets forth the closing price per share of Tecogen common stock and the closing price per share of ADGE common stock on November 1, 2016, (the last business day preceding the public announcement of the execution and delivery of the Merger Agreement) and on * (the latest practicable trading date prior to the mailing this joint proxy statement/prospectus). The table also presents the equivalent market value per share of ADGE common stock based on the Exchange Ratio of 0.092 shares of Tecogen common stock for each share of ADGE common stock. You are urged to obtain current market quotations for shares of Tecogen and ADGE common stock before making a decision with respect to the Merger. Tecogen common stock is listed on the Nasdaq Capital Market under the symbol "TGEN," and ADGE common stock is listed on the NYSE MKT under the symbol "ADGE."

Date	Tecogen Common Stock	ADGE Common Stock	
	Historical	Historical	Equivalent Market Value Per Share
November 1, 2016	\$4.03	\$0.30	\$0.37
*	*	*	*

Because the market price of shares of Tecogen common stock is subject to fluctuation between the date of this joint proxy statement/prospectus and the Merger effective time, the market value of the shares of Tecogen common stock that ADGE stockholders may receive in the Merger may increase or decrease prior to and following the Merger. ADGE stockholders are urged to obtain current market quotations for Tecogen common stock.

Tecogen's Market Price Data

The shares of Tecogen common stock are listed on the Nasdaq Capital Market under the symbol "TGEN." This table sets forth, for the periods indicated, the high and low closing per share sales prices of Tecogen common stock, as reported on the Nasdaq Capital Market composite transaction reports. No distributions were made by Tecogen during the periods presented.

	Price Per Tecogen Common Share	
	High	Low
2015		
1st Quarter	\$5.65	\$4.55
2nd Quarter	5.19	3.90
3rd Quarter	4.40	2.80
4th Quarter	4.10	2.46
2016		
1st Quarter	\$6.50	\$2.80
2nd Quarter	5.75	3.50
3rd Quarter	5.20	4.00