



ARCHAEA ENERGY INC.

110,334,394 SHARES OF CLASS A COMMON STOCK

7,021,000 WARRANTS TO PURCHASE SHARES OF CLASS A COMMON STOCK

This prospectus supplement is being filed solely to update the information contained in the table in the "Selling Securityholders" section of the prospectus dated October 21, 2021 (the "Prospectus") to reflect certain transfers described herein.

The Prospectus and this prospectus supplement relate to the issuance by us of up to 18,883,492 shares of our Class A common stock, par value \$0.0001 per share (the "Class A Common Stock"), which consist of (i) 11,862,492 shares that may be issued upon the exercise of the 11,862,492 warrants (the "Public Warrants") originally sold as part of the units issued in the initial public offering (the "IPO") of Rice Acquisition Corp. ("RAC"), (ii) 6,771,000 shares of Class A Common Stock that may be issued upon the exercise of the 6,771,000 warrants originally issued to Rice Acquisition Sponsor LLC (the "Sponsor") and Atlas Point Energy Infrastructure Fund, LLC ("Atlas") in a private placement that closed simultaneously with the consummation of the IPO (the "Private Placement Warrants") and (iii) 250,000 shares of Class A Common Stock that may be issued upon the exercise of the 250,000 warrants issued to Atlas in a private placement that closed simultaneously with the consummation of the Business Combinations (as defined in the Prospectus) (the "Forward Purchase Warrants" and, together with the Public Warrants and the Private Placement Warrants, the "Warrants"). Each Warrant is exercisable to purchase for \$11.50 one share of Class A Common Stock, subject to adjustment.

In addition, the Prospectus and this prospectus supplement relate to the resale from time to time of 6,771,000 Private Placement Warrants, 250,000 Forward Purchase Warrants and 110,334,394 shares of Class A Common Stock by the selling security holders named in the Prospectus or their permitted transferees (each a "Selling Securityholder" and, collectively, the "Selling Securityholders"). The 110,334,394 shares of Class A Common Stock consist of (i) 29,166,667 shares of Class A Common Stock issued in a private placement that closed concurrently with the consummation of the Business Combinations, (ii) 2,500 shares of Class A Common Stock issued to the Sponsor in a private placement prior to the consummation of the IPO, (iii) 18,883,492 shares of Class A Common Stock issuable upon exercise of the Warrants, (iv) 5,931,350 shares of Class A Common Stock issuable upon redemption of the 5,931,350 Class A units of LFG Acquisition Holdings LLC (f/k/a Rice Acquisition Holdings LLC) ("Opco") held by the initial stockholders of RAC, all of which were issued prior to the consummation of the IPO, (v) 23,000,000 shares of Class A Common Stock issuable upon redemption of the 23,000,000 Opco Class A units issued as partial consideration upon consummation of the Aria Merger (as defined in the Prospectus) and (vi) 33,350,385 shares of Class A Common Stock issuable upon redemption of the 33,350,385 Opco Class A units issued as consideration upon consummation of the Archaea Merger (as defined in the Prospectus).

This prospectus supplement updates and supplements the information in the Prospectus and is not complete without, and may not be delivered or utilized except in combination with, the Prospectus, including any other amendments or supplements thereto. This prospectus supplement should be read in conjunction with the Prospectus and if there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement.

The Class A Common Stock is listed on the New York Stock Exchange ("NYSE") under the symbol "LFG." On May 12, 2022, the last sale price of the Class A Common Stock as reported on the NYSE was \$18.30 per share.

Investing in our securities involves certain risks, including those that are described in the "Risk Factors" section beginning on page 7 of the Prospectus, as updated and supplemented by the section entitled "Risk Factors" included in our Annual Report on Form 10-K for the year ended December 31, 2021 (which was attached to Prospectus Supplement No. 7, dated March 18, 2022) and the section entitled "Risk Factors" included in the 10-Q (which is attached to Prospectus Supplement No. 11).

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under the Prospectus or determined if the Prospectus or this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is March 13, 2022.

SELLING SECURITYHOLDERS

The following information is provided as of May 11, 2022 to update the “Selling Securityholders” section of the Prospectus to reflect the pro rata distribution by the Sponsor to its members on such date of an aggregate of (i) 6,093,900 Private Placement Warrants, (ii) 5,532,287 shares of Class B common stock, par value \$0.0001 per share (the “Class B Common Stock”), and (iii) 2,500 shares of Class A Common Stock (the “Distribution”), as reflected in the Selling Securityholder table set forth below. Following the Distribution, the Sponsor no longer owns any shares of Class A Common Stock, Class B Common Stock or Private Placement Warrants.

Where the name of a Selling Securityholder identified in the table below also appears in the table in the Prospectus, the information set forth in the table below regarding that Selling Securityholder supersedes and replaces the information regarding such Selling Securityholder in the Prospectus. Information regarding the Selling Securityholders listed in the table below, including the number of shares of Class A Common Stock, Class B Common Stock and Private Placement Warrants beneficially owned by them, is based on information provided by such Selling Securityholders as of the date of this prospectus supplement.

Information about the Selling Securityholders, including those listed below, may change over time. Since the effectiveness of the Registration Statement on Form S-1 of which the Prospectus is a part, a number of Selling Securityholders have exercised their warrants and/or sold or otherwise transferred their securities registered thereunder. This prospectus supplement does not provide any updates with respect to any such exercises, sales or transfers, except for those expressly referred to in the immediately preceding paragraph.

Name of Selling Securityholder	Before the Offering		Number of Securities Being Offered		After the Offering		
	Number of Shares of Class A Common Stock	Number of Warrants	Number of Shares of Class A Common Stock Being Offered	Number of Warrants Being Offered	Number of Shares of Class A Common Stock	Percentage of Outstanding Shares of Class A Common Stock	Number of Warrants
Brian McCarthy ⁽¹⁾⁽²⁾	148,253	316,299	148,253	316,299	-	-	-
Charles H. Burrus ⁽¹⁾⁽³⁾	9,268	21,467	9,268	21,467	-	-	-
Daniel J. Rice III ⁽¹⁾⁽⁴⁾	1,170,866	251,905	1,170,866	251,905	-	-	-
Daniel J. Rice IV ⁽¹⁾⁽⁵⁾	7,031	-	5,154	-	1,877	*	-
Daniel J. Rice IV 2018 Irrevocable Trust ⁽¹⁾⁽⁶⁾⁽⁷⁾							
(8)	1,540,898	1,282,972	1,540,898	1,282,972	-	-	-
Derek A. Rice 2018 Irrevocable Trust ⁽¹⁾⁽⁷⁾⁽⁹⁾	1,153,955	637,792	1,153,955	637,792	-	-	-
Elliana Rogers Trust ⁽¹⁾⁽¹⁰⁾	13,550	-	13,550	-	-	-	-
Gavin Rogers Trust ⁽¹⁾⁽¹⁰⁾	13,550	-	13,550	-	-	-	-
J. Kyle Derham ⁽¹⁾⁽¹¹⁾	1,067,565	1,490,899	1,065,688	1,490,899	1,877	*	-
Jack Rogers Trust ⁽¹⁾⁽¹⁰⁾	13,550	-	13,550	-	-	-	-
James Torgerson ⁽¹⁾⁽¹²⁾	138,551	83,968	136,674	83,968	1,877	*	-
James Wilmot Rogers ⁽¹⁾⁽¹³⁾	161,317	234,399	161,317	234,398	-	-	-
Joseph Malchow ⁽¹⁾⁽¹²⁾	138,551	83,968	136,674	83,968	1,877	*	-
Kathryn Jackson ⁽¹⁾⁽¹²⁾	138,551	83,968	136,674	83,968	1,877	*	-
Liam Rogers Trust ⁽¹⁾⁽¹⁰⁾	13,550	-	13,550	-	-	-	-
Quincy Rogers Trust ⁽¹⁾⁽¹⁰⁾	13,550	-	13,550	-	-	-	-
Richard Walton ⁽¹⁾⁽¹⁴⁾	261,114	421,259	261,114	421,259	-	-	-
Ryan N. Rice 2018 Irrevocable Trust ⁽¹⁾⁽⁷⁾⁽¹⁵⁾	205,433	125,953	205,433	125,953	-	-	-
Stork Partners LLC ⁽¹⁾⁽¹⁶⁾	1,107,396	421,259	1,107,396	421,259	-	-	-
Toby Z. Rice 2018 Irrevocable Trust ⁽¹⁾⁽⁷⁾⁽¹⁷⁾	1,153,955	637,792	1,153,955	637,792	-	-	-

* Less than 1%

- (1) Pursuant to the limited liability company agreement of Opco, at the request of the holder, each Opco Class A unit may be redeemed for, at Opco's election, a newly-issued share of Class A Common Stock or a cash payment equal to the Cash Election Amount (as defined therein and which is generally the volume-weighted average closing price of one share of Class A Common Stock for the five consecutive trading days prior to the date on which the holder requested the redemption), and upon redemption of such Opco Class A unit, a share of Class B Common Stock shall be surrendered by the holder and cancelled by the Company.
 - (2) The shares reported (before the offering) consists of 148,253 shares of Class B Common Stock and 148,253 Opco Class A units. Mr. McCarthy is the Chief Investment Officer and Interim Chief Financial Officer of the Company and, prior to the consummation of the Business Combinations, an employee of Archaea.
 - (3) The shares reported (before the offering) consists of 9,268 shares of Class B Common Stock and 9,268 Opco Class A units. Mr. Burrus served as an M&A advisor to RAC.
 - (4) The shares reported (before the offering) consists of 900,000 shares of Class A Common Stock as well as 270,866 shares of Class B Common Stock and 270,866 Opco Class A units. The Selling Securityholder is the father of Daniel J. Rice, IV, who is a director of the Company and was a director and Chief Executive Officer of RAC.
 - (5) The shares reported (before the offering) consists of 1,877 shares of Class A Common Stock as well as 5,154 shares of Class B Common Stock and 5,154 Opco Class A units. Mr. Rice is a director of the Company and was a director and the Chief Executive Officer of RAC.
 - (6) The shares reported (before the offering) consists of 332,500 shares of Class A Common Stock as well as 1,208,398 shares of Class B Common Stock and 1,208,398 Opco Class A units.
 - (7) Andrew L. Share, as Trustee of the Selling Securityholder, has voting and investment power over the reported securities.
 - (8) The beneficiary of the Selling Securityholder is Daniel J. Rice, IV, who is a director of the Company and was a director and Chief Executive Officer of RAC.
 - (9) The shares reported (before the offering) consists of 330,000 shares of Class A Common Stock as well as 823,955 shares of Class B Common Stock and 823,955 Opco Class A units.
 - (10) Ted Tishman, as Trustee of the Selling Securityholder, has voting and investment power over the reported securities. The beneficiary of the Selling Securityholder is the child of James W. Rogers, who was the Chief Accounting Officer of RAC. The shares reported (before the offering) consists of 13,550 shares of Class B Common Stock and 13,550 Opco Class A units.
 - (11) The shares reported (before the offering) consists of 31,877 shares of Class A Common Stock as well as 1,035,688 shares of Class B Common Stock and 1,035,688 Opco Class A units. Mr. Derham is a director of the Company and was a director and the Chief Financial Officer of RAC.
 - (12) The shares reported (before the offering) consists of 1,877 shares of Class A Common Stock as well as 136,674 shares of Class B Common Stock and 136,674 Opco Class A units. The Selling Securityholder is a director of the Company and, prior to the consummation of the Business Combinations, of RAC.
 - (13) The shares reported (before the offering) consists of 161,317 shares of Class B Common Stock and 161,317 Opco Class A
 - (14) The shares reported (before the offering) consists of 261,114 shares of Class B Common Stock and 261,114 Opco Class A units. Mr. Walton is the President of the Company and, prior to the consummation of the Business Combinations, of Archaea.
 - (15) The shares reported (before the offering) consists of 70,000 shares of Class A Common Stock as well as 135,433 shares of Class B Common Stock and 135,433 Opco Class A units.
 - (16) The shares reported (before the offering) consists of 50,000 shares of Class A Common Stock as well as 1,057,396 shares of Class B Common Stock and 1,057,396 Opco Class A units. Nicholas Stork, as the manager of the Selling Securityholder, has voting and investment power over the reported securities. Mr. Stork is a director and the Chief Executive Officer of the Company and, prior to the consummation of the Business Combinations, of Archaea.
 - (17) The shares reported (before the offering) consists of 330,000 shares of Class A Common Stock as well as 823,955 shares of Class B Common Stock and 823,955 Opco Class A units. The beneficiary of the Selling Securityholder is the brother of Daniel J. Rice, IV, who is a director of the Company and was a director and the Chief Executive Officer of RAC.
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