
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): October 10, 2025

IonQ, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

1-39694
(Commission
File Number)

85-2992192
(I.R.S. Employer
Identification No.)

4505 Campus Drive
College Park, Maryland
(Address of principal executive offices)

20740
(Zip Code)

Registrant's Telephone Number, Including Area Code: 301 298-7997

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	IONQ	New York Stock Exchange
Warrants, each exercisable for one share of common stock for \$11.50 per share	IONQ WS	New York Stock Exchange

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

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 8.01 Other Events.

On October 10, 2025, IonQ, Inc. (the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with J.P. Morgan Securities LLC as the sole underwriter, providing for the offer and sale of (i) 16,500,000 shares (the “Shares”) of the Company’s common stock, par value \$0.0001 per share (“Common Stock”), (ii) 5,005,400 pre-funded warrants (the “Pre-Funded Warrants”) to purchase an aggregate of 5,005,400 shares of Common Stock and (iii) 43,010,800 warrants (the “Series B Warrants” and, together with the Pre-Funded Warrants, the “Warrants”) to purchase 43,010,800 shares of Common Stock. Each share of Common Stock was offered with two Series B Warrants to purchase two shares of Common Stock at a combined price to the public of \$93.00. Each Pre-Funded Warrant was offered with two Series B Warrants to purchase two shares of Common Stock at a combined price to the public of \$93.00 (with a nominal exercise price of \$0.0001 per share remaining unpaid as of the issuance date with respect to each Pre-Funded Warrant). The shares of Common Stock, the Series B Warrants and the Pre-Funded Warrants will be issued separately and not as a unit.

The Series B Warrants are being issued pursuant to a Warrant Agreement, dated October 14, 2025 (the “Series B Warrant Agreement”), between the Company and Continental Stock Transfer & Trust Company, as warrant agent. The Pre-Funded Warrants are being issued pursuant to a Pre-Funded Warrant Agreement, dated October 14, 2025 (the “Pre-Funded Warrant Agreement” and together with the Series B Warrant Agreement, the “Warrant Agreements”), between the Company and Continental Stock Transfer & Trust Company, as warrant agent.

The Warrants are exercisable immediately upon issuance and from time to time thereafter through and including the seven-year anniversary of the initial issuance date (the “Expiration Date”). Each Pre-Funded Warrant is exercisable at an exercise price of \$0.0001 per share (the “Pre-Funded Warrant Exercise Price”), and each Series B Warrant is exercisable at an exercise price of \$155.00 per share (the “Series B Warrant Exercise Price”).

The Series B Warrant Exercise Price and the number of shares of Common Stock issuable upon exercise of the Series B Warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the shares of Common Stock, as well as upon any distribution of assets, including cash, stock or other property, to holders of the Common Stock.

The Pre-Funded Warrant Exercise Price and the number of shares of Common Stock issuable upon exercise of the Pre-Funded Warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting the shares of Common Stock, provided that the Pre-Funded Warrant Exercise Price will not be adjusted below the par value per share of the Common Stock. The holders of Pre-Funded Warrants have the right to participate on an as-exercised basis in certain distributions to the holders of Common Stock.

A holder will not have the right to exercise any portion of the Warrants if the holder (together with its Attribution Parties (as defined therein)) would beneficially own in excess of 4.99% (which amount may be increased (not in excess of 9.99%) or decreased by the holder from time to time pursuant to and in accordance with the Warrant Agreements) of the total number of issued and outstanding shares of Common Stock immediately after giving effect to such exercise.

Under the Series B Warrant Agreement, upon consummation of each Fundamental Transaction (as defined in the Series B Warrant Agreement), the holder would be entitled to receive shares of common stock (or its equivalent) of the Successor Entity (as defined in the Series B Warrant Agreement) or such other securities, cash, assets or other property, as applicable, which the holder would have been entitled to receive upon the happening of such Fundamental Transaction had a Series B Warrant been exercised immediately prior to such Fundamental Transaction (without regard to any limitations on the exercise of a Series B Warrant), as adjusted in accordance with the provisions of the Series B Warrant Agreement. Notwithstanding the foregoing, at the request of a holder, the Series B Warrant Agreement provides that the Company or the Successor Entity (as the case may be) shall purchase the Series B Warrants from the holder on the date of such request by paying to the holder cash in an amount equal to the Black Scholes Value (as defined in the Series B Warrant Agreement), provided that, no such payment shall be required prior to consummation of the applicable Fundamental Transaction.

Under the Pre-Funded Warrant Agreement, upon consummation of each Fundamental Transaction (as defined in the Pre-Funded Warrant Agreement), the holder would be entitled to receive shares of common stock (or its equivalent) of the Successor Entity (as defined in the Pre-Funded Warrant Agreement) or such other securities, cash, assets or other property, as applicable, which the holder would have been entitled to receive upon the happening of such Fundamental Transaction had a Pre-Funded Warrant been exercised immediately prior to such Fundamental Transaction (without regard to any limitations on the exercise of a Pre-Funded Warrant), as adjusted in accordance with the provisions of the Pre-Funded Warrant Agreement.

Except as may otherwise be provided in a Warrant Agreement, the holder of a Warrant, solely in its capacity as holder of a Warrant, does not have the rights of a holder of shares of Common Stock, including any voting rights, prior to the issuance to the holder of the warrant shares which it is then entitled to receive upon the due exercise of a Warrant.

The closing of the offering is expected to occur on October 14, 2025.

The foregoing descriptions of the Underwriting Agreement, the Warrants and the Warrant Agreements are not complete and are qualified in their entirety by reference to the full text of the Underwriting Agreement, the Series B Warrant Agreement, the Form of Series B Warrant, the Pre-Funded Warrant Agreement and the Form of Pre-Funded Warrant, copies of which are filed as Exhibits 1.1, 4.1, 4.2, 4.3 and 4.4, respectively, to this Current Report on Form 8-K and are incorporated herein by reference.

A copy of the opinion of Paul, Weiss, Rifkind, Wharton & Garrison LLP relating to the validity of the securities issued in the offering is filed herewith as Exhibit 5.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

<u>Exhibit No.</u>	<u>Document Description</u>
1.1	<u>Underwriting Agreement, dated October 10, 2025, by and among the Company and J.P. Morgan Securities LLC, as the sole underwriter.</u>
4.1	<u>Series B Warrant Agreement, dated as of October 14, 2025, by and between the Company and Continental Stock Transfer & Trust Company, as warrant agent.</u>
4.2	<u>Form of Series B Warrant (included in Exhibit 4.1 hereto).</u>
4.3	<u>Pre-Funded Warrant Agreement, dated as of October 14, 2025, by and between the Company and Continental Stock Transfer & Trust Company, as warrant agent.</u>
4.4	<u>Form of Pre-Funded Warrant (included in Exhibit 4.3 hereto).</u>
5.1	<u>Opinion of Paul, Weiss, Rifkind, Wharton & Garrison LLP</u>
23.1	<u>Consent of Paul, Weiss, Rifkind, Wharton & Garrison LLP (included in Exhibit 5.1).</u>
104	Cover Page Interactive Data File - the cover page XBRL tags are embedded within the Inline XBRL document.

SIGNATURE

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

IONQ, INC.

By: /s/ Paul T. Dacier

Name: Paul T. Dacier

Title: Chief Legal Officer and Corporate Secretary

Date: October 14, 2025

IonQ, Inc.

16,500,000 Shares of Common Stock

5,005,400 Pre-Funded Warrants to Purchase 5,005,400 Shares of Common Stock

43,010,800 Warrants to Purchase 43,010,800 Shares of Common Stock

Underwriting Agreement

October 10, 2025

J.P. Morgan Securities LLC
As Representative of the
several Underwriters listed
in Schedule 1 hereto

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, New York 10179

Ladies and Gentlemen:

IonQ, Inc., a Delaware corporation (the "Company"), proposes to issue and sell to the several underwriters listed in Schedule 1 hereto (the "Underwriters"), for whom you are acting as representative (the "Representative"), an aggregate of (i) 16,500,000 shares (the "Underwritten Shares") of common stock, par value \$0.0001 per share (the "Common Stock") of the Company, (ii) 5,005,400 pre-funded warrants of the Company to purchase an aggregate of 5,005,400 shares of Common Stock at an exercise price equal to \$0.0001 per share (the "Pre-Funded Warrants") and (iii) 43,010,800 warrants to purchase an aggregate of 43,010,800 shares of Common Stock at an exercise price equal to \$155.00 per share (the "Warrants," and each such Underwritten Share, Pre-Funded Warrant and Warrant, an "Underwritten Security.") The Pre-Funded Warrants will be issued pursuant to an agreement (the "Pre-Funded Warrant Agreement") by and among the Company and Continental Stock Transfer & Trust Company, as the warrant agent (the "Warrant Agent"). The Warrants will be issued pursuant to an agreement (the "Warrant Agreement") by and among the Company and the Warrant Agent. The shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants and Warrants are herein referred to as the "Warrant Shares." The Underwritten Shares, Pre-Funded Warrants and Warrants are herein referred to as the "Securities." In the event only one underwriter is listed in Schedule 1, any reference in this underwriting agreement (the "Agreement") to the "Underwriters" shall be deemed to refer to the sole underwriter listed in Schedule 1.

The Company hereby confirms its agreement with the several Underwriters concerning the purchase and sale of the Securities, as follows:

1. Registration Statement. The Company has prepared and filed with the Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder (collectively, the “Securities Act”), a registration statement on Form S-3ASR (File No. 333-285279), including a prospectus, relating to the Underwritten Shares and the Warrants. Such registration statement, as amended at the time it became effective, including the information, if any, deemed pursuant to Rule 430A, 430B or 430C under the Securities Act to be part of the registration statement at the time of its effectiveness (“Rule 430 Information”), is referred to herein as the “Registration Statement”; and as used herein, the term “Preliminary Prospectus” means each prospectus included in such registration statement (and any amendments thereto) before effectiveness, any prospectus filed with the Commission pursuant to Rule 424(a) under the Securities Act and the prospectus included in the Registration Statement at the time of its effectiveness that omits Rule 430 Information, and the term “Prospectus” means the prospectus in the form first used (or made available upon request of purchasers pursuant to Rule 173 under the Securities Act) in connection with confirmation of sales of the Securities. If the Company has filed an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the “Rule 462 Registration Statement”), then any reference herein to the term “Registration Statement” shall be deemed to include such Rule 462 Registration Statement. Any reference in this Agreement to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the Securities Act, as of the effective date of the Registration Statement or the date of such Preliminary Prospectus or the Prospectus, as the case may be, and any reference to “amend,” “amendment” or “supplement” with respect to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to refer to and include any documents filed after such date under the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder (collectively, the “Exchange Act”) that are deemed to be incorporated by reference therein. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Registration Statement and the Prospectus.

At or prior to the Applicable Time (as defined below), the Company had prepared the following information (collectively with the pricing information set forth on Annex A-1 hereto, the “Pricing Disclosure Package”): a Preliminary Prospectus dated October 10, 2025 and each “free-writing prospectus” (as defined pursuant to Rule 405 under the Securities Act) listed on Annex A-1 hereto.

“Applicable Time” means 8:40 A.M., New York City time, on October 10, 2025.

2. Purchase of the Securities by the Underwriters.

(a) The Company agrees to issue and sell the Securities to the several Underwriters as provided in this Agreement, and each Underwriter, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, agrees, severally and not jointly, to purchase, at a price of \$92.07 per Underwritten Share (the “Share Purchase Price”) and \$92.0699 per Pre-Funded Warrant, from the Company the respective number of Underwritten Shares and Pre-Funded Warrants set forth opposite such Underwriter’s name in Schedule I hereto. The Warrants are being issued and sold for no additional consideration to the Underwriters; however, for purposes of settlement, nominal value may be allocated to the Warrants, in a manner to be agreed between the Company and the Representative.

(b) The Company understands that the Underwriters intend to make a public offering of the Securities, and initially to offer the Securities on the terms set forth in the Pricing Disclosure Package. The Company acknowledges and agrees that the Underwriters may offer and sell Securities to or through any affiliate of an Underwriter.

(c) Payment for the Securities shall be made by wire transfer in immediately available funds to the account specified by the Company to the Representative at the offices of Simpson Thacher & Bartlett LLP, counsel for the Underwriters, at 425 Lexington Avenue, New York, NY 10017 at 9:00 A.M. New York City time on October 14, 2025, or at such other time or place on the same or such other date, not later than the fifth business day thereafter, as the Representative and the Company may agree upon in writing. The time and date of such payment for the Securities is referred to herein as the “Closing Date.”

Payment for the Securities to be purchased on the Closing Date shall be made against delivery to the Representative for the respective accounts of the several Underwriters of the Securities to be purchased on such date in definitive form registered in such names and in such denominations as the Representative shall request in writing not later than two full business days prior to the Closing Date with any transfer taxes payable in connection with the sale of such Securities duly paid by the Company. Delivery of the Securities shall be made through the facilities of The Depository Trust Company (“DTC”) unless the Representative shall otherwise instruct. The Underwritten Shares shall be delivered to the Representative in definitive form, registered in such names and in such denominations as the Representative shall request in writing not later than the Closing Date. The Pre-Funded Warrants and the Warrants shall be delivered to the Representative in definitive form, registered in such names and in such denominations as the Representative shall request in writing not later than the Closing Date. The Pre-Funded Warrants and the Warrants will be made available for inspection by the Representative on the business day prior to the Closing Date.

In lieu of Pre-Funded Warrants that were otherwise to have been delivered under this Agreement, the Representative may elect, by written notice to the Company and payment of the Share Purchase Price by wire transfer in immediately available funds to the account specified by the Company at the location and time designated in this Section 2(c) for the Closing Date, to receive a number of shares of Common Stock equal to the same number of Pre-Funded Warrants at a price per share of Common Stock equal to the Share Purchase Price.

(d) The Company acknowledges and agrees that the Representative and the other Underwriters are acting solely in the capacity of an arm’s length contractual counterparty to the Company with respect to the offering of Securities contemplated hereby (including in connection with determining the terms of the offering) and not as a financial advisor or a fiduciary to, or an agent of, the Company or any other person. Additionally, neither the Representative nor any other Underwriter is advising the Company or any other person as to any legal, tax, investment, accounting or regulatory matters in any jurisdiction. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and neither the Representative nor the other Underwriters shall have any responsibility or liability to the Company with respect thereto. Any review by the Representative and the other Underwriters of the Company, the transactions contemplated hereby or other matters relating to such transactions will be performed solely for the benefit of the Underwriters and shall not be on behalf of the Company.

3. Representations and Warranties of the Company. The Company represents and warrants to each Underwriter that:

(a) *Preliminary Prospectus.* No order preventing or suspending the use of any Preliminary Prospectus has been issued by the Commission, and each Preliminary Prospectus included in the Pricing Disclosure Package, at the time of filing thereof, complied in all material respects with the Securities Act, and no Preliminary Prospectus, at the time of filing thereof, contained any untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use in any Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(b) *Pricing Disclosure Package.* The Pricing Disclosure Package as of the Applicable Time did not, and as of the Closing Date will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use in such Pricing Disclosure Package, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof. No statement of material fact included in the Prospectus has been omitted from the Pricing Disclosure Package and no statement of material fact included in the Pricing Disclosure Package that is required to be included in the Prospectus has been omitted therefrom.

(c) *Issuer Free Writing Prospectus.* Other than the Registration Statement, the Preliminary Prospectus and the Prospectus, the Company (including its agents and representatives, other than the Underwriters in their capacity as such) has not prepared, made, used, authorized, approved or referred to and will not prepare, make, use, authorize, approve or refer to any “written communication” (as defined in Rule 405 under the Securities Act) that constitutes an offer to sell or solicitation of an offer to buy the Securities (each such communication by the Company or its agents and representatives (other than a communication referred to in clause (i) below) an “Issuer Free Writing Prospectus”) other than (i) any document not constituting a prospectus pursuant to Section 2(a)(10)(a) of the Securities Act or Rule 134 under the Securities Act or (ii) the documents listed on Annex A-1 hereto, each electronic road show and any other written communications approved in writing in advance by the Representative. Each such Issuer Free Writing Prospectus complies in all material respects with the Securities Act, has

been or will be (within the time period specified in Rule 433) filed in accordance with the Securities Act (to the extent required thereby) and does not conflict with the information contained in the Registration Statement or the Pricing Disclosure Package, and, when taken together with the Preliminary Prospectus accompanying, or delivered prior to delivery of, such Issuer Free Writing Prospectus, did not, and as of the Closing Date will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in each such Issuer Free Writing Prospectus or Preliminary Prospectus in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use in such Issuer Free Writing Prospectus or Preliminary Prospectus, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(d) *Registration Statement and Prospectus.* The Registration Statement is an “automatic shelf registration statement” as defined under Rule 405 of the Securities Act that has been filed with the Commission not earlier than three years prior to the date hereof; and no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) under the Securities Act has been received by the Company. No order suspending the effectiveness of the Registration Statement has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 8A of the Securities Act against the Company or related to the offering of the Securities has been initiated or, to the knowledge of the Company, threatened by the Commission; as of the applicable effective date of the Registration Statement and any post-effective amendment thereto, the Registration Statement and any such post-effective amendment complied and will comply in all material respects with the Securities Act, and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading; and as of the date of the Prospectus and any amendment or supplement thereto and as of the Closing Date, the Prospectus will comply in all material respects with the Securities Act and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided that the Company makes no representation or warranty with respect to any statements or omissions made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use in the Registration Statement and the Prospectus and any amendment or supplement thereto, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 7(b) hereof.

(e) *Incorporated Documents.* The documents incorporated by reference in the Registration Statement, the Prospectus and the Pricing Disclosure Package, when they were filed with the Commission conformed in all material respects to the requirements of the Exchange Act, and none of such documents contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; and any further documents so filed and incorporated by reference in the Registration Statement, the Prospectus or the Pricing Disclosure Package, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(f) *Financial Statements.* The financial statements (including the related notes thereto) of the Company and its consolidated subsidiaries included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus comply in all material respects with the applicable requirements of the Securities Act and the Exchange Act, as applicable, and present fairly the financial position of the Company and its consolidated subsidiaries as of the dates indicated and the results of their operations and the changes in their cash flows for the periods specified; such financial statements have been prepared in conformity with generally accepted accounting principles (“GAAP”) in the United States applied on a consistent basis throughout the periods covered thereby (except in the case of unaudited financial statements, which are subject to normal year-end adjustments and do not contain certain footnotes as permitted by the applicable rules of the Commission), and any supporting schedules included or incorporated by reference in the Registration Statement present fairly the information required to be stated therein; and the other financial information included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly the information shown thereby; all disclosures included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus regarding “non-GAAP financial measures” (as such term is defined by the rules and regulations of Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Securities Act, to the extent applicable.

(g) *No Material Adverse Change.* Since the date of the most recent financial statements of the Company included or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (i) there has not been any change in the capital stock, and the Company has not purchased any of its outstanding capital stock (other than the issuance of shares of Common Stock upon exercise of stock options and warrants described as outstanding in, and the vesting and settlement of restricted stock units and the grant of options and awards under existing equity incentive plans described in, the Registration Statement, the Pricing Disclosure Package and the Prospectus), any material change in short-term debt or long-term debt of the Company or any of its subsidiaries, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, or any material adverse change, or any development that would reasonably be expected to result in a prospective material adverse change, in or affecting the business, properties, management, financial position, stockholders’ equity, results of operations or prospects of the Company and its subsidiaries taken as a whole; (ii) neither the Company nor any of

its subsidiaries has entered into any transaction or agreement (whether or not in the ordinary course of business) that is material to the Company and its subsidiaries taken as a whole or incurred any liability or obligation, direct or contingent, that is material to the Company and its subsidiaries taken as a whole; and (iii) neither the Company nor any of its subsidiaries has sustained any loss or interference with its business that is material to the Company and its subsidiaries taken as a whole and that is either from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor disturbance or dispute or any action, order or decree of any court or arbitrator or governmental or regulatory authority, except in each case as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(h) *Organization and Good Standing.* The Company and each of its subsidiaries have been duly organized and are validly existing and in good standing under the laws of their respective jurisdictions of organization, are duly qualified to do business and are in good standing in each jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such qualification, and have all power and authority necessary to own or hold their respective properties and to conduct the businesses in which they are engaged, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company and its subsidiaries taken as a whole or on the performance by the Company of its obligations under the Transaction Documents (as defined below) (a "Material Adverse Effect"). The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21 to the Registration Statement. The subsidiaries listed in Schedule 2 to this Agreement are the only significant subsidiaries of the Company.

(i) *Capitalization.* The Company has an authorized capitalization as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Description of Capital Stock"; all the outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable and are not subject to any pre-emptive or similar rights; except as described in or expressly contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no outstanding rights (including, without limitation, pre-emptive rights), warrants or options to acquire, or instruments convertible into or exchangeable for, any shares of capital stock or other equity interest in the Company or any of its subsidiaries, or any contract, commitment, agreement, understanding or arrangement of any kind relating to the issuance of any capital stock of the Company or any such subsidiary, any such convertible or exchangeable securities or any such rights, warrants or options; the capital stock of the Company conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and all the outstanding shares of capital stock or other equity interests of each subsidiary owned, directly or indirectly, by the Company have been duly and validly authorized and issued, are fully paid and non-assessable (except, in the case of any foreign subsidiary, for directors' qualifying shares and except as otherwise described in the Registration Statement, the Pricing Disclosure Package and the Prospectus,) and are owned directly or indirectly by the Company, free and clear of any lien, charge, encumbrance, security interest, restriction on voting or transfer or any other claim of any third party.

(j) *Stock Options.* With respect to the stock options (the “Stock Options”) granted pursuant to the stock-based compensation plans of the Company and its subsidiaries (the “Company Stock Plans”), (i) each Stock Option intended to qualify as an “incentive stock option” under Section 422 of the Code so qualifies, (ii) each grant of a Stock Option was duly authorized no later than the date on which the grant of such Stock Option was by its terms to be effective (the “Grant Date”) by all necessary corporate action, including, as applicable, approval by the board of directors of the Company (or a duly constituted and authorized committee thereof) and any required stockholder approval by the necessary number of votes or written consents, and the award agreement governing such grant (if any) was duly executed and delivered by each party thereto, (iii) each such grant was made in accordance with the terms of the Company Stock Plans, the Exchange Act and all other applicable laws and regulatory rules or requirements, including the rules of the New York Stock Exchange (“NYSE”) and any other exchange on which the Company’s securities are traded, and (iv) each such grant was properly accounted for in accordance with GAAP in the financial statements (including the related notes) of the Company and disclosed in the Company’s filings with the Commission in accordance with the Exchange Act and all other applicable laws. The Company has not knowingly granted, and there is no and has been no policy or practice of the Company of granting, Stock Options prior to, or otherwise coordinating the grant of Stock Options with, the release or other public announcement of material information regarding the Company or its subsidiaries or their results of operations or prospects.

(k) *Due Authorization.* The Company has full right, power and authority to execute and deliver this Agreement, the Pre-Funded Warrant Agreement, the Warrant Agreement, the Pre-Funded Warrants and the Warrants (collectively, the “Transaction Documents”) and to perform its obligations hereunder and thereunder; and all action required to be taken for the due and proper authorization, execution and delivery by it of this Agreement and each of the Transaction Documents and the consummation by it of the transactions contemplated hereby and thereby has been duly and validly taken.

(l) *Underwriting Agreement.* This Agreement has been duly authorized, executed and delivered by the Company.

(m) *Authorization of the Securities and Warrant Shares.* The (i) Underwritten Shares to be issued and sold by the Company hereunder have been duly authorized by the Company and, when issued and delivered and paid for as provided herein, will be duly and validly issued, will be fully paid and nonassessable and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (ii) the Pre-Funded Warrant Agreement has been duly authorized by the Company and, when executed and delivered by the Company, will constitute a valid and legally binding agreement of the Company enforceable against the Company in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency or similar laws affecting creditors’ rights generally or by

equitable principles relating to enforceability (collectively, the “Enforceability Exceptions”), and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iii) the Warrant Agreement has been duly authorized by the Company and, when executed and delivered by the Company, will constitute a valid and legally binding agreement of the Company enforceable against the Company in accordance with its terms, except as enforceability may be limited by the Enforceability Exceptions, and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iv) Pre-Funded Warrants and Warrants have been duly authorized by the Company and, when executed, authenticated, issued and delivered by the Company as provided in the Pre-Funded Warrant Agreement and the Warrant Agreement, respectively, and paid for as provided herein, will be duly and validly issued and outstanding and will constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their terms subject to the Enforceability Exceptions, will be entitled to the benefit of the Pre-Funded Warrant Agreement and the Warrant Agreement, respectively, and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (v) Warrant Shares to be issued by the Company upon exercise of the Pre-Funded Warrants and the Warrants, as provided in the Pre-Funded Warrant Agreement and the Warrant Agreement, respectively, and the terms of the Pre-Funded Warrants and the Warrants, have been duly and validly authorized and reserved for issuance upon exercise of the Pre-Funded Warrants and the Warrants in a number sufficient to meet the current exercise requirements and, when issued and delivered upon exercise pursuant to the terms of the Pre-Funded Warrant Agreement and the Warrant Agreement, respectively, the Pre-Funded Warrants and the Warrants, the Warrant Shares will be duly and validly issued, fully paid and non-assessable and will conform to the descriptions thereof in the Registration Statement, the Pricing Disclosure Package and the Prospectus; and (vi) issuance of the Securities is not, and the issuance of the Warrant Shares will not be, subject to any preemptive or similar rights to subscribe for or purchase the Securities or the Warrant Shares that have not been duly and validly waived or satisfied.

(n) *Descriptions of the Transaction Documents.* Each Transaction Document conforms in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(o) *No Violation or Default.* Neither the Company nor any of its subsidiaries is (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any property or asset of the Company or any of its subsidiaries is subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (ii) and (iii) above, for any such default or violation that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(p) *No Conflicts.* The execution, delivery and performance by the Company of each of the Transaction Documents, the issuance and sale of the Securities and the Warrant Shares and the consummation of the transactions contemplated by this Agreement, the Pre-Funded Warrant Agreement, the Warrant Agreement, the Pre-Funded Warrants and the Warrants, the Pricing Disclosure Package and the Prospectus will not (i) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, result in the termination, modification or acceleration of, or result in the creation or imposition of any lien, charge or encumbrance upon any property, right or asset of the Company or any of its subsidiaries pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any property, right or asset of the Company or any of its subsidiaries is subject, (ii) result in any violation of the provisions of the charter or by-laws or similar organizational documents of the Company or any of its subsidiaries or (iii) result in the violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of clauses (i) and (iii) above, for any such conflict, breach, violation, default, lien, charge or encumbrance that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(q) *No Consents Required.* No consent, approval, authorization, order, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of each of the Transaction Documents, the issuance and sale of the Securities and the Warrant Shares and the consummation of the transactions contemplated by the Transaction Documents, except for the registration of the Securities and the Warrant Shares under the Securities Act and such consents, approvals, authorizations, orders and registrations or qualifications as may be required by the Financial Industry Regulatory Authority, Inc. ("FINRA"), NYSE and under applicable state securities laws in connection with the purchase and distribution of the Securities by the Underwriters.

(r) *Legal Proceedings.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no legal, governmental or regulatory investigations, actions, demands, claims, suits, arbitrations, inquiries or proceedings ("Actions") pending to which the Company or any of its subsidiaries is or may be a party or to which any property of the Company or any of its subsidiaries is or may be the subject that, individually or in the aggregate, if determined adversely to the Company or any of its subsidiaries, would reasonably be expected to have a Material Adverse Effect; no such Actions are threatened or, to the knowledge of the Company, contemplated by any governmental or regulatory authority or threatened by others; and (i) there are no current or, to the knowledge of the Company, pending Actions that are required under the Securities Act to be described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that are not so described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and (ii) there are no statutes, regulations or contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that are not so filed as exhibits to the Registration Statement or described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(s) *Independent Accountants.* Ernst & Young LLP, who has certified certain financial statements of the Company and its subsidiaries is an independent registered public accounting firm with respect to the Company and its subsidiaries within the applicable rules and regulations adopted by the Commission and the Public Company Accounting Oversight Board (United States) and as required by the Securities Act.

(t) *Title to Personal Property.* The Company and its subsidiaries have good and marketable title in fee simple to, or have valid rights to lease or otherwise use, all items of personal property that are material to the respective businesses of the Company and its subsidiaries, in each case free and clear of all liens, encumbrances, claims and defects and imperfections of title except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and its subsidiaries or (ii) would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(u) *Real Property.* The Company and each of its subsidiaries do not own any real property. The Company and each of its subsidiaries have good and marketable title to all personal property (other than intellectual property, which is covered by Section 3(v) below) owned by them which is material to the business of the Company and its subsidiaries, taken as a whole, in each case free and clear of all liens, encumbrances and defects except such as do not materially diminish the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and, to the knowledge of the Company, enforceable leases with such exceptions as are not material and do not materially interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries.

(v) *Intellectual Property.* Except as disclosed in the Registration Statement, the Prospectus or the General Disclosure Package, the Company and its subsidiaries own or possess, or can obtain on reasonable terms, adequate rights to use all patents, patent applications, inventions, software, database rights, trademarks (both registered and unregistered), trade names, trademark registrations, service marks, service mark registrations, Internet domain name registrations, copyrights, copyright registrations, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) and other intellectual property or similar proprietary rights throughout the world, including all goodwill associated with any of the foregoing (collectively, the “Intellectual Property Rights”), in each case as used in or reasonably necessary for the conduct of their respective businesses as conducted as of the date hereof and as proposed to be conducted from the date hereof until each Time of Sale in all material respects, provided that this sentence shall not be deemed a representation or warranty of non-infringement, which is covered solely by subclause (iv) below. Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate,

reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, (i) the Intellectual Property Rights owned, purported to be owned, exclusively licensed or purported to be exclusively licensed by the Company and its subsidiaries (“Company Intellectual Property Rights”) are subsisting and to the Company’s knowledge, not invalid or unenforceable, and there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity, scope or enforceability of any such Company Intellectual Property Rights, (ii) neither the Company nor any of its subsidiaries has received any written notice or claim alleging any infringement, misappropriation or other violation of Intellectual Property Rights of any third party by the Company or any of its subsidiaries, (iii) to the Company’s knowledge, no third party has infringed, misappropriated or otherwise violated any Company Intellectual Property Rights, (iv) neither the Company nor any of its subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property Rights of any third party, (v) all employees or contractors engaged in the development of Intellectual Property Rights on behalf of the Company or any of its subsidiaries have executed an invention assignment agreement whereby such employees or contractors presently assign all of their right, title and interest in and to such Intellectual Property Rights to the Company or the applicable subsidiary, and to the Company’s knowledge, no such agreement has been breached or violated, (vi) the Company and its subsidiaries use, and have used, commercially reasonable steps necessary to protect the confidentiality of all trade secrets within the Company Intellectual Property Rights the value of which to the Company and its subsidiaries is contingent upon maintaining the confidentiality thereof and no such trade secrets within the Company Intellectual Property Rights has been disclosed other than to employees, representatives, agents and service providers of the Company and its subsidiaries, all of whom are bound by written confidentiality agreements (or comparable professional obligations of confidentiality); (vii) no other entity or individual has any right or claim in any of the Company Intellectual Property Rights by virtue of any contract, license or other agreement entered into between such entity or individual and the Company or any of its subsidiaries or by any non-contractual obligation, other than by written non-exclusive licenses granted by the Company or any of its subsidiaries, and (viii) no government funding, facilities or resources of a university, college, other educational institution or research center or funding from third parties was used in the development of any Company Intellectual Property Rights.

(w) *No Undisclosed Relationships.* No relationship, direct or indirect, exists between or among the Company or any of its subsidiaries, on the one hand, and the directors, officers, stockholders, customers, suppliers or other affiliates of the Company or any of its subsidiaries, on the other, that is required by the Securities Act to be described in each of the Registration Statement and the Prospectus and that is not so described in such documents and in the Pricing Disclosure Package.

(x) *Investment Company Act.* The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, will not be required to register as an “investment company” or an entity “controlled” by an “investment company” within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder (collectively, the “Investment Company Act”).

(y) *Taxes*. The Company and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof and have paid all taxes required to be paid (except (i) for cases in which the failure to file or pay would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect, or (ii) with respect to taxes that are currently being contested in good faith and for which reserves required by GAAP have been created in the financial statements of the Company), and no unpaid tax deficiency has been determined adversely to the Company or any of its subsidiaries which, singly or in the aggregate, has had (nor does the Company nor any of its subsidiaries have any notice or knowledge of any unpaid tax deficiency which could reasonably be expected to be determined adversely to the Company or any of its subsidiaries and which could reasonably be expected to have) a Material Adverse Effect.

(z) *Licenses and Permits*. The Company and its subsidiaries possess all licenses, sub-licenses, certificates, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, except where the failure to possess or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and except as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus, neither the Company nor any of its subsidiaries has received notice of any revocation or modification of any such license, sub-license, certificate, permit or authorization or has any reason to believe that any such license, sub-license, certificate, permit or authorization will not be renewed in the ordinary course, except where such revocation, modification or non-renewal would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(aa) *No Labor Disputes*. No labor disturbance by or dispute with employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by, or dispute with, the employees of any of its or its subsidiaries' principal suppliers, contractors or customers, except as would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any notice of cancellation or termination with respect to any collective bargaining agreement to which it is a party.

(bb) *Certain Environmental Matters*. (i) The Company and each of its subsidiaries (x) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("Environmental Laws"); (y) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective

businesses; are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (z) have not received notice of any actual or potential liability or obligation under or relating to, or any actual or potential violation of, any Environmental Laws, including for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, and have no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, singly or in the aggregate, reasonably be expected to have a Material Adverse Effect; and (iii) Except as described in each of the Pricing Disclosure Package and the Prospectus, (x) there is no proceeding that is pending, or that is known to be contemplated, against the Company or any of its subsidiaries under any Environmental Laws in which a governmental entity is also a party, other than such proceeding regarding which it is reasonably believed no monetary sanctions of \$300,000 or more will be imposed, (y) the Company and its subsidiaries are not aware of any facts or issues regarding compliance with Environmental Laws, or liabilities or other obligations under Environmental Laws or concerning hazardous or toxic substances or wastes, pollutants or contaminants, that could reasonably be expected to have a material effect on the capital expenditures, earnings or competitive position of the Company and its subsidiaries, and (z) none of the Company or its subsidiaries anticipates material capital expenditures relating to any Environmental Laws.

(cc) *Compliance with ERISA.* (i) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), for which the Company or any member of its “Controlled Group” (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as amended (the “Code”)) would have any liability (each, a “Plan”) has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no Plan has failed (whether or not waived), or is reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan; (iv) no Plan is, or is reasonably expected to be, in “at risk status” (within the meaning of Section 303(i) of ERISA) and no Plan that is a “multiemployer plan” within the meaning of Section 4001(a)(3) of ERISA is in “endangered status” or “critical status” (within the meaning of

Sections 304 and 305 of ERISA) (v) the fair market value of the assets of each Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan); (vi) no “reportable event” (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification; (viii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guarantee Corporation, in the ordinary course and without default) in respect of a Plan (including a “multiemployer plan” within the meaning of Section 4001(a)(3) of ERISA); and (ix) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company and its Controlled Group affiliates compared to the amount of such contributions made in the Company’s and its Controlled Group affiliates’ most recently completed fiscal year; or (B) a material increase in the Company and its subsidiaries’ “accumulated post-retirement benefit obligations” (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company and its subsidiaries’ most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (ix) hereof, as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(dd) *Disclosure Controls*. The Company and its subsidiaries maintain an effective system of “disclosure controls and procedures” (as defined in Rule 13a-15(e) of the Exchange Act) that complies with the requirements of the Exchange Act and that has been designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Commission’s rules and forms, including controls and procedures designed to ensure that such information is accumulated and communicated to the Company’s management as appropriate to allow timely decisions regarding required disclosure. The Company and its subsidiaries have carried out evaluations of the effectiveness of their disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

(ee) *Accounting Controls*. The Company and its subsidiaries maintain systems of “internal control over financial reporting” (as defined in Rule 13a-15(f) of the Exchange Act) that comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP. The Company and its subsidiaries maintain internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management’s general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability;

(iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences and (v) interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the Prospectus and the Pricing Disclosure Package fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no material weaknesses in the Company's internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which have adversely affected or are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and (ii) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

(ff) [Reserved].

(gg) *Insurance.* The Company and its subsidiaries have insurance covering their respective properties, operations, personnel and businesses, including business interruption insurance, which insurance is in amounts and insures against such losses and risks as are adequate to protect the Company and its subsidiaries and their respective businesses, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; and neither the Company nor any of its subsidiaries has (i) received notice from any insurer or agent of such insurer that capital improvements or other expenditures are required or necessary to be made in order to continue such insurance or (ii) any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage at reasonable cost from similar insurers as may be necessary to continue its business.

(hh) *Cybersecurity; Data Protection.* (i) Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, (x) the Company and its subsidiaries own or have a valid right to access and use all computer systems, networks, hardware, software, technical databases, websites and equipment used to process, store, maintain and operate data, information and functions used in connection with the Company's and its subsidiaries' businesses (the "Company IT Systems"), and (y) the Company IT Systems are adequate for, and operate and perform as required in connection with, the operation of the Company's and its subsidiaries' businesses as currently conducted and are free and clear of any bugs, errors, defects, Trojan horses, time bombs, malware or other corruptants; (ii) Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, neither the Company nor any of its subsidiaries uses or distributes or has used or distributed any "free," "open source," or

similar licensing model (including but not limited to the MIT License, Apache License, GNU General Public License, GNU Lesser General Public License and GNU Affero General Public License) in any manner that requires or has required, with respect to any proprietary software authored and owned by or on behalf of the Company or its subsidiaries, any such software code to be (x) disclosed or distributed in source code form, (y) licensed for the purpose of making derivative works or (z) redistributed at no charge; (iii) Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, (x) the Company and each of its subsidiaries are presently in compliance with all internal and external privacy policies, applicable contractual obligations, binding industry standards, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations, in each case, relating to privacy or security with respect to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its subsidiaries of any information that is defined as “personal information” or “personally identifiable information” including household, sensitive, confidential or regulated data (“Data Security Obligations,” and such data, “Data”); (y) the Company has not received any written notification of or written complaint alleging non-compliance with any Data Security Obligation; and (z) to the Company’s knowledge, there is no action, suit or proceeding by or before any court or governmental agency, authority or body pending or threatened in writing alleging non-compliance by the Company or its subsidiaries with any Data Security Obligation; and (iv) Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, (i) the Company and each of its subsidiaries have taken reasonable technical and organizational measures designed to protect the information technology systems and Data used by the Company and its subsidiaries in the operation of their businesses and (ii) without limiting the foregoing, the Company and its subsidiaries have used reasonable efforts to establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, disablement, misappropriation or modification, or other compromise or misuse of the Company IT Systems or Data used by the Company and its subsidiaries in the operation of their businesses (“Breach”). Except as disclosed in the Registration Statement, the Prospectus, the General Disclosure Package, or as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect on the Company and its subsidiaries, taken as a whole, there here has been no such Breach, and the Company and its subsidiaries have not been notified in writing of any ongoing threat that is reasonably expected to result in any such Breach.

(ii) *No Unlawful Payments.* During the last five (5) years, neither the Company nor any of its subsidiaries nor any director, officer or employee of the Company or any of its subsidiaries nor, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or any of its subsidiaries, in each case acting in their capacity as such, has (i) used any corporate funds

for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made or taken an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any foreign or domestic government official or employee, including of any government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the Foreign Corrupt Practices Act of 1977, as amended, or any applicable law or regulation implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act 2010 of the United Kingdom or any other applicable anti-bribery or anti-corruption law; or (iv) made, offered, agreed, requested or taken an act in furtherance of any unlawful bribe or other unlawful benefit, including, without limitation, any rebate, payoff, influence payment, kickback or other unlawful or improper payment or benefit. The Company and its subsidiaries have instituted, maintain and enforce, and will continue to maintain and enforce policies and procedures designed to promote and ensure compliance with all applicable anti-bribery and anti-corruption laws.

(jj) *Compliance with Anti-Money Laundering Laws.* During the last five (5) years, the operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act of 1970, applicable provisions of the USA PATRIOT Act of 2001, the Money Laundering Control Act of 1986, the Anti-Money Laundering Act of 2020, and the Currency and Foreign Transactions Reporting Act of 1970, as amended, the applicable money laundering statutes of all jurisdictions where the Company or any of its subsidiaries conducts business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines issued, administered or enforced by any governmental agency (collectively, the “Anti-Money Laundering Laws”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened. During the last five (5) years, the Company and its subsidiaries have conducted their businesses in compliance with the Anti-Corruption Laws, the Anti-Money Laundering Laws, and Sanctions, and no investigation, inquiry, action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Anti-Corruption Laws, the Anti-Money Laundering Laws or Sanctions is pending or, to the knowledge of the Company, threatened. The Company and its subsidiaries and controlled affiliates have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with the Anti-Corruption Laws, the Anti-Money Laundering Laws, Sanctions, and with the representations and warranties contained herein.

(kk) *No Conflicts with Sanctions Laws.* Neither the Company nor any of its subsidiaries, directors, officers, or employees, nor, to the knowledge of the Company, any agent, affiliate, or other person associated with or acting on behalf of the Company or any of its subsidiaries is currently the target of any sanctions administered or enforced by the

U.S. government, (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury (“OFAC”) or the U.S. Department of State and including, without limitation, the designation as a “specially designated national” or “blocked person”), the United Nations Security Council (“UNSC”), the European Union, His Majesty’s Treasury (“HMT”) or other applicable sanctions authority (collectively, “Sanctions”), nor is the Company or any of its subsidiaries located or resident in, or organized under the laws of, a country or territory that is the target of comprehensive Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, the so-called Donetsk People’s Republic, and the so-called Luhansk People’s Republic (each, a “Sanctioned Country”); and the Company will not directly or knowingly indirectly use the proceeds of the offering of the Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity (i) to fund or facilitate any activities of or business with any person that, at the time of such funding or facilitation, is the target of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. Since April 24, 2019, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the target of Sanctions or with any Sanctioned Country.

(ll) *Outbound Investment Rules.* None of the Company or any of its subsidiaries or controlled affiliates is a ‘covered foreign person’ as that term is used in the regulations administered and enforced, together with any related public guidance issued, by the United States Department of the Treasury under U.S. Executive Order 14105 of August 9, 2023, or any similar law or regulation; as of the date of this Agreement, and as codified at 31 C.F.R. § 850.101 et seq. (the “Outbound Investment Rules”). None of the Company or any of its subsidiaries or controlled affiliates has any present intention to engage in the future, directly or indirectly, in (i) a “covered transaction,” as defined in the Outbound Investment Rules, or (ii) any other activity that would cause any of them to become a ‘covered foreign person’.

(mm) *No Restrictions on Subsidiaries.* No subsidiary of the Company is currently prohibited, directly or indirectly, under any agreement or other instrument to which it is a party or is subject, from paying any dividends to the Company, from making any other distribution on such subsidiary’s capital stock or similar ownership interest, from repaying to the Company any loans or advances to such subsidiary from the Company or from transferring any of such subsidiary’s properties or assets to the Company or any other subsidiary of the Company.

(nn) *No Broker’s Fees.* Neither the Company nor any of its subsidiaries is a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against any of them or any Underwriter for a brokerage commission, finder’s fee or like payment in connection with the offering and sale of the Securities.

(oo) *No Registration Rights*. No person has the right to require the Company or any of its subsidiaries to register any securities for sale under the Securities Act by reason of the filing of the Registration Statement with the Commission or the issuance and sale of the Securities.

(pp) *No Stabilization*. Neither the Company nor any of its subsidiaries or affiliates has taken, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Securities.

(qq) *Margin Rules*. Neither the issuance, sale and delivery of the Securities nor the application of the proceeds thereof by the Company as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(rr) *Forward-Looking Statements*. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) included or incorporated by reference in any of the Registration Statement, the Pricing Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(ss) *Statistical and Market Data*. Nothing has come to the attention of the Company that has caused the Company to believe that the statistical and market-related data included or incorporated by reference in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus is not based on or derived from sources that are reliable and accurate in all material respects.

(tt) *Sarbanes-Oxley Act*. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith (the "Sarbanes-Oxley Act"), including Section 402 related to loans and Sections 302 and 906 related to certifications.

(uu) *Status under the Securities Act*. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or any offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) under the Securities Act) of the Securities and at the date hereof, the Company was not and is not an "ineligible issuer," and is a well-known seasoned issuer, in each case as defined in Rule 405 under the Securities Act. The Company has paid the registration fee for this offering pursuant to Rule 456(b)(1) under the Securities Act or will pay such fee within the time period required by such rule (without giving effect to the proviso therein) and in any event prior to the Closing Date.

(vv) *No Ratings*. There are (and prior to the Closing Date, will be) no debt securities, convertible securities or preferred stock issued or guaranteed by the Company or any of its subsidiaries that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) under the Exchange Act.

4. Further Agreements of the Company. The Company covenants and agrees with each Underwriter that:

(a) *Required Filings.* The Company will file the final Prospectus with the Commission within the time periods specified by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act, will file any Issuer Free Writing Prospectus to the extent required by Rule 433 under the Securities Act; and the Company will file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus is required in connection with the offering or sale of the Securities; and the Company will furnish copies of the Prospectus and each Issuer Free Writing Prospectus (to the extent not previously delivered) to the Underwriters in New York City prior to 10:00 A.M., New York City time, on the business day next succeeding the date of this Agreement in such quantities as the Representative may reasonably request. The Company will pay the registration fee for this offering within the time period required by Rule 456(b)(1) under the Securities Act (without giving effect to the proviso therein) and in any event prior to the Closing Date.

(b) *Delivery of Copies.* The Company will deliver, without charge, (i) to the Representative, two signed copies of the Registration Statement as originally filed and each amendment thereto, in each case including all exhibits and consents filed therewith and documents incorporated by reference therein and (ii) to each Underwriter (A) a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) and (B) during the Prospectus Delivery Period (as defined below), as many copies of the Prospectus (including all amendments and supplements thereto and documents incorporated by reference therein and each Issuer Free Writing Prospectus) as the Representative may reasonably request. As used herein, the term "Prospectus Delivery Period" means such period of time after the first date of the public offering of the Securities as in the opinion of counsel for the Underwriters a prospectus relating to the Securities is required by law to be delivered (or required to be delivered but for Rule 172 under the Securities Act) in connection with sales of the Securities by any Underwriter or dealer.

(c) *Amendments or Supplements, Issuer Free Writing Prospectuses.* Before making, preparing, using, authorizing, approving, referring to or filing any Issuer Free Writing Prospectus, and before filing any amendment or supplement to the Registration Statement, the Pricing Disclosure Package or the Prospectus, whether before or after the time that the Registration Statement becomes effective, the Company will furnish to the Representative and counsel for the Underwriters a copy of the proposed Issuer Free Writing Prospectus, amendment or supplement for review and will not make, prepare, use, authorize, approve, refer to or file any such Issuer Free Writing Prospectus or file any such proposed amendment or supplement to which the Representative reasonably objects.

(d) *Notice to the Representative.* The Company will advise the Representative promptly, and confirm such advice in writing, (i) when the Registration Statement has become effective; (ii) when any amendment to the Registration Statement has been filed or becomes effective; (iii) when any supplement to the Pricing Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or any amendment to the Prospectus has been filed or distributed; (iv) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or the receipt of any comments from the Commission relating to the Registration Statement or any other request by the Commission for any additional information; (v) of the issuance by the Commission or any other governmental or regulatory authority of any order suspending the effectiveness of the Registration Statement or preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package, the Prospectus or the initiation or threatening of any proceeding for that purpose or pursuant to Section 8A of the Securities Act; (vi) of the occurrence of any event or development within the Prospectus Delivery Period as a result of which the Prospectus, any of the Pricing Disclosure Package or any Issuer Free Writing Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus, the Pricing Disclosure Package or any such Issuer Free Writing Prospectus is delivered to a purchaser, not misleading; and (vii) of the receipt by the Company of any notice with respect to any suspension of the qualification of the Securities for offer and sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and the Company will use its reasonable best efforts to prevent the issuance of any such order suspending the effectiveness of the Registration Statement, preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package or the Prospectus or suspending any such qualification of the Securities and, if any such order is issued, will obtain as soon as possible the withdrawal thereof.

(e) *Ongoing Compliance.* (1) If during the Prospectus Delivery Period (i) any event or development shall occur or condition shall exist as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Prospectus to comply with law, the Company will immediately notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission and furnish to the Underwriters and to such dealers as the Representative may designate such amendments or supplements to the Prospectus (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Prospectus as so amended or supplemented (or any document to be filed with the Commission and incorporated by reference therein) will not, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus will comply with law and (2) if at any time prior to the Closing Date (i) any event or development shall occur or condition shall exist as a result of which the Pricing Disclosure Package as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, not misleading or (ii) it is necessary to

amend or supplement the Pricing Disclosure Package to comply with law, the Company will immediately notify the Underwriters thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission (to the extent required) and furnish to the Underwriters and to such dealers as the Representative may designate such amendments or supplements to the Pricing Disclosure Package (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Pricing Disclosure Package as so amended or supplemented will not, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, be misleading or so that the Pricing Disclosure Package will comply with law.

(f) *Blue Sky Compliance.* The Company will qualify the Securities for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Representative shall reasonably request and will continue such qualifications in effect so long as required for distribution of the Securities; provided that the Company shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(g) *Earning Statement.* The Company will make generally available (which may be satisfied with filing with the Commission's Electronic Data Gathering, Analysis and Retrieval System (or any successor thereto, "EDGAR")) to its security holders and the Representative as soon as practicable an earning statement that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 of the Commission promulgated thereunder covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the "effective date" (as defined in Rule 158) of the Registration Statement.

(h) *Clear Market.* For a period of 60 days after the date of the Prospectus (the "Restricted Period"), the Company will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Commission a registration statement under the Securities Act relating to, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Common Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise, without the prior written consent of the Representative, other than the Securities to be sold hereunder.

The restrictions described above do not apply to (i) the issuance of, or submission to or filing with the Commission a registration statement under the Securities Act relating to, shares of Common Stock or securities convertible into or exercisable for shares of Common Stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise) or the settlement of RSUs (including net settlement), in each case outstanding on the date of this Agreement and described in the Prospectus and Pricing Disclosure Package (including the Pre-Funded Warrants, the Warrants and the issuance of the Warrant Shares); (ii) grants of stock options, stock awards, restricted stock, RSUs, or other equity awards and the issuance of shares of Common Stock or securities convertible into or exercisable or exchangeable for shares of Common Stock (whether upon the exercise of stock options or otherwise) to the Company's employees, officers, directors, advisors, or consultants pursuant to the terms of an equity compensation plan in effect as of the Closing Date and described in the Prospectus, provided that any such recipient who is an executive officer or director of the Company enter into a lock-up agreement with the Underwriters covering the Restricted Period; (iii) the issuance of, or submission to or filing with the Commission a registration statement under the Securities Act relating to, shares of Common Stock pursuant to acquisitions or other similar strategic transactions that have been disclosed in the Prospectus and Pricing Disclosure Package; (iv) the issuance of, or submission to or filing with the Commission a registration statement under the Securities Act relating to, shares of Common Stock, or securities convertible into, exercisable for, or which are otherwise exchangeable for, Common Stock, immediately following the Closing Date, in acquisitions or other similar strategic transactions (including the entry into any agreement providing for such issuance); (v) facilitating the establishment of a trading plan on behalf of a stockholder, officer, employee or director of the Company to pursuant to Rule 10b5-1 under the Exchange Act for the sale, transfer or disposition of Common Stock; provided that such plan does not provide for the sale, transfer or disposition of Common Stock during the Restricted Period or (vi) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date of this Agreement and described in the Prospectus and Pricing Disclosure Package or any assumed benefit plan pursuant to an acquisition or similar strategic transaction.

(i) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Securities as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Use of proceeds."

(j) *No Stabilization.* Neither the Company nor its subsidiaries or affiliates will take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Common Stock.

(k) *Exchange Listing.* The Company will use its reasonable best efforts to list, subject to notice of issuance, the Underwritten Shares and the Warrant Shares on NYSE.

(l) *Reports.* So long as the Securities are outstanding, the Company will furnish to the Representative, as soon as they are available, copies of all reports or other communications (financial or other) furnished to holders of the Securities, and copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange or automatic quotation system; provided the Company will be deemed to have furnished such reports and financial statements to the Representative to the extent they are filed on the EDGAR.

(m) *Record Retention*. The Company will, pursuant to reasonable procedures developed in good faith, retain copies of each Issuer Free Writing Prospectus that is not filed with the Commission in accordance with Rule 433 under the Securities Act.

(n) *Shelf Renewal*. If immediately prior to the third anniversary (the “Renewal Deadline”) of the initial effective date of the Registration Statement, any of the Securities remain unsold by the Underwriters, the Company will, prior to the Renewal Deadline, file, if it has not already done so and is eligible to do so, a new automatic shelf registration statement relating to the Securities, in a form satisfactory to the Representative. If the Company is not eligible to file an automatic shelf registration statement, the Company will, prior to the Renewal Deadline, if it has not already done so, file a new shelf registration statement relating to the Securities, in a form satisfactory to the Representative, and will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will take all other action necessary or appropriate to permit the issuance and sale of the Securities to continue as contemplated in the expired registration statement relating to the Securities. References herein to the Registration Statement shall include such new automatic shelf registration statement or such new shelf registration statement, as the case may be.

(o) *Warrant Shares Reserved*. The Company shall, at all times while any Pre-Funded Warrants or Warrants are outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of such Pre-Funded Warrants or Warrants, the number of Warrant Shares that are issuable and deliverable upon the exercise of the then outstanding Pre-Funded Warrants or Warrants.

5. Certain Agreements of the Underwriters. Each Underwriter hereby represents and agrees that:

(a) It has not and will not use, authorize use of, refer to or participate in the planning for use of, any “free writing prospectus,” as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company and not incorporated by reference into the Registration Statement and any press release issued by the Company) other than (i) a free writing prospectus that contains no “issuer information” (as defined in Rule 433(h)(2) under the Securities Act) that was not included (including through incorporation by reference) in the Preliminary Prospectus or a previously filed Issuer Free Writing Prospectus, (ii) any Issuer Free Writing Prospectus listed on Annex A or prepared pursuant to Section 3(c) or Section 4(c) above (including any electronic road show), or (iii) any free writing prospectus prepared by such underwriter and approved by the Company in advance in writing (each such free writing prospectus referred to in clauses (i) or (iii), an “Underwriter Free Writing Prospectus”).

(b) It has not and will not, without the prior written consent of the Company, use any free writing prospectus that contains the final terms of the Securities unless such terms have previously been included in a free writing prospectus filed with the Commission.

(c) It is not subject to any pending proceeding under Section 8A of the Securities Act with respect to the offering (and will promptly notify the Company if any such proceeding against it is initiated during the Prospectus Delivery Period).

6. Conditions of Underwriters' Obligations. The obligation of each Underwriter to purchase the Underwritten Shares on the Closing Date as provided herein is subject to the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Registration Compliance; No Stop Order.* No order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose, pursuant to Rule 401(g)(2) or pursuant to Section 8A under the Securities Act, shall be pending before or threatened by the Commission; the Prospectus and each Issuer Free Writing Prospectus shall have been timely filed with the Commission under the Securities Act (in the case of an Issuer Free Writing Prospectus, to the extent required by Rule 433 under the Securities Act) and in accordance with Section 4(a) hereof; and all requests by the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representative.

(b) *Representations and Warranties.* The representations and warranties of the Company contained herein shall be true and correct on the date hereof and on and as of the Closing Date; and the statements of the Company and its officers made in any certificates delivered pursuant to this Agreement shall be true and correct on and as of the Closing Date.

(c) *No Material Adverse Change.* No event or condition of a type described in Section 3(g) hereof shall have occurred or shall exist, which event or condition is not described in the Pricing Disclosure Package (excluding any amendment or supplement thereto) and the Prospectus (excluding any amendment or supplement thereto) and the effect of which in the judgment of the Representative makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Securities on the Closing Date on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

(d) *Officer's Certificate.* The Representative shall have received on and as of the Closing Date a certificate of the chief financial officer or chief accounting officer of the Company and one additional senior executive officer of the Company who is satisfactory to the Representative (i) confirming that such officers have carefully reviewed the Registration Statement, the Pricing Disclosure Package and the Prospectus and, to the knowledge of such officers, the representations set forth in Sections 3(b) and 3(d) hereof are true and correct, (ii) confirming that the other representations and warranties of the Company in this Agreement are true and correct and that the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date, and (iii) to the effect set forth in paragraphs (a) and (c) above.

(e) *Comfort Letters.* On the date of this Agreement and on the Closing Date, Ernst & Young LLP shall have furnished to the Representative, at the request of the Company, letters, dated the respective dates of delivery thereof and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative, containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained or incorporated by reference in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided, that the letter delivered on the Closing Date shall use a "cut-off" date no more than two business days prior to such Closing Date.

(f) *Opinion and 10b-5 Statement of Counsel for the Company.* Paul, Weiss, Rifkind, Wharton & Garrison LLP, counsel for the Company, shall have furnished to the Representative, at the request of the Company, their written opinion and 10b-5 statement, dated the Closing Date and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative.

(g) *Opinion and 10b-5 Statement of Counsel for the Underwriters.* The Representative shall have received on and as of the Closing Date an opinion and 10b-5 statement, addressed to the Underwriters, of Simpson Thacher & Bartlett LLP, counsel for the Underwriters, with respect to such matters as the Representative may reasonably request, and such counsel shall have received such documents and information as they may reasonably request to enable them to pass upon such matters.

(h) *No Legal Impediment to Issuance and Sale.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Closing Date prevent the issuance or sale of the Securities; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Closing Date prevent the issuance or sale of the Securities.

(i) *Good Standing.* The Representative shall have received on and as of the Closing Date satisfactory evidence of the good standing of the Company and its subsidiaries in their respective jurisdictions of organization and their good standing in such other jurisdictions as the Representative may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(j) *Exchange Listing.* The Underwritten Shares to be delivered on the Closing Date shall have been approved for listing on the NYSE, subject to official notice of issuance.

(k) *Lock-up Agreements*. The “lock-up” agreements, each substantially in the form of Exhibit A hereto, between you and certain shareholders, officers and directors of the Company relating to sales and certain other dispositions of shares of Common Stock or certain other securities, delivered to you on or before the date hereof, shall be full force and effect on the Closing Date.

(l) *Pre-Funded Warrant Agreement, Warrant Agreement, Pre-Funded Warrants and Warrants*. The Pre-Funded Warrant Agreement and the Warrant Agreement shall have been duly executed and delivered by a duly authorized officer of the Company and the Warrant Agent, and the Pre-Funded Warrants and Warrants shall have been duly executed and delivered by a duly authorized officer of the Company and duly authenticated by the Warrant Agent.

(m) *Additional Documents*. On or prior to the Closing Date the Company shall have furnished to the Representative such further certificates and documents as the Representative may reasonably request.

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

7. Indemnification and Contribution.

(a) *Indemnification of the Underwriters*. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors and officers and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of, or are based upon, (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein, not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any press release listed on Annex A-2, any Issuer Free Writing Prospectus, any road show as defined in Rule 433(h) under the Securities Act (a “road show”) or any Pricing Disclosure Package, or caused by any omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in each case except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in paragraph (b) below.

(b) *Indemnification of the Company.* Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the indemnity set forth in paragraph (a) above, but only with respect to any losses, claims, damages or liabilities that arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to such Underwriter furnished to the Company in writing by such Underwriter through the Representative expressly for use in the Registration Statement, the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any Issuer Free Writing Prospectus, any road show or any Pricing Disclosure Package, it being understood and agreed upon that the only such information furnished by any Underwriter consists of the following information in the Prospectus furnished on behalf of each Underwriter: the name of each Underwriter, the fourteenth paragraph, the first sentence of the fifteenth paragraph and the second and third sentences of the sixteenth paragraph under the section “Underwriting.”

(c) *Notice and Procedures.* If any suit, action, proceeding (including any governmental or regulatory investigation), claim or demand shall be brought or asserted against any person in respect of which indemnification may be sought pursuant to the preceding paragraphs of this Section 7, such person (the “Indemnified Person”) shall promptly notify the person against whom such indemnification may be sought (the “Indemnifying Person”) in writing; provided that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 7 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided, further, that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have to an Indemnified Person otherwise than under the preceding paragraphs of this Section 7. If any such proceeding shall be brought or asserted against an Indemnified Person and it shall have notified the Indemnifying Person thereof, the Indemnifying Person shall retain counsel reasonably satisfactory to the Indemnified Person (who shall not, without the consent of the Indemnified Person, be counsel to the Indemnifying Person) to represent the Indemnified Person and any others entitled to indemnification pursuant to this Section that the Indemnifying Person may designate in such proceeding and shall pay the fees and expenses in such proceeding and shall pay the fees and expenses of such counsel related to such proceeding, as incurred. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless (i) the Indemnifying Person and the Indemnified Person shall have mutually agreed to the contrary; (ii) the Indemnifying Person has failed within a reasonable time to retain counsel reasonably satisfactory to the Indemnified Person; (iii) the Indemnified Person shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Indemnifying Person; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the Indemnifying Person and the Indemnified Person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood and agreed that the Indemnifying Person shall not, in connection with any proceeding or related proceeding in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Indemnified Persons, and that all such fees and expenses shall be paid or reimbursed as they are incurred. Any such separate firm for any Underwriter, its affiliates, directors and officers and any control persons of such Underwriter shall be designated in writing by J.P. Morgan Securities LLC and any such separate firm for the Company, its directors, its officers who signed the Registration Statement and any control

persons of the Company shall be designated in writing by the Company. The Indemnifying Person shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent, the Indemnifying Person agrees to indemnify each Indemnified Person from and against any loss or liability by reason of such settlement. Notwithstanding the foregoing sentence, if at any time an Indemnified Person shall have requested that an Indemnifying Person reimburse the Indemnified Person for fees and expenses of counsel as contemplated by this paragraph, the Indemnifying Person shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Indemnifying Person of such request and (ii) the Indemnifying Person shall not have reimbursed the Indemnified Person in accordance with such request prior to the date of such settlement. No Indemnifying Person shall, without the written consent of the Indemnified Person, effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnification could have been sought hereunder by such Indemnified Person, unless such settlement (x) includes an unconditional release of such Indemnified Person, in form and substance reasonably satisfactory to such Indemnified Person, from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of any Indemnified Person.

(d) *Contribution.* If the indemnification provided for in paragraphs (a) or (b) above is unavailable to an Indemnified Person or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each Indemnifying Person under such paragraph, in lieu of indemnifying such Indemnified Person thereunder, shall contribute to the amount paid or payable by such Indemnified Person as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters on the other, from the offering of the Securities or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) but also the relative fault of the Company, on the one hand, and the Underwriters on the other, in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters on the other, shall be deemed to be in the same respective proportions as the net proceeds (before deducting expenses) received by the Company from the sale of the Securities and the total underwriting discounts and commissions received by the Underwriters in connection therewith, in each case as set forth in the table on the cover of the Prospectus bear to the aggregate offering price of the Securities. The relative fault of the Company, on the one hand, and the Underwriters on the other, shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(e) *Limitation on Liability.* The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to paragraph (d) above were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in paragraph (d) above. The amount paid or payable by an Indemnified Person as a result of the

losses, claims, damages and liabilities referred to in paragraph (d) above shall be deemed to include, subject to the limitations set forth above, any legal or other expenses incurred by such Indemnified Person in connection with any such action or claim. Notwithstanding the provisions of paragraphs (d) and (e), in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Securities exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to paragraphs (d) and (e) are several in proportion to their respective purchase obligations hereunder and not joint.

(f) *Non-Exclusive Remedies.* The remedies provided for in this Section 7 paragraphs (a) through (e) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Person at law or in equity.

8. Effectiveness of Agreement. This Agreement shall become effective as of the date first written above.

9. Termination. This Agreement may be terminated in the absolute discretion of the Representative, by notice to the Company, if after the execution and delivery of this Agreement and on or prior to the Closing Date (i) trading generally shall have been suspended or materially limited on or by NYSE; (ii) trading of any securities issued or guaranteed by the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) a general moratorium on commercial banking activities shall have been declared by federal or New York State authorities; or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets or any calamity or crisis, either within or outside the United States, that, in the judgment of the Representative, is material and adverse and makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Securities on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

10. Defaulting Underwriter.

(a) If, on the Closing Date any Underwriter defaults on its obligation to purchase the Securities that it has agreed to purchase hereunder on such date, the non-defaulting Underwriters may in their discretion arrange for the purchase of such Securities by other persons satisfactory to the Company on the terms contained in this Agreement. If, within 36 hours after any such default by any Underwriter, the non-defaulting Underwriters do not arrange for the purchase of such Securities, then the Company shall be entitled to a further period of 36 hours within which to procure other persons satisfactory to the non-defaulting Underwriters to purchase such Securities on such terms. If other persons become obligated or agree to purchase the Securities of a defaulting Underwriter, either the non-defaulting Underwriters or the Company may postpone the Closing Date for up to five full business days in order to effect any changes that in the opinion of counsel for the Company or counsel for the Underwriters may be necessary in the Registration Statement and the Prospectus or in any other document or arrangement, and the Company agrees to promptly prepare any amendment or supplement to the Registration Statement and the Prospectus that effects any such changes. As used in this Agreement, the term "Underwriter" includes, for all purposes of this Agreement unless the context otherwise requires, any person not listed in Schedule 1 hereto that, pursuant to this Section 10, purchases Securities that a defaulting Underwriter agreed but failed to purchase.

(b) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Securities that remain unpurchased on the Closing Date does not exceed one-eleventh of the aggregate number of Securities to be purchased on such date, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Securities that such Underwriter agreed to purchase hereunder on such date plus such Underwriter's pro rata share (based on the number of Securities that such Underwriter agreed to purchase on such date) of the Securities of such defaulting Underwriter or Underwriters for which such arrangements have not been made.

(c) If, after giving effect to any arrangements for the purchase of the Securities of a defaulting Underwriter or Underwriters by the non-defaulting Underwriters and the Company as provided in paragraph (a) above, the aggregate number of Securities that remain unpurchased on the Closing Date exceeds one-eleventh of the aggregate amount of Securities to be purchased on such date, or if the Company shall not exercise the right described in paragraph (b) above, then this Agreement shall terminate without liability on the part of the non-defaulting Underwriters. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company, except that the Company will continue to be liable for the payment of expenses as set forth in Section 11 hereof and except that the provisions of Section 7 hereof shall not terminate and shall remain in effect.

(d) Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have to the Company or any non-defaulting Underwriter for damages caused by its default.

11. Payment of Expenses.

(a) Whether or not the transactions contemplated by this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid all costs and expenses incident to the performance of its obligations hereunder, including without limitation, (i) the costs incident to the authorization, issuance, sale, preparation and delivery of the Securities and any taxes payable in that connection; (ii) the costs incident to the preparation, printing and filing under the Securities Act of the Registration Statement, the Preliminary Prospectus, any Issuer Free Writing Prospectus, any Pricing Disclosure Package and the Prospectus (including all exhibits, amendments and supplements thereto) and the distribution thereof; (iii) the costs of reproducing and distributing each of the Transaction Documents; (iv) the fees and expenses of the Company's counsel and independent accountants; (v) the fees and expenses incurred in connection with the registration or qualification and determination of eligibility for investment of the Securities under the laws of such jurisdictions as the Representative may designate and the preparation, printing and distribution of a Blue Sky Memorandum (including the related fees and expenses of counsel for the Underwriters); (vi) the cost of preparing stock certificates; (vii) the costs and charges of any transfer agent and any registrar; (viii) all expenses and application fees incurred in connection with any filing with, and clearance of the offering by, FINRA; (ix) all expenses incurred by the Company in connection with any "road show" presentation to potential investors ; and (x) all expenses and application fees related to the listing of the Underwritten Shares and the Warrant Shares on NYSE.

(b) If (i) this Agreement is terminated pursuant to Section 9, (ii) the Company for any reason fails to tender the Securities for delivery to the Underwriters or (iii) the Underwriters decline to purchase the Securities for any reason permitted under this Agreement, the Company agrees to reimburse the Underwriters for all out-of-pocket costs and expenses (including the fees and expenses of their counsel) reasonably incurred by the Underwriters in connection with this Agreement and the offering contemplated hereby.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers and directors and any controlling persons referred to herein, and the affiliates of each Underwriter referred to in Section 7 hereof. Nothing in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein. No purchaser of Securities from any Underwriter shall be deemed to be a successor merely by reason of such purchase.

13. Survival. The respective indemnities, rights of contribution, representations, warranties and agreements of the Company and the Underwriters contained in this Agreement or made by or on behalf of the Company or the Underwriters pursuant to this Agreement or any certificate delivered pursuant hereto shall survive the delivery of and payment for the Securities and shall remain in full force and effect, regardless of any termination of this Agreement or any investigation made by or on behalf of the Company or the Underwriters or the directors, officers, controlling persons or affiliates referred to in Section 7 hereof.

14. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term “affiliate” has the meaning set forth in Rule 405 under the Securities Act; (b) the term “business day” means any day other than a day on which banks are permitted or required to be closed in New York City; (c) the term “subsidiary” has the meaning set forth in Rule 405 under the Securities Act ; and (d) the term “significant subsidiary” has the meaning set forth in Rule 1-02 of Regulation S-X under the Exchange Act.

15. Compliance with USA Patriot Act. In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters are required to obtain, verify and record information that identifies their respective clients, including the Company, which information may include the name and address of their respective clients, as well as other information that will allow the Underwriters to properly identify their respective clients.

16. Miscellaneous.

(a) Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted and confirmed by any standard form of telecommunication. Notices to the Underwriters shall be given to the Representative c/o J.P. Morgan Securities LLC, 383 Madison Avenue, New York, New York 10179 (fax: (212) 622-8358); Attention Equity Syndicate Desk. Notices to the Company shall be given to it at 4505 Campus Drive, College Park, MD 20742, Attention: Chief Legal Officer.

(b) *Governing Law.* This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(c) *Submission to Jurisdiction.* The Company hereby submits to the exclusive jurisdiction of the U.S. federal and New York state courts in the Borough of Manhattan in The City of New York in any suit or proceeding arising out of or relating to this Agreement or the transactions contemplated hereby. The Company waives any objection which it may now or hereafter have to the laying of venue of any such suit or proceeding in such courts. The Company agrees that final judgment in any such suit, action or proceeding brought in such court shall be conclusive and binding upon the Company and may be enforced in any court to the jurisdiction of which Company is subject by a suit upon such judgment.

(d) *Waiver of Jury Trial.* Each of the parties hereto hereby waives any right to trial by jury in any suit or proceeding arising out of or relating to this Agreement.

(e) *Recognition of the U.S. Special Resolution Regimes.*

(i) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 16(g):

“BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

“Covered Entity” means any of the following:

- (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);
- (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or

(iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

“Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

“U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

(f) *Counterparts*. This Agreement may be signed in counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be an original and all of which together shall constitute one and the same instrument.

(g) *Amendments or Waivers*. No amendment or waiver of any provision of this Agreement, nor any consent or approval to any departure therefrom, shall in any event be effective unless the same shall be in writing and signed by the parties hereto.

(h) *Headings*. The headings herein are included for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

If the foregoing is in accordance with your understanding, please indicate your acceptance of this Agreement by signing in the space provided below.

Very truly yours,

IONQ, INC.

By: /s/ Paul T. Dacier

Name: Paul T. Dacier

Title: Chief Legal Officer and Corporate Secretary

Accepted: As of the date first written above

J.P. MORGAN SECURITIES LLC

For itself and on behalf of the several Underwriters listed in Schedule 1 hereto.

By: /s/ Keith Canton

Authorized Signatory

<u>Underwriter</u>	<u>Number of Underwritten Shares</u>	<u>Number of Pre-Funded Warrants</u>	<u>Number of Warrants</u>
J.P. Morgan Securities LLC	16,500,000	5,005,400	43,010,800
Total	16,500,000	5,005,400	43,010,800

Significant Subsidiaries

IonQ Quantum, Inc.

A-1: Pricing Disclosure Package

Pricing Information Provided Orally by Underwriter:

Public Offering Price per Underwritten Share: \$93.00

Underwriting Discounts and Commissions per Underwritten Share: \$0.93

Public Offering Price per Pre-Funded Warrant: \$92.9999

Underwriting Discounts and Commissions per Pre-Funded Warrant: \$0.93

Each Underwritten Share and each Pre-Funded Warrant is being offered with two Series B Warrants at a combined price of \$93.00 (with a nominal exercise price of \$0.0001 per share of Common Stock remaining unpaid as of the Closing Date with respect to each Pre-Funded Warrant).

A-2: Press Releases

Press release dated October 10, 2025.

FORM OF LOCK-UP AGREEMENT

October [•], 2025

J.P. MORGAN SECURITIES LLC

As Representative of
the several Underwriters listed in
Schedule 1 to the Underwriting
Agreement referred to below

c/o J.P. Morgan Securities LLC
383 Madison Avenue
New York, NY 10179

Re: IonQ, Inc.— Public Offering

Ladies and Gentlemen:

The undersigned understands that you, as Representative of the several Underwriters, propose to enter into an underwriting agreement (the “Underwriting Agreement”) with IonQ, Inc., a Delaware corporation (the “Company”), providing for the public offering (the “Public Offering”) by the several Underwriters named in Schedule 1 to the Underwriting Agreement (the “Underwriters”), of shares (the “Underwritten Shares”) of common stock, par value of \$0.0001 per share (“Common Stock”) of the Company and warrants to purchase Common Stock (the “Warrants” and, together with the Underwritten Shares, the “Securities”). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters’ agreement to purchase and make the Public Offering of the Securities, and for other good and valuable consideration receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of J.P. Morgan Securities LLC, the undersigned will not, and will not cause any direct or indirect affiliate to, during the period beginning on the date of this letter agreement (this “Letter Agreement”) and ending at the close of business 60 days after the date of the final prospectus supplement relating to the Public Offering (the “Prospectus”) (such period, the “Restricted Period”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange

Commission and securities which may be issued upon exercise of a stock option or warrant) (collectively with the Common Stock, "Lock-Up Securities"), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities, or (4) publicly disclose the intention to do any of the foregoing. The undersigned acknowledges and agrees that the foregoing precludes the undersigned from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (whether by the undersigned or any other person) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any Lock-Up Securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Lock-Up Securities, in cash or otherwise.

Notwithstanding the foregoing, the undersigned may:

(a) transfer the undersigned's Lock-Up Securities:

(i) as a bona fide gift or gifts, or for bona fide estate planning purposes,

(ii) by will or intestacy,

(iii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust (for purposes of this Letter Agreement, "immediate family" shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin),

(iv) to a partnership, limited liability company or other entity of which the undersigned and the immediate family of the undersigned are the legal and beneficial owner of all of the outstanding equity securities or similar interests,

(v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv) above,

(vi) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the undersigned or affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), or (B) as part of a distribution to members or shareholders of the undersigned,

(vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement,

(viii) to the Company from an employee of the Company upon death, disability or termination of employment, in each case, of such employee,

(ix) as part of a sale of the undersigned's Lock-Up Securities acquired in open market transactions after the closing date for the Public Offering,

(x) to the Company in connection with the vesting, settlement, or exercise of restricted stock units, options, warrants or other rights to purchase shares of Common Stock (including, in each case, by way of "net" or "cashless" exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of Common Stock received upon such exercise, vesting or settlement shall be subject to the terms of this Letter Agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the undersigned pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or

(xi) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the Board of Directors of the Company and made to all holders of the Company's capital stock involving a Change of Control (as defined below) of the Company (for purposes hereof, "Change of Control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of shares of capital stock if, after such transfer, such person or group of affiliated persons would hold at least a majority of the outstanding voting securities of the Company (or the surviving entity)); provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the undersigned's Lock-Up Securities shall remain subject to the provisions of this Letter Agreement; provided that (A) in the case of any transfer or distribution pursuant to clause (a)(i), (ii), (iii), (iv), (v), (vi) and (vii), such transfer shall not involve a disposition for value and each donee, devisee, transferee or distributee shall execute and deliver to the Representative a lock-up letter in the form of this Letter Agreement, (B) in the case of any transfer or distribution pursuant to clause (a)(i), (ii), (iii), (iv), (v), (vi), (ix) and (x), no filing by any party (donor, donee, devisee, transferor, transferee, distributor or distributee) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution (other than a filing on a Form 5 made after the expiration of the Restricted Period referred to above) and (C) in the case of any transfer or distribution pursuant to clause (a)(vii) and (viii) it shall be a condition to such transfer that no public filing, report or announcement shall be voluntarily made and if any filing under Section 16(a) of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Common Stock in connection with such transfer or distribution shall be legally required during the Restricted Period, such filing, report or announcement shall clearly indicate in the footnotes thereto the nature and conditions of such transfer;

(b) exercise outstanding options, settle restricted stock units or other equity awards or exercise warrants pursuant to plans described in the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided that any Lock-up Securities received upon such exercise, vesting or settlement shall be subject to the terms of this Letter Agreement;

(c) convert outstanding preferred stock, warrants to acquire preferred stock or convertible securities into shares of Common Stock or warrants to acquire shares of Common Stock; provided that any such shares of Common Stock or warrants received upon such conversion shall be subject to the terms of this Letter Agreement;

(d) establish trading plans pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Lock-Up Securities; provided that (1) such plans do not provide for the transfer of Lock-Up Securities during the Restricted Period and (2) no filing by any party under the Exchange Act or other public announcement shall be required or made voluntarily in connection with such trading plan; and

(e) transfer shares of Common Stock under a trading plan pursuant to Rule 10b5-1 under the Exchange Act (a "Trading Plan") that is existing on the date hereof which has been provided to the Representatives or its legal counsel; provided, that, to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the undersigned or the Company regarding such transfer, such announcement or filing shall include a statement that such transfer is in accordance with an established Trading Plan; and

(f) sell the Securities to be sold by the undersigned pursuant to the terms of the Underwriting Agreement.

If the undersigned is an officer or director of the Company, (i) J.P. Morgan Securities LLC agrees that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Lock-Up Securities, J.P. Morgan Securities LLC will notify the Company of the impending release or waiver, and (ii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by J.P. Morgan Securities LLC hereunder to any such officer or director shall only be effective two business days after the publication date of such announcement. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration or that is to an immediate family member as defined in FINRA Rule 5130(i)(5) and (b) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Letter Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Letter Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering of the Securities and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Representative may be required or choose to provide certain Regulation Best Interest and Form CRS disclosures to you in connection with the Public Offering, the Representative and the other Underwriters are not making a recommendation to you to enter into this Letter Agreement, and nothing set forth in such disclosures is intended to suggest that the Representative or any Underwriter is making such a recommendation.

The undersigned understands that, if the Underwriting Agreement does not become effective by October 14, 2025, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Common Stock to be sold thereunder, the undersigned shall be released from all obligations under this Letter Agreement. The undersigned understands that the Underwriters are entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Letter Agreement.

This Letter Agreement and any claim, controversy or dispute arising under or related to this Letter Agreement shall be governed by and construed in accordance with the laws of the State of New York.

Very truly yours,

[*NAME OF SECURITY HOLDER*]

By: _____
Name:
Title:

SERIES B WARRANT AGREEMENT

THIS SERIES B WARRANT AGREEMENT (this “**Agreement**” or this “**Warrant Agreement**”), dated as of October 14, 2025, is entered into by and between IonQ, Inc. a Delaware corporation (the “**Company**”), and Continental Stock Transfer & Trust Company, a New York corporation (the “**Warrant Agent**”).

WHEREAS, the Company desires to issue and sell (i) 16,500,000 shares of common stock of the Company, par value \$0.0001 per share (the “**Common Stock**”) and (ii) 43,010,800 warrants (each a “**Warrant**” or, collectively, the “**Warrants**”), with each Warrant initially entitling holders to purchase one (1) share of Common Stock at the Exercise Price, and such Warrants, collectively, entitling holders to purchase an aggregate of 43,010,800 shares of Common Stock (the “**Warrant Shares**”);

WHEREAS, except as otherwise defined herein, capitalized terms in this Warrant Agreement shall have the meanings set forth in Section 22;

WHEREAS, the Company has filed with the Securities and Exchange Commission a Registration Statement on Form S-3ASR, Registration No. 333-285279 (the “**Registration Statement**”) for the registration, under the Securities Act of 1933, as amended (the “**1933 Act**”) of, among other securities, the Warrants and the Common Stock issuable upon exercise of the Warrants;

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in connection with the issuance, registration, transfer, exchange, redemption and exercise of the Warrants;

WHEREAS, the Company desires to provide for the form and provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants, when executed on behalf of the Company and countersigned by or on behalf of the Warrant Agent, as provided herein, the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. APPOINTMENT OF WARRANT AGENT.

The Company hereby appoints the Warrant Agent to act as agent for the Company for the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the terms and conditions set forth in this Agreement.

2. WARRANTS.

(a) Form of Warrant.

The Warrants shall initially be issuable in book-entry registration only and evidenced by one or more warrant certificates in global form (the “**Book-Entry Warrant Certificates**”). All of the Warrants shall initially be represented by one or more Book-Entry Warrant Certificates deposited with The Depository Trust Company (“**DTC**”) and registered in the name of Cede & Co., as nominee of DTC. Ownership of beneficial interests in the Warrants shall be shown on, and

the transfer of such ownership shall be effected through, records maintained by (i) DTC or its nominee for each Book-Entry Warrant Certificate or (ii) institutions that have accounts with DTC (such institutions, with respect to a Warrant in its account, each a “**Participant**”). If DTC subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding other arrangements for book-entry settlement. In the event that the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Warrant Agent shall provide written instructions to DTC to deliver to the Warrant Agent for cancellation each Book-Entry Warrant Certificate, and the Company shall instruct the Warrant Agent to deliver to each Holder a warrant certificate in substantially the form of Exhibit A hereto (a “**Warrant Certificate**”), the provisions of which are incorporated herein and signed by, or bear the facsimile signature of, an authorized signatory. In the event the person whose facsimile signature has been placed upon any Warrant shall have ceased to serve in the capacity in which such person signed the Warrant before such Warrant is issued, it may be issued with the same effect as if he or she had not ceased to be such at the date of issuance.

(b) Effect of Countersignature.

Unless and until countersigned by the Warrant Agent pursuant to this Agreement, a Warrant shall be invalid and of no effect and may not be exercised by the holder thereof.

(c) Registration.

(i) Warrant Register.

The Warrant Agent shall maintain books (the “**Warrant Register**”) for the registration of the original issuance and transfers of the Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue and register the Warrants in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company.

(ii) Holder.

Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name such Warrant shall be registered upon the Warrant Register (the “**Holder**”), as the absolute owner of such Warrant and of each Warrant represented thereby (notwithstanding any notation of ownership or other writing on the warrant certificate made by anyone other than the Company or the Warrant Agent), for the purpose of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

3. TERMS AND EXERCISE OF WARRANTS.

(a) Mechanics of Exercise.

Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Sections 3(d)(ii) and 3(f)), a Warrant may be exercised by the Holder on any day (an “**Exercise Date**”) during the period (the “**Exercise Period**”) commencing on or after the Issuance Date and terminating at 5:00 p.m., New York City time, on October 14, 2032 (seven years following the Issuance Date) (such time and date, the “**Expiration Date**”), in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice, in the form attached to the Warrant Certificate (the “**Exercise Notice**”), to the Warrant Agent of the Holder’s election to exercise a Warrant (or, in the case of a global Book-Entry Warrant Certificate, properly delivered

by the Participant in accordance with DTC's procedures). Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at 5:00 p.m., New York City time, on the Expiration Date. Within one (1) Trading Day following an exercise of a Warrant as aforesaid, the Holder shall deliver payment to the Warrant Agent of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which a Warrant was so exercised (the "**Aggregate Exercise Price**") in certified bank draft or wire transfers in U.S. Dollars (or pursuant to and subject to the conditions in the Cashless Exercise provisions of Section 3(d) below). The Warrant Agent shall forward funds received for warrant exercises by the first (1st) Business Day following receipt by wire transfer to an account designated by the Company.

The Holder shall not be required to deliver the original of a Warrant Certificate in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares underlying a Warrant Certificate shall have the same effect as cancellation of the original Warrant Certificate and issuance of a new Warrant Certificate evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original Warrant Certificate after delivery of the Warrant Shares in accordance with the terms hereof; provided that if fewer than all of the Warrants evidenced by a global Book-Entry Warrant Certificate are exercised, a notation shall be made to the records maintained by DTC, its nominee for each global Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance of the Warrants remaining after such exercise.

On or before the first (1st) Trading Day following the date on which the Warrant Agent has received an Exercise Notice, the Company or its agent shall transmit by facsimile or electronic mail an acknowledgment of confirmation of receipt of such Exercise Notice to the Holder (or, in the case of a global Book-Entry Warrant Certificate, properly delivered in accordance with DTC's procedures or otherwise through a means reasonably determined to provide notice to the applicable Holder) and the Company's transfer agent (the "**Transfer Agent**"), which confirmation shall constitute an instruction to the Transfer Agent to process such Exercise Notice in accordance with the terms herein. On or before the first (1st) Trading Day following the date on which the Company has received such Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date), the Company shall (x) provided that the Transfer Agent is participating in DTC's Fast Automated Securities Transfer Program ("**FAST**"), upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian system, or (y) if the Transfer Agent is not participating in FAST, upon the request of the Holder, issue and deliver (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder shall be entitled pursuant to such exercise.

Upon delivery of an Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which a Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be); provided that the Holder shall be deemed to have waived any voting rights of any such Warrant

Shares that may arise with respect to the period commencing on such Exercise Date, through, and including, such applicable Share Delivery Date (as defined below), as necessary, such that the aggregate voting rights of any shares of Common Stock (including such Warrant Shares) beneficially owned by the Holder and/or any Attribution Parties, collectively, on any such date of determination shall not exceed the Maximum Percentage (as defined below) as a result of any such exercise of a Warrant. If a Warrant is not represented by a Book-Entry Warrant Certificate and is submitted in connection with any exercise pursuant to this Section 3(a) and the number of Warrant Shares represented by a Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon exercise and surrender of a Warrant to the Warrant Agent by the Holder, then, at the request of the Holder, the Company shall as soon as practicable and in no event later than two (2) Business Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 9(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under a Warrant, less the number of Warrant Shares with respect to which a Warrant is exercised.

No fractional shares of Common Stock are to be issued upon the exercise of a Warrant and, instead, the Company shall, upon such exercise, round down to the nearest whole number the number of shares of Common Stock to be issued to upon such exercise. The Company shall pay any and all taxes that may be imposed on the Company or the Warrant Agent and costs and expenses (including, without limitation, fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any, including without limitation for same day processing and/or all fees and expenses of issuance of the Warrant Shares in certificated form as set forth in clause (y) of the third paragraph of this Section 3(a)) that may be payable with respect to the issuance and delivery of any Warrant Shares or a certificate representing such Warrant Shares upon exercise of a Warrant; provided that the Company shall not be required to pay any tax which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised, and no such issue or delivery shall be made unless and until the Person requesting such issue and delivery has paid to the Company the amount of any such tax or has established to the satisfaction of the Company that such tax has been paid. Notwithstanding the foregoing, except in the case where an exercise of a Warrant is validly made pursuant to a Cashless Exercise, the Company's failure to deliver Warrant Shares to the Holder on or prior to the later of (i) one (1) Trading Day after receipt of the applicable Exercise Notice (or valid notice of a Cashless Exercise) (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date) and (ii) the Trading Day on which the Warrant Agent receives the Aggregate Exercise Price (if such Aggregate Exercise Price is so received at or before 3:00 p.m., Eastern time, on such Trading Day) and, if such Aggregate Exercise Price is so received after 3:00 p.m., Eastern time, on such Trading Day, then the immediately following Trading Day (such later date, the "**Share Delivery Date**") shall not be deemed to be a breach of this Warrant Agreement. From the Issuance Date through and including the Expiration Date, the Company shall maintain a transfer agent that participates in FAST.

(b) Exercise Price. "**Exercise Price**" means \$155.00 per share of Common Stock, subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. If the Company fails to deliver the applicable number of Warrant Shares upon an exercise pursuant to Section 3 by the applicable Share Delivery Date, then the Holder shall have the right to rescind such exercise in whole or in part and retain and/or have the Company return, as the case may be, any portion of a Warrant that has not been exercised pursuant to such Exercise Notice; and if a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares that are subject to an Exercise Notice is not available for the issuance or resale, as applicable, of such Warrant Shares and the Holder has submitted an Exercise Notice prior to receiving notice of the non-availability of such registration statement and the Company has not already delivered the Warrant Shares underlying such Exercise Notice electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit / Withdrawal At Custodian system, the Holder shall have the option, by delivery of notice to the Company, to (x) rescind such Exercise Notice in whole or in part and retain or have returned, as the case may be, any portion of a Warrant that has not been exercised pursuant to such Exercise Notice, provided that the rescission of an Exercise Notice shall not affect the Company's obligation to make any payments that have accrued prior to the date of such notice, and/or (y) switch some or all of such Exercise Notice from a cash exercise to a Cashless Exercise.

(d) Cashless Exercise.

(i) Except for as set forth in Sections 3(d)(ii) and 3(d)(iii) below, the Warrant shall be exercisable only for cash.

(ii) Notwithstanding the foregoing, if at any time the Company shall have failed to file or maintain in effect a registration statement for the registration, under the 1933 Act, of the Warrant Shares issuable upon exercise of the Warrant, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, the Holder instead shall have the right to elect to receive upon such exercise the "Net Number" of Warrant Shares determined according to the following formula (a "**Cashless Exercise**"), provided that, if the Net Number is negative, no Warrant Shares shall be issued pursuant to such exercise:

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

For purposes of the foregoing formula:

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

B = as elected by the Holder: (i) the VWAP of the shares of Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 3(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 3(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice or (z) the Bid Price of the shares of Common

Stock as of the time of the Holder's execution of the applicable Exercise Notice if such Exercise Notice is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter pursuant to Section 3(a) hereof, or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 3(a) hereof after the close of "regular trading hours" on such Trading Day.

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

(iii) Notwithstanding the foregoing, on each six (6) month anniversary of the Issuance Date and upon at least 15 days' prior notice to the Holder, the Company may elect (the "**Cashless Election**") to permit exercise of a Warrant only in a Cashless Exercise during the six-month period commencing on the date of such Cashless Election and ending on the date immediately prior to the next six (6) month anniversary of the Issuance Date (the "**Election Period**"). For the avoidance of doubt, during an Election Period, the Holder will not have discretion to exercise a Warrant in cash. The Company shall have the right to make a Cashless Election only on each six (6) month anniversary of the Issuance Date in accordance with this paragraph, and, once made, such Cashless Exercise shall be irrevocable by the Company for the corresponding Election Period, and such Cashless Election shall apply only during such corresponding Election Period. Commencing on the next six (6) month anniversary of the Issuance Date following a Cashless Election, a Warrant may be exercised only in cash unless either (A) a Cashless Exercise by the Holder is permitted by clause (ii) above or (B) the Company makes (and has provided notice of) a new Cashless Election in accordance with this paragraph.

(iv) If Warrant Shares are issued in such a Cashless Exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the 1933 Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised, and the holding period of the Warrants being exercised may be tacked on to the holding period of the Warrant Shares, with such period being deemed to have commenced on the date a Warrant was originally issued. The Company agrees not to take any position contrary to this Section 3(d)(iv). Without limiting the rights of a Holder to receive Warrant Shares on a "cashless exercise" in accordance with the terms of this Agreement and to receive the cash payments contemplated pursuant to this Agreement, in no event will the Company be required to net cash settle a Warrant exercise.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 18.

(f) Limitations on Exercises. Solely for the purposes of this Section 3(f) (and other applicable definitions used herein), in the case of Book-Entry Warrant Certificates, references to "Holder" shall be deemed to be reference to a beneficial owner. The Company shall not effect the exercise of any portion of a Warrant, and the Holder shall not have the right to exercise any portion of a Warrant, pursuant to the terms and conditions of this Warrant Agreement and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to

such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 4.99% (the “**Maximum Percentage**”) of the shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of a Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of the Warrants beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants, including other Warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 3(f). For purposes of this Section 3(f), beneficial ownership shall be calculated in accordance with Section 13(d) of the 1934 Act. For purposes of determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of a Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the SEC, as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent, if any, setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 3(f), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be acquired pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. Upon the reasonable written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including a Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of a Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder any exercise price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Company,

the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and (ii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant Agreement in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise a Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 3(f) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 3(f) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be amended, modified or waived and shall apply to a successor holder of a Warrant.

(g) Reservation of Shares.

(i) Required Reserve Amount. So long as any Warrant remains outstanding, the Company shall at all times keep reserved for issuance a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock under the Warrants then outstanding (without regard to any limitations on exercise) (the "**Required Reserve Amount**"); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 3(g) (i) be reduced other than proportionally in connection with any exercise or redemption of Warrants or such other event covered by Section 4(a) below. The Required Reserve Amount (including, without limitation, each increase in the number of shares so reserved) shall be allocated pro rata among the holders of the Warrants based on the number of shares of Common Stock issuable upon exercise of Warrants held by each holder on the Closing Date (without regard to any limitations on exercise) or increase in the number of reserved shares, as the case may be (the "**Authorized Share Allocation**"). In the event that a Holder shall sell or otherwise transfer any of such Holder's Warrants, each transferee shall be allocated a pro rata portion of such Holder's Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Warrants shall be allocated to the remaining holders of Warrants, pro rata based on the number of shares of Common Stock issuable upon exercise of the Warrants then held by such holders (without regard to any limitations on exercise).

(ii) Insufficient Authorized Shares. If, notwithstanding Section 3(g)(i) above, and not in limitation thereof, at any time while any of the Warrants remain outstanding, the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall reasonably promptly take all action necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the

Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than sixty (60) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if, at any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding shares of Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C. In the event that the Company is prohibited from issuing shares of Common Stock upon an exercise of a Warrant due to the failure by the Company to have sufficient shares of Common Stock available out of the authorized but unissued shares of Common Stock (such unavailable number of shares of Common Stock, the "**Authorization Failure Shares**"), in lieu of delivering such Authorization Failure Shares to the Holder, the Company shall pay cash in exchange for the cancellation of such portion of a Warrant exercisable into such Authorization Failure Shares at a price equal to the sum of (i) the product of (x) such number of Authorization Failure Shares and (y) the greatest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date the Holder delivers the applicable Exercise Notice with respect to such Authorization Failure Shares to the Company and ending on the date of such payment under this Section 3(g) (ii); and (ii) to the extent the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of Authorization Failure Shares, brokerage commissions and other reasonable and documented out-of-pocket expenses, if any, of the Holder incurred in connection therewith.

(h) Withholding. The Company and the Warrant Agent shall be entitled to deduct and withhold taxes on all payments and distributions (or deemed distributions) on the Warrants and Warrant Shares to the extent required by applicable law. To the extent that any amounts are so deducted or withheld, such deducted or withheld amounts shall be treated for all purposes of a Warrant as having been paid to the Person in respect of which such deduction or withholding was made. In the event the Company previously remitted any amounts to a governmental authority on account of such taxes required to be deducted or withheld in respect of any payment or distribution (or deemed distribution) with respect to a Warrant or Warrant Share, the Company shall be entitled (i) to offset any such amounts against any amounts otherwise payable in respect of such Warrant or Warrant Share or (ii) to require the Person in respect of whom such deduction or withholding was made to reimburse the Company for such amounts (and such Person shall promptly so reimburse the Company upon demand). The Company shall (i) make commercially reasonable efforts to notify each holder of Warrants or Warrant Shares at least five (5) Business Days prior to any withholding of its intention of any such withholding and (ii) not withhold with respect to any U.S. federal withholding tax if it receives a properly completed and duly executed IRS Form W-9 from a Holder certifying its exemption from backup withholding.

4. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of a Warrant are subject to adjustment from time to time as set forth in this Section 4.

(a) Stock Dividends and Splits. Without limiting any provision of Section 3 or Section 6, if the Company, at any time on or after the Issuance Date, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to Section 4, the number of Warrant Shares that may be purchased upon exercise of a Warrant shall be increased or decreased proportionately, as applicable, so that after such adjustment the Aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the Aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein).

(c) Calculations. All calculations under this Section 4 shall be made by rounding to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issuance or sale of Common Stock. The Warrant Agent shall have no obligation under any Section of this Warrant Agreement to determine whether any calculation shall be required or to calculate any of the adjustments set forth herein.

(d) Voluntary Adjustment by the Company. Subject to the rules and regulations of the Principal Market, the Company may at any time during the term of a Warrant, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

5 [RESERVED].

6. EXTRAORDINARY DIVIDENDS; FUNDAMENTAL TRANSACTIONS.

(a) Extraordinary Dividends. If the Company, at any time while the Warrants are outstanding and unexpired, pays to all or substantially all of the holders of the Common Stock a dividend or makes a distribution in cash, securities or other assets on account of such shares of Common Stock, other than (i) as described in subsection 4(a) above or (ii) to the extent the Holder is entitled to participate in such dividend or distribution to the same extent that the Holder would

have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of its Warrants (without regard to any limitations or restrictions on exercise of such Warrants, including without limitation the Maximum Percentage, subject to the proviso below) immediately before the date on which a record is taken for such dividend or distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such dividend or distribution (provided, however, that to the extent that the Holder's right to participate in any such dividend or distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such dividend or distribution in excess of the Maximum Percentage (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such dividend or distribution (and beneficial ownership) to the extent of any such excess) and the portion of such dividend or distribution constituting such excess shall be treated as an Extraordinary Dividend as set forth below) (any such non-excluded event being referred to herein as an "**Extraordinary Dividend**"), then the Exercise Price shall be decreased, effective immediately after the record date for the determination of the holders of the Common Stock entitled to receive such Extraordinary Dividend, by (x) in the case of a cash dividend or distribution, the amount of cash and/or (y) in the case of a non-cash dividend or distribution, the fair market value (as determined by the board of directors of the Company, in good faith) of any securities or other assets paid on each share of Common Stock in respect of such Extraordinary Dividend, provided that, if the economic value of a Warrant immediately following such adjustment (the "**Adjusted Economic Value**") is less than the economic value of a Warrant immediately prior to such adjustment (the "**Pre-Adjustment Economic Value**") (in each case, as determined by the Company in good faith) using the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg) due solely to such adjustment, the Exercise Price shall be further reduced to the extent necessary to ensure that the Adjusted Economic Value is not less than the Pre-Adjustment Economic Value. Notwithstanding the foregoing, the Company shall not pay to any holder of Common Stock an Extraordinary Dividend if it would result in an adjusted Exercise Price below the "Minimum Price" (as defined in Section 312.03 of the NYSE listed company manual) as of 8:45 a.m., New York City time, on October 10, 2025.

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless upon consummation of such Fundamental Transaction the Successor Entity assumes in writing all of the obligations of the Company under the unexercised portion of the Warrants in accordance with the provisions of this Section 6(b) pursuant to written agreements, including agreements to deliver to the Holder in exchange for the unexercised portion of the Warrants such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property issuable upon exercise as described below in the second succeeding sentence of this paragraph, as applicable, evidenced by a written instrument substantially similar in form and substance to a Warrant. Upon the consummation of each Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of the applicable Fundamental Transaction, the provisions of the Warrants and the other Transaction Documents referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under the unexercised portion of the Warrants and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of each Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of a Warrant at

any time after the consummation of the applicable Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of a Warrant prior to the applicable Fundamental Transaction, such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had the unexercised portion of the Warrants been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of the Warrants), as adjusted in accordance with the provisions of this Warrant Agreement. For purposes of any such exercise, if such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, issuable in respect of one share of Common Stock in such Fundamental Transaction are not on a 1:1 basis, then the Exercise Price shall be appropriately adjusted to apply to such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, based on the amount or number of such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, issuable in respect of one share of Common Stock in such Fundamental Transaction, and, if multiple types of securities, cash, assets or other property, as applicable, are receivable upon such exercise, the Company shall apportion the Exercise Price among such types of securities, cash, assets or other property, as applicable, in a reasonable manner reflecting the relative value of any different components of such types of securities, cash, assets or other property. Notwithstanding the foregoing, and without limiting Section 3(f) hereof, the Holders of a majority of the outstanding Warrants may elect by delivery of written notice to the Company to waive this Section 6(b) to permit the Fundamental Transaction without the assumption of the unexercised portion of the Warrants. In addition to and not in substitution for any other rights hereunder (but without duplication thereof), upon consummation of each Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive cash, securities or other assets or property with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of a Warrant at any time after the consummation of the applicable Fundamental Transaction but prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property (except such items still issuable under Section 6(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such cash, securities or other assets or property (collectively, the “**Corporate Event Consideration**”) which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had the Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of the Warrant).

(c) Black Scholes Value. Notwithstanding the foregoing and the provisions of Section 6(b) above, at the request of the Holder delivered at any time commencing on the earliest to occur of (x) the public disclosure of any Fundamental Transaction, (y) the consummation of any Fundamental Transaction and (z) the Holder first becoming aware of any Fundamental Transaction through the date that is sixty (60) days after the public disclosure of the consummation of such Fundamental Transaction by the Company pursuant to a Current Report on Form 8-K filed with the SEC, the Company or the Successor Entity (as the case may be) shall purchase this Warrant from the Holder on the date of such request by paying to the Holder cash in an amount equal to

the Black Scholes Value. Payment of such amounts shall be made by the Company (or at the Company's direction) to the Holder on or prior to the later of (x) the second (2nd) Trading Day after the date of such request and (y) the date of consummation of such Fundamental Transaction, provided that, for the avoidance of doubt, no such payment shall be required prior to consummation of the applicable Fundamental Transaction.

(d) Application. The provisions of this Section 6 shall apply similarly and equally to successive Fundamental Transactions (in each case, as and to the extent described above) and Corporate Events and shall be applied as if a Warrant (and any such subsequent warrants) were fully exercisable and without regard to any limitations on the exercise of a Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of a Warrant (or any such other warrant)).

(e) Consideration Elections. If in any Fundamental Transaction a holder of Common Stock shall be entitled to make an election to receive a form of consideration, or a combination thereof, with respect to shares of Common Stock held by such holder, for purposes of Section 6(b), the consideration issuable upon the exercise of a Warrant upon and following the consummation of such Fundamental Transaction shall be, for each share of Common Stock, an amount and type of such consideration equal to (x) the aggregate amount of each form of consideration, or combination thereof, received or receivable by all holders of Common Stock divided by (y) the total number of shares of Common Stock outstanding immediately prior to consummation of the Fundamental Transaction.

7. NON-CIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its certificate of incorporation or bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issuance or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of a Warrant, and will at all times in good faith carry out all the provisions of a Warrant and take all action as may reasonably be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of a Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares of Common Stock upon the exercise of a Warrant and (iii) shall, so long as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Warrants, the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the Warrants then outstanding (without regard to any limitations on exercise). Notwithstanding anything herein to the contrary, if after the sixty (60) calendar day anniversary of the Issuance Date, the Holder is not permitted to exercise a Warrant in full for any reason (other than pursuant to restrictions set forth in Sections 3(d) and 3(f) hereof), the Company shall use its reasonable efforts to promptly remedy such failure, including, without limitation, obtaining such consents or approvals as necessary to permit such exercise into shares of Common Stock.

8. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in its capacity as a holder of a Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in a Warrant be construed to confer upon the Holder,

solely in its capacity as the Holder of a Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of a Warrant. In addition, nothing contained in a Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of a Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 8, the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders.

9. REISSUANCE OF WARRANT CERTIFICATES.

(a) Transfer of Warrant Certificate. If a Warrant Certificate is to be transferred, the Holder shall surrender such Warrant Certificate to the Warrant Agent, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant Certificate (in accordance with Section 9(d)), registered as the Holder may request, representing the Warrants being transferred by the Holder and, if less than the total number of Warrants then underlying a Warrant Certificate is being transferred, a new Warrant Certificate (in accordance with Section 9(d)) to the Holder representing the Warrants not being transferred. The Company shall not be required to pay any tax which may be payable in respect of any transfer of the Warrant.

(b) Lost, Stolen or Mutilated Warrant Certificate. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of a Warrant Certificate (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of a Warrant Certificate, the Company shall execute and deliver to the Holder a new Warrant Certificate (in accordance with Section 9(d)) representing the Warrants then underlying such Warrant Certificate.

(c) Exchangeable for Multiple Warrant Certificates. A Warrant Certificate is exchangeable, upon the surrender hereof by the Holder at the principal office of the Warrant Agent, for a new Warrant Certificate or Warrant Certificates (in accordance with Section 9(d)) representing in the aggregate the Warrants then underlying a Warrant Certificate, and each such new Warrant Certificate will represent the such portion of such Warrants as is designated by the Holder at the time of such surrender; provided, however, no Warrant Certificates for fractional Warrants (or rights to purchase fractional shares of Common Stock) shall be given, and the Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the issuance of a Warrant Certificate for a fraction of a Warrant.

(d) Issuance of New Warrant Certificates. Whenever the Company is required to issue a new Warrant Certificate pursuant to the terms of this Warrant Agreement, such new Warrant Certificate (i) shall be of like tenor with the applicable Warrant Certificate, (ii) shall represent, as indicated on the face of such new Warrant Certificate, the Warrants then underlying such Warrant Certificate (or in the case of a new Warrant Certificate being issued pursuant to Section 9(a) or Section 9(c), the Warrants designated by the Holder which, when added to the Warrants underlying the other new Warrant Certificates issued in connection with such issuance, does not exceed the number of Warrants then underlying the applicable Warrant Certificate), (iii) shall have an issuance date, as indicated on the face of such new Warrant Certificate which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as the applicable Warrant Certificate.

10. CONCERNING THE WARRANT AGENT AND OTHER MATTERS.

(a) Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of shares of Common Stock upon the exercise of Warrants, but the Company shall not be obligated to pay any tax or charge which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised.

(b) Resignation, Consolidation, or Merger of Warrant Agent.

(i) Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving sixty (60) days' notice in writing to the Company. If the office of the Warrant Agent becomes vacant by resignation or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent or by the holder of the Warrant (who shall, with such notice, submit his, her or its Warrant for inspection by the Company), then the holder of any Warrant may apply to the Supreme Court of the State of New York for the County of New York for the appointment of a successor Warrant Agent at the Company's cost. Any successor Warrant Agent, whether appointed by the Company or by such court, shall be a corporation organized and existing under the laws of the State of New York, in good standing and having its principal office in the Borough of Manhattan, City and State of New York, and authorized under such laws to exercise corporate trust powers and subject to supervision or examination by federal or state authority. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed; but if for any reason it becomes necessary or appropriate, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transfer-ring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

(ii) Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the Transfer Agent for the Common Stock not later than the effective date of any such appointment.

(iii) Merger or Consolidation of Warrant Agent. Any corporation into which the Warrant Agent may be merged or with which it may be consolidated or any corporation resulting from any merger or consolidation to which the Warrant Agent shall be a party shall be the successor Warrant Agent under this Agreement without any further act.

(c) Fees and Expenses of Warrant Agent.

(i) Remuneration. The Company agrees to pay the Warrant Agent reasonable remuneration for its services as such Warrant Agent hereunder and will reimburse the Warrant Agent upon demand for all expenditures that the Warrant Agent may reasonably incur in the execution of its duties hereunder.

(ii) Further Assurances. The Company agrees to perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Agreement.

(d) Liability of Warrant Agent.

(i) Reliance on Company Statement. Whenever in the performance of its duties under this Warrant Agreement the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a statement signed by the President or Chairman of the Board of the Company and delivered to the Warrant Agent. The Warrant Agent may rely upon such statement for any action taken or suffered in good faith by it pursuant to the provisions of this Agreement.

(ii) Indemnity. The Warrant Agent shall be liable hereunder only for its own gross negligence, willful misconduct or bad faith. The Company agrees to indemnify the Warrant Agent and save it harmless against any and all liabilities, including judgments, costs and reasonable counsel fees, for anything done or omitted by the Warrant Agent in the execution of this Agreement, except as a result of the Warrant Agent's gross negligence, willful misconduct or bad faith.

(iii) Exclusions. The Warrant Agent shall have no responsibility with respect to the validity of this Agreement or with respect to the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Warrant; nor shall it be responsible to make any adjustments required under the provisions hereof or responsible for the manner, method or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment; nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Agreement or any Warrant or as to whether any shares of Common Stock will when issued be valid and fully paid and nonassessable.

(e) Acceptance of Agency. The Warrant Agent hereby accepts the agency established by this Agreement and agrees to perform the same upon the terms and conditions herein set forth and, among other things, shall account promptly to the Company with respect to Warrants exercised and concurrently account for, and pay to the Company, all moneys received by the Warrant Agent for the purchase of shares of Common Stock through the exercise of Warrants.

11. NOTICES. Whenever notice is required to be given under this Agreement or any Warrant Certificate, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or by facsimile or (b) from outside the United States, by International Federal Express, electronic mail or facsimile, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier, one (1) Business Day after so mailed, (C) if delivered by International Federal Express, two (2) Business Days after so mailed and (D) at the time of transmission, if delivered by electronic mail to each of the email addresses specified in this Section 11 prior to 5:00 p.m. (New York time) on a Trading Day, (E) the next Trading Day after the date of transmission, if delivered by electronic mail to each of the email addresses specified in this Section 11 on a day that is not a Trading Day or later than 5:00 p.m. (New York time) on any Trading Day and (F) if delivered by facsimile, upon electronic confirmation of delivery of such facsimile, and will be delivered and addressed as follows:

(i) if to the Company, to:

IonQ, Inc.
4505 Campus Drive
College Park, MD 20740
Phone: (301) 298-7997

(ii) if to the Warrant Agent, to:

Continental Stock Transfer & Trust Company
1 State Street, 30 FL
New York, New York 10004
Attn: Compliance Department

Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Company or the Warrant Agent to a Holder shall be sufficiently made if in writing and delivered by hand or sent by first-class mail, postage prepaid or by overnight courier service, addressed to such Holders addressed to such holder at the address set forth for such Holder in the Warrant Register.

The Company shall provide the Holder with prompt written notice of all material actions taken pursuant to this Agreement and any applicable Warrant Certificate (other than the issuance of shares of Common Stock upon exercise in accordance with the terms hereof), including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) as soon as reasonably practicable upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s), (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, or (B) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation, provided in each case that such information shall be made known to the public prior to or in

conjunction with such notice being provided to the Holder, and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K or otherwise publicly disclose such information in a Regulation FD compliant manner. If the Company or any of its subsidiaries provides material non-public information to the Holder that is not simultaneously filed in a Current Report on Form 8-K and the Holder has not agreed to receive such material non-public information, the Company hereby covenants and agrees that the Holder shall not have any duty of confidentiality to the Company, any of its subsidiaries or any of their respective officers, directors, employees, affiliates or agents with respect to, or a duty to any of the foregoing not to trade on the basis of, such material non-public information. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

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

13. ABSENCE OF TRADING AND DISCLOSURE RESTRICTIONS. The Company acknowledges and agrees that the Holder is not a fiduciary or agent of the Company and that the Holder shall have no obligation under this Agreement or a Warrant to (a) maintain the confidentiality of any information provided by the Company or (b) refrain from trading any securities while in possession of such information.

14. AMENDMENT AND WAIVER. This Warrant Agreement and any Warrant Certificate may be amended by the parties hereto by executing a supplemental warrant agreement, without the consent of any of the Holders, solely for ministerial purposes that, for the avoidance of doubt, shall not adversely affect the interests of the Holder to effect (i) evidencing the succession of another entity to the Company and the assumption by any such successor of the covenants of the Company contained in this Warrant Agreement and the Warrants, or (ii) evidencing and providing for the acceptance of appointment by a successor Warrant Agent with respect to the Warrants. All other modifications or amendments to this Warrant Agreement, including any amendment to increase the Exercise Price or shorten the Exercise Period, shall require the written consent of the Holders of a majority of the then outstanding Warrants. Notwithstanding anything in this Warrant Agreement to the contrary, the Warrant Agent shall not be required to execute any supplement or amendment to this Warrant Agreement that it has determined would adversely affect its own rights, duties, obligations or immunities under this Warrant Agreement. No supplement or amendment to this Warrant Agreement shall be effective unless duly executed by the Warrant Agent. Notwithstanding the foregoing and for the avoidance of doubt, the limitation contained in Section 3(f) may not be amended, modified or waived and shall apply to a successor holder of a Warrant.

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

16. GOVERNING LAW. This Warrant Agreement and the Warrant Certificates shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant Agreement and the Warrant Certificates shall be governed by, the internal laws of the State of New York, without giving effect to any provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The parties hereto and the Holder each hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address set forth in or determined in accordance with Section 11 above (or such other address as such party subsequently delivers to the other party) and agrees that such service shall constitute good and sufficient service of process and notice thereof. The parties hereto and the Holder each hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the parties hereto or the Holder from bringing suit or taking other legal action in any other jurisdiction to enforce a judgment or other court ruling in favor of the Holder. **THE PARTIES HERETO AND THE HOLDER EACH HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

17. CONSTRUCTION; HEADINGS. Neither this Warrant Agreement nor any Warrant Certificate shall be construed against any Person as the drafter hereof. The headings are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant Agreement or any Warrant Certificate.

18. DISPUTE RESOLUTION.

(a) Submission to Dispute Resolution.

(i) In the case of a dispute relating to the Exercise Price, the Closing Sale Price, the Bid Price, Black Scholes Value or fair market value or the arithmetic calculation of the number of Warrant Shares (as the case may be) (including, without limitation, a dispute relating to the determination of any of the foregoing), the Company or the Holder (as the case may be, the “**Submitting Party**”) shall promptly submit the dispute to the other party in writing, specifying in reasonable detail (i) the dispute(s) and (ii) the Submitting Party’s proposed calculation, adjustment and/or determination, as applicable. Promptly following such submission, the Company and the Holder agree to consult (including, without limitation, exchanging reasonable details of their positions and any supporting data as part of the consultation process, provided that they will not be required to exchange any proprietary or confidential information) in good faith and in a commercially reasonable and timely manner to resolve any such dispute(s) and agree on such calculation, adjustment and/or determination. If the Holder and the Company are unable to promptly resolve such dispute relating to such Exercise Price, such Closing Sale Price, such Bid Price, Black Scholes Value or such fair market value or such arithmetic calculation of the number of Warrant Shares (as the case may be), at any time after the second (2nd) Business Day following such initial notice by the Company or the Holder (as the case may be), then the Submitting Party may select an independent, reputable investment bank to resolve such dispute (subject to the other party’s consent, not to be unreasonably withheld).

(ii) The Holder and the Company shall each deliver to such investment bank (A) a copy of the initial dispute submission so delivered in accordance with the first sentence of this Section 18 and (B) written documentation supporting its position with respect to such dispute, in each case, no later than 5:00 p.m. (New York time) by the fifth (5th) Business Day immediately following the date on which such investment bank was selected (the “**Dispute Submission Deadline**”) (the documents referred to in the immediately preceding clauses (A) and (B) are collectively referred to herein as the “**Required Dispute Documentation**”) (it being understood and agreed that if either the Holder or the Company fails to so deliver all of the Required Dispute Documentation by the Dispute Submission Deadline, then the party who fails to so submit all of the Required Dispute Documentation shall no longer be entitled to (and hereby waives its right to) deliver or submit any further written documentation or other support to such investment bank with respect to such dispute and such investment bank shall resolve such dispute based solely on the Required Dispute Documentation that was delivered to such investment bank prior to the Dispute Submission Deadline). Unless otherwise agreed to in writing by both the Company and the Holder or otherwise requested by such investment bank, neither the Company nor the Holder shall be entitled to deliver or submit any written documentation or other support to such investment bank in connection with such dispute (other than the Required Dispute Documentation).

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

(b) MISCELLANEOUS. THE COMPANY EXPRESSLY ACKNOWLEDGES AND AGREES THAT (I) THIS SECTION 18 CONSTITUTES AN AGREEMENT TO ARBITRATE BETWEEN THE COMPANY AND THE HOLDER (AND CONSTITUTES AN ARBITRATION AGREEMENT) UNDER THE RULES THEN IN EFFECT UNDER § 7501, ET SEQ. OF THE NEW YORK CIVIL PRACTICE LAW AND RULES ("CPLR") AND THAT THE HOLDER IS AUTHORIZED TO APPLY FOR AN ORDER TO COMPEL ARBITRATION PURSUANT TO CPLR § 7503(A) IN ORDER TO COMPEL COMPLIANCE WITH THIS SECTION 18, (II) THE TERMS OF THIS WARRANT AGREEMENT AND EACH OTHER APPLICABLE TRANSACTION DOCUMENT AND THE REQUIRED DISPUTE DOCUMENTATION SHALL SERVE AS THE BASIS FOR THE SELECTED INVESTMENT BANK'S RESOLUTION OF THE APPLICABLE DISPUTE, SUCH INVESTMENT BANK SHALL BE ENTITLED (AND IS HEREBY EXPRESSLY AUTHORIZED) TO MAKE ALL FINDINGS, DETERMINATIONS AND THE LIKE THAT SUCH INVESTMENT BANK DETERMINES ARE REQUIRED TO BE MADE BY SUCH INVESTMENT BANK IN CONNECTION WITH ITS RESOLUTION OF SUCH DISPUTE AND IN RESOLVING SUCH DISPUTE SUCH INVESTMENT BANK SHALL APPLY SUCH FINDINGS, DETERMINATIONS AND THE LIKE TO THE TERMS OF THIS WARRANT AGREEMENT, ANY OTHER APPLICABLE TRANSACTION DOCUMENTS AND ANY OTHER REQUIRED DISPUTE DOCUMENTATION, AND (III) NOTHING IN THIS SECTION 18 SHALL LIMIT THE HOLDER FROM OBTAINING ANY INJUNCTIVE RELIEF OR OTHER EQUITABLE REMEDIES (INCLUDING, WITHOUT LIMITATION, WITH RESPECT TO ANY MATTERS DESCRIBED IN THIS SECTION 18).

19. REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant Agreement, the other Transaction Documents and the Warrant Certificates shall be cumulative and in addition to all other remedies available under this Warrant Agreement, the other Transaction Documents and the Warrant Certificates, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Warrant Agreement or the applicable Warrant Certificate. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent jurisdiction in any such case without the necessity of showing economic loss, proving actual damages and without posting a bond or other security. The Company shall provide all information and documentation to the Holder that is reasonably requested by the Holder to enable the Holder to confirm the Company's

compliance with the terms and conditions of this Warrant Agreement or the applicable Warrant Certificate (including, without limitation, compliance with Section 4 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of a Warrant shall be made without charge to the Holder for any transfer, stamp, issuance or similar tax in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised.

20. PAYMENT OF COLLECTION, ENFORCEMENT AND OTHER COSTS. If (a) a Warrant is placed in the hands of an attorney for collection or enforcement or is collected or enforced through any legal proceeding or the holder otherwise takes action to collect amounts due under a Warrant or to enforce the provisions of a Warrant or (b) there occurs any bankruptcy, reorganization, receivership of the company or other proceedings affecting company creditors' rights and involving a claim under a Warrant, then the Company shall pay the reasonable costs incurred by the Holder for such collection, enforcement or action or in connection with such bankruptcy, reorganization, receivership or other proceeding, including the reasonable fees and disbursements of a single outside counsel of the Holder.

21. MISCELLANEOUS.

(a) A Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

(b) Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the Holders of the Warrants. All covenants, conditions, stipulations, promises, and agreements contained in this Warrant Agreement shall be for the sole and exclusive benefit of the parties hereto and their successors and assigns and of the Holders of the Warrants.

(c) A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent at the offices of the Warrant Agent designated for such purposes, for inspection by the Holder of any Warrant. The Warrant Agent may require any such Holder to submit his, her or its Warrant for inspection.

(d) This Warrant Agreement may be executed in any number of counterparts, and each of such counterparts shall, for all purposes, be deemed to be an original, and all such counterparts shall together constitute one and the same instrument. Facsimile signatures or signatures transmitted electronically shall constitute original signatures for all purposes of this Warrant Agreement.

(e) This Warrant Agreement sets forth the entire agreement of the parties hereto as to the subject matter hereof and supersedes all previous agreements by and between the parties hereto with respect thereto, whether written, oral or otherwise. As between the Company and the Holder, this Warrant Agreement and the other Transaction Documents set forth the entire agreement of the Company and the Holder as to the subject matter hereof and supersedes all previous agreements by and between the parties hereto with respect thereto, whether written, oral or otherwise.

22. **CERTAIN DEFINITIONS.** For purposes of a Warrant, the following terms shall have the following meanings:

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

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

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

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

(e) “**Bid Price**” means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of any market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(f) “**Black Scholes Value**” means the value of the unexercised portion of the Warrants remaining on the date of the Holder’s request pursuant to Section 6(c), which value is calculated using the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg utilizing (i) an underlying price per share equal to the sum of the price per share being offered in cash in the applicable Fundamental Transaction (if any) plus the value of the non-cash consideration being offered in the applicable Fundamental Transaction (if any), (ii) a strike price equal to the Exercise Price in effect on the date of the Holder’s request pursuant to Section 6(c), (iii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the greater

of (1) the remaining term of the unexercised portion of the Warrants as of the date of the Holder's request pursuant to Section 6(c) and (2) the remaining term of the unexercised portion of the Warrants as of the date of consummation of the applicable Fundamental Transaction or as of the date of the Holder's request pursuant to Section 6(c) if such request is prior to the date of the consummation of the applicable Fundamental Transaction, (iv) a zero cost of borrow and (v) an expected volatility equal to 80%.

(g) "**Bloomberg**" means Bloomberg, L.P.

(h) "**Business Day**" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

(i) "**Closing Sale Price**" means, for any security as of any date, the last closing trade price for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing trade price, then the last trade price of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last trade price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing does not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no last trade price is reported for such security by Bloomberg, the average of the ask prices of any market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(j) "**Common Stock**" means (i) the Company's shares of common stock, \$0.0001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

(k) "**Expiration Date**" means the date that is the fifth (5th) anniversary of the Issuance Date or, if such date falls on a day other than a Trading Day or on which trading does not take place on the Principal Market (a "**Holiday**"), the next date that is not a Holiday.

(l) "**Fundamental Transaction**" means (A) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) any Person, Persons or Group (including in a "double dummy" or "holding company" transaction with a subsidiary or Affiliate of the Company), or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the assets of the Company and any of its subsidiaries, taken as a whole, to one or more Persons or Group (including through any such Person or Group

acquiring equity interests of one or more subsidiaries) (other than to the Company or a wholly-owned subsidiary of the Company), or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding, or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its Common Stock (other than a transaction to which Section 4(a) applies), which is effected in such a way that the holders of Common Stock receive or are entitled to receive, with respect to or in exchange for Common Stock, cash, stock, securities or other assets or property (or any combination thereof), or (B) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reclassification or otherwise in any manner whatsoever, of (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the date of the Warrant Agreement calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company or (C) directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction; provided that a transaction described in clause (A)(i) or (A)(v) shall only be a

Fundamental Transaction for the purpose of Section 6(c) if one or more Subject Entities, individually or in the aggregate, acquires, directly or indirectly: (1) at least 50% of the outstanding shares of Common Stock, or (2) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (3) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (4) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, or (5) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject Entities as of the date of the Warrant Agreement calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (6) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company.

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

(n) “**Issuance Date**” means, October 14, 2025.

(o) “**Office of the Warrant Agent**” means Continental Stock Transfer & Trust Company, 1 State Street, 30 FL, New York, New York 10004, or its successors.

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

(q) “**Principal Market**” means the New York Stock Exchange.

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

(s) “**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group (in each case, other than the Company or a subsidiary of the Company), or any stockholders or other securityholders of the foregoing.

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

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

(v) “**Transaction Documents**” means any agreement entered into by and between the Company and the Holder with respect to the Warrants.

(w) “**VWAP**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market (or, if the Principal Market is not the principal trading market for such security, then on the principal securities exchange or securities market on which such security is then traded), during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg through its “VAP” function (set to 09:30 start time and 16:00 end time) or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices). If the VWAP cannot be calculated for such security on such date on any of the foregoing bases, the VWAP of such security on such date shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, recapitalization or other similar transaction during such period.

[signature page follows]

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties hereto as of the day and year first above written.

IONQ, INC.

By: /s/ Paul T. Dacier
Name: Paul T. Dacier
Title: Chief Legal Officer and Corporate Secretary

**CONTINENTAL STOCK TRANSFER & TRUST
COMPANY**

By: /s/ Steven Vdacante
Name: Steven Vdacante
Title: Vice President

[SIGNATURE PAGE TO SERIES B WARRANT AGREEMENT]

[FORM OF WARRANT CERTIFICATE]

[UNLESS THIS GLOBAL WARRANT CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO., OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS IN WHOLE, BUT NOT IN PART, TO NOMINEES OF DTC OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR’S NOMINEE, AND TRANSFERS OF PORTIONS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN THE WARRANT AGREEMENT REFERRED TO ON THE REVERSE HEREOF.

ANY TRANSFER OF THE SECURITIES REPRESENTED BY THIS GLOBAL WARRANT CERTIFICATE IS SUBJECT TO THE CONDITIONS SPECIFIED IN THE SERIES B WARRANT AGREEMENT (THE “**WARRANT AGREEMENT**”) DATED AS OF OCTOBER 14, 2025 BETWEEN IONQ, INC. AND CONTINENTAL STOCK TRANSFER & TRUST COMPANY, SOLELY IN ITS CAPACITY AS WARRANT AGENT. BY ACCEPTING DELIVERY OF THE SECURITIES REPRESENTED BY THIS GLOBAL WARRANT CERTIFICATE, ANY TRANSFEREE SHALL BE DEEMED TO HAVE AGREED TO BE BOUND BY THE WARRANT AGREEMENT AS IF THE TRANSFEREE HAD EXECUTED AND DELIVERED THE WARRANT AGREEMENT.

EXERCISABLE ON OR AFTER OCTOBER 14, 2025
AND UNTIL 5:00 P.M. (NEW YORK TIME) ON THE EXPIRATION DATE]¹

WARRANT CERTIFICATE

NUMBER [•] [•] Warrants representing the right to purchase an aggregate of [•] Shares

**(THIS WARRANT WILL BE VOID IF NOT EXERCISED PRIOR TO
5:00 P.M. NEW YORK CITY TIME, SEVEN YEARS
FROM THE DATE OF ORIGINAL ISSUANCE)**

IONQ, INC.

¹ Insert for Global Warrant Certificate

THIS WARRANT CERTIFICATE CERTIFIES THAT, for value received [•], or registered agents, is the registered holder (the “**Holder**”) of [•] Warrant(s) (the “**Warrant**”) expiring on a date which is 7 years from the original date of issuance on October 14, 2025. Each Warrant evidenced by this Warrant Certificate entitles the Holder to purchase one (1) fully paid and non-assessable share of common stock, par value \$0.0001 per share (the “**Shares**”), of IONQ, INC., a Delaware corporation (the “**Company**”) upon the procedures specified in and subject to the conditions set forth herein and in the Series B Warrant Agreement, dated October 14, 2025, between the Company and the Warrant Agent (the “**Warrant Agreement**”). This Warrant Certificate is subject to and shall be interpreted under the terms and conditions of the Warrant Agreement (as defined below). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

In the event of any conflict between the terms of this Warrant Certificate and the terms of the Warrant Agreement, the terms of the Warrant Agreement shall govern. The Warrant Agreement provides that, upon the occurrence of certain events, the Exercise Price and the number of Warrant Shares purchasable by each Warrant, as set forth on the face hereof, may be adjusted, subject to certain conditions. The term Exercise Price as used in this Warrant Certificate refers to the price per Share at which Shares may be purchased at the time a Warrant is exercised.

Each Warrant will expire on the date first referenced above if it is not exercised prior to such date by the Holder pursuant to the terms of the Warrant Agreement or if it is redeemed by the Company prior to such date as described below.

No fraction of a Share will be issued upon any exercise of a Warrant.

Upon any exercise of a Warrant Certificate for less than the total number of full Shares provided for herein, there shall be issued to the Holder hereof or its assignee(s) a new Warrant Certificate covering the number of Shares for which the Warrant has not been exercised.

Warrant Certificates, when surrendered at the office or agency of the Warrant Agent by the Holder hereof in person or by attorney duly authorized in writing, may be exchanged in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants.

Upon due presentment for registration of transfer of the Warrant Certificate at the office or agency of the Warrant Agent, a new Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants shall be issued to the transferee(s) in exchange for this Warrant Certificate, subject to the limitations provided in the Warrant Agreement, without charge except for any applicable tax or other governmental charge.

The Company and the Warrant Agent may deem and treat the Holder as the absolute owner(s) of this Warrant Certificate (notwithstanding any notation of ownership or other writing hereon made by anyone) for the purpose of any exercise hereof, of any distribution to the Holder, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

Except as provided in the Warrant Agreement, this Warrant does not entitle the Holder to any of the rights of a stockholder of the Company.

[The remainder of this page has been left intentionally blank.]

IN WITNESS WHEREOF, the undersigned have caused this [Global] Warrant Certificate to be executed as of the date set forth below.

IONQ, INC.

By: _____

NAME:

TITLE:

DATED: _____

COUNTERSIGNED:

[●]

BY: _____

AUTHORIZED OFFICER

[Signature page to [Global] Warrant Certificate]

[REVERSE OF CERTIFICATE]

EXERCISE NOTICE

TO BE EXECUTED BY THE HOLDER IN ORDER TO EXERCISE WARRANTS

1. The undersigned hereby elects to purchase [•] Warrant Shares of the Company pursuant to the terms of the attached Warrant Certificate, and tenders herewith payment of the exercise price in full, in each case, in accordance with the terms of the Warrant Agreement, together with all applicable transfer taxes, if any.

2. Unless the Warrant Shares will be delivered electronically via DWAC, please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

and deliver the physical certificate representing said Warrant Shares to the following address:

If the Warrant Shares will be delivered electronically via DWAC, please issue them to the following account:

- Name of DTC Participant: _____
- DTC Participant Number: _____
- Name of Account at DTC Participant to be credited with the Warrant Shares:

- Account Number at DTC Participant to be credited with the Warrant Shares:

Name of Investing Entity

Signature of Authorized Signatory of Investing Entity

Name of Authorized Signatory

Title of Authorized Signatory

Date

Tax Identification Number(s)

[Date]

**Number of
Warrant
Shares
Available to
be Exercised**

**Number of
Warrant
Shares
Exercised**

**Number of
Warrant
Shares
Remaining to
be Exercised**

² Insert for Global Warrant Certificate

ASSIGNMENT

TO BE EXECUTED BY THE HOLDER IN ORDER TO ASSIGN WARRANTS

For Value Received, [•] hereby sell(s), assign(s), and transfer(s) unto

(PLEASE TYPE OR PRINT NAME(S) AND ADDRESS(ES))

(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER(S))

and to be delivered to

(PLEASE PRINT OR TYPE NAME(S) AND ADDRESS(ES))

(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER(S))

the Warrants represented by this Warrant Certificate, and hereby irrevocably constitute and appoint [•] Attorney to transfer this Warrant Certificate on the books of the Company, with full power of substitution in the premises.

Dated:

(SIGNATURE(S))

NOTICE: THE SIGNATURE(S) TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

Signature(s) Guaranteed:

By _____

THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15).

PRE-FUNDED WARRANT AGREEMENT

THIS PRE-FUNDED WARRANT AGREEMENT (this “**Agreement**” or this “**Warrant Agreement**”), dated as of October 14, 2025, is entered into by and between IonQ, Inc. a Delaware corporation (the “**Company**”), and Continental Stock Transfer & Trust Company, a New York corporation (the “**Warrant Agent**”).

WHEREAS, the Company desires to issue and sell 5,005,400 pre-funded warrants (each, a “**Warrant**” or, collectively, the “**Warrants**”), with each Warrant initially entitling holders to purchase one (1) share of common stock of the Company, par value \$0.0001 per share (the “**Common Stock**”) at the Exercise Price, and such Warrants, collectively, entitling holders to purchase an aggregate of 5,005,400 shares of Common Stock (the “**Warrant Shares**”);

WHEREAS, except as otherwise defined herein, capitalized terms in this Warrant Agreement shall have the meanings set forth in Section 22;

WHEREAS, the Company has filed with the Securities and Exchange Commission a Registration Statement on Form S-3ASR, Registration No. 333-285279 (the “**Registration Statement**”) for the registration, under the Securities Act of 1933, as amended (the “**1933 Act**”) of, among other securities, the Warrants and the Common Stock issuable upon exercise of the Warrants;

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in connection with the issuance, registration, transfer, exchange, redemption and exercise of the Warrants;

WHEREAS, the Company desires to provide for the form and provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants, when executed on behalf of the Company and countersigned by or on behalf of the Warrant Agent, as provided herein, the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. APPOINTMENT OF WARRANT AGENT.

The Company hereby appoints the Warrant Agent to act as agent for the Company for the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the terms and conditions set forth in this Agreement.

2. WARRANTS.**(a) Form of Warrant.**

The Warrants shall initially be issuable in book-entry registration only and evidenced by one or more warrant certificates in global form (the “**Book-Entry Warrant Certificates**”). All of the Warrants shall initially be represented by one or more Book-Entry Warrant Certificates deposited with The Depository Trust Company (“**DTC**”) and registered in the name of Cede & Co., as nominee of DTC. Ownership of beneficial interests in the Warrants shall be shown on, and the transfer of such ownership shall be effected through, records maintained by (i) DTC or its

nominee for each Book-Entry Warrant Certificate or (ii) institutions that have accounts with DTC (such institutions, with respect to a Warrant in its account, each a “**Participant**”). If DTC subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding other arrangements for book-entry settlement. In the event that the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Warrant Agent shall provide written instructions to DTC to deliver to the Warrant Agent for cancellation each Book-Entry Warrant Certificate, and the Company shall instruct the Warrant Agent to deliver to each Holder a warrant certificate in substantially the form of Exhibit A hereto (a “**Warrant Certificate**”), the provisions of which are incorporated herein and signed by, or bear the facsimile signature of, an authorized signatory. In the event the person whose facsimile signature has been placed upon any Warrant shall have ceased to serve in the capacity in which such person signed the Warrant before such Warrant is issued, it may be issued with the same effect as if he or she had not ceased to be such at the date of issuance.

The total exercise price for all of the Warrants, except for a nominal Exercise Price of \$0.0001 per Warrant Share, was prefunded to the Company on or prior to the initial Issuance Date and, consequently, no additional consideration (other than the nominal Exercise Price of \$0.0001 per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant.

(b) Effect of Countersignature.

Unless and until countersigned by the Warrant Agent pursuant to this Agreement, a Warrant shall be invalid and of no effect and may not be exercised by the holder thereof.

(c) Registration.

(i) Warrant Register.

The Warrant Agent shall maintain books (the “**Warrant Register**”) for the registration of the original issuance and transfers of the Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue and register the Warrants in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company.

(ii) Holder.

Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name such Warrant shall be registered upon the Warrant Register (the “**Holder**”), as the absolute owner of such Warrant and of each Warrant represented thereby (notwithstanding any notation of ownership or other writing on the warrant certificate made by anyone other than the Company or the Warrant Agent), for the purpose of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

3. TERMS AND EXERCISE OF WARRANTS.

(a) Mechanics of Exercise.

Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Sections 3(d)(ii) and 3(f)), a Warrant may be exercised by the Holder on any day (an “**Exercise Date**”) during the period (the “**Exercise Period**”) commencing on or after the Issuance Date and terminating at 5:00 p.m., New York City time, on October 14, 2032 (seven years

following the Issuance Date) (such time and date, the “**Expiration Date**”), in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice, in the form attached to the Warrant Certificate (the “**Exercise Notice**”), to the Warrant Agent of the Holder’s election to exercise a Warrant (or, in the case of a global Book-Entry Warrant Certificate, properly delivered by the Participant in accordance with DTC’s procedures). Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at 5:00 p.m., New York City time, on the Expiration Date. Within one (1) Trading Day following an exercise of a Warrant as aforesaid, the Holder shall deliver payment to the Warrant Agent of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which a Warrant was so exercised (the “**Aggregate Exercise Price**”) in certified bank draft or wire transfers in U.S. Dollars (or pursuant to and subject to the conditions in the Cashless Exercise provisions of Section 3(d) below). The Warrant Agent shall forward funds received for warrant exercises by the first (1st) Business Day following receipt by wire transfer to an account designated by the Company.

The Holder shall not be required to deliver the original of a Warrant Certificate in order to effect an exercise hereunder. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares underlying a Warrant Certificate shall have the same effect as cancellation of the original Warrant Certificate and issuance of a new Warrant Certificate evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original Warrant Certificate after delivery of the Warrant Shares in accordance with the terms hereof; provided that if fewer than all of the Warrants evidenced by a global Book-Entry Warrant Certificate are exercised, a notation shall be made to the records maintained by DTC, its nominee for each global Book-Entry Warrant Certificate, or a Participant, as appropriate, evidencing the balance of the Warrants remaining after such exercise.

On or before the first (1st) Trading Day following the date on which the Warrant Agent has received an Exercise Notice, the Company or its agent shall transmit by facsimile or electronic mail an acknowledgment of confirmation of receipt of such Exercise Notice to the Holder (or, in the case of a global Book-Entry Warrant Certificate, properly delivered in accordance with DTC’s procedures or otherwise through a means reasonably determined to provide notice to the applicable Holder) and the Company’s transfer agent (the “**Transfer Agent**”), which confirmation shall constitute an instruction to the Transfer Agent to process such Exercise Notice in accordance with the terms herein. On or before the first (1st) Trading Day following the date on which the Company has received such Exercise Notice (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date), the Company shall (x) provided that the Transfer Agent is participating in DTC’s Fast Automated Securities Transfer Program (“**FAST**”), upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit/Withdrawal at Custodian system, or (y) if the Transfer Agent is not participating in FAST, upon the request of the Holder, issue and deliver (via reputable overnight courier) to the address as specified in the Exercise Notice, a certificate, registered in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder shall be entitled pursuant to such exercise.

Upon delivery of an Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which a Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be); provided that the Holder shall be deemed to have waived any voting rights of any such Warrant Shares that may arise with respect to the period commencing on such Exercise Date, through, and including, such applicable Share Delivery Date (as defined below), as necessary, such that the aggregate voting rights of any shares of Common Stock (including such Warrant Shares) beneficially owned by the Holder and/or any Attribution Parties, collectively, on any such date of determination shall not exceed the Maximum Percentage (as defined below) as a result of any such exercise of a Warrant. If a Warrant is not represented by a Book-Entry Warrant Certificate and is submitted in connection with any exercise pursuant to this Section 3(a) and the number of Warrant Shares represented by a Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon exercise and surrender of a Warrant to the Warrant Agent by the Holder, then, at the request of the Holder, the Company shall as soon as practicable and in no event later than two (2) Business Days after any exercise and at its own expense, issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 9(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under a Warrant, less the number of Warrant Shares with respect to which a Warrant is exercised.

No fractional shares of Common Stock are to be issued upon the exercise of a Warrant and, instead, the Company shall, upon such exercise, round down to the nearest whole number the number of shares of Common Stock to be issued to upon such exercise. The Company shall pay any and all taxes that may be imposed on the Company or the Warrant Agent and costs and expenses (including, without limitation, fees and expenses of the Transfer Agent and all fees and expenses with respect to the issuance of Warrant Shares via DTC, if any, including without limitation for same day processing and/or all fees and expenses of issuance of the Warrant Shares in certificated form as set forth in clause (y) of the third paragraph of this Section 3(a)) that may be payable with respect to the issuance and delivery of any Warrant Shares or a certificate representing such Warrant Shares upon exercise of a Warrant; provided that the Company shall not be required to pay any tax which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised, and no such issue or delivery shall be made unless and until the Person requesting such issue and delivery has paid to the Company the amount of any such tax or has established to the satisfaction of the Company that such tax has been paid. Notwithstanding the foregoing, except in the case where an exercise of a Warrant is validly made pursuant to a Cashless Exercise, the Company's failure to deliver Warrant Shares to the Holder on or prior to the later of (i) one (1) Trading Day after receipt of the applicable Exercise Notice (or valid notice of a Cashless Exercise) (or such earlier date as required pursuant to the 1934 Act or other applicable law, rule or regulation for the settlement of a trade of such Warrant Shares initiated on the applicable Exercise Date) and (ii) the Trading Day on which the Warrant Agent receives the Aggregate Exercise Price (if such Aggregate Exercise Price is so received at or before 3:00 p.m., Eastern time, on such Trading Day) and, if such Aggregate Exercise Price is so received after 3:00 p.m., Eastern time, on such Trading Day, then the immediately following Trading Day (such later date, the "**Share Delivery Date**") shall not be deemed to be a breach of this Warrant Agreement. From the Issuance Date through and including the Expiration Date, the Company shall maintain a transfer agent that participates in FAST.

(b) Exercise Price. “**Exercise Price**” means the remaining unpaid exercise price of \$0.0001 per share of Common Stock, subject to adjustment as provided herein.

(c) Company’s Failure to Timely Deliver Securities. If the Company fails to deliver the applicable number of Warrant Shares upon an exercise pursuant to Section 3 by the applicable Share Delivery Date, then the Holder shall have the right to rescind such exercise in whole or in part and retain and/or have the Company return, as the case may be, any portion of a Warrant that has not been exercised pursuant to such Exercise Notice; and if a registration statement (which may be the Registration Statement) covering the issuance or resale of the Warrant Shares that are subject to an Exercise Notice is not available for the issuance or resale, as applicable, of such Warrant Shares and the Holder has submitted an Exercise Notice prior to receiving notice of the non-availability of such registration statement and the Company has not already delivered the Warrant Shares underlying such Exercise Notice electronically without any restrictive legend by crediting such aggregate number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the Holder’s or its designee’s balance account with DTC through its Deposit / Withdrawal At Custodian system, the Holder shall have the option, by delivery of notice to the Company, to (x) rescind such Exercise Notice in whole or in part and retain or have returned, as the case may be, any portion of a Warrant that has not been exercised pursuant to such Exercise Notice, provided that the rescission of an Exercise Notice shall not affect the Company’s obligation to make any payments that have accrued prior to the date of such notice, and/or (y) switch some or all of such Exercise Notice from a cash exercise to a Cashless Exercise.

(d) Cashless Exercise.

(i) Except for as set forth in Sections 3(d)(ii) and 3(d)(iii) below, the Warrant shall be exercisable only for cash.

(ii) Notwithstanding the foregoing, if at any time the Company shall have failed to file or maintain in effect a registration statement for the registration, under the 1933 Act, of the Warrant Shares issuable upon exercise of the Warrant, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, the Holder instead shall have the right to elect to receive upon such exercise the “Net Number” of Warrant Shares determined according to the following formula (a “**Cashless Exercise**”), provided that, if the Net Number is negative, no Warrant Shares shall be issued pursuant to such exercise:

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

For purposes of the foregoing formula:

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

B = as elected by the Holder: (i) the VWAP of the shares of Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice if such Exercise Notice is (1) both executed and delivered pursuant to Section 3(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 3(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the

Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Exercise Notice or (z) the Bid Price of the shares of Common Stock as of the time of the Holder's execution of the applicable Exercise Notice if such Exercise Notice is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter pursuant to Section 3(a) hereof, or (iii) the Closing Sale Price of the Common Stock on the date of the applicable Exercise Notice if the date of such Exercise Notice is a Trading Day and such Exercise Notice is both executed and delivered pursuant to Section 3(a) hereof after the close of "regular trading hours" on such Trading Day.

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

(iii) Notwithstanding the foregoing, on each six (6) month anniversary of the Issuance Date and upon at least 15 days' prior notice to the Holder, the Company may elect (the "**Cashless Election**") to permit exercise of a Warrant only in a Cashless Exercise during the six-month period commencing on the date of such Cashless Election and ending on the date immediately prior to the next six (6) month anniversary of the Issuance Date (the "**Election Period**"). For the avoidance of doubt, during an Election Period, the Holder will not have discretion to exercise a Warrant in cash. The Company shall have the right to make a Cashless Election only on each six (6) month anniversary of the Issuance Date in accordance with this paragraph, and, once made, such Cashless Exercise shall be irrevocable by the Company for the corresponding Election Period, and such Cashless Election shall apply only during such corresponding Election Period. Commencing on the next six (6) month anniversary of the Issuance Date following a Cashless Election, a Warrant may be exercised only in cash unless either (A) a Cashless Exercise by the Holder is permitted by clause (ii) above or (B) the Company makes (and has provided notice of) a new Cashless Election in accordance with this paragraph.

(iv) If Warrant Shares are issued in such a Cashless Exercise, the Company acknowledges and agrees that in accordance with Section 3(a)(9) of the 1933 Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised, and the holding period of the Warrants being exercised may be tacked on to the holding period of the Warrant Shares, with such period being deemed to have commenced on the date a Warrant was originally issued. The Company agrees not to take any position contrary to this Section 3(d)(iv). Without limiting the rights of a Holder to receive Warrant Shares on a "cashless exercise" in accordance with the terms of this Agreement and to receive the cash payments contemplated pursuant to this Agreement, in no event will the Company be required to net cash settle a Warrant exercise.

(e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 18.

(f) Limitations on Exercises. Solely for the purposes of this Section 3(f) (and other applicable definitions used herein), in the case of Book-Entry Warrant Certificates, references to “Holder” shall be deemed to be reference to a beneficial owner. The Company shall not effect the exercise of any portion of a Warrant, and the Holder shall not have the right to exercise any portion of a Warrant, pursuant to the terms and conditions of this Warrant Agreement and any such exercise shall be null and void and treated as if never made, to the extent that after giving effect to such exercise, the Holder together with the other Attribution Parties collectively would beneficially own in excess of 4.99% (the “**Maximum Percentage**”) of the shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by the Holder and the other Attribution Parties shall include the number of shares of Common Stock held by the Holder and all other Attribution Parties plus the number of shares of Common Stock issuable upon exercise of a Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Common Stock which would be issuable upon (A) exercise of the remaining, unexercised portion of the Warrants beneficially owned by the Holder or any of the other Attribution Parties and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company (including, without limitation, any convertible notes or convertible preferred stock or warrants, including other Warrants) beneficially owned by the Holder or any other Attribution Party subject to a limitation on conversion or exercise analogous to the limitation contained in this Section 3(f). For purposes of this Section 3(f), beneficial ownership shall be calculated in accordance with Section 13(d) of the 1934 Act. For purposes of determining the number of outstanding shares of Common Stock the Holder may acquire upon the exercise of a Warrant without exceeding the Maximum Percentage, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company’s most recent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public filing with the SEC, as the case may be, (y) a more recent public announcement by the Company or (z) any other written notice by the Company or the Transfer Agent, if any, setting forth the number of shares of Common Stock outstanding (the “**Reported Outstanding Share Number**”). If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s beneficial ownership, as determined pursuant to this Section 3(f), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be acquired pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. Upon the reasonable written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including a Warrant, by the Holder and any other Attribution Party since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of shares of Common Stock to the Holder upon exercise of a Warrant results in the Holder and the other Attribution Parties being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the 1934 Act), the number of shares so issued by which the Holder’s and the other Attribution Parties’ aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the

Excess Shares has been deemed null and void, the Company shall return to the Holder any exercise price paid by the Holder for the Excess Shares. Upon delivery of a written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% as specified in such notice; provided that (i) any such increase in the Maximum Percentage will not be effective until the sixty-first (61st) day after such notice is delivered to the Company and (ii) any such increase or decrease will apply only to the Holder and the other Attribution Parties and not to any other holder of Warrants that is not an Attribution Party of the Holder. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant Agreement in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the 1934 Act. No prior inability to exercise a Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 3(f) to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 3(f) or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be amended, modified or waived and shall apply to a successor holder of a Warrant.

(g) Reservation of Shares.

(i) Required Reserve Amount. So long as any Warrant remains outstanding, the Company shall at all times keep reserved for issuance a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock under the Warrants then outstanding (without regard to any limitations on exercise) (the "**Required Reserve Amount**"); provided that at no time shall the number of shares of Common Stock reserved pursuant to this Section 3(g) (i) be reduced other than proportionally in connection with any exercise or redemption of Warrants or such other event covered by Section 4(a) below. The Required Reserve Amount (including, without limitation, each increase in the number of shares so reserved) shall be allocated pro rata among the holders of the Warrants based on the number of shares of Common Stock issuable upon exercise of Warrants held by each holder on the Issuance Date (without regard to any limitations on exercise) or increase in the number of reserved shares, as the case may be (the "**Authorized Share Allocation**"). In the event that a Holder shall sell or otherwise transfer any of such Holder's Warrants, each transferee shall be allocated a pro rata portion of such Holder's Authorized Share Allocation. Any shares of Common Stock reserved and allocated to any Person which ceases to hold any Warrants shall be allocated to the remaining holders of Warrants, pro rata based on the number of shares of Common Stock issuable upon exercise of the Warrants then held by such holders (without regard to any limitations on exercise).

(ii) Insufficient Authorized Shares. If, notwithstanding Section 3(g)(i) above, and not in limitation thereof, at any time while any of the Warrants remain outstanding, the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve the Required Reserve Amount (an "**Authorized Share Failure**"), then the Company shall reasonably promptly take all action

necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than sixty (60) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. Notwithstanding the foregoing, if, at any such time of an Authorized Share Failure, the Company is able to obtain the written consent of a majority of the shares of its issued and outstanding shares of Common Stock to approve the increase in the number of authorized shares of Common Stock, the Company may satisfy this obligation by obtaining such consent and submitting for filing with the SEC an Information Statement on Schedule 14C. In the event that the Company is prohibited from issuing shares of Common Stock upon an exercise of a Warrant due to the failure by the Company to have sufficient shares of Common Stock available out of the authorized but unissued shares of Common Stock (such unavailable number of shares of Common Stock, the "**Authorization Failure Shares**"), in lieu of delivering such Authorization Failure Shares to the Holder, the Company shall pay cash in exchange for the cancellation of such portion of a Warrant exercisable into such Authorization Failure Shares at a price equal to the sum of (i) the product of (x) such number of Authorization Failure Shares and (y) the greatest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date the Holder delivers the applicable Exercise Notice with respect to such Authorization Failure Shares to the Company and ending on the date of such payment under this Section 3(g)(ii); and (ii) to the extent the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of Authorization Failure Shares, brokerage commissions and other reasonable and documented out-of-pocket expenses, if any, of the Holder incurred in connection therewith.

(h) Withholding. The Company and the Warrant Agent shall be entitled to deduct and withhold taxes on all payments and distributions (or deemed distributions) on the Warrants and Warrant Shares to the extent required by applicable law. To the extent that any amounts are so deducted or withheld, such deducted or withheld amounts shall be treated for all purposes of a Warrant as having been paid to the Person in respect of which such deduction or withholding was made. In the event the Company previously remitted any amounts to a governmental authority on account of such taxes required to be deducted or withheld in respect of any payment or distribution (or deemed distribution) with respect to a Warrant or Warrant Share, the Company shall be entitled (i) to offset any such amounts against any amounts otherwise payable in respect of such Warrant or Warrant Share or (ii) to require the Person in respect of whom such deduction or withholding was made to reimburse the Company for such amounts (and such Person shall promptly so reimburse the Company upon demand). The Company shall (i) make commercially reasonable efforts to notify each holder of Warrants or Warrant Shares at least five (5) Business Days prior to any withholding of its intention of any such withholding and (ii) not withhold with respect to any U.S. federal withholding tax if it receives a properly completed and duly executed IRS Form W-9 from a Holder certifying its exemption from backup withholding.

4. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and number of Warrant Shares issuable upon exercise of a Warrant are subject to adjustment from time to time as set forth in this Section 4.

(a) **Stock Dividends and Splits.** Without limiting any provision of Section 3 or Section 6, if the Company, at any time on or after the Issuance Date, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) **Number of Warrant Shares.** Simultaneously with any adjustment to the Exercise Price pursuant to Section 4, the number of Warrant Shares that may be purchased upon exercise of a Warrant shall be increased or decreased proportionately, as applicable, so that after such adjustment the Aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the Aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein). Notwithstanding the foregoing or anything to the contrary in this Agreement, in no event may the Exercise Price be adjusted below the par value of the shares of Common Stock then in effect.

(c) **Calculations.** All calculations under this Section 4 shall be made by rounding to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issuance or sale of Common Stock. The Warrant Agent shall have no obligation under any Section of this Warrant Agreement to determine whether any calculation shall be required or to calculate any of the adjustments set forth herein.

(d) **Voluntary Adjustment by the Company.** Subject to the rules and regulations of the Principal Market, the Company may at any time during the term of a Warrant, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

5 [RESERVED].

6. RIGHTS UPON DISTRIBUTION OF ASSETS; FUNDAMENTAL TRANSACTIONS.

(a) Distributions. If the Company, at any time while the Warrants are outstanding and unexpired, pays to all or substantially all of the holders of the Common Stock a dividend or makes a distribution in cash, securities or other assets on account of such shares of Common Stock other than as described in subsection 4(a) above (any such non-excluded event being referred to herein as a “**Distribution**”), then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of its Warrants (without regard to any limitations or restrictions on exercise of such Warrants, including without limitation the Maximum Percentage, subject to the proviso below) immediately before the date on which a record is taken for such dividend or distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such dividend or distribution (provided, however, that to the extent that the Holder’s right to participate in any such dividend or distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such dividend or distribution in excess of the Maximum Percentage (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such dividend or distribution (and beneficial ownership) to the extent of any such excess) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation, provided that, for the avoidance of doubt, in no event shall the Company be required to hold such Distribution(s) in abeyance at or after at 5:00 p.m., New York City time, on the Expiration Date).

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless upon consummation of such Fundamental Transaction the Successor Entity assumes in writing all of the obligations of the Company under the unexercised portion of the Warrants in accordance with the provisions of this Section 6(b) pursuant to written agreements, including agreements to deliver to the Holder in exchange for the unexercised portion of the Warrants such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property issuable upon exercise as described below in the second succeeding sentence of this paragraph, as applicable, evidenced by a written instrument substantially similar in form and substance to a Warrant. Upon the consummation of each Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of the applicable Fundamental Transaction, the provisions of the Warrants and the other Transaction Documents referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under the unexercised portion of the Warrants and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of each Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of a Warrant at any time after the consummation of the applicable Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property (except such items still issuable under Sections 3 and 4(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of a Warrant prior to the applicable Fundamental Transaction, such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had the unexercised portion of the

Warrants been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of the Warrants), as adjusted in accordance with the provisions of this Warrant Agreement. For purposes of any such exercise, if such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, issuable in respect of one share of Common Stock in such Fundamental Transaction are not on a 1:1 basis, then the Exercise Price shall be appropriately adjusted to apply to such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, based on the amount or number of such shares of common stock (or its equivalent) of the Successor Entity or such other securities, cash, assets or other property, as applicable, issuable in respect of one share of Common Stock in such Fundamental Transaction, and, if multiple types of securities, cash, assets or other property, as applicable, are receivable upon such exercise, the Company shall apportion the Exercise Price among such types of securities, cash, assets or other property, as applicable, in a reasonable manner reflecting the relative value of any different components of such types of securities, cash, assets or other property. Notwithstanding the foregoing, and without limiting Section 3(f) hereof, the Holders of a majority of the outstanding Warrants may elect by delivery of written notice to the Company to waive this Section 6(b) to permit the Fundamental Transaction without the assumption of the unexercised portion of the Warrants. In addition to and not in substitution for any other rights hereunder (but without duplication thereof), upon consummation of each Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive cash, securities or other assets or property with respect to or in exchange for shares of Common Stock (a “**Corporate Event**”), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of a Warrant at any time after the consummation of the applicable Fundamental Transaction but prior to the Expiration Date, in lieu of the shares of the Common Stock (or other securities, cash, assets or other property (except such items still issuable under Section 6(a) above, which shall continue to be receivable thereafter)) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such cash, securities or other assets or property (collectively, the “**Corporate Event Consideration**”) which the Holder would have been entitled to receive upon the happening of the applicable Fundamental Transaction had the Warrant been exercised immediately prior to the applicable Fundamental Transaction (without regard to any limitations on the exercise of the Warrant).

(c) [Reserved].

(d) Application. The provisions of this Section 6 shall apply similarly and equally to successive Fundamental Transactions (in each case, as and to the extent described above) and Corporate Events and shall be applied as if a Warrant (and any such subsequent warrants) were fully exercisable and without regard to any limitations on the exercise of a Warrant (provided that the Holder shall continue to be entitled to the benefit of the Maximum Percentage, applied however with respect to shares of capital stock registered under the 1934 Act and thereafter receivable upon exercise of a Warrant (or any such other warrant)).

(e) Consideration Elections. If in any Fundamental Transaction a holder of Common Stock shall be entitled to make an election to receive a form of consideration, or a combination thereof, with respect to shares of Common Stock held by such holder, for purposes of Section 6(b), the consideration issuable upon the exercise of a Warrant upon and following the consummation of such Fundamental Transaction shall be, for each share of Common Stock, an amount and type of such consideration equal to (x) the aggregate amount of each form of consideration, or combination thereof, received or receivable by all holders of Common Stock divided by (y) the total number of shares of Common Stock outstanding immediately prior to consummation of the Fundamental Transaction.

7. NON-CIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its certificate of incorporation or bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issuance or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of a Warrant, and will at all times in good faith carry out all the provisions of a Warrant and take all action as may reasonably be required to protect the rights of the Holder. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of a Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable shares of Common Stock upon the exercise of a Warrant and (iii) shall, so long as any of the Warrants are outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of the Warrants, the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of the Warrants then outstanding (without regard to any limitations on exercise). Notwithstanding anything herein to the contrary, if after the sixty (60) calendar day anniversary of the Issuance Date, the Holder is not permitted to exercise a Warrant in full for any reason (other than pursuant to restrictions set forth in Sections 3(d) and 3(f) hereof), the Company shall use its reasonable efforts to promptly remedy such failure, including, without limitation, obtaining such consents or approvals as necessary to permit such exercise into shares of Common Stock.

8. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except for U.S. federal income tax purposes or as otherwise specifically provided herein, the Holder, solely in its capacity as a holder of a Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in a Warrant be construed to confer upon the Holder, solely in its capacity as the Holder of a Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of a Warrant. In addition, nothing contained in a Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of a Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company. Notwithstanding this Section 8, the Company shall provide the Holder with copies of the same notices and other information given to the stockholders of the Company generally, contemporaneously with the giving thereof to the stockholders.

9. REISSUANCE OF WARRANT CERTIFICATES.

(a) Transfer of Warrant Certificate. If a Warrant Certificate is to be transferred, the Holder shall surrender such Warrant Certificate to the Warrant Agent, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant Certificate (in accordance with Section 9(d)), registered as the Holder may request, representing the Warrants being transferred by the Holder and, if less than the total number of Warrants then underlying a Warrant Certificate is being transferred, a new Warrant Certificate (in accordance with Section 9(d)) to the Holder representing the Warrants not being transferred. The Company shall not be required to pay any tax which may be payable in respect of any transfer of the Warrant.

(b) Lost, Stolen or Mutilated Warrant Certificate. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of a Warrant Certificate (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of a Warrant Certificate, the Company shall execute and deliver to the Holder a new Warrant Certificate (in accordance with Section 9(d)) representing the Warrants then underlying such Warrant Certificate.

(c) Exchangeable for Multiple Warrant Certificates. A Warrant Certificate is exchangeable, upon the surrender hereof by the Holder at the principal office of the Warrant Agent, for a new Warrant Certificate or Warrant Certificates (in accordance with Section 9(d)) representing in the aggregate the Warrants then underlying a Warrant Certificate, and each such new Warrant Certificate will represent the such portion of such Warrants as is designated by the Holder at the time of such surrender; provided, however, no Warrant Certificates for fractional Warrants (or rights to purchase fractional shares of Common Stock) shall be given, and the Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the issuance of a Warrant Certificate for a fraction of a Warrant.

(d) Issuance of New Warrant Certificates. Whenever the Company is required to issue a new Warrant Certificate pursuant to the terms of this Warrant Agreement, such new Warrant Certificate (i) shall be of like tenor with the applicable Warrant Certificate, (ii) shall represent, as indicated on the face of such new Warrant Certificate, the Warrants then underlying such Warrant Certificate (or in the case of a new Warrant Certificate being issued pursuant to Section 9(a) or Section 9(c), the Warrants designated by the Holder which, when added to the Warrants underlying the other new Warrant Certificates issued in connection with such issuance, does not exceed the number of Warrants then underlying the applicable Warrant Certificate), (iii) shall have an issuance date, as indicated on the face of such new Warrant Certificate which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as the applicable Warrant Certificate.

10. CONCERNING THE WARRANT AGENT AND OTHER MATTERS.

(a) Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of shares of Common Stock upon the exercise of Warrants, but the Company shall not be obligated to pay any tax or charge which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised.

(b) Resignation, Consolidation, or Merger of Warrant Agent.

(i) Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving sixty (60) days' notice in writing to the Company. If the office of the Warrant Agent becomes vacant by resignation or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent or by the holder of the Warrant (who shall, with such notice, submit his, her or its Warrant for inspection by the Company), then the holder of any Warrant may apply to the Supreme Court of the State of New York for the County of New York for the appointment of a successor Warrant Agent at the Company's cost. Any successor Warrant Agent, whether appointed by the Company or by such court, shall be a corporation organized and existing under the laws of the State of New York, in good standing and having its principal office in the Borough of Manhattan, City and State of New York, and authorized under such laws to exercise corporate trust powers and subject to supervision or examination by federal or state authority. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed; but if for any reason it becomes necessary or appropriate, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transfer-ring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

(ii) Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the Transfer Agent for the Common Stock not later than the effective date of any such appointment.

(iii) Merger or Consolidation of Warrant Agent. Any corporation into which the Warrant Agent may be merged or with which it may be consolidated or any corporation resulting from any merger or consolidation to which the Warrant Agent shall be a party shall be the successor Warrant Agent under this Agreement without any further act.

(c) Fees and Expenses of Warrant Agent.

(i) Remuneration. The Company agrees to pay the Warrant Agent reasonable remuneration for its services as such Warrant Agent hereunder and will reimburse the Warrant Agent upon demand for all expenditures that the Warrant Agent may reasonably incur in the execution of its duties hereunder.

(ii) Further Assurances. The Company agrees to perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Agreement.

(d) Liability of Warrant Agent.

(i) Reliance on Company Statement. Whenever in the performance of its duties under this Warrant Agreement the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a statement signed by the President or Chairman of the Board of the Company and delivered to the Warrant Agent. The Warrant Agent may rely upon such statement for any action taken or suffered in good faith by it pursuant to the provisions of this Agreement.

(ii) Indemnity. The Warrant Agent shall be liable hereunder only for its own gross negligence, willful misconduct or bad faith. The Company agrees to indemnify the Warrant Agent and save it harmless against any and all liabilities, including judgments, costs and reasonable counsel fees, for anything done or omitted by the Warrant Agent in the execution of this Agreement, except as a result of the Warrant Agent's gross negligence, willful misconduct or bad faith.

(iii) Exclusions. The Warrant Agent shall have no responsibility with respect to the validity of this Agreement or with respect to the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Warrant; nor shall it be responsible to make any adjustments required under the provisions hereof or responsible for the manner, method or amount of any such adjustment or the ascertaining of the existence of facts that would require any such adjustment; nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Agreement or any Warrant or as to whether any shares of Common Stock will when issued be valid and fully paid and nonassessable.

(e) Acceptance of Agency. The Warrant Agent hereby accepts the agency established by this Agreement and agrees to perform the same upon the terms and conditions herein set forth and, among other things, shall account promptly to the Company with respect to Warrants exercised and concurrently account for, and pay to the Company, all moneys received by the Warrant Agent for the purchase of shares of Common Stock through the exercise of Warrants.

11. NOTICES. Whenever notice is required to be given under this Agreement or any Warrant Certificate, unless otherwise provided herein, such notice shall be given in writing, (i) if delivered (a) from within the domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, electronic mail or by facsimile or (b) from outside the United States, by International Federal Express, electronic mail or facsimile, and (ii) will be deemed given (A) if delivered by first-class registered or certified mail domestic, three (3) Business Days after so mailed, (B) if delivered by nationally recognized overnight carrier, one (1) Business Day after so mailed, (C) if delivered by International Federal Express, two (2) Business Days after so mailed and (D) at the time of transmission, if delivered by electronic mail to each of the email addresses specified in this Section 11 prior to 5:00 p.m. (New York time) on a Trading Day, (E) the next Trading Day after the date of transmission, if delivered by electronic mail to each of the email addresses specified in this Section 11 on a day that is not a Trading Day or later than 5:00 p.m. (New York time) on any Trading Day and (F) if delivered by facsimile, upon electronic confirmation of delivery of such facsimile, and will be delivered and addressed as follows:

(i) if to the Company, to:

IonQ, Inc.
4505 Campus Drive
College Park, MD 20740
Phone: (301) 298-7997

(ii) if to the Warrant Agent, to:

Continental Stock Transfer & Trust Company
1 State Street, 30 FL
New York, New York 10004
Attn: Compliance Department

Any notice, statement or demand authorized by this Warrant Agreement to be given or made by the Company or the Warrant Agent to a Holder shall be sufficiently made if in writing and delivered by hand or sent by first-class mail, postage prepaid or by overnight courier service, addressed to such Holders addressed to such holder at the address set forth for such Holder in the Warrant Register.

The Company shall provide the Holder with prompt written notice of all material actions taken pursuant to this Agreement and any applicable Warrant Certificate (other than the issuance of shares of Common Stock upon exercise in accordance with the terms hereof), including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) as soon as reasonably practicable upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s), (ii) at least fifteen (15) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, or (B) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation, provided in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder, and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K or otherwise publicly disclose such information in a Regulation FD compliant manner. If the Company or any of its subsidiaries provides material non-public information to the Holder that is not simultaneously filed in a Current Report on Form 8-K and the Holder has not agreed to receive such material non-public information, the Company hereby covenants and agrees that the Holder shall not have any duty of confidentiality to the Company, any of its subsidiaries or any of their respective officers, directors, employees, affiliates or agents with respect to, or a duty to any of the foregoing not to trade on the basis of, such material non-public information. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

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

13. ABSENCE OF TRADING AND DISCLOSURE RESTRICTIONS. The Company acknowledges and agrees that the Holder is not a fiduciary or agent of the Company and that the Holder shall have no obligation under this Agreement or a Warrant to (a) maintain the confidentiality of any information provided by the Company or (b) refrain from trading any securities while in possession of such information.

14. AMENDMENT AND WAIVER. This Warrant Agreement and any Warrant Certificate may be amended by the parties hereto by executing a supplemental warrant agreement, without the consent of any of the Holders, solely for ministerial purposes that, for the avoidance of doubt, shall not adversely affect the interests of the Holder to effect (i) evidencing the succession of another entity to the Company and the assumption by any such successor of the covenants of the Company contained in this Warrant Agreement and the Warrants, or (ii) evidencing and providing for the acceptance of appointment by a successor Warrant Agent with respect to the Warrants. All other modifications or amendments to this Warrant Agreement, including any amendment to increase the Exercise Price or shorten the Exercise Period, shall require the written consent of the Holders of a majority of the then outstanding Warrants. Notwithstanding anything in this Warrant Agreement to the contrary, the Warrant Agent shall not be required to execute any supplement or amendment to this Warrant Agreement that it has determined would adversely affect its own rights, duties, obligations or immunities under this Warrant Agreement. No supplement or amendment to this Warrant Agreement shall be effective unless duly executed by the Warrant Agent. Notwithstanding the foregoing and for the avoidance of doubt, the limitation contained in Section 3(f) may not be amended, modified or waived and shall apply to a successor holder of a Warrant.

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

16. GOVERNING LAW. This Warrant Agreement and the Warrant Certificates shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant Agreement and the Warrant Certificates shall be governed by, the internal laws of the State of New York, without giving effect to any provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The parties hereto and the Holder each hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address set forth in or determined in accordance with Section 11 above (or such other address as such party subsequently delivers to the other party) and agrees that such service shall constitute good and sufficient service of process and notice thereof. The parties hereto and the Holder each hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the parties hereto or the Holder from bringing suit or taking other legal action in any other jurisdiction to enforce a judgment or other court ruling in favor of the Holder. **THE PARTIES HERETO AND THE HOLDER EACH HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

17. CONSTRUCTION; HEADINGS. Neither this Warrant Agreement nor any Warrant Certificate shall be construed against any Person as the drafter hereof. The headings are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant Agreement or any Warrant Certificate.

18. DISPUTE RESOLUTION.

(a) Submission to Dispute Resolution.

(i) In the case of a dispute relating to the Exercise Price, the Closing Sale Price, the Bid Price or fair market value or the arithmetic calculation of the number of Warrant Shares (as the case may be) (including, without limitation, a dispute relating to the determination of any of the foregoing), the Company or the Holder (as the case may be, the “**Submitting Party**”) shall promptly submit the dispute to the other party in writing, specifying in reasonable detail (i) the dispute(s) and (ii) the Submitting Party’s proposed calculation, adjustment and/or determination, as applicable. Promptly following such submission, the Company and the Holder agree to consult (including, without limitation, exchanging reasonable details of their positions and any supporting data as part of the consultation process, provided that they will not be required to exchange any proprietary or confidential information) in good faith and in a commercially reasonable and timely manner to resolve any such dispute(s) and agree on such calculation, adjustment and/or determination. If the Holder and the Company are unable to promptly resolve such dispute relating to such Exercise Price, such Closing Sale Price, such Bid Price or such fair market value or such arithmetic calculation of the number of Warrant Shares (as the case may be),

at any time after the second (2nd) Business Day following such initial notice by the Company or the Holder (as the case may be), then the Submitting Party may select an independent, reputable investment bank to resolve such dispute (subject to the other party's consent, not to be unreasonably withheld).

(ii) The Holder and the Company shall each deliver to such investment bank (A) a copy of the initial dispute submission so delivered in accordance with the first sentence of this Section 18 and (B) written documentation supporting its position with respect to such dispute, in each case, no later than 5:00 p.m. (New York time) by the fifth (5th) Business Day immediately following the date on which such investment bank was selected (the "**Dispute Submission Deadline**") (the documents referred to in the immediately preceding clauses (A) and (B) are collectively referred to herein as the "**Required Dispute Documentation**") (it being understood and agreed that if either the Holder or the Company fails to so deliver all of the Required Dispute Documentation by the Dispute Submission Deadline, then the party who fails to so submit all of the Required Dispute Documentation shall no longer be entitled to (and hereby waives its right to) deliver or submit any further written documentation or other support to such investment bank with respect to such dispute and such investment bank shall resolve such dispute based solely on the Required Dispute Documentation that was delivered to such investment bank prior to the Dispute Submission Deadline). Unless otherwise agreed to in writing by both the Company and the Holder or otherwise requested by such investment bank, neither the Company nor the Holder shall be entitled to deliver or submit any written documentation or other support to such investment bank in connection with such dispute (other than the Required Dispute Documentation).

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

(b) MISCELLANEOUS. THE COMPANY EXPRESSLY ACKNOWLEDGES AND AGREES THAT (I) THIS SECTION 18 CONSTITUTES AN AGREEMENT TO ARBITRATE BETWEEN THE COMPANY AND THE HOLDER (AND CONSTITUTES AN ARBITRATION AGREEMENT) UNDER THE RULES THEN IN EFFECT UNDER § 7501, ET SEQ. OF THE NEW YORK CIVIL PRACTICE LAW AND RULES ("**CPLR**") AND THAT THE HOLDER IS AUTHORIZED TO APPLY FOR AN ORDER TO COMPEL ARBITRATION PURSUANT TO CPLR § 7503(A) IN ORDER TO COMPEL COMPLIANCE WITH THIS SECTION 18, (II) THE TERMS OF THIS WARRANT AGREEMENT AND EACH OTHER APPLICABLE TRANSACTION DOCUMENT AND THE REQUIRED DISPUTE DOCUMENTATION SHALL SERVE AS THE BASIS FOR THE SELECTED INVESTMENT BANK'S RESOLUTION OF THE APPLICABLE DISPUTE, SUCH INVESTMENT BANK SHALL BE ENTITLED (AND IS HEREBY EXPRESSLY AUTHORIZED) TO MAKE ALL FINDINGS, DETERMINATIONS AND THE LIKE THAT SUCH INVESTMENT BANK DETERMINES ARE REQUIRED TO BE MADE BY SUCH INVESTMENT BANK IN CONNECTION WITH ITS RESOLUTION OF SUCH DISPUTE AND IN RESOLVING SUCH DISPUTE SUCH INVESTMENT BANK SHALL APPLY SUCH FINDINGS,

DETERMINATIONS AND THE LIKE TO THE TERMS OF THIS WARRANT AGREEMENT, ANY OTHER APPLICABLE TRANSACTION DOCUMENTS AND ANY OTHER REQUIRED DISPUTE DOCUMENTATION, AND (III) NOTHING IN THIS SECTION 18 SHALL LIMIT THE HOLDER FROM OBTAINING ANY INJUNCTIVE RELIEF OR OTHER EQUITABLE REMEDIES (INCLUDING, WITHOUT LIMITATION, WITH RESPECT TO ANY MATTERS DESCRIBED IN THIS SECTION 18).

19. REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant Agreement, the other Transaction Documents and the Warrant Certificates shall be cumulative and in addition to all other remedies available under this Warrant Agreement, the other Transaction Documents and the Warrant Certificates, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Warrant Agreement or the applicable Warrant Certificate. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to specific performance and/or temporary, preliminary and permanent injunctive or other equitable relief from any court of competent jurisdiction in any such case without the necessity of showing economic loss, proving actual damages and without posting a bond or other security. The Company shall provide all information and documentation to the Holder that is reasonably requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant Agreement or the applicable Warrant Certificate (including, without limitation, compliance with Section 4 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of a Warrant shall be made without charge to the Holder for any transfer, stamp, issuance or similar tax in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of (i) income of the Holder or (ii) any transfer involved in the issue and delivery of Common Stock in a name other than that of the Holder or its agent on its behalf of the Warrant or Warrants to be exercised.

20. PAYMENT OF COLLECTION, ENFORCEMENT AND OTHER COSTS. If (a) a Warrant is placed in the hands of an attorney for collection or enforcement or is collected or enforced through any legal proceeding or the holder otherwise takes action to collect amounts due under a Warrant or to enforce the provisions of a Warrant or (b) there occurs any bankruptcy, reorganization, receivership of the company or other proceedings affecting company creditors' rights and involving a claim under a Warrant, then the Company shall pay the reasonable costs incurred by the Holder for such collection, enforcement or action or in connection with such bankruptcy, reorganization, receivership or other proceeding, including the reasonable fees and disbursements of a single outside counsel of the Holder.

21. MISCELLANEOUS.

(a) A Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

(b) Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the Holders of the Warrants. All covenants, conditions, stipulations, promises, and agreements contained in this Warrant Agreement shall be for the sole and exclusive benefit of the parties hereto and their successors and assigns and of the Holders of the Warrants.

(c) A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent at the offices of the Warrant Agent designated for such purposes, for inspection by the Holder of any Warrant. The Warrant Agent may require any such Holder to submit his, her or its Warrant for inspection.

(d) This Warrant Agreement may be executed in any number of counterparts, and each of such counterparts shall, for all purposes, be deemed to be an original, and all such counterparts shall together constitute one and the same instrument. Facsimile signatures or signatures transmitted electronically shall constitute original signatures for all purposes of this Warrant Agreement.

(e) This Warrant Agreement sets forth the entire agreement of the parties hereto as to the subject matter hereof and supersedes all previous agreements by and between the parties hereto with respect thereto, whether written, oral or otherwise. As between the Company and the Holder, this Warrant Agreement and the other Transaction Documents set forth the entire agreement of the Company and the Holder as to the subject matter hereof and supersedes all previous agreements by and between the parties hereto with respect thereto, whether written, oral or otherwise.

22. CERTAIN DEFINITIONS. For purposes of a Warrant, the following terms shall have the following meanings:

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

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

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

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

(e) “**Bid Price**” means, for any security as of the particular time of determination, the bid price for such security on the Principal Market as reported by Bloomberg as of such time of determination, or, if the Principal Market is not the principal securities exchange or trading market for such security, the bid price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg as of such time of determination, or if the foregoing does not apply, the bid price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg as of such time of determination, or, if no bid price is reported for such security by Bloomberg as of such time of determination, the average of the bid prices of any market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices) as of such time of determination. If the Bid Price cannot be calculated for a security as of the particular time of determination on any of the foregoing bases, the Bid Price of such security as of such time of determination shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

(f) [Reserved].

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

(h) “**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

(i) “**Closing Sale Price**” means, for any security as of any date, the last closing trade price for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing trade price, then the last trade price of such security prior to 4:00:00 p.m., New York time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last trade price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing does not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no last trade price is reported for such security by Bloomberg, the average of the ask prices of any market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

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

(k) “**Expiration Date**” means the date that is the fifth (5th) anniversary of the Issuance Date or, if such date falls on a day other than a Trading Day or on which trading does not take place on the Principal Market (a “**Holiday**”), the next date that is not a Holiday.

(l) “**Fundamental Transaction**” means (A) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) any Person, Persons or Group (including in a “double dummy” or “holding company” transaction with a subsidiary or Affiliate of the Company), or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the assets of the Company and any of its subsidiaries, taken as a whole, to one or more Persons or Group (including through any such Person or Group acquiring equity interests of one or more subsidiaries) (other than to the Company or a wholly-owned subsidiary of the Company), or (iii) make, or allow one or more Subject Entities to make, or allow the Company to be subject to or have its Common Stock be subject to or party to one or more Subject Entities making, a purchase, tender or exchange offer that is accepted by the holders of at least (x) 50% of the outstanding shares of Common Stock, (y) 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all Subject Entities making or party to, or Affiliated with any Subject Entities making or party to, such purchase, tender or exchange offer were not outstanding, or (z) such number of shares of Common Stock such that all Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such purchase, tender or exchange offer, become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (iv) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with one or more Subject Entities whereby such Subject Entities, individually or in the aggregate, acquire (x) at least 50% of the outstanding shares of Common Stock, (y) at least 50% of the outstanding shares of Common Stock calculated as if any shares of Common Stock held by all the Subject Entities making or party to, or Affiliated with any Subject Entity making or party to, such stock purchase agreement or other business combination were not outstanding; or (z) such number of shares of Common Stock such that the Subject Entities become collectively the beneficial owners (as defined in Rule 13d-3 under the 1934 Act) of at least 50% of the outstanding shares of Common Stock, or (v) reorganize, recapitalize or reclassify its Common Stock (other than a transaction to which Section 4(a) applies), which is effected in such a way that the holders of Common Stock receive or are entitled to receive, with respect to or in exchange for Common Stock, cash, stock, securities or other assets or property (or any combination thereof), or (B) that the Company shall, directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, allow any Subject Entity individually or the Subject Entities in the aggregate to be or become the “beneficial owner” (as defined in Rule 13d-3 under the 1934 Act), directly or indirectly, whether through acquisition, purchase, assignment, conveyance, tender, tender offer, exchange, reduction in outstanding shares of Common Stock, merger, consolidation, business combination, reorganization, recapitalization, spin-off, scheme of arrangement, reclassification or otherwise in any manner whatsoever, of (x) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock, (y) at least 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock not held by all such Subject

Entities as of the date of the Warrant Agreement calculated as if any shares of Common Stock held by all such Subject Entities were not outstanding, or (z) a percentage of the aggregate ordinary voting power represented by issued and outstanding shares of Common Stock or other equity securities of the Company sufficient to allow such Subject Entities to effect a statutory short form merger or other transaction requiring other stockholders of the Company to surrender their shares of Common Stock without approval of the stockholders of the Company or (C) directly or indirectly, including through subsidiaries, Affiliates or otherwise, in one or more related transactions, the issuance of or the entering into any other instrument or transaction structured in a manner to circumvent, or that circumvents, the intent of this definition in which case this definition shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this definition to the extent necessary to correct this definition or any portion of this definition which may be defective or inconsistent with the intended treatment of such instrument or transaction.

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

(n) “**Issuance Date**” means October 14, 2025.

(o) “**Office of the Warrant Agent**” means Continental Stock Transfer & Trust Company, 1 State Street, 30 FL, New York, New York 10004, or its successors.

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

(q) “**Principal Market**” means the New York Stock Exchange.

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

(s) “**Subject Entity**” means any Person, Persons or Group or any Affiliate or associate of any such Person, Persons or Group (in each case, other than the Company or a subsidiary of the Company), or any stockholders or other securityholders of the foregoing.

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

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

(v) “**Transaction Documents**” means any agreement entered into by and between the Company and the Holder with respect to the Warrants.

(w) “**VWAP**” means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market (or, if the Principal Market is not the principal trading market for such security, then on the principal securities exchange or securities market on which such security is then traded), during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg through its “VAP” function (set to 09:30 start time and 16:00 end time) or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30 a.m., New York time, and ending at 4:00 p.m., New York time, as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in The Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices). If the VWAP cannot be calculated for such security on such date on any of the foregoing bases, the VWAP of such security on such date shall be the fair market value as determined by the Company in good faith. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination, recapitalization or other similar transaction during such period.

[signature page follows]

IN WITNESS WHEREOF, this Agreement has been duly executed by the parties hereto as of the day and year first above written.

IONQ, INC.

By: /s/ Paul T. Dacier
Name: Paul T. Dacier
Title: Chief Legal Officer and Corporate Secretary

**CONTINENTAL STOCK TRANSFER & TRUST
COMPANY**

By: /s/ Steven Vdacante
Name: Steven Vdacante
Title: Vice President

[SIGNATURE PAGE TO PRE-FUNDED WARRANT AGREEMENT]

[FORM OF WARRANT CERTIFICATE]

[UNLESS THIS GLOBAL WARRANT CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO., OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS IN WHOLE, BUT NOT IN PART, TO NOMINEES OF DTC OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR’S NOMINEE, AND TRANSFERS OF PORTIONS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN THE WARRANT AGREEMENT REFERRED TO ON THE REVERSE HEREOF.

ANY TRANSFER OF THE SECURITIES REPRESENTED BY THIS GLOBAL WARRANT CERTIFICATE IS SUBJECT TO THE CONDITIONS SPECIFIED IN THE PRE-FUNDED WARRANT AGREEMENT (THE “**WARRANT AGREEMENT**”) DATED AS OF OCTOBER 14, 2025 BETWEEN IONQ, INC. AND CONTINENTAL STOCK TRANSFER & TRUST COMPANY, SOLELY IN ITS CAPACITY AS WARRANT AGENT. BY ACCEPTING DELIVERY OF THE SECURITIES REPRESENTED BY THIS GLOBAL WARRANT CERTIFICATE, ANY TRANSFEREE SHALL BE DEEMED TO HAVE AGREED TO BE BOUND BY THE WARRANT AGREEMENT AS IF THE TRANSFEREE HAD EXECUTED AND DELIVERED THE WARRANT AGREEMENT.

EXERCISABLE ON OR AFTER OCTOBER 14, 2025
AND UNTIL 5:00 P.M. (NEW YORK TIME) ON THE EXPIRATION DATE]¹

WARRANT CERTIFICATE

NUMBER [•] [•] Warrants representing the right to purchase an aggregate of [•] Shares

**(THIS WARRANT WILL BE VOID IF NOT EXERCISED PRIOR TO
5:00 P.M. NEW YORK CITY TIME, SEVEN YEARS
FROM THE DATE OF ORIGINAL ISSUANCE)**

IONQ, INC.

¹ Insert for Global Warrant Certificate

THIS WARRANT CERTIFICATE CERTIFIES THAT, for value received [•], or registered agents, is the registered holder (the “**Holder**”) of [•] Warrant(s) (the “**Warrant**”) expiring on a date which is 7 years from the original date of issuance on October 14, 2025. Each Warrant evidenced by this Warrant Certificate entitles the Holder to purchase one (1) fully paid and non-assessable share of common stock, par value \$0.0001 per share (the “**Shares**”), of IONQ, INC., a Delaware corporation (the “**Company**”) upon the procedures specified in and subject to the conditions set forth herein and in the Pre-Funded Warrant Agreement, dated October 14, 2025, between the Company and the Warrant Agent (the “**Warrant Agreement**”). This Warrant Certificate is subject to and shall be interpreted under the terms and conditions of the Warrant Agreement (as defined below). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

In the event of any conflict between the terms of this Warrant Certificate and the terms of the Warrant Agreement, the terms of the Warrant Agreement shall govern. The Warrant Agreement provides that, upon the occurrence of certain events, the Exercise Price and the number of Warrant Shares purchasable by each Warrant, as set forth on the face hereof, may be adjusted, subject to certain conditions. The term Exercise Price as used in this Warrant Certificate refers to the price per Share at which Shares may be purchased at the time a Warrant is exercised.

Each Warrant will expire on the date first referenced above if it is not exercised prior to such date by the Holder pursuant to the terms of the Warrant Agreement or if it is redeemed by the Company prior to such date as described below.

No fraction of a Share will be issued upon any exercise of a Warrant.

Upon any exercise of a Warrant Certificate for less than the total number of full Shares provided for herein, there shall be issued to the Holder hereof or its assignee(s) a new Warrant Certificate covering the number of Shares for which the Warrant has not been exercised.

Warrant Certificates, when surrendered at the office or agency of the Warrant Agent by the Holder hereof in person or by attorney duly authorized in writing, may be exchanged in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants.

Upon due presentment for registration of transfer of the Warrant Certificate at the office or agency of the Warrant Agent, a new Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants shall be issued to the transferee(s) in exchange for this Warrant Certificate, subject to the limitations provided in the Warrant Agreement, without charge except for any applicable tax or other governmental charge.

The Company and the Warrant Agent may deem and treat the Holder as the absolute owner(s) of this Warrant Certificate (notwithstanding any notation of ownership or other writing hereon made by anyone) for the purpose of any exercise hereof, of any distribution to the Holder, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

Except as provided in the Warrant Agreement, this Warrant does not entitle the Holder to any of the rights of a stockholder of the Company.

[The remainder of this page has been left intentionally blank.]

IN WITNESS WHEREOF, the undersigned have caused this [Global] Warrant Certificate to be executed as of the date set forth below.

IONQ, INC.

By: _____

NAME:

TITLE:

DATED: _____

COUNTERSIGNED:

[•]

BY: _____

AUTHORIZED OFFICER

[Signature page to [Global] Warrant Certificate]

[REVERSE OF CERTIFICATE]

EXERCISE NOTICE

TO BE EXECUTED BY THE HOLDER IN ORDER TO EXERCISE WARRANTS

1. The undersigned hereby elects to purchase [•] Warrant Shares of the Company pursuant to the terms of the attached Warrant Certificate, and tenders herewith payment of the exercise price in full, in each case, in accordance with the terms of the Warrant Agreement, together with all applicable transfer taxes, if any.

2. Unless the Warrant Shares will be delivered electronically via DWAC, please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

and deliver the physical certificate representing said Warrant Shares to the following address:

If the Warrant Shares will be delivered electronically via DWAC, please issue them to the following account:

- Name of DTC Participant: _____
- DTC Participant Number: _____
- Name of Account at DTC Participant to be credited with the Warrant Shares:

- Account Number at DTC Participant to be credited with the Warrant Shares:

Name of Investing Entity

Signature of Authorized Signatory of Investing Entity

Name of Authorized Signatory

Title of Authorized Signatory

Date

Tax Identification Number(s)

[Date]

**Number of
Warrant
Shares
Available to
be Exercised**

**Number of
Warrant
Shares
Exercised**

**Number of
Warrant
Shares
Remaining to
be Exercised**

² Insert for Global Warrant Certificate

ASSIGNMENT

TO BE EXECUTED BY THE HOLDER IN ORDER TO ASSIGN WARRANTS

For Value Received, [•] hereby sell(s), assign(s), and transfer(s) unto

(PLEASE TYPE OR PRINT NAME(S) AND ADDRESS(ES))

(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER(S))

and to be delivered to

(PLEASE PRINT OR TYPE NAME(S) AND ADDRESS(ES))

(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER(S))

the Warrants represented by this Warrant Certificate, and hereby irrevocably constitute and appoint [•] Attorney to transfer this Warrant Certificate on the books of the Company, with full power of substitution in the premises.

Dated:

(SIGNATURE(S))

NOTICE: THE SIGNATURE(S) TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATEVER.

Signature(s) Guaranteed:

By _____

THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15).

October 14, 2025

Registration Statement on Form S-3

IonQ, Inc.
4505 Campus Drive
College Park, MD

Ladies and Gentlemen:

We have acted as special counsel to IonQ, Inc., a Delaware corporation (the “Company”), in connection with the registration statement on Form S-3ASR (File No. 333-285279) (the “Registration Statement”) of the Company, filed with the Securities and Exchange Commission (the “Commission”) pursuant to the Securities Act of 1933, as amended (the “Act”), and the rules and regulations thereunder (the “Rules”), which became effective on February 26, 2025. You have asked us to furnish our opinion as to the legality of (i) 16,500,000 shares (the “Issued Shares”) of common stock of the Company, par value \$0.0001 per share (the “Common Stock”), (ii) 43,010,800 warrants to purchase shares of Common Stock (the “Warrants”), (iii) 5,005,400 pre-funded warrants to purchase shares of Common Stock (the “Pre-Funded Warrants”) and (iv) 48,016,200 shares (the “Warrant Shares” and, together with the Issued Shares, the Warrants and the Pre-Funded Warrants, the “Securities”) of Common Stock, which are issuable upon the exercise of the Warrants pursuant to the terms of the Warrant Agreement (as defined below) and upon the exercise of the Pre-Funded Warrants pursuant to the terms of the Pre-Funded Warrant Agreement (as defined below), in each case, which are being offered and sold by the Company.

In connection with the furnishing of this opinion, we have examined originals, or copies certified or otherwise identified to our satisfaction, of the following documents (collectively, the “Documents”):

1. the Registration Statement;
2. the base prospectus dated February 26, 2025;
3. the preliminary prospectus supplement, dated October 10, 2025 (the “Preliminary Prospectus”);
4. the prospectus supplement, dated October 10, 2025 (the “Final Prospectus”);
5. the Underwriting Agreement, dated October 10, 2025 (the “Underwriting Agreement”), by and between the Company and J.P. Morgan Securities, LLC;
4. the Warrant Agreement, dated as of October 14, 2025 (the “Warrant Agreement”), between the Company and Continental Stock Transfer and Trust Company; and
5. the Pre-Funded Warrant Agreement, dated as of October 14, 2025 (the “Pre-Funded Warrant Agreement”), between the Company and Continental Stock Transfer and Trust Company.

In addition, we have examined (i) such corporate records of the Company that we have considered appropriate, including a copy of the certificate of incorporation, as amended, and by-laws, as amended, of the Company, certified by the Company as in effect on the date of this letter, and copies of resolutions of the board of directors of the Company relating to the issuance of the Securities, and (ii) such other certificates, agreements and documents that we deemed relevant and necessary as a basis for the opinions expressed below. We have also relied upon the factual matters contained in the representations and warranties of the Company made in the Documents and upon certificates of public officials and the officers of the Company.

In our examination of the documents referred to above, we have assumed, without independent investigation, the genuineness of all signatures, the legal capacity of all individuals who have executed any of the documents reviewed by us, the authenticity of all documents submitted to us as originals, the conformity to the originals of all documents submitted to us as certified, photostatic, reproduced or conformed copies of valid existing agreements or other documents, the authenticity of all such latter documents and that the statements regarding matters of fact in the certificates, records, agreements, instruments and documents that we have examined are accurate and complete. We have further assumed that the Warrants and the Warrant Agreement and the Pre-Funded Warrants and the Pre-Funded Warrant Agreement constitute the legal, valid and binding obligations of Continental Stock Transfer and Trust Company.

Based upon the above, and subject to the stated assumptions, exceptions and qualifications, we are of the opinion that:

1. The Issued Shares have been duly authorized by all necessary corporate action on the part of the Company and the Issued Shares, when issued, delivered and paid for as contemplated in the Registration Statement and in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and non-assessable.

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2. The Warrant Shares have been duly authorized by all necessary corporate action on the part of the Company and, when issued, delivered and paid for in accordance with the terms of the Warrants, the Pre-Funded Warrants, the Warrant Agreement and the Pre-Funded Warrant Agreement, the Warrant Shares will be validly issued, fully paid and non-assessable.
 3. The Warrants and the Warrant Agreement have been duly authorized by all necessary corporate action on the part of the Company, and the Warrants constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms and the terms of the Warrant Agreement, except that (i) the enforceability of the Warrants may be subject to bankruptcy, insolvency, reorganization, fraudulent conveyance or transfer, moratorium or similar laws affecting creditors' rights generally and subject to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law), (ii) we express no opinion as to the validity, legally binding effect or enforceability of Section 4 of the Warrant Agreement or any related provision in the Warrants that requires or relates to adjustments to the conversion rate in an amount that a court would determine in the circumstances under applicable law to be commercially unreasonable or a penalty or forfeiture and (iii) we express no opinion as to the validity, legally binding effect or enforceability of any provision in the Warrant Agreement or the Warrants that imposes penalties or liquidated damages under certain circumstances.

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4. The Pre-Funded Warrants and the Pre-Funded Warrant Agreement have been duly authorized by all necessary corporate action on the part of the Company, and the Pre-Funded Warrants constitute legal, valid and binding obligations of the Company enforceable against the Company in accordance with their terms and the terms of the Pre-Funded Warrant Agreement, except that (i) the enforceability of the Pre-Funded Warrants may be subject to bankruptcy, insolvency, reorganization, fraudulent conveyance or transfer, moratorium or similar laws affecting creditors' rights generally and subject to general principles of equity (regardless of whether enforceability is considered in a proceeding in equity or at law), (ii) we express no opinion as to the validity, legally binding effect or enforceability of Section 4 of the Pre-Funded Warrant Agreement or any related provision in the Pre-Funded Warrants that requires or relates to adjustments to the conversion rate in an amount that a court would determine in the circumstances under applicable law to be commercially unreasonable or a penalty or forfeiture and (iii) we express no opinion as to the validity, legally binding effect or enforceability of any provision in the Pre-Funded Warrant Agreement or the Pre-Funded Warrants that imposes penalties or liquidated damages under certain circumstances.

The opinions expressed above are limited to the laws of the State of New York and Delaware General Corporation Law. Our opinions are rendered only with respect to the laws, and the rules, regulations and orders under those laws, that are currently in effect.

We hereby consent to the use of these opinions as an exhibit to the Company's Current Report on Form 8-K filed by the Company with the Commission on the date hereof, and to the use of our name under the heading "Legal Matters" contained in the prospectus included in the Registration Statement, the Preliminary Prospectus and the Final Prospectus. In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required by the Act or the Rules.

Very truly yours,

/s/ Paul, Weiss, Rifkind, Wharton & Garrison LLP
PAUL, WEISS, RIFKIND, WHARTON & GARRISON
LLP