

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Amendment No. 4 to  
FORM S-3 REGISTRATION STATEMENT (NO. 333-286455)  
UNDER  
THE SECURITIES ACT OF 1933**

**T1 Energy Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**93-3205861**

(I.R.S. Employer  
Identification No.)

**1211 E 4th St.  
Austin, Texas 78702  
409-599-5706**

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

**Daniel Barcelo  
1211 E 4th St.  
Austin, Texas 78702  
409-599-5706**

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

Copies to

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**Approximate date of commencement of proposed sale to the public:** From time to time after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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

## EXPLANATORY NOTE

This Amendment No. 4 to the Registration Statement on Form S-3, File No. 333-286455, filed on April 9, 2025 (the “Registration Statement”) of T1 Energy Inc. is being filed in order to update certain sections in the Registration Statement and to make certain other related updates. Accordingly, this amendment amends the Registration Statement to update the facing page, including this Explanatory Note, update the last reported closing price of T1 Energy Inc.’s Common Stock and publicly traded warrants on the New York Stock Exchange and update Item 16. Exhibits. The remainder of the Registration Statement is unchanged.

For the purposes of this Registration Statement, references to the “Company,” “T1 Energy,” the “Registrant,” “we,” “our,” “us” and similar terms mean T1 Energy Inc., and where appropriate, their respective wholly owned subsidiaries.

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**The information in this prospectus is not complete and may be changed. The selling securityholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED SEPTEMBER 23, 2025**

**PRELIMINARY PROSPECTUS**

**T1 Energy Inc.**

**75,289,724 Shares of Common Stock  
5,000,000 Shares of Convertible Preferred Stock**

The selling securityholders named in this prospectus (including their pledgees, donees, transferees, assignees, successors and other permitted transferees) (the “Selling Securityholders”) may use this prospectus to offer and resell from time to time up to (i) 5,000,000 shares of the Company’s Series A Convertible Preferred Stock, par value \$0.01 per share (the “Convertible Preferred Stock”), which comprises one of two tranches of 5,000,000 shares of Convertible Preferred Stock each (such tranches, the “First Tranche Preferred Stock” and the “Second Tranche Preferred Stock”), of which the First Tranche Preferred Stock was issued pursuant to a preferred stock purchase agreement, dated as of November 6, 2024, between the Company and certain funds and accounts managed by Encompass Capital Advisors LLC (“Encompass”), as amended (the “Preferred Stock Purchase Agreement”), (ii) 15,437,847 shares (the “Trina Shares”) of common stock, par value \$0.01 per share (the “Common Stock”), of the Company as consideration for certain transactions with Trina Solar (Schweiz) AG (the “Seller”) and issued pursuant to a transaction agreement, dated as of November 6, 2024, between the Company and the Seller (the “Transaction Agreement”), (iii) 29,411,764 shares of the Common Stock underlying the Convertible Preferred Stock in relation to the First Tranche Preferred Stock (the “Underlying Shares”), issuable pursuant to the Preferred Stock Purchase Agreement, and (iv) 30,440,113 shares of Common Stock underlying an \$80.0 million seven percent (7%) unsecured convertible note due in five (5) years dated December 23, 2024 between the Company and the Seller (the “Convertible Note Instrument”), which is issuable to the Seller pursuant to the Convertible Note Instrument (the “Conversion Shares”). The First Tranche Preferred Stock, the Trina Shares, the Underlying Shares and the Conversion Shares are collectively referred to herein as the “Securities.”

The Selling Securityholders will pay all underwriting discounts and selling commissions, if any, in connection with their sale of the Securities. We have agreed to pay certain expenses in connection with this Registration Statement and to indemnify the Selling Securityholders and certain related persons against certain liabilities. As of the date of this prospectus, no underwriter or other person has been engaged to facilitate the sale of the Securities held by the Selling Securityholders.

We are registering the securities in order to permit the Selling Securityholders to offer the Securities for resale from time to time. Our registration of the securities covered by this prospectus does not mean that the Selling Securityholders will offer or sell any of the Securities.

The Selling Securityholders or their permitted transferees may offer, sell or distribute all or a portion of the Common Stock or the Convertible Preferred Stock, following the approval of such listing of Convertible Preferred Stock (as further discussed below), publicly or through private transactions at fixed prices, prevailing market prices or at negotiated prices, or at market prices prevailing at the time of sale.

Prior to the date of this prospectus, there has been no established public trading market for the Convertible Preferred Stock. We have applied to list the Convertible Preferred Stock on the NYSE. If the application is approved, we expect trading in the Convertible Preferred Stock on the NYSE to begin promptly thereafter under the symbol “TE P.” Pending such approval, we believe the actual offering price in sales of our Convertible Preferred Stock by the Selling Securityholders will be derived from the following factors: (i) the prevailing market price of our Common Stock at the time of any such sale; (ii) the \$10.00 per share purchase price paid by the Selling Securityholders in connection with the original issuance of the Convertible Preferred Stock; and (iii) the Conversion Price (as defined herein) of the Convertible Preferred Stock, until our listing application with the NYSE is approved. We cannot guarantee that our Convertible Preferred Stock will be approved for listing on the NYSE. We provide more information about how the Selling Securityholders may sell the Securities in the section titled “*Plan of Distribution for Securities Offered by Selling Securityholders*” on page 18 of this prospectus.

Our Common Stock and T1 Energy Warrants are listed on the NYSE under the symbols TE and TE WS, respectively. On September 22, 2025, the closing price of our Common Stock was \$2.03 and the closing price of our publicly traded warrants was \$0.0668.

**Investing in our securities involves a high degree of risk and you should read this prospectus and any accompanying prospectus supplement before you invest. See “Risk Factors” on page 4 of this prospectus and any similar section included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus. You should carefully consider these factors before making your investment decision.**

**Neither the SEC nor any other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

**The date of this prospectus is \_\_\_\_\_, 2025.**

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**You should rely only on the information contained in this prospectus. No one has been authorized to provide you with information that is different from that contained in this prospectus. This prospectus is dated as of the date set forth on the cover hereof. You should not assume that the information contained in this prospectus is accurate as of any date other than that date or as of any earlier date as of which information is given.**

For investors outside the United States: We have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) in connection with the Trina Business Combination.

The securities offered for resale from time to time by the Selling Securityholders named in this prospectus hereunder include:

- (i) the Convertible Preferred Stock, at an aggregate of 5,000,000 shares of the Company’s Series A Convertible Preferred Stock, par value \$0.01 per share, which comprises one of two tranches of 5,000,000 shares of Convertible Preferred Stock each, of which the First Tranche Preferred Stock was issued pursuant to the Preferred Stock Purchase Agreement; and
- (ii) the Common Stock, at an aggregate of 75,289,724 shares of Common Stock of the Company comprising:
  - (a) the Trina Shares, at an aggregate of 15,437,847 shares of Common Stock, issued pursuant to the Transaction Agreement;
  - (b) the Underlying Shares, at an aggregate of 29,411,764 shares of Common Stock, issuable pursuant to the Preferred Stock Purchase Agreement; and
  - (c) the Conversion Shares, at an aggregate of 30,440,113 shares of Common Stock.

We will not receive any proceeds from the sale by such Selling Securityholders (as defined below) of the securities offered by them described in this prospectus. Neither we nor the Selling Securityholders have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus or any applicable prospectus supplement prepared by or on behalf of us or to which we have referred you. Neither we nor the Selling Securityholders take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor the Selling Securityholders will make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

We may provide a prospectus supplement or, if appropriate, a post-effective amendment, to the registration statement to add information to, or update or change information contained in, this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the sections of this prospectus entitled “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

## FREQUENTLY USED TERMS

Unless otherwise stated or unless the context otherwise requires, the term “FREYR Legacy” refers to FREYR AS, a company organized under the laws of Norway, and their consolidated subsidiaries, and the term “Alussa” refers to Alussa Energy Acquisition Corp., a Cayman Islands exempted company. For the purposes of this Registration Statement, references to the “Company,” “T1 Energy,” “the Registrant,” “we,” “our,” “us” and similar terms mean (i) as of any time prior to the Redomiciliation (as defined below), FREYR Battery, (ii) as of any time after the Redomiciliation, FREYR Delaware, and (iii) as of February 19, 2025, T1 Energy Inc., and where appropriate, their respective wholly owned subsidiaries. In this document:

“10-Day VWAP” means the volume weighted average price of the Common Stock in composite transactions for the principal U.S. national or regional securities exchange on which the shares of Common Stock are then listed as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:00 p.m. (New York City time)) (or a similar organization or agency succeeding to its functions of reporting prices) for the ten (10) consecutive full Trading Days prior to and including such determination date.

“Acquired Companies” means, collectively, T1 G1 Dallas Holding, T1 G1 Dallas Midco, T1 G1 Dallas Associated Entity, T1 G1 Dallas Solar Module (Trina) and TUM 2.

“Alussa” means Alussa Energy Acquisition Corp., a Cayman Islands exempted company.

“Business Combination Agreement” means the Business Combination Agreement, dated as of January 29, 2021, by and among, inter alios, Alussa, the Purchaser Representative, FREYR Legacy, FREYR Battery and the Major Shareholders.

“Business Day” means any day other than Saturday, Sunday or other day on which banking institutions in the City of New York are authorized or required by law or executive order to remain closed.

“Certificate of Designation” means the amended and restated certificate of designation issued in relation to the Convertible Preferred Stock filed as Exhibit 4.1 hereto.

“Closing Date” means December 23, 2024, the closing date of the Trina Business Combination.

“Code” means the Internal Revenue Code of 1986, as amended.

“Common Stock” means the common stock of T1 Energy, par value of \$0.01 per share.

“Conversion Date” means the date on which a conversion of the Convertible Preferred Stock shall be deemed effective, being the Business Day that the notice of conversion of such Preferred Stock is sent and received by the Company in the manner set out in the Preferred Stock Purchase Agreement.

“Conversion Price” means the conversion price of the Convertible Preferred Stock which is (i) \$1.70 per share of Common Stock for the First Tranche Preferred Stock, and (ii) \$1.90 per share of Common Stock for the Second Tranche Preferred Stock if the 10-Day VWAP of the Common Stock immediately prior to the Conversion Date is \$2.50 or more per share of Common Stock (being the greater of the conversion prices for the Second Tranche Preferred Stock), and assuming no accrued and unpaid dividends; the conversion price of the Second Tranche Preferred Stock will be reduced to \$1.70 per share of Common Stock in the event that the 10-Day VWAP of the Common Stock immediately prior to the Conversion Date is less than \$2.50 per share of Common Stock

“Conversion Shares” means the 30,440,113 shares of Common Stock underlying the Convertible Note Instrument.

“Convertible Note Instrument” means the \$80.0 million seven percent (7%) unsecured convertible note due December 23, 2029 dated December 23, 2024.

“Convertible Preferred Stock” means the Company’s Series A Convertible Preferred Stock, par value \$0.01 per share.

“DGCL” means the Delaware General Corporation Law.

“EDGE Global” means EDGE Global LLC.

“Encompass” means Encompass Capital Advisors LLC.

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“First Tranche Preferred Stock” means the first tranche of 5,000,000 shares of Convertible Preferred Stock.

“FREYR Battery” means FREYR Battery, a corporation in the form of a public limited liability company (société anonyme) incorporated under the laws of Luxembourg, with registered office at 22-24, Boulevard Royal, L-2449 Luxembourg, Grand Duchy of Luxembourg, registered with the Luxembourg Trade and Companies Register (Registre de Commerce et des Sociétés) under number B 251199.

“FREYR Delaware” or “T1 Energy” means T1 Energy Inc., a Delaware corporation (f/k/a FREYR Battery, Inc. prior to February 19, 2025), and the successor registrant to FREYR Battery.

“FREYR Legacy” means FREYR AS, a private limited liability company organized under the laws of Norway.

“G2 Austin” means T1’s planned 5 GW nameplate capacity solar cell manufacturing facility located in Milam County, Texas, which the Company currently plans to develop in two stages of 2.5 GW each.

“Lower Conversion Price” means the conversion price, for converting into shares of Common Stock, of any shares of preferred stock issued by the Company between the date of the Preferred Stock Purchase Agreement and one (1) year following the Second Tranche Closing Date, where such conversion price was lower than the conversion price set out in the Certificate of Designation and that would otherwise be applicable to the Second Tranche Preferred Stock.

“Major Shareholders” means those certain shareholders of FREYR Legacy as set forth in the Business Combination Agreement, which include (i) ATS AS (in its capacity as a Major Shareholder), (ii) EDGE Global and (iii) entities affiliated with Teknovekst NUF.

“Maturity Date” means December 23, 2027, the maturity date of the Convertible Preferred Stock.

“NYSE” means The New York Stock Exchange.

“Preferred Stock Purchase Agreement” means the preferred stock purchase agreement, dated as of November 6, 2024, as amended on March 21, 2025, April 29, 2025 and August 13, 2025, between the Company and certain funds and accounts managed by Encompass.

“Principal Trading Market” means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date of the Preferred Stock Purchase Agreement, shall be the NYSE.

“Purchaser Representative” means the Sponsor in its capacity as the purchaser representative in accordance with the terms and conditions of the Business Combination Agreement.

“Redomiciliation” means the change of jurisdiction of incorporation by FREYR Battery from Luxembourg to the State of Delaware and change in the legal name to FREYR Battery, Inc., effective December 31, 2023.

“SEC” means the U.S. Securities and Exchange Commission.

“Second Tranche Closing Date” means the date of issuance of the Second Tranche Preferred Stock, being 10 Business Days following the date the Company notifies Encompass of its decision to exercise the Second Tranche Option.

“Second Tranche Option” shall mean, following the issuance of the First Tranche Preferred Stock and upon subsequent mutual agreement of the parties to the Preferred Stock Purchase Agreement in writing (each in their sole discretion), the option for the Company to issue and sell to Encompass, and for Encompass to subscribe to, the Second Tranche Preferred Stock in accordance with the Preferred Stock Purchase Agreement.

“Second Tranche Preferred Stock” means the second tranche of 5,000,000 shares of Convertible Preferred Stock.

“Securities” means the First Tranche Preferred Stock, the Trina Shares, the Underlying Shares and the Conversion Shares.

“Securities Act” means the U.S. Securities Act of 1933, as amended.

“Seller” means Trina Solar (Schweiz) AG, an entity organized under the laws of Switzerland.

“Sponsor” means Alussa Energy Sponsor LLC, a Delaware limited liability company.

“Trading Day” means (i) a day on which the Common Stock is listed or quoted and traded on its Principal Trading Market (other than the OTC Bulletin Board), or (ii) if the Common Stock is not listed on a Trading Market (other than the OTC Bulletin Board), a day on which the Common Stock is traded in the over-the-counter market, as reported by the OTC Bulletin Board, or (iii) if the Common Stock is not quoted on any Trading Market, a day on which the Common Stock is quoted in the over-the-counter market as reported by OTC Markets Group Inc. (formerly OTC Markets Inc.) (or any similar organization or agency succeeding to its functions of reporting prices); provided, that in the event that the Common Stock is not listed or quoted as set forth in (i), (ii) and (iii) hereof, then Trading Day shall mean a Business Day.

“Trading Market” means whichever of the NYSE, the American Stock Exchange, The Nasdaq Global Select Market, The Nasdaq Global Market, The Nasdaq Capital Market or the OTC Bulletin Board on which the Common Stock is listed or quoted for trading on the date in question.

“Transaction Agreement” means the transaction agreement dated November 6, 2024 between the Company and the Seller, for the acquisition of all legal and beneficial ownership in the shares of capital stock of T1 G1 Dallas Holding, which owns, directly or indirectly, all legal and beneficial ownership in the shares of capital stock of, or other ownership, membership or equity interest in the Acquired Companies.

“T1 G1 Dallas Associated Entity” means T1 G1 Dallas Associated Entity LLC, a Texas limited liability company (f/k/a Trina Solar US Manufacturing Module Associated Entity 1, LLC).

“T1 G1 Dallas Holding” means T1 G1 Dallas Holding Inc., a Delaware corporation (f/k/a Trina Solar (U.S.) Holding Inc.).

“T1 G1 Dallas Midco” means T1 G1 Dallas Midco Inc., a Delaware corporation (f/k/a Trina Solar US Manufacturing Holding Inc.).

“T1 G1 Dallas Solar Module (Trina)” means T1 G1 Dallas Solar Module (Trina) LLC, a Texas limited liability company (f/k/a Trina Solar US Manufacturing Module 1, LLC).

“Trina Business Combination” means the transactions contemplated by the Transaction Agreement.

“Trina Registration Rights Agreement” means the registration rights agreement between T1 Energy and the Seller.

“Trina Shares” means the 15,437,847 shares of Common Stock as consideration for certain transactions in connection with the Trina Business Combination.

“TUM 2” means Trina Solar US Manufacturing Cell 1, LLC, an Oklahoma limited liability company.

“Underlying Shares” means the 29,411,764 shares of Common Stock underlying the First Tranche Preferred Stock.

“\$” means the currency in dollars of the United States of America.

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein may contain forward-looking statements. All statements other than statements of historical or current facts contained or incorporated by reference in this prospectus and any accompanying prospectus supplement may be forward-looking statements. Statements regarding our future results and timing of operations, expected performance and financial position, business strategy and plans and objectives of management for future operations, including, among others, statements regarding the offering and the pending application to list our Convertible Preferred Stock on the NYSE, any expected results and benefits arising from the Trina Business Combination, liquidity, growth and profitability strategies and factors and trends affecting our business are forward-looking statements. Forward-looking statements can be identified in some cases by the use of words such as “believe,” “can,” “could,” “potential,” “plan,” “predict,” “goals,” “seek,” “should,” “may,” “may have,” “would,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” or the negative of these words, other similar expressions or by discussions of strategy, plans or intentions.

The forward-looking statements contained or incorporated by reference in this prospectus and any accompanying prospectus supplement are only predictions. We base these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. Forward-looking statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We believe that these factors include, but are not limited to, the factors set forth under the heading “Risk Factors” in our most recent Annual Report on Form 10-K. These factors include, but are not limited to, risks related to: (1) our ability to (i) successfully integrate the businesses and operations of us and Trina; (ii) construct and equip manufacturing facilities in a timely and cost-effective manner; (iii) target and retain customers and suppliers; (iv) attract and retain key employees and qualified personnel; (v) protect our intellectual property; (vi) comply with legal and environmental regulations; (vii) compete in international markets in light of export and import controls; and (viii) incur substantially more debt; (2) the concentration of our operations in Texas and our dependence on a limited number of suppliers; (3) changes adversely affecting the flow of components and materials from international vendors, the costs of raw materials, components, equipment, and machinery; (4) general economic and geopolitical conditions, changes in applicable laws or regulations, including environmental, export control and tax laws and incentives, as well as international trade policies, including tariffs, on our products and our competitive position; (5) the outcome of any legal proceedings relating to our products and services, including intellectual property or product liability claims, commercial or contractual disputes, warranty claims, and other proceedings; and (6) the capital-intensive nature of our business and our ability to raise additional capital on attractive terms or service our debt.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus or any accompanying prospectus supplement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements.

These forward-looking statements speak only as of the date of this prospectus or, in the case of any accompanying prospectus supplement or documents incorporated by reference, the date of any such document. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statement, whether as a result of any new information, future events or otherwise.

## SUMMARY OF THE PROSPECTUS

This summary highlights selected information appearing elsewhere in this prospectus. Because it is a summary, it may not contain all of the information that may be important to you. To understand this offering fully, you should read this entire prospectus carefully, including the information set forth under the heading “Risk Factors” and our financial statements and related notes included in this prospectus or incorporated by reference into this prospectus, any applicable prospectus supplement and the documents to which we have referred to in the “Incorporation of Certain Documents by Reference” section below.

### Company Overview

T1 Energy Inc., a Delaware corporation (“T1 Energy,” the “Company,” “we,” or “us”), is an energy solutions provider building an integrated U.S. supply chain for solar and batteries. We manufacture and sell photovoltaic (“PV”) solar modules in the United States for our U.S. customers.

We are one of the leading solar manufacturing companies in the United States. Our PV solar module manufacturing facility in Wilmer, TX (“G1 Dallas”) is operating and is expected to have an installed base of five gigawatts (“5 GW”) per annum after the expected completion of equipment commissioning in 2025. We believe our facility is one of the most technologically advanced PV solar module plants globally. T1 Energy produces PV solar modules that employ highly energy efficient Passivated Emitter and Rear Contact and Tunnel Oxide Passivated Contact technologies. We believe the superior performance characteristics of the PV solar modules that we manufacture through our commercial partnership with Trina Solar (“Trina”) and our domestic content will competitively differentiate T1 Energy in the U.S. market.

On November 6, 2024, we announced that we had entered into the Transaction Agreement to acquire all the shares of capital stock of T1 G1 Dallas Holding and its related subsidiaries (collectively “T1 G1 Dallas Holding”). The Trina Business Combination closed on December 23, 2024. As part of the Transaction Agreement, we acquired G1 Dallas from T1 G1 Dallas Holding and entered into a series of commercial support and technology licensing agreements with Trina.

### The Trina Business Combination

On December 23, 2024, we completed the transactions contemplated under the Transaction Agreement entered into with the Seller, on November 6, 2024 for the acquisition of all legal and beneficial ownership in the shares of capital stock of T1 G1 Dallas Holding, which owns, directly or indirectly, all legal and beneficial ownership in the shares of capital stock of, or other ownership, membership or equity interest in the Acquired Companies.

On December 23, 2024, in consideration for the Trina Business Combination, T1 Energy (i) paid to the Seller \$100.0 million cash consideration and (ii) issued to the Seller: (a) a \$50.0 million repayment of an intercompany loan (together with accrued and unpaid interest); (b) the Trina Shares, at an aggregate 15,437,847 shares of Common Stock; (c) a \$150.0 million 1% per annum senior unsecured note due in five years; and (d) the Convertible Note Instrument, at an aggregate of \$80.0 million 7% unsecured convertible note due in five years, which is convertible in up to two conversions into the Conversion Shares, of an aggregate 30,440,113 shares of Common Stock. The Second Conversion per NYSE listing rules is also subject to the affirmative vote (in person or by proxy) of the holders of a majority of the outstanding shares of the Company. On September 5, 2025, as part of the partial conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to the Seller.

With respect to the development, operation and services of the solar module manufacturing facility located in Wilmer, Texas with an output capacity of 5 GW, owned by T1 G1 Dallas Solar Module (Trina), and currently under construction (the “Solar Module Manufacturing Facility”), on the Closing Date, the Company and (A) certain parties affiliated to the Seller, entered into that certain (i) Module Operational Support Agreement, (ii) IP License Agreement and (B) T1 G1 Dallas Solar Module (Trina) entered into that certain IP Sublicense Agreement; and T1 G1 Dallas Solar Module (Trina) and certain affiliated parties to Seller entered into that certain (i) Sales Agency and Aftermarket Services Agreement, (ii) Amended and Restated Sales Agreement (Solar Cells), (iii) Amended and Restated Sales Agreement (Polysilicon), (iv) Amended and Restated Supply Contract, (v) Amendment No. 1 to Intellectual Property License Agreement, and (vi) Amended and Restated Trademark License Agreement.

With respect to the existing project finance of T1 G1 Dallas Solar Module (Trina) in connection with the construction of the Solar Module Manufacturing Facility, on the Closing Date, T1 G1 Dallas Solar Module (Trina) entered into that certain Consent, Waiver and Amendment No. 1 to that certain \$235.0 million senior secured credit facility by and among T1 G1 Dallas Solar Module (Trina), as borrower, the lenders from time to time party thereto, HSBC Bank USA, N.A., as administrative and collateral agent, Standard Chartered Bank, Société Générale and HSBC Bank USA, N.A., as joint lead arrangers, Standard Chartered Bank, as green loan coordinator, dated July 16, 2024 (the “Credit Agreement Amendment” and such credit facility, the “Senior Secured Credit Facility”), and the Company entered into that certain (i) Equity Contribution Agreement, (ii) Loan Commitment Agreement, and (iii) Direct Agreement—Operational Support Agreement.

On the Closing Date, the Company and Seller also entered into a Cooperation Agreement. The Cooperation Agreement states, among other things, that (i) for so long as the Seller holds 15.4 million shares of Common Stock, it shall be entitled to designate for nomination one (1) director to T1's board of directors and (ii) for as long as the Seller holds fifteen percent (15%) or more of shares of Common Stock, it shall be entitled to designate for nomination two (2) directors to T1's board of directors. For so long as there is at least one (1) director designated by the Seller on the T1 board of directors and at least one (1) such director is an independent director in accordance with the applicable stock exchange listing rules, T1's board of directors shall appoint a director designated by the Seller to each of (i) the nominating and corporate governance committee and (ii) the compensation committee. Please refer to "Description of Capital Stock – Trina Registration Rights Agreement" for a description of the Trina Registration Rights Agreement also entered into between the Company and Seller on the Closing Date.

In connection with the Company's efforts to finance in part the construction, commissioning of and ramp-up related to G2 Austin, including general corporate purposes related to the assets to be acquired by the Company pursuant to the Trina Business Combination, T1 Energy and certain funds and accounts managed by Encompass Capital Advisors LLC entered into the Preferred Stock Purchase Agreement, dated November 6, 2024 and amended on March 21, 2025, April 29, 2025 and August 13, 2025, pursuant to which such funds purchased non-voting Convertible Preferred Stock of T1 Energy in exchange for \$100.0 million (such transaction, the "Convertible Preferred Stock Issuance"), to be funded across two tranches of \$50.0 million each, upon closing of the Trina Business Combination and thereafter upon, pursuant to Amendment No. 3 to the Preferred Stock Purchase Agreement, the mutual agreement of the parties in writing (each in their sole discretion). The Company and Encompass will notify each other of their decision to exercise the Second Tranche Option in accordance with the addressee details provided under the notice provisions of the Preferred Stock Purchase Agreement; conversely, if either party elects not to exercise such option, it expects to notify the other party in the same manner via electronic mail. The Second Tranche Preferred Stock will be issued within 10 Business Days following the date the Company notifies Encompass of its decision to exercise the Second Tranche Option.

#### Amendment No. 3 to the Preferred Stock Purchase Agreement

In connection with the Preferred Stock Purchase Agreement and as disclosed by the Company in its Current Report on Form 8-K filed with the SEC on August 14, 2025, on August 13, 2025, the parties thereto entered into that certain Amendment No. 3 to the Preferred Stock Purchase Agreement, in order to amend and restate in entirety, among other things:

- (i) the definitions of "Conversion Price" and "Second Tranche Closing Date", and such amended and restated definitions have been reflected herein;
- (ii) the inclusion of definitions of "Trading Day", "Trading Market", "Principal Trading Market", "Trading Market" and "10-Day VWAP";
- (iii) the inclusion of a condition precedent to the consummation of the issuance of the Second Tranche Preferred Stock which relates to the Company's financial statements that also replaced an earlier condition precedent related to the Company's final investment decision with regard to the facility to be developed by TUM 2;
- (iv) the inclusion of the covenant relating to amendment of the terms of the Second Tranche Preferred Stock in case of a Lower Conversion Price; and
- (v) the issuance of warrants to Encompass which are exercisable for 3,500,000 shares of Common Stock at a purchase price of \$0.01 per share (the "Penny Warrants") if the Second Tranche Closing does not occur by December 31, 2026.

On or after December 23, 2025, the then-issued Convertible Preferred Stock shall be convertible, at the option of the holders thereof, into the Underlying Shares, up to an aggregate of 55,727,554 shares of Common Stock, in whole and not in part, based on a conversion price of (i) \$1.70 per share of Common Stock for the First Tranche Preferred Stock, and (ii) \$1.90 per share of Common Stock for the Second Tranche Preferred Stock if the 10-Day VWAP of the Common Stock immediately prior to the Conversion Date is \$2.50 or more per share of Common Stock (being the greater of the conversion prices for the Second Tranche Preferred Stock), and assuming no accrued and unpaid dividends; the conversion price of the Second Tranche Preferred Stock will be reduced to \$1.70 per share of Common Stock in the event that the 10-Day VWAP of the Common Stock immediately prior to the Conversion Date is less than \$2.50 per share of Common Stock (the "Conversion Price"). Upon such reduction of the conversion price, each share of the then-issued Convertible Preferred Stock will be convertible into approximately 5.88 shares of Common Stock, up to an aggregate of approximately 58,823,529 shares of Common Stock, in whole and not in part, based on the reduced conversion price (subject to dilution adjustments), and holders can expect to receive additional Underlying Shares as compared to the conversion price of \$1.90 for the Second Tranche Preferred Stock. There are no record dates in relation to the relevant dates of the conversion or required redemption.

If the Company issues any shares of preferred stock with a Lower Conversion Price between the date of the Preferred Stock Purchase Agreement and one (1) year following the Second Tranche Closing Date, it shall make such amendment as is necessary to the terms of the Second Tranche Preferred Stock so that the conversion price applicable to the Second Tranche Preferred Stock is no higher than the Lower Conversion Price (with such Lower Conversion Price to be no lower than \$1.05 in any event).

If the Second Tranche Closing does not occur by December 31, 2026, then the Company shall issue Penny Warrants to Encompass which are exercisable for 3,500,000 shares of the Common Stock at a purchase price of \$0.01 per share upon certain conditions.

The Convertible Preferred Stock has a term of three years beginning from December 23, 2024. On December 23, 2027 (the “Maturity Date”), the Company will redeem the then-outstanding Convertible Preferred Stock at \$10.00 per share (up to an aggregate amount of \$100,000,000 assuming all shares of Convertible Preferred Stock are fully issued and outstanding across both the First Tranche Preferred Stock and Second Tranche Preferred Stock at the time of redemption) plus any accrued and unpaid dividends. Prior to the Maturity Date, the Convertible Preferred Stock will not be redeemable. In any case of redemption of shares of Convertible Preferred Stock, T1 Energy shall, not less than thirty (30) nor more than sixty (60) days before the Maturity Date, send to each holder notice of the intention of the Company to redeem such shares of Convertible Preferred Stock.

Prior to the date of this prospectus, there has been no public market for the Convertible Preferred Stock. We have applied to list the Convertible Preferred Stock on the NYSE. If the application is approved, we expect trading in such securities on the NYSE to begin promptly thereafter. However, there can be no assurance as to the development or liquidity of any such market for the Convertible Preferred Stock. Furthermore, we cannot guarantee that the Convertible Preferred Stock will be approved for listing on the NYSE in a timely manner or at all. Prior to such listing, should it elect to sell its shares of Convertible Preferred Stock, the holder of the Convertible Preferred Stock intends to sell such shares at no less than the issue price of \$10.00 per share; after such time the Convertible Preferred Stock can be offered and sold at prevailing market prices or at negotiated prices. Please see the “Risk Factors” on page 4 of this prospectus for further details.

### **Stock Exchange Listing**

The Common Stock and T1 Energy Warrants are currently listed on the NYSE under the symbols TE and TE WS, respectively. We have applied to list the Convertible Preferred Stock on the NYSE. We cannot guarantee that the Convertible Preferred Stock will be approved for listing on the NYSE in a timely manner or at all.

### **Corporate Information**

The mailing address of T1 Energy’s registered and principal executive office is 1211 E 4th St. Austin, Texas 78702. The telephone number of T1 Energy’s registered and principal executive office is 409-599-5706.

Our investor relations website is located at <https://ir.t1energy.com/>, and its news site located at <https://ir.t1energy.com/news/>, our X (f/k/a Twitter) account is located at [https://x.com/T1\\_Energy](https://x.com/T1_Energy), our LinkedIn account is located at <https://www.linkedin.com/company/t1energy>, and our Instagram account is located at [https://www.instagram.com/t1\\_energy/](https://www.instagram.com/t1_energy/). We use our investor relations website, our X account and our LinkedIn account as well as Daniel Barcelo’s X account ([https://x.com/\\_danielbarcelo](https://x.com/_danielbarcelo)), LinkedIn account (<https://www.linkedin.com/in/daniel-barcelo-b262a939/>) and Instagram account (<https://www.instagram.com/danbarcelo/>) to post important information for investors, including news releases, analyst presentations, and supplemental financial information, and as a means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. Accordingly, investors should monitor our investor relations website, our X account and our LinkedIn account, in addition to following press releases, SEC filings and public conference calls and webcasts. Our website, X account and our LinkedIn account and the information contained on each, or that can be accessed through each, is not deemed to be incorporated by reference in, and is not considered part of, this prospectus or any accompanying prospectus supplement, and you should not consider it a part of this prospectus or any accompanying prospectus supplement. We also make available, free of charge, on our investor relations website under “Financials—SEC Filings,” our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports as soon as reasonably practicable after electronically filing or furnishing those reports to the SEC.

## RISK FACTORS

Investing in our securities involves risks. You should carefully review the risk factors described below and contained under the heading “Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 and any risk factors that we may describe in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K filed subsequently to the Annual Report on Form 10-K, which risk factors are incorporated by reference in this prospectus, together with the information contained under the heading “Cautionary Note Regarding Forward-Looking Statements” in this prospectus or under any similar heading in any applicable prospectus supplement or in any document incorporated herein or therein by reference, any specific risk factors discussed under the caption “Risk Factors” in any applicable prospectus supplement or in any document incorporated herein or therein by reference and the other information contained in, or incorporated by reference in, this prospectus or any applicable prospectus supplement before making an investment decision. The risks and uncertainties described in our SEC filings are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any such risks and uncertainties actually occur, our business, financial condition, results of operations, cash flows and prospects could be materially and adversely affected, the market price of our securities could decline and you could lose all or part of your investment. See “Incorporation of Certain Documents by Reference” and “Cautionary Note Regarding Forward-Looking Statements.”

The risks described herein and referenced above are not exhaustive and do not comprise all of the risks associated with an investment in the Company. Additional risks and uncertainties not currently known to the Company which the Company currently deems immaterial may also have a material adverse effect on the Company’s business, financial condition, results of operations, prospects and/or its stock price.

### **Risks Related to Ownership of Our Convertible Preferred Stock**

***There is currently no trading market for the Convertible Preferred Stock. If an active trading market does not develop, then preferred stockholders may be unable to sell their Convertible Preferred Stock at desired times or prices, or at all.***

There is currently no active trading market for the Convertible Preferred Stock and no active trading market may ever develop. The shares of Convertible Preferred Stock may trade at a discount from their initial offering price, depending on: the market for similar securities; the price and volatility in price of our shares of Common Stock; our performance; and other factors. In addition, we do not know whether an active trading market will develop for the Convertible Preferred Stock. Although we have applied to list the Convertible Preferred Stock on the NYSE, we cannot guarantee that the Convertible Preferred Stock will be approved for listing on the NYSE in a timely manner or at all. Furthermore, even if listed on the NYSE, the liquidity of any market for the Convertible Preferred Stock will depend upon the number of holders of the Convertible Preferred Stock, our results of operations and financial condition, the market for similar securities, the interest of securities dealers in making a market in the Convertible Preferred Stock and other factors. Because an active or liquid trading market for the Convertible Preferred Stock may not develop, the ability of preferred stockholders to sell their Convertible Preferred Stock at an acceptable price may be limited. To the extent that an active trading market does not develop, the liquidity and trading prices for the Convertible Preferred Stock may be harmed.

## USE OF PROCEEDS

All of the securities offered by the Selling Securityholders pursuant to this prospectus will be sold by the Selling Securityholders for their respective accounts. We cannot currently determine the price or prices at which such securities may be sold by the Selling Securityholders. We will not receive any of the proceeds from these sales. The Selling Securityholders will pay any underwriting fees, discounts, selling commissions, stock transfer taxes and certain legal expenses incurred by such Selling Securityholders in disposing of their securities, and we will bear all other costs, fees and expenses incurred in effecting the registration of such securities covered by this prospectus, including, without limitation, all registration and filing fees, any NYSE fees and fees and expenses of our counsel and our independent registered public accountants.

## SECURITIES WE MAY OFFER

This prospectus contains summary descriptions of the securities our Selling Securityholders may offer from time to time. These summary descriptions are not meant to be complete descriptions of each security. The particular terms of any security will be described in the applicable prospectus supplement and/or any related free writing prospectus.

## DESCRIPTION OF CAPITAL STOCK

*The following is a summary of the material terms of the Company's Common Stock and Convertible Preferred Stock and is not intended to be a complete summary of the rights and preferences of our Common Stock or Convertible Preferred Stock. The Company's Second Amended and Restated Certificate of Incorporation and Second Amended Restated Bylaws as of February 19, 2025 are included as exhibits to the Annual Report on Form 10-K for the fiscal year ended December 31, 2024. Read the applicable provisions of Delaware law, the Second Amended and Restated Certificate of Incorporation and Bylaws and the Preferred Stock Purchase Agreement (including Amendment No. 3 to the Preferred Stock Purchase Agreement) in their entirety for a complete description of the rights and preferences of the Company's Common Stock and Convertible Preferred Stock.*

### Authorized Share Capital

Currently, T1 Energy's authorized capital stock consists of (i) three hundred and fifty-five million (355,000,000) shares of Common Stock, par value \$0.01 per share, and (ii) ten million (10,000,000) shares of Convertible Preferred Stock, par value \$0.01 per share.

### Common Stock

*Dividends.* Subject to prior dividend rights of the holders of any Convertible Preferred Stock and any other class or series of shares having a preference as to dividends over Common Stock, holders of shares of Common Stock are entitled to receive dividends when, as and if declared by the T1 Energy board of directors, out of funds legally available for that purpose.

*Voting Rights.* Each outstanding share of Common Stock is entitled to one vote per share on each matter to be voted on by the holders of Common Stock. The holders of Common Stock are not entitled to cumulative voting of their shares in elections of directors.

*Conversion.* The Conversion Shares are issuable shares of Common Stock underlying the Convertible Note Instrument. The conversion into our Common Stock is provided in two stages: (i) into 12.5 million shares of Common Stock, subject to certain adjustments and (ii) into 17.9 million shares of Common Stock, subject to certain adjustments, upon securing required stockholder approval. If these conditions are not met, the Convertible Note Instrument may be replaced with a new unsecured senior note on similar terms. The Convertible Note Instrument bears interest at 7% per annum, escalating by an additional 3% every 60 days if conversion does not occur within specified deadlines. As of December 31, 2024, \$80.7 million was outstanding on the Convertible Note Instrument. On September 5, 2025, as part of the first conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to the Seller.

*Other Rights.* In the event of any liquidation, dissolution or winding up (either voluntary or involuntary) of T1 Energy, the holders of Common Stock will be entitled to receive the assets and funds of T1 Energy available for distribution in proportion to the number of shares held by them, respectively, without regard to class, after payments to creditors and subject to any related preferential rights of any holders of any Convertible Preferred Stock of T1 Energy that at the time may be outstanding.

T1 Energy Common Stock is currently listed on the NYSE under the symbol "TE."

### Preferred Stock

T1 Energy's Second Amended and Restated Certificate of Incorporation expressly authorizes T1 Energy's board of directors to provide for the issuance of all or any preferred stock in one or more classes or series, and to fix for each such class or series such voting powers, full or limited, or no voting powers, and such designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the board of directors providing for the issuance of such class or series, including, without limitation, the authority to provide that any such class or series may be (i) subject to redemption at such time or times and at such price or prices; (ii) entitled to receive dividends (which may be cumulative or non-cumulative) at such rates, on such conditions, and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or any other series; (iii) entitled to such rights upon the dissolution of, or upon any distribution of the assets of T1 Energy; or (iv) convertible into, or exchangeable for, shares of any other class or classes of stock, or of any other series of the same or any other class or classes of stock, of T1 Energy at such price or prices or at such rates of exchange and with such adjustments; all as may be stated in such resolution or resolutions. The issuance of preferred stock may have the effect of diluting the earnings per share and book value per share of Common Stock. In addition, the T1 Energy board of directors may issue preferred stock with voting rights or conversion rights that, if exercised, could adversely affect the voting power of the holders of Common Stock.

*Rights and Features of the Convertible Preferred Stock Issuable under the Purchase Agreement.*

## Liquidation Preference

The Convertible Preferred Stock issuable under the Preferred Stock Purchase Agreement will rank senior to the Common Stock but junior to all debt obligations of the Company and will have a liquidation preference equal to \$10.00 per share of Convertible Preferred Stock plus accrued but unpaid dividends.

In the event of any voluntary or involuntary liquidation, subject to the rights of holders of any senior securities and after satisfaction of all liabilities and obligations to creditors of the Company, before any distribution is made to holders of shares of junior securities, the holders of the Convertible Preferred Stock will be entitled to receive liquidating distributions in the amount that is the greater of (i) the aggregate liquidation preference per share of Convertible Preferred Stock and (ii) the amount of cash to which a holder would be entitled to receive in a liquidation with respect to such shares if they had been converted to Common Stock immediately prior to such liquidation.

## Registration Rights

The Company also agreed to provide certain registration rights with respect to the Convertible Preferred Stock, the shares of Common Stock for which the Penny Warrants are exercisable and the shares of Common Stock underlying the Convertible Preferred Stock, contingent on Encompass furnishing in writing to the Company such information regarding Encompass, the registrable securities and the intended method of disposition of the registrable securities as shall be reasonably necessary and requested by the Company to effect the registration of the registrable securities.

## Conversion

On or after December 23, 2025, the then-issued Convertible Preferred Stock shall be convertible, at the option of the holders thereof, into the Underlying Shares, up to an aggregate of 55,727,554 shares of Common Stock, in whole and not in part, based on the Conversion Price. Under the terms of the Preferred Stock Purchase Agreement, the Company and Encompass shall mutually agree in writing (each in their sole discretion) to issue and sell to Encompass, and for Encompass to subscribe to, the additional 5,000,000 shares of Convertible Preferred Stock (i.e., the Second Tranche Option for the Second Tranche Preferred Stock) in accordance with the Preferred Stock Purchase Agreement. The Company and Encompass will notify each other of their decision to exercise the Second Tranche Option in accordance with the addressee details provided under the notice provisions of the Preferred Stock Purchase Agreement; conversely, if either party elects not to exercise such option, it expects to notify the other party in the same manner via electronic mail. The Second Tranche Preferred Stock will be issued within 10 Business Days following the date the Company notifies Encompass of its decision to exercise the Second Tranche Option.

Upon such reduction of the conversion price, each share of the then-issued Convertible Preferred Stock will be convertible into approximately 5.88 shares of Common Stock, up to an aggregate of approximately 58,823,529 shares of Common Stock, in whole and not in part, based on the reduced conversion price (subject to dilution adjustments), and holders can expect to receive additional Underlying Shares as compared to the conversion price of \$1.90 for the Second Tranche Preferred Stock. There are no record dates in relation to the relevant dates of the conversion or required redemption.

If the Company issues any shares of preferred stock with a Lower Conversion Price between the date of the Preferred Stock Purchase Agreement and one (1) year following the Second Tranche Closing Date, it shall make such amendment as is necessary to the terms of the Second Tranche Preferred Stock so that the conversion price applicable to the Second Tranche Preferred Stock is no higher than the Lower Conversion Price (with such Lower Conversion Price to be no lower than \$1.05 in any event).

Additionally, in case of a stock split or similar event effected by the Company, the conversion price shall be proportionally decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding.

If the Second Tranche Closing does not occur by December 31, 2026, then the Company shall issue the Penny Warrants to Encompass upon certain conditions.

## Change of Control

In the event of a change of control event in which the Company is not the surviving or resulting corporation, the holders of Convertible Preferred Stock will be entitled to receive the greater of: (i) the aggregate liquidation preference of the Convertible Preferred Stock outstanding, including any accrued and unpaid dividends thereon to the closing date of the change of control event, and (ii) the amount of consideration that would be payable or issuable in such change of control transaction to a holder of the number of shares of Common Stock into which the shares of Convertible Preferred Stock are convertible by their terms as of the closing date of the change of control event, provided that the holders will receive the same form of consideration to be received by holders of Common Stock in such change of control event.

## Term; Redemption

The Convertible Preferred Stock has a term of three years beginning from December 23, 2024. On the Maturity Date, the Company shall redeem the then-outstanding Convertible Preferred Stock at \$10.00 per share (up to an aggregate amount of \$100,000,000 assuming all shares of Convertible Preferred Stock are fully issued and outstanding across both the First Tranche Preferred Stock and Second Tranche Preferred Stock at the time of redemption) plus any accrued and unpaid dividends. In any case of redemption of shares of Convertible Preferred Stock, T1 Energy shall, not less than thirty (30) nor more than sixty (60) days before the Maturity Date, send to each holder notice of the intention of the Company to redeem such shares of Convertible Preferred Stock.

## Dividends

The Convertible Preferred Stock carries a dividend rate of 6%, accruing on the funding of the first tranche and payable in arrears (i) on the dividend date 18 months after the first tranche funding and (ii) every six months after such dividend payment date. Dividends may be payable in cash, securities or other property as may be determined by T1's board of directors or any of its duly authorized committees. Any dividends will be paid net of any required withholding taxes.

## Other

Other customary representations and warranties, closing conditions and terms were included in the Preferred Stock Purchase Agreement.

## **Registration Rights**

### FREYR Battery Registration Rights Agreement

On July 7, 2021, FREYR Battery, a Luxembourg public limited liability company ("société anonyme"), FREYR AS, a private limited liability company organized under the laws of Norway ("FREYR Legacy"), certain shareholders of FREYR Legacy (the "Major Shareholders") as set forth in the Business Combination Agreement, dated as of January 29, 2021 (the "Alussa Business Combination Agreement"), and Alussa Energy Sponsor LLC, a Delaware limited liability company (the "Purchaser Representative" or the "Sponsor") entered into a registration rights agreement (the "FREYR Battery Registration Rights Agreement") pursuant to which FREYR Battery agreed to register for resale, pursuant to Rule 415 under the Securities Act, certain ordinary shares and other equity securities that are held by the parties thereto from time to time. Under the terms of the FREYR Battery Registration Rights Agreement, the Purchaser Representative and the Major Shareholders and ATS AS in its capacity as representative for the Major Shareholders can demand that FREYR Battery register registrable securities under certain circumstances and have piggyback registration rights for these securities in connection with certain registrations of securities that FREYR Battery undertakes.

As a result of the Redomiciliation and in accordance with Luxembourg law governing the terms of the series of transactions whereby FREYR Battery merged into T1 Energy, with T1 Energy surviving, T1 Energy, as the absorbing company, was subrogated to all rights and obligations of FREYR Battery towards third parties, including those under the FREYR Battery Registration Rights Agreement, and T1 Energy will continue to perform the obligations of FREYR Battery under any agreements to which the latter is a party.

### Trina Registration Rights Agreement

On December 23, 2024, in connection with the completion of the transactions contemplated under the Transaction Agreement entered into with the Seller on November 6, 2024, the Seller and the Company entered into the Trina Registration Rights Agreement, pursuant to which T1 Energy grants the Seller certain registration rights on Form S-3 or other forms of registration statements, including Form S-1, as available, with respect to the shares of Common Stock issued to the Seller pursuant to the Transaction Agreement and the \$80.0 million seven percent (7%) unsecured Convertible Note Instrument due in five years issued to the Seller pursuant to the Transaction Agreement which is convertible in up to two conversions into 30.4 million shares of Common Stock, in aggregate.

## Encompass Preferred Stock Purchase Agreement

Pursuant to the terms of the Preferred Stock Purchase Agreement, T1 Energy also agreed to provide certain registration rights with respect to the Convertible Preferred Stock, the shares of Common Stock for which the Penny Warrants are exercisable and the shares of Common Stock underlying the Convertible Preferred Stock.

### **Certain Anti-Takeover Measures**

Certain provisions of the T1 Energy's governing documents and the DGCL could have the effect of delaying, deferring or discouraging another party from acquiring T1 Energy. These provisions encourage persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with the T1 Energy board of directors rather than pursue non-negotiated takeover attempts. These provisions include the below summarized items.

#### *DGCL Section 203*

T1 Energy will be subject to the provisions of Section 203 of the DGCL ("Section 203"). In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the date of the transaction in which such person becomes an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting share of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting shares outstanding (but not the outstanding voting shares owned by the interested stockholder) those shares owned:
  - by persons who are directors and also officers; and
  - employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting shares which is not owned by the interested stockholder.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting shares of T1 Energy and any entity or person affiliated with or controlling or controlled by the entity or person.

### Board Composition and Powers

The T1 Energy Second Amended and Restated Bylaws provide that any director or the entire board of directors may be removed from office at any time, but only for cause (as such term is defined in the Second Amended and Restated Certificate of Incorporation), and only by the affirmative vote of the holders of at least a majority in voting power of the issued and outstanding capital stock of T1 Energy entitled to vote in the election of directors. Any director serving on a committee of the board may be removed from such committee at any time by the board of directors. T1 Energy's board of directors has the power to fix the number of directors by resolution, subject to the requirements of T1 Energy's governing documents that the T1 Energy board of directors be not fewer than five (5) nor more than twelve (12). Vacancies on the board or any committee resulting from the death, resignation, retirement, disqualification or removal of a director, or from an increase in the number of directors constituting the board or such committee, may be filled only by a majority of the directors then in office, even though less than a quorum, or by a sole remaining director, and the directors chosen in this manner, in the case of the board of directors, will hold office until the next annual election and until a successor is duly elected and qualified, or until his earlier death, resignation, retirement, disqualification or removal and, in the case of any committee of the board, will hold office until a successor is duly appointed by the board of directors or until his earlier death, resignation, retirement, disqualification or removal. For further details on T1's board composition as set forth under the Cooperation Agreement, please also see "Summary of the Prospectus – The Trina Business Combination."

### ***Advance Notice Requirements for Stockholder Proposals and Director Nominations***

The T1 Energy Second Amended and Restated Bylaws provide that in order for a stockholder to propose business at an annual meeting of stockholders, a stockholder's notice must be delivered to the secretary at the principal executive offices of T1 Energy no later than the close of business on the sixtieth (60th) day nor earlier than the close of business on the ninetieth (90th) day prior to the first anniversary date of the preceding year's annual meeting of stockholders; provided, however, that in the event that the annual meeting of stockholders is called for a date that is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the stockholder in order to be timely must be so delivered not earlier than the close of business on the ninetieth (90th) day prior to such annual meeting of stockholders and not later than the close of business on the later of the sixtieth (60th) day prior to such annual meeting of stockholders or, if the first public announcement of the date of such annual meeting of stockholders is less than a hundred (100) days prior to the date of such annual meeting of stockholders, the tenth (10th) day following the day on which public announcement of the date of such annual meeting of stockholders is first made by T1 Energy.

The T1 Energy Second Amended and Restated Bylaws further provide that in order for a stockholder to make a nomination at an annual meeting of stockholders, a stockholder's notice must be delivered to the secretary at the principal executive offices of T1 Energy (a) in the case of an annual meeting of stockholders, no later than the close of business on the sixtieth (60th) day nor earlier than the close of business on the ninetieth (90th) day prior to the first anniversary date of the preceding year's annual meeting of stockholders; provided, however, that in the event that the annual meeting of stockholders is called for a date that is more than thirty (30) days before or more than sixty (60) days after such anniversary date, notice by the stockholder in order to be timely must be so delivered not earlier than the close of business on the ninetieth (90th) day prior to such annual meeting of stockholders and not later than the close of business on the later of the sixtieth (60th) day prior to such annual meeting of stockholders or, if the first public announcement of the date of such annual meeting of stockholders is less than a hundred (100) days prior to the date of such annual meeting of stockholders, the tenth (10th) day following the day on which public announcement of the date of such annual meeting of stockholders is first made by T1 Energy; and (b) in the case of a special meeting of stockholders called for the purpose of electing directors, not later than the close of business on the tenth (10th) day following the day on which notice of the date of the special meeting of stockholders was mailed or public disclosure of the date of the special meeting of stockholders was made, whichever first occurs.

### ***No Stockholder Action by Written Consent***

The T1 Energy Second Amended and Restated Certificate of Incorporation provides that any action required or permitted to be taken by the stockholders of T1 Energy must be effected at a duly called annual or special meeting of stockholders of T1 Energy, and the ability of the stockholders to consent in writing to the taking of any action is specifically denied.

### ***Special Meetings of Stockholders***

The T1 Energy Second Amended and Restated Bylaws provide that special meetings of stockholders, for any purpose or purposes, may be called only by (i) the board of directors, (ii) the chair of the board of directors, if there be one, or (iii) a stockholder, or group of stockholders holding more than twenty percent (20%) of the total voting power of the outstanding shares of the capital stock of T1 Energy issued and outstanding and entitled to vote on the matter for which such special meeting of stockholders is called if such stockholder, or group of stockholders, have dated, signed and delivered to the secretary a written demand for such special meeting of stockholders at least ninety (90) days prior to the proposed date for such special meeting of stockholders, describing each matter of business desired to be brought before the special meeting of stockholders, the reasons for conducting such business, the text of any proposal or business to be considered, and the information required by the notice provisions and of the Second Amended and Restated Bylaws.

### ***Stockholders' Derivative Actions***

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the transaction to which the action relates or such stockholders' share thereafter devolved by operation of law. Unless T1 Energy consents in writing to the selection of an alternative forum, the federal district courts of the United States of America will, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act and the Exchange Act.

### ***Authorized but Unissued Shares***

The authorized but unissued shares of T1 Energy Common Stock and Convertible Preferred Stock will be available for future issuance without any further vote or action T1 Energy stockholders. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of T1 Energy Common Stock and Convertible Preferred Stock could render more difficult or discourage an attempt to obtain control over T1 Energy by means of a proxy contest, tender offer, merger or otherwise

### ***Supermajority Approval Requirements***

The DGCL generally provides that the affirmative vote of a majority of the shares entitled to vote thereon is required to amend a corporation's certificate of incorporation, unless the corporation's certificate of incorporation or bylaws requires a greater percentage. The DGCL does not specify a required vote for stockholder to amend a corporation's bylaws and, therefore, the default voting standard set forth in a corporation's bylaws will apply to votes to amend the bylaws unless the certificate of incorporation or bylaws provide otherwise. In addition, the DGCL provides that a board of directors may amend the bylaws without further stockholder action if authorized to do so by the corporation's certificate of incorporation.

T1 Energy's Second Amended and Restated Certificate of Incorporation provides that the affirmative vote of at least a majority of the entire board of directors or the affirmative vote of holders of at least two thirds (2/3) of the voting power of the shares entitled to vote at an election of directors will be required to adopt, amend, alter, or repeal the bylaws. In addition, T1 Energy's Second Amended and Restated Certificate of Incorporation provides that the affirmative vote of the holders of at least two-thirds (2/3) of the voting power of the shares entitled to vote at an election of directors will be required to amend, alter, change or repeal, or to adopt any provision as part of the Second Amended and Restated Certificate of Incorporation inconsistent with the purpose and intent of certain provisions of the Second Amended and Restated Certificate of Incorporation, including those governing the limitation of liability of directors, indemnification of directors and officers, stockholders' action by written consent, the amendment of T1 Energy's Second Amended and Restated Bylaws by the board of directors, and the required stockholder vote for the amendment of the foregoing provisions. This requirement of a supermajority vote to approve amendments to our bylaws and certificate of incorporation could enable a minority of our stockholders to exercise veto power over any such amendments.

These provisions may have the effect of deterring hostile takeovers or delaying or preventing changes in control of T1 Energy or its management, such as a merger, reorganization or tender offer. These provisions are intended to enhance the likelihood of continued stability in the composition of the board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of T1 Energy. These provisions are designed to reduce T1 Energy's vulnerability to an unsolicited acquisition proposal. The provisions are also intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for T1 Energy's shares and, as a consequence, they also may inhibit fluctuations in the market price of Common Stock that could result from actual or rumored takeover attempts. Such provisions may also have the effect of preventing changes in our management.

### ***Limitation of Personal Liability of Directors/Officers***

The Second Amended and Restated Certificate of Incorporation, to the full extent permitted by the DGCL, will limit or eliminate the liability of T1 Energy directors made a party to any proceeding to T1 Energy or its stockholders for monetary damages for breach of fiduciary duty as a director.

Under the DGCL, no such elimination of liability is permitted (i) for any breach of the director's duty of loyalty to T1 Energy or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of dividend or unlawful share purchase or redemption or (iv) for any transaction from which the director derived an improper personal benefit.

### ***Forum Selection***

The T1 Energy Second Amended and Restated Certificate of Incorporation and Bylaws provide that unless T1 Energy consents in writing to the selection of an alternative forum (an "Alternative Forum Consent"), the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of T1 Energy, (ii) any action asserting a claim of breach of a duty (including any fiduciary duty) owed by any current or former director, officer, stockholder, employee or agent of T1 Energy to T1 Energy or T1 Energy's stockholders, (iii) any action asserting a claim against T1 Energy or any current or former director, officer, stockholder, employee or agent of T1 Energy arising out of or relating to any provision of the DGCL, the T1 Energy Second Amended and Restated Certificate of Incorporation or Bylaws (each, as in effect from time to time), or (iv) any action asserting a claim against T1 Energy or any current or former director, officer, stockholder, employee or agent of T1 Energy governed by the internal affairs doctrine of the State of Delaware; provided, however, that, in the event that the Court of Chancery of the State of Delaware lacks subject matter jurisdiction over any such action or proceeding, the sole and exclusive forum for such action or proceeding will be another state or federal court located within the State of Delaware, in each such case, unless the Court of Chancery (or such other state or federal court located within the State of Delaware, as applicable) has dismissed a prior action by the same plaintiff asserting the same claims because such court lacked personal jurisdiction over an indispensable party named as a defendant therein.

Unless T1 Energy gives an Alternative Forum Consent, the federal district courts of the United States of America will, to the fullest extent permitted by law, be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act and the Exchange Act. Any person or entity purchasing, otherwise acquiring or holding any interest in shares of capital stock of T1 Energy will be deemed to have notice of and consented to these forum selection provisions. The existence of any prior Alternative Forum Consent will not act as a waiver of T1 Energy's ongoing consent right with respect to any current or future actions or claims. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Moreover, Section 27 of the Exchange Act creates exclusive federal jurisdiction over all claims brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder and T1 Energy's Second Amended and Restated Bylaws provide that the federal district courts of the United States of America will, to the fullest extent permitted by law, be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Exchange Act. Accordingly, actions by our stockholders to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder must be brought in federal court.

We recognize that the forum selection clause in T1 Energy's Second Amended and Restated Certificate of Incorporation and Bylaws may impose additional litigation costs on stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware. Additionally, the forum selection clause in T1 Energy's Second Amended and Restated Certificate of Incorporation and Bylaws may limit our stockholders' ability to bring a claim in a forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The Court of Chancery of the State of Delaware may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments may be more or less favorable to us than to our stockholders.

### **Transfer Agent**

The transfer agent for our Common Stock and Convertible Preferred Stock is Continental Stock Transfer & Trust Company.

## SELLING SECURITYHOLDERS

This prospectus relates to the resale by the Selling Securityholders from time to time of up to 75,289,724 shares of Common Stock (including the Trina Shares, the Underlying Shares and the Conversion Shares) and up to 5,000,000 shares of Convertible Preferred Stock. The Selling Securityholders may from time to time offer and sell any or all of the Common Stock and Convertible Preferred Stock set forth below pursuant to this prospectus and any accompanying prospectus supplement. When we refer to the “Selling Securityholders” in this prospectus, we mean the persons listed in the table below, and the pledgees, donees, transferees, assignees, successors, designees and others who later come to hold any of the Selling Securityholders’ interest in the Common Stock and the Convertible Preferred Stock set forth below other than through a public sale.

The following table sets forth and the accompanying footnotes are based primarily on information initially provided by the Selling Securityholders indicating our Common Stock and Convertible Preferred Stock to be covered by this registration statement and eligible for sale under this prospectus. A Selling Securityholder may have sold or transferred some or all of the Common Stock and Convertible Preferred Stock indicated below with respect to such Selling Securityholder and may in the future sell or transfer some or all of the Common Stock and Convertible Preferred Stock indicated below in transactions exempt from the registration requirements of the Securities Act rather than under this prospectus. We cannot advise you as to whether the Selling Securityholders will in fact sell any or all of such Common Stock or Convertible Preferred Stock. For purposes of this table, we have assumed that the Selling Securityholders will have sold all of our Common Stock and Convertible Preferred Stock covered by this prospectus upon the completion of the offering.

We have determined beneficial ownership in accordance with the rules of the SEC and the information is not necessarily indicative of beneficial ownership for any other purpose. Unless otherwise indicated below, to our knowledge, the persons and entities named in the tables have sole voting and sole investment power with respect to all securities that they beneficially own, subject to community property laws where applicable. Except as otherwise described below, based on the information provided to us by the Selling Securityholders, no Selling Securityholder is a broker-dealer or an affiliate thereof.

For purposes of the table below, we have assumed that the Selling Securityholders will not acquire beneficial ownership of any additional securities during the offering. Information for each additional Selling Securityholder, if any, will be set forth by prospectus supplement to the extent required prior to the time of any offer or sale of such Selling Securityholder’s shares and warrants pursuant to this prospectus. Any prospectus supplement may add, update, substitute, or change the information contained in this prospectus, including the identity of each Selling Securityholder and the number of shares registered on its, his, her or their behalf. A Selling Securityholder may sell or otherwise transfer all, some or none of such shares in this offering. See “*Plan of Distribution for Securities Offered by Selling Securityholders.*”

Name of Selling Securityholder	Shares of Convertible Preferred Stock Beneficially Owned After this Offering <sup>†</sup>	Shares of Convertible Preferred Stock Beneficially Owned Prior to Offering <sup>†</sup>	Number of Shares of Common Stock to be Sold in this Offering <sup>†</sup>	Number of Shares of Convertible Preferred Stock to be Sold in this Offering <sup>†</sup>	Common Stock Beneficially Owned After this Offering		Convertible Preferred Stock Beneficially Owned After this Offering	
					Number	Percent <sup>(1)</sup>	Number	Percent <sup>(1)</sup>
Trina Solar (Schweiz) AG <sup>(2)</sup>	27,959,500	—	45,877,960	—	—	—	—	—
Certain funds and accounts managed by Encompass Capital Advisors LLC <sup>(3)</sup>	13,818,733	5,000,000	29,411,764	5,000,000	13,818,733	8.2	—	—

<sup>†</sup> Common Stock and Convertible Preferred Stock offered and beneficially owned are based primarily on information initially provided by the Selling Securityholders indicating the Common Stock and Convertible Preferred Stock to be covered by this registration statement and eligible for sale under this prospectus. A Selling Securityholder may have sold or transferred some or all of the Common Stock and Convertible Preferred Stock set forth in the table and accompanying footnotes, and consequently the Common Stock and Convertible Preferred Stock indicated to be offered may exceed the number of shares of Common Stock and Convertible Preferred Stock to be sold by the Selling Securityholders.

- (1) The percentage of beneficial ownership before this offering is calculated based on 168,616,327 shares of Common Stock outstanding, as of September 5, 2025. Unless otherwise indicated, we believe that all persons named in the table have sole voting and investment power with respect to all shares beneficially owned by them.
- (2) This information is derived from Schedule 13D/A of Trina Solar (Schweiz) AG filed with the SEC on September 9, 2025 (the “Trina 13D/A”). On December 23, 2024, as part of the total consideration for the Trina Business Combination, T1 Energy issued to the Seller: (i) 15,437,847 shares of Common Stock, and (ii) the \$80.0 million seven percent (7%) Convertible Note Instrument, pursuant to which the Conversion Shares are issuable at an aggregate of 30,440,113 shares of Common Stock; on September 5, 2025, as part of the partial conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to Trina Solar (Schweiz) AG. Trina Solar (Schweiz) AG is a wholly-owned subsidiary of and is controlled by Trina Solar Co., Ltd. Based on the Trina 13D/A, Trina Solar (Schweiz) AG maintains a material relationship with the Company by virtue of its beneficial ownership of approximately 16.6% shares of outstanding Common Stock. As Chairman and General Manager of Trina Solar Co., Ltd., Mr. Jifan Gao is the ultimate beneficial owner and has voting and investment control over Trina Solar Co., Ltd. Trina Solar Co., Ltd., as the sole and ultimate indirect shareholder of Trina Solar (Schweiz) AG, has full voting and investment control of the securities held by Trina Solar (Schweiz) AG. Trina Solar Co., Ltd. does not have any direct material relationship with the Company or affiliates. However, pursuant to the Cooperation Agreement incorporated by reference hereto as Exhibit 10.4, (i) for so long as the Seller holds 15.4 million or more shares of Common Stock, it shall be entitled to designate for nomination one (1) director to T1’s board of directors and (ii) for as long as the Seller holds fifteen percent (15%) or more of shares of Common Stock, it shall be entitled to designate for nomination two (2) directors to T1’s board of directors. For so long as there is at least one (1) director designated by the Seller on the T1 board of directors and at least one (1) such director is an independent director in accordance with the applicable stock exchange listing rules, T1’s board of directors shall appoint a director designated by the Seller to each of (i) the nominating and corporate governance committee and (ii) the compensation committee.
- (3) This information is derived from Schedule 13D/A of Encompass Capital Advisors LLC filed with the SEC on August 15, 2025, including (i) 13,463,268 shares of Common Stock and (ii) 355,465 warrants, which are exercisable into shares of Common Stock, plus the First Tranche Preferred Stock, which was issued at an aggregate of 5,000,000 shares of Convertible Preferred Stock. These securities are held by certain accounts and funds managed by Encompass Capital Advisors LLC. Encompass Capital Partners LLC and Todd Jason Kantor, as the managing member of Encompass Capital Advisors LLC, may be deemed to control Encompass Capital Advisors LLC and beneficially own the securities held by certain funds and accounts managed by Encompass Capital Advisors LLC. Mr. Kantor maintains a material relationship with the Company by virtue of Mr. Kantor’s position as a director.

## U.S. FEDERAL INCOME TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax considerations generally applicable to the ownership and disposition of our Common Stock and Convertible Preferred Stock (individually or collectively, “Stock”) by a non-U.S. holder (as defined below). This discussion is based on currently existing provisions of the Internal Revenue Code of 1986, as amended (the “Code”), Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service (the “IRS”), in each case in effect as of the date hereof and all of which are subject to change or to differing interpretation, possibly with retroactive effect. Accordingly, the U.S. federal income tax considerations applicable to the ownership and disposition of our Stock by a non-U.S. holder could differ from those described below.

For purposes of this discussion, a “non-U.S. holder” is a beneficial owner of our Stock that is not, for U.S. federal income tax purposes, any of the following:

- a citizen or individual resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or any state or political subdivision thereof;
- any entity or arrangement treated as a partnership for U.S. federal income tax purposes;
- an estate the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to (A) the primary supervision of a court within the United States and (B) the authority of one or more U.S. persons to control all substantial decisions of the trust, or (2) has a valid election in effect to be treated as a U.S. person.

If a partnership (including any entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our Stock, the tax treatment of a partner (or other beneficial owner) will generally depend upon the status of the partner (or other beneficial owner) and the activities of the partnership. Any entity or arrangement treated as a partnership for U.S. federal income tax purposes that holds our Stock, and any owners of such an entity or arrangement, should consult their own tax advisors regarding the tax considerations applicable to an investment in our Stock.

This discussion applies only to non-U.S. holders of our Stock who hold such Stock as a “capital asset” within the meaning of the Code (generally, property held for investment). This discussion does not address the applicability of the alternative minimum tax or the Medicare tax on net investment income, any U.S. federal estate or gift tax, or foreign, state or local tax considerations applicable to the ownership and disposition of our Stock. In addition, this discussion does not address all aspects of U.S. federal income taxation that may be relevant to non-U.S. holders of our Stock in light of their particular circumstances, nor does it address the U.S. federal income tax considerations applicable to non-U.S. holders of our Stock that are subject to special rules, including, without limitation:

- tax-exempt organizations;
- retirement plans;
- banks, insurance companies, and other financial institutions;
- mutual funds;
- regulated investment companies or real estate investment trusts;
- expatriates or holders who have a “functional currency” other than the U.S. dollar;
- controlled foreign corporations;
- passive foreign investment companies; and
- holders who have, at any point, actually or constructively owned more than 5% of any class of our stock.

Non U.S. holders of our Stock described in the foregoing sentence and U.S. persons who hold our Stock should consult their own tax advisors as to the tax considerations applicable to the ownership and disposition of our Stock with respect to their particular circumstances.

No ruling has been or will be sought from the IRS with respect to any of the U.S. federal income tax considerations discussed below, and no assurance can be given that the IRS will not take a position contrary to the discussion below.

**If you are considering the purchase of our Stock, you should consult your own tax advisor concerning the particular U.S. federal income, estate and other tax considerations applicable to you of owning and disposing of our Stock, as well as the considerations applicable to you under the laws of any other applicable taxing jurisdiction (including any state, local or foreign tax laws) in light of your particular circumstances.**

#### **U.S. Federal Income Tax Characterization of the Convertible Preferred Stock**

The determination of whether a security should be classified as indebtedness or equity for U.S. federal income tax purposes requires a judgment based on all relevant facts and circumstances. There is no statutory, judicial or administrative authority that directly addresses the U.S. federal income tax treatment of securities substantially similar to the Convertible Preferred Stock. Based upon the analysis of the relevant facts and circumstances, we believe the Convertible Preferred Stock should be classified as equity for U.S. federal income tax purposes and we intend to so treat the Convertible Preferred Stock. By investing in the Convertible Preferred Stock, holders of the Convertible Preferred Stock agree to treat the Convertible Preferred Stock as equity for U.S. federal income tax purposes, unless otherwise required by applicable law. There can be no assurance, however, that the IRS will not treat the Convertible Preferred Stock as indebtedness for U.S. federal income tax purposes and such treatment, if successfully asserted by the IRS, may have adverse U.S. federal income tax consequences to a holder of the Convertible Preferred Stock. The remainder of this discussion assumes that the Convertible Preferred Stock will be treated as equity for U.S. federal income tax purposes.

**Each prospective investor in Convertible Preferred Stock should consult its tax advisors with respect to the characterization of the Convertible Preferred Stock as debt or equity for U.S. federal income tax purposes.**

#### **Distributions on Stock**

In general, a distribution, if any, of cash or other property (other than certain distributions of our stock) with respect to our Stock, the distribution will be treated as a dividend for U.S. federal income tax purposes to the extent of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Any portion of a distribution that exceeds our current and accumulated earnings and profits will generally be treated first as a tax free return of capital, on a share by share basis, to the extent of the non-U.S. holder's adjusted tax basis in our Stock, and, to the extent such portion exceeds the non-U.S. holder's adjusted tax basis in our Stock, the excess will be treated as gain from the disposition of the Stock.

The gross amount of dividends paid to a non-U.S. holder with respect to our Stock will generally be subject to U.S. federal withholding tax at a rate of 30%, unless (1) an applicable income tax treaty reduces or eliminates such tax, and the non-U.S. holder certifies that it is eligible for the benefits of such treaty by timely providing the proper IRS documentation to the applicable withholding agent, or (2) the dividends are effectively connected with the non-U.S. holder's conduct of a trade or business in the United States (and, where required by an applicable income tax treaty, are attributable to a permanent establishment maintained by the non-U.S. holder in the United States) and the non-U.S. holder satisfies certain certification and disclosure requirements. In the latter case, a non-U.S. holder will generally be subject to U.S. federal income tax with respect to such dividends on a net income basis in the same manner as if the non-U.S. holder were a U.S. person. Additionally, a non-U.S. holder that is a corporation may be subject to an additional "branch profits tax" at a 30% rate (or such lower rate as may be specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year, as adjusted for certain items

The foregoing discussion is subject to the discussion below under "—Foreign Account Tax Compliance Act."

#### **Sale or other Disposition of Stock**

A non-U.S. Holder will generally not be subject to U.S. federal income tax on any gain realized upon a disposition of our Stock unless (1) the gain is effectively connected with such non-U.S. holder's conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States), or (2) such non-U.S. holder is an individual present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are satisfied.

If the first exception applies, the non-U.S. holder will generally be subject to U.S. federal income tax on a net basis and, if it is a foreign corporation, may be subject to a 30% branch profits tax (or lower applicable treaty rate). If the second exception applies, the non-U.S. holder will generally be subject to U.S. federal income tax at a rate of 30% (or at a reduced rate under an applicable income tax treaty) on the amount by which capital gains allocable to U.S. sources (including gains from the sale, exchange, retirement or other disposition of our Stock) exceed capital losses allocable to U.S. sources.

### **Foreign Account Tax Compliance Act**

Sections 1471 through 1474 of the Code and the Treasury Regulations and administrative guidance promulgated thereunder (commonly referred to as the “Foreign Account Tax Compliance Act” or “FATCA”) generally impose withholding at a rate of 30% in certain circumstances on dividends in respect of our Stock which is held by or through certain foreign financial institutions (including investment funds), unless any such institution (1) enters into, and complies with, an agreement with the IRS to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution that are owned by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments, or (2) if required under an intergovernmental agreement between the United States and an applicable foreign country, reports such information to its local tax authority, which will exchange such information with the U.S. authorities. An intergovernmental agreement between the United States and an applicable foreign country, or other guidance, may modify these requirements. Accordingly, the entity through which our Stock is held will affect the determination of whether such withholding is required. Similarly, dividends, if any, in respect of our Stock held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exemptions will generally be subject to withholding at a rate of 30%, unless such entity either (1) certifies to us or the applicable withholding agent that such entity does not have any “substantial United States owners” or (2) provides certain information regarding the entity’s “substantial United States owners,” which we or the applicable withholding agent will, in turn, provide to the U.S. Department of the Treasury. We will not pay any additional amounts to investors in respect of any amounts withheld. Prospective investors should consult their tax advisors regarding the possible implications of FATCA on their investment in our Stock.

THIS DISCUSSION OF U.S. FEDERAL INCOME TAX CONSIDERATIONS IS NOT INTENDED TO BE, AND SHOULD NOT BE CONSTRUED AS, TAX ADVICE. THE FOREGOING SUMMARY IS NOT A SUBSTITUTE FOR AN INDIVIDUAL ANALYSIS OF THE TAX CONSIDERATIONS APPLICABLE TO YOU OF THE OWNERSHIP AND DISPOSITION OF OUR STOCK, WHICH ANALYSIS MAY BE COMPLEX AND WILL DEPEND ON YOUR SPECIFIC SITUATION. WE URGE YOU TO CONSULT A TAX ADVISOR REGARDING THE PARTICULAR FEDERAL, STATE, LOCAL AND FOREIGN TAX CONSIDERATIONS APPLICABLE TO YOU OF THE OWNERSHIP AND DISPOSITION OF OUR STOCK.

## PLAN OF DISTRIBUTION FOR SECURITIES OFFERED BY SELLING SECURITYHOLDERS

On behalf of the Selling Securityholders, we are registering 75,289,724 shares of Common Stock and 5,000,000 shares of Convertible Preferred Stock to permit the Selling Securityholders to conduct public secondary trading of these securities from time to time after the date of this prospectus. The Selling Securityholders or their permitted transferees may offer, sell or distribute all or a portion of the Common Stock or the Convertible Preferred Stock, following the approval of such listing of Convertible Preferred Stock, publicly or through private transactions at fixed prices, prevailing market prices or at negotiated prices, or at market prices prevailing at the time of sale.

Pending such approval, we believe the actual offering price in sales of our Convertible Preferred Stock by the Selling Securityholders will be derived from the following factors: (i) the prevailing market price of our Common Stock at the time of any such sale; (ii) the \$10.00 per share purchase price paid by the Selling Securityholders in connection with the original issuance of the Convertible Preferred Stock; and (iii) the Conversion Price of the Convertible Preferred Stock, until our listing application with the NYSE is approved. We cannot guarantee that our Convertible Preferred Stock will be approved for listing on the NYSE.

We will not receive any of the proceeds of the sale of the securities offered by the Selling Securityholders. The aggregate proceeds to the Selling Securityholders from the sale of the securities will be the purchase price of the securities less any discounts and commissions. We are paying certain expenses (other than commissions and discounts of underwriters, brokers, dealers or agents) incidental to the offering and sale of the securities covered by this prospectus by the Selling Securityholders to the public. The Selling Securityholders reserve the right to accept and, together with their respective agents, to reject, any proposed purchases of securities to be made directly or through agents.

Once issued, as applicable and upon effectiveness of the registration statement of which this prospectus forms a part, the Securities offered by this prospectus may be sold from time to time to purchasers:

- directly by the Selling Securityholders, or
- through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, commissions or agent's commissions from the Selling Securityholders or the purchasers of the securities.

Any underwriters, broker-dealers or agents who participate in the sale or distribution of the securities may be deemed to be "underwriters" within the meaning of the Securities Act. As a result, any discounts, commissions or concessions received by any such broker-dealer or agents who are deemed to be underwriters will be deemed to be underwriting discounts and commissions under the Securities Act. Underwriters are subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities under the Securities Act and the Exchange Act. We will make copies of this prospectus available to the Selling Securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. To our knowledge, there are currently no plans, arrangements or understandings between the Selling Securityholders and any underwriter, broker-dealer or agent regarding the sale of the securities by the Selling Securityholders.

The securities may be sold in one or more transactions at:

- fixed prices;
- prevailing market prices at the time of sale;
- prices related to such prevailing market prices;
- varying prices determined at the time of sale; or
- negotiated prices.

These sales may be effected in one or more transactions:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, including NYSE;
- in the over-the-counter market;
- in transactions otherwise than on such exchanges or services or in the over-the-counter market;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- one or more underwritten offerings;

- block trades in which the broker-dealer will attempt to sell the Common Stock or Convertible Preferred Stock as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its accounts;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- distributions to their members, employees, partners or shareholders;
- short sales effected after the date of the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- in market transactions, including transactions on a national securities exchange or quotations service or over-the-counter market;
- in “at the market” offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- directly to one or more purchasers;
- through agents;
- broker-dealers may agree with the Selling Securityholders to sell a specified number of such Common Stock or Convertible Preferred Stock at a stipulated price per share or warrant;
- any other method permitted by applicable law; or
- through any combination of the foregoing.

These transactions may include block transactions or crosses. Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

At the time a particular offering of the securities is made, a prospectus supplement will be distributed, which will set forth the name of the Selling Securityholders, the aggregate amount of securities being offered and the terms of the offering, including, to the extent required, (1) the name or names of any underwriters, broker-dealers or agents, (2) any discounts, commissions and other terms constituting compensation from the Selling Securityholders and (3) any discounts, commissions or concessions allowed or reallocated to be paid to broker-dealers. We may suspend the sale of securities by the Selling Securityholders pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in one business day, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than one scheduled business day after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the second business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than one scheduled business day after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement and/or any related free writing prospectus.

The anticipated date of delivery of offered securities will be set forth in the applicable prospectus supplement and/or any related free writing prospectus relating to each offer.

The Selling Securityholders will act independently of us in making decisions with respect to the timing, manner, and size of each resale or other transfer. There can be no assurance that the Selling Securityholders will sell any or all of the securities under this prospectus. Further, we cannot assure you that the Selling Securityholders will not transfer, distribute, devise or gift the securities by other means not described in this prospectus. In addition, any securities covered by this prospectus that qualify for sale under Rule 144 of the Securities Act may be sold under Rule 144 rather than under this prospectus. The securities may be sold in some states only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification is available and complied with.

The Selling Securityholders and any other person participating in the sale of the securities will be subject to the Exchange Act. The Exchange Act rules include, without limitation, Regulation M, which may limit the timing of purchases and sales of any of the securities by the Selling Securityholders and any other person. In addition, Regulation M may restrict the ability of any person engaged in the distribution of the Securities to engage in market-making activities with respect to the particular Shares being distributed.

This may affect the marketability of the securities and the ability of any person or entity to engage in market-making activities with respect to the securities.

The Selling Securityholders may, from time to time, pledge or grant a security interest in some of our Common Stock or Convertible Preferred Stock owned by them and, if a Selling Securityholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell such Common Stock or Convertible Preferred Stock, as applicable, from time to time, under this prospectus, or under an amendment or supplement to this prospectus amending the list of the Selling Securityholders to include the pledgee, transferee or other successors in interest as the Selling Securityholders under this prospectus. The Selling Securityholders also may transfer Common Stock or Convertible Preferred Stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

With respect to those securities being registered pursuant to the Trina Registration Rights Agreement, we have agreed to indemnify or provide contribution to the Selling Securityholders and all of their officers, directors and control persons, as applicable, and certain underwriters effecting sales of the securities against certain liabilities, including certain liabilities under the Securities Act. The Selling Securityholders have agreed to indemnify us in certain circumstances against certain liabilities, including certain liabilities under the Securities Act. Agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

For additional information regarding expenses of registration, see the section titled “*Use of Proceeds*” appearing elsewhere in this prospectus.

## LEGAL MATTERS

The legality of the Common Stock (including the Trina Shares, the Underlying Shares and the Conversion Shares) and Convertible Preferred Stock registered under this Registration Statement under New York law have been passed upon for T1 Energy by Skadden, Arps, Slate, Meagher & Flom (UK) LLP.

## EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2024 have been so incorporated in reliance on the report of PricewaterhouseCoopers AS, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting. PricewaterhouseCoopers AS is a member of Den norske Revisorforening.

The financial statements incorporated in this Prospectus by reference to the Current Report on Form 8-K/A filed with the SEC on March 10, 2025 have been so incorporated in reliance on the report of RSM China CPA LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to our securities offered by this prospectus. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and our securities. The rules and regulations of the SEC allow us to omit from this prospectus certain information included in the registration statement. For further information about us and the securities, you should refer to the registration statement and the exhibits and schedules filed with the registration statement. With respect to the statements contained in this prospectus regarding the contents of any agreement or any other document, in each instance, the statement is qualified in all respects by the complete text of the agreement or document, a copy of which has been filed as an exhibit to the registration statement.

We are subject to the reporting requirements of the Exchange Act, and its rules and regulations. The Exchange Act requires us to file reports and other information with the SEC. The SEC maintains a website that contains reports and other information regarding issuers that file electronically with the SEC. These materials may be obtained electronically by accessing the SEC's website at <http://www.sec.gov>.

We make available, free of charge on our website, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports filed or furnished pursuant to Section 13(a), 14 or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file these documents with, or furnish them to, the SEC. These documents are also posted on our website at [www.https://t1energy.com/](http://www.https://t1energy.com/). Any references in this prospectus to our website are inactive textual references only, and the information contained on or that can be accessed through our website (except for the SEC filings expressly incorporated by reference herein) is not incorporated in, and is not a part of, this prospectus.

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus information we file with the SEC in other documents. This means that we can disclose important information to you by referring to another document we filed with the SEC. The information relating to us contained in this prospectus should be read together with the information in the documents incorporated by reference.

We incorporate by reference the documents listed below that we have previously filed with the SEC (other than any document or portion of any document furnished or deemed furnished and not filed in accordance with SEC rules, including Items 2.02 and 7.01 of Form 8-K and Item 9.01 related thereto):

- Annual Report on [Form 10-K](#) and [Form 10-K/A](#) for the fiscal year ended December 31, 2024, filed with the SEC on March 31, 2025 and April 30, 2025, respectively;
- Quarterly Reports on Form 10-Q and Form 10-Q/A for the quarterly period ended March 31, 2025, filed with the SEC on [May 15, 2025](#) and [August 18, 2025](#), respectively, and for the quarterly period ended June 30, 2025 filed with the SEC on [August 19, 2025](#); and
- Current Reports on Form 8-K and Form 8-K/A, as applicable, filed with the SEC on [February 10, 2025](#), [February 14, 2025](#), [February 19, 2025](#), [March 4, 2025](#), [March 10, 2025](#), [March 14, 2025](#), [April 9, 2025](#), [April 28, 2025](#), [May 1, 2025](#), [May 15, 2025](#), [June 26, 2025](#), [July 3, 2025](#), [August 14, 2025](#), [August 15, 2025](#), [August 18, 2025](#), [August 20, 2025](#), [September 4, 2025](#), [September 5, 2025](#) and [September 11, 2025](#).

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus, which will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings update and supplement the information provided in this prospectus.

The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC and incorporate by reference in this prospectus will automatically update and supersede this previously filed information, as applicable, including information in previously filed documents or reports that have been incorporated by reference into this prospectus. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated by reference in this prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into such documents. Requests may be made by telephone at 409-599-5706, or by sending a written request to T1 Energy Inc., 1211 E 4th St. Austin, Texas 78702, Attention: Jeffery Spittel. Exhibits to any documents incorporated by reference in this prospectus will not be sent, however, unless those exhibits have specifically been incorporated by reference into such documents.

You should rely only on the information incorporated by reference or provided in this prospectus or any supplement. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any supplement is accurate as of any date other than the date on the front of those documents or as of any earlier date as of which such information is given.

**PART II**

**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution.**

The following table sets forth the estimated expenses to be borne by the registrant in connection with the issuance and distribution of the securities being registered hereby.

<b>SEC registration fees</b>	<b>\$ 22,171.68</b>
<b>FINRA filing fees</b>	<b>\$ *</b>
<b>Transfer agent, trustee and registrar fees</b>	<b>\$ *</b>
<b>Accounting fees and expenses</b>	<b>\$ *</b>
<b>Legal fees and expenses</b>	<b>\$ *</b>
<b>Financial printing and miscellaneous expenses</b>	<b>\$ *</b>
<b>Blue Sky fees and expenses</b>	<b>\$ *</b>
<b>Total</b>	<b>\$ *</b>

\* These fees and expenses (other than the SEC registration fee to be paid upon the filing of this registration statement) will depend on the number and nature of the offerings, and cannot be estimated at this time. An estimate of the aggregate expenses in connection with the issuance and distribution of securities being offered will be included in any applicable prospectus supplement.

**Item 15. Indemnification of Directors and Officers.**

T1 Energy is subject to the laws of Delaware on corporate matters, including its indemnification provisions. Section 102 of the DGCL permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145(a) of the DGCL provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), because he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the DGCL provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made with respect to any claim, issue or matter as to which he or she shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, he or she is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or other adjudicating court shall deem proper.

Section 145(g) of the DGCL provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against such liability under Section 145 of the DGCL.

The Second Amended and Restated Certificate of Incorporation provides that no Director of T1 Energy will be personally liable to T1 Energy or its stockholders for monetary damages for any breach of fiduciary duty as a director of T1 Energy. In addition, the Second Amended and Restated Certificate of Incorporation provides that if the DGCL is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of T1 Energy shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

The Second Amended and Restated Certificate of Incorporation further provides that any repeal or modification of such article will not adversely affect any right or protection of a director of T1 Energy existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification.

The Second Amended and Restated Bylaws provide that T1 Energy will indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of T1 Energy), by reason of the fact that such person is or was a director or officer of T1 Energy, as the latter term is defined in Section 16 of the Exchange Act, or is or was a director or officer of T1 Energy serving at the request of T1 Energy as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of T1 Energy, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful.

T1 Energy will indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of T1 Energy to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of T1 Energy, as the latter term is defined in Section 16 of the Exchange Act, or is or was a director or officer of T1 Energy serving at the request of T1 Energy as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of T1 Energy; except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to T1 Energy unless and only to the extent that the Court of Chancery of the State of Delaware or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Expenses (including attorneys' fees) incurred by a director or officer of T1 Energy in defending any civil, criminal, administrative or investigative action, suit or proceeding will be paid by T1 Energy in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of such director or officer to repay such amount if it shall ultimately be determined that such person is not entitled to be indemnified by T1 Energy. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents of the corporation or by persons serving at the request of the corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as T1 Energy deems appropriate.

T1 Energy also maintains a general liability insurance policy, which covers certain liabilities of directors and officers of T1 Energy arising out of claims based on acts or omissions in their capacities as directors or officers.

As permitted by Section 102(b)(7) of the DGCL, T1 Energy’s Second Amended and Restated Certificate of Incorporation contains a provision eliminating the personal liability of a director to T1 Energy or its stockholders for monetary damages for breach of fiduciary duty as a director, subject to certain exceptions.

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

**Item 16. Exhibits and Financial Statement Schedules.**

<b>Exhibit No.</b>	<b>Description</b>
2.1	<a href="#"><u>Business Combination Agreement, dated as of January 29, 2021, by and among Alussa Energy Acquisition Corp., Alussa Energy Sponsor LLC, FREYR AS, ATS AS, Norway Sub 1 AS, Norway Sub 2 AS, Adama Charlie Sub, FREYR Battery, and the Major Shareholders, included as Annex A to the proxy statement/prospectus (Incorporated by reference to Exhibit 2.1 to FREYR Battery’s Registration Statement on Form S-4 filed with the SEC on March 26, 2021)</u></a>
2.2++	<a href="#"><u>Transaction Agreement by and among FREYR Battery, Inc. and Trina Solar (Schweiz) AG, dated as of November 6, 2024 (Incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on November 6, 2024)</u></a>
3.1	<a href="#"><u>Second Amended and Restated Certificate of Incorporation of T1 Energy Inc., a Delaware corporation (Incorporated by reference to Exhibit 3.1 to the Annual Report on Form 10-K filed with the SEC on March 31, 2025)</u></a>
3.2	<a href="#"><u>Second Amended and Restated Bylaws of T1 Energy Inc., a Delaware corporation (Incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed with the SEC on February 19, 2025)</u></a>
4.1	<a href="#"><u>Amended and Restated Certificate of Designation of Series A Convertible Preferred Stock of T1 Energy Inc., dated September 2, 2025 (Incorporated by reference to Exhibit 4.1 to Amendment No. 2 to the Registration Statement on Form S-3 filed with the SEC on September 3, 2025)</u></a>
5.1	<a href="#"><u>Opinion of Skadden, Arps, Slate, Meagher &amp; Flom (UK) LLP<sup>(a)</sup></u></a>
10.1	<a href="#"><u>Form of Registration Rights Agreement (Incorporated by reference to Exhibit 10.6 to the Current Report on Form 8-K filed with the SEC on November 6, 2024)</u></a>
10.2++	<a href="#"><u>Preferred Stock Purchase Agreement entered into on November 6, 2024 by and between FREYR Battery, Inc. and certain funds and accounts managed by Encompass Capital Advisors LLC, (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the SEC on November 6, 2024)</u></a>
10.3++	<a href="#"><u>Amendment No. 3 to the Preferred Stock Purchase Agreement, dated as of August 13, 2025 (Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the SEC on August 14, 2025)</u></a>
10.4	<a href="#"><u>Form of Convertible Note Instrument (Incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on November 6, 2024)</u></a>
10.5	<a href="#"><u>Cooperation Agreement by and between FREYR Battery, Inc. and Trina Solar (Schweiz) AG, dated as of December 23, 2024 (Incorporated by reference to Exhibit 10.5 to the Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on December 27, 2024)<sup>(b)</sup></u></a>
23.1	<a href="#"><u>Consent of PricewaterhouseCoopers AS<sup>(a)</sup></u></a>
23.2	<a href="#"><u>Consent of RSM China CPA LLP<sup>(a)</sup></u></a>
23.3	<a href="#"><u>Consent of Skadden, Arps, Slate, Meagher &amp; Flom (UK) LLP (Included in Exhibit 5.1)<sup>(a)</sup></u></a>
24.1	<a href="#"><u>Power of Attorney (Incorporated signature on pages hereto)<sup>(b)</sup></u></a>
107	<a href="#"><u>Filing Fee Table<sup>(a)</sup></u></a>

(a) Filed herewith.

(b) Previously filed.

++ Certain portions of this exhibit (indicated by “[\*\*\*]”) have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K because it is not material and is the type of information that the registrant treats as private or confidential.

**Item 17. Undertakings.**

(a) The undersigned registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
  - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the “Calculation of Filing Fee Tables” in the effective registration statement; and

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

Provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

2. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
4. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
  - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
  - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
5. That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

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

- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby further undertakes:
- (i) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
  - (ii) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.
  - (iii) To file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the SEC under Section 305(b)(2) of the Securities Act.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Amendment No. 4 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Austin, Texas, on September 23, 2025.

**T1 Energy Inc.**

By: /s/ Daniel Barcelo  
 Name: Daniel Barcelo  
 Title: Chief Executive Officer and Chairman  
 of the Board of Directors

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Daniel Barcelo</u> Daniel Barcelo	Chief Executive Officer and Chairman of the Board of Directors (Principal executive officer)	September 23, 2025
* <u>Evan Calio</u>	Chief Financial Officer (Principal financial officer)	September 23, 2025
* <u>Denise Cruz</u>	Chief Accounting Officer (Principal accounting officer)	September 23, 2025
* <u>W. Richard Anderson</u>	Director	September 23, 2025
* <u>Mingxing Lin</u>	Director	September 23, 2025
* <u>David Manners</u>	Director	September 23, 2025
* <u>Todd Kantor</u>	Director	September 23, 2025
* <u>Peter Matrai</u>	Director	September 23, 2025
* <u>Tore Ivar Slettemoen</u>	Director	September 23, 2025
* <u>Daniel Steingart</u>	Director	September 23, 2025
* <u>Jessica Wirth Strine</u>	Director	September 23, 2025

\*By: /s/ Daniel Barcelo  
 Daniel Barcelo  
 Attorney-in-Fact

SKADDEN, ARPS, SLATE, MEAGHER & FLOM (UK) LLP  
 22 BISHOPSGATE  
 LONDON EC2N 4BQ

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 SEOUL  
 SINGAPORE  
 TOKYO  
 TORONTO

September 23, 2025

T1 Energy Inc.  
 1211 E 4th St.  
 Austin, Texas 78702  
 409-599-5706

Re: T1 Energy Inc.  
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as special United States counsel to T1 Energy Inc., a Delaware corporation (the "Company"), in connection with the resale by the selling stockholders identified in Schedule A hereto (the "Selling Stockholders") of up to (i) 5,000,000 shares of the Company's Series A Convertible Preferred Stock (the "Convertible Preferred Stock"), par value \$0.01 per share (the "Preferred Stock"), (ii) 15,437,847 shares (the "Trina Shares") of common stock, par value \$0.01 per share (the "Common Stock"), of the Company as consideration for certain transactions with Trina Solar (Schweiz) AG (the "Seller"), (iii) 29,411,764 shares of the Common Stock underlying the Convertible Preferred Stock (the "Underlying Shares") and (iii) 30,440,113 shares of Common Stock underlying an \$80.0 million seven percent (7%) unsecured convertible note due in five (5) years (the "Convertible Note") dated December 23, 2024 between the Company and the Seller (the "Convertible Note Instrument") (the "Conversion Shares"). We have been advised that (i) the Convertible Preferred Stock was issued pursuant to a preferred stock purchase agreement, dated as of November 6, 2024, between the Company and certain funds and accounts managed by Encompass Capital Advisors LLC, as amended (the "Preferred Stock Purchase Agreement"), (ii) the Trina Shares were issued pursuant to a transaction agreement, dated as of November 6, 2024, between the Company and the Seller (the "Transaction Agreement"), together with the Preferred Stock Purchase Agreement and the Convertible Note Instrument, the "Transaction Documents"), (iii) the Underlying Shares are issuable pursuant to the Preferred Stock Purchase Agreement and (iv) the Conversion Shares are issuable pursuant to the Convertible Note Instrument. The Convertible Preferred Stock, the Trina Shares, the Underlying Shares and the Conversion Shares are collectively referred to herein as the "Securities."

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act of 1933 (the “Securities Act”).

In rendering the opinions stated herein, we have examined and relied upon the following:

(a) the registration statement on Form S-3 of the Company relating to the Securities filed on September 23, 2025 with the Securities and Exchange Commission (the “Commission”) under the Securities Act, allowing for delayed offerings pursuant to Rule 415 of the General Rules and Regulations under the Securities Act (the “Rules and Regulations”) (such registration statement being hereinafter referred to as the “Registration Statement”);

(b) the preliminary prospectus, dated as of the date hereof, which forms a part of and is included in the Registration Statement;

(c) an executed copy of the Preferred Stock Purchase Agreement;

(d) an executed copy of the Transaction Agreement;

(e) an executed copy of the Convertible Note Instrument;

(f) an executed copy of a certificate of Peter del Vecchio, Interim Chief Legal Officer and Chief Compliance Officer of the Company, dated the date hereof (the “Secretary’s Certificate”);

(g) a copy of the Company’s Amended and Restated Certificate of Incorporation certified by the Secretary of State of the State of Delaware as of December 19, 2023, November 4, 2024, December 22, 2024 and February 19, 2025, and certified pursuant to the Secretary’s Certificate (the “Amended and Restated Certificate of Incorporation”);

(h) a copy of the Company’s Amended and Restated Bylaws, as amended and in effect as of the date hereof and on December 19, 2023, November 4, 2024 and December 22, 2024 and certified pursuant to the Secretary’s Certificate (the “Amended and Restated Bylaws”);

(i) a copy of the Company’s Certificate of Designation certified by the Secretary of State of the State of Delaware as of December 23, 2024, and certified pursuant to the Secretary’s Certificate (the “Certificate of Designation”); and

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(j) a copy of certain resolutions of the Board of Directors of the Company, adopted on (i) December 19, 2023, (ii) November 4, 2024 and (iii) December 22, 2024, each certified pursuant to the Secretary's Certificate.

We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and the Selling Stockholders and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company, the Selling Stockholders and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinions stated below.

In our examination, we have assumed the genuineness of all signatures, including electronic signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photocopied copies, and the authenticity of the originals of such copies. With respect to our opinions set forth in paragraphs 1 and 3 below, we have assumed that (i) the Company received the consideration for the Convertible Preferred Stock and the Trina Shares set forth in the Preferred Stock Purchase Agreement and Transaction Agreement, respectively, and the applicable board resolutions and (ii) the issuances of the Convertible Preferred Stock and the Trina Shares have been registered in the Company's share registry. As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and the Selling Stockholders and others and of public officials, including the facts and conclusions set forth in the Secretary's Certificate and the Amended and Restated Certificate of Incorporation and the factual representations and warranties set forth in the Transaction Documents.

We do not express any opinion with respect to the laws of any jurisdiction other than the General Corporation Law of the State of Delaware (the "DGCL").

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

1. The Convertible Preferred Stock has been duly authorized by all requisite corporate action on the part of the Company under the DGCL and has been validly issued and are fully paid and nonassessable.
  2. The Underlying Shares initially issuable upon the conversion of the Convertible Preferred Stock pursuant to the Certificate of Designation have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and when issued upon conversion of the Convertible Preferred Stock in accordance with the Certificate of Designation, will be validly issued, fully paid and nonassessable.
  3. The Trina Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and have been validly issued and are fully paid and nonassessable.
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4. The Conversion Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and when issued and delivered upon conversion of the Convertible Note in accordance with the Convertible Note Instrument, will be validly issued, fully paid and nonassessable.

In addition, in rendering the foregoing opinions we have assumed that:

(a) the Company's issuances of the Underlying Shares and the Conversion Shares do not and will not and the issuances of the First Tranche Convertible Preferred Stock and the Trina Shares did not and will not (i) except to the extent expressly stated in the opinions contained herein, violate any statute to which the Company or such issuance is subject, or (ii) constitute a violation of, or a breach under, or require the consent or approval of any other person under, any agreement or instrument binding on the Company (except that we do not make this assumption with respect to the Amended and Restated Certificate of Incorporation, the Amended and Restated Bylaws, the Certificate of Designation or those agreements or instruments expressed to be governed by the laws of the State of New York which are listed in Part II of the Registration Statement or the Company's Annual Report on Form 10-K for the year ended December 31, 2024), although we have assumed compliance with any covenant, restriction or provision with respect to financial ratios or tests or any aspect of the financial condition or results of operations of the Company contained in such agreements or instruments), and we have further assumed that the Company will continue to have sufficient authorized shares of Common Stock and Preferred Stock.

(b) the Company's authorized capital stock is as set forth in the Amended and Restated Certificate of Incorporation and the Certificate of Designation, and we have relied solely on the certified copies thereof issued by the Secretary of State of the State of Delaware and have not made any other inquiries or investigations.

This opinion letter shall be interpreted in accordance with customary practice of United States lawyers who regularly give opinions in transactions of this type.

We hereby consent to the reference to our firm under the heading "Legal Matters" in the prospectus forming part of the Registration Statement. We also hereby consent to the filing of this opinion letter with the Commission as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations.

Very truly yours,

/s/ Skadden, Arps, Slate, Meagher & Flom (UK) LLP

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Schedule A

<u>Selling Stockholder</u>	<u>Total Number of Shares to be Sold</u>
Certain funds and accounts managed by Encompass Capital Advisors LLC	5,000,000 shares of Preferred Stock 29,411,764 shares of Common Stock
Trina Solar (Schweiz) AG	45,877,960 shares of Common Stock

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of T1 Energy Inc. of our report dated March 31, 2025 relating to the financial statements, which appears in T1 Energy Inc.'s Annual Report on Form 10-K for the year ended December 31, 2024. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers AS  
Oslo, Norway  
September 23, 2025

**Consent of Independent Auditor**

We consent to the incorporation by reference in this Registration Statement on Form S-3 of T1 Energy, Inc. of our report dated March 10, 2025, relating to Audited financial statements of the Target (combined carve-out financial statements of Trina Solar (U.S.) Holding Inc.), appearing in the Current Report on Form 8-K/A filed by T1 Energy, Inc. on March 10, 2025.

We also consent to the reference to our firm under the heading “Experts” in such Registration Statement.

RSM China CPA LLP

/s/ RSM China CPA LLP

Beijing, China  
September 23, 2025

## CALCULATION OF FILING FEE TABLES

S-3

## T1 Energy Inc.

Table 1: Newly Registered and Carry Forward Securities

Line Item Type	Security Type	Security Class Title	Notes	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
<i>Newly Registered Securities</i>									
Fees Previously Paid	Equity	Common Stock, par value of \$0.01 per share	(1)	Other	65,877,960	\$ 1.19	\$ 78,394,772.40	0.0001531	\$ 12,002.24
Fees Previously Paid	Equity	Convertible Preferred Stock	(2)	457(o)	0	0.00	50,000,000.00	0.0001531	7,655.00
Fees to be Paid	Equity	Common Stock, par value of \$0.01 per share	(3)	Other	9,411,764	\$ 1.7450	\$ 16,423,528.18	0.0001531	\$ 2,514.44
						Total Offering Amounts:	\$ 144,818,300.58		22,171.68
						Total Fees Previously Paid:			19,657.24
						Total Fee Offsets:			0.00
						Net Fee Due:			<u>\$ 2,514.44</u>

Offering Note(s)

- (1) Pursuant to Rule 416(a), there are also being registered an indeterminable number of additional securities as may be issued to prevent dilution resulting from share sub-divisions, share dividends or similar transactions.

Estimated solely for the purpose of calculating the amount of the registration fee.

This Registration Statement on Form S-3 covers: (1) shares of common stock, par value of \$0.01 per share (“Common Stock”), of T1 Energy, Inc. (the “Company” or “Registrant”), (i) issued as part of the total consideration for the transactions under the transaction agreement dated November 6, 2024 between the Company and Trina Solar (Schweiz) AG (the “Seller”), by the Company to the Seller in aggregate amount of 15,437,847 shares of Common Stock; (ii) issuable in an aggregate of up to 29,411,764 shares of Common Stock underlying the 5,000,000 preferred shares (the “Convertible Preferred Stock”), which comprises one of two tranches of 5,000,000 shares of Convertible Preferred Stock purchased by certain funds and accounts managed by Encompass Capital Advisors LLC (“Encompass”) pursuant to a preferred stock purchase agreement dated as of November 6, 2024, as amended, among the Company and Encompass, pursuant to which Encompass purchased non-voting Convertible Preferred Stock of the Company in exchange for \$100.0 million, to be funded across two tranches of \$50.0 million each, and with a conversion price of (x) \$1.70 per share of Common Stock for the first tranche issuance of such Convertible Preferred Stock, and (y) \$1.90 per share of Common Stock for the second tranche issuance of such Convertible Preferred Stock if the 10-day VWAP of the Common Stock immediately prior to the conversion date of the Convertible Preferred Stock is \$2.50 or more per share of Common Stock (being the greater of the conversion prices for the second tranche issuance), and assuming no accrued and unpaid dividends; the conversion price of the second tranche issuance will be reduced to \$1.70 per share of Common Stock in the event that the 10-day VWAP of the Common Stock immediately prior to the conversion date is less than \$2.50 per share of Common Stock; and (iii) 30,440,113 shares of Common Stock underlying the \$80.0 million, 7% unsecured convertible note due in 5 years (the “Convertible Note Instrument”) issued to the Seller, which is convertible in up to two conversions, comprising (a) 12,521,653 shares in the first conversion and (b) 17,918,460 shares from the second conversion (the second conversion of the Convertible Note Instrument is also subject to the Company obtaining stockholder approval prior to such second conversion); and (2) 5,000,000 shares of Convertible Preferred Stock. On September 5, 2025, as part of the first conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to the Seller.

Estimated in accordance with Rule 457(c) of the Securities Act, and solely for the purpose of calculating the registration fee, the proposed maximum offering price for the Common Stock in connection with the Common Stock is an amount equal to \$1.19, the average of the high (\$1.23) and low (\$1.15) prices of the Company’s Common Stock on the NYSE on April 2, 2025.

Determined in accordance with Section 6(b) of the Securities Act, a rate equal to \$153.10 per \$1,000,000 of the proposed maximum aggregate offering price.

- (2) Pursuant to Rule 416(a), there are also being registered an indeterminable number of additional securities as may be issued to prevent dilution resulting from share sub-divisions, share dividends or similar transactions.

Estimated solely for the purpose of calculating the amount of the registration fee.

This Registration Statement on Form S-3 covers: (1) shares of common stock, par value of \$0.01 per share (“Common Stock”), of T1 Energy, Inc. (the “Company” or “Registrant”), (i) issued as part of the total consideration for the transactions under the transaction agreement dated November 6, 2024 between the Company and Trina Solar (Schweiz) AG (the “Seller”), by the Company to the Seller in aggregate amount of 15,437,847 shares of Common Stock; (ii) issuable in an aggregate of up to 29,411,764 shares of Common Stock underlying the 5,000,000 preferred shares (the “Convertible Preferred Stock”), which comprises one of two tranches of 5,000,000 shares of Convertible Preferred Stock purchased by certain funds and accounts managed by Encompass Capital Advisors LLC (“Encompass”) pursuant to a preferred stock purchase agreement dated as of November 6, 2024, as amended, among the Company and Encompass, pursuant to which Encompass purchased non-voting Convertible Preferred Stock of the Company in exchange for \$100.0 million, to be funded across two tranches of \$50.0 million each, and with a conversion price of (x) \$1.70 per share of Common Stock for the first tranche issuance of such Convertible Preferred Stock, and (y) \$1.90 per share of Common Stock for the second tranche issuance of such Convertible Preferred Stock if the 10-day VWAP of the Common Stock immediately prior to the conversion date of the Convertible Preferred Stock is \$2.50 or more per share of Common Stock (being the greater of the conversion prices for the second tranche issuance), and assuming no

accrued and unpaid dividends; the conversion price of the second tranche issuance will be reduced to \$1.70 per share of Common Stock in the event that the 10-day VWAP of the Common Stock immediately prior to the conversion date is less than \$2.50 per share of Common Stock; and (iii) 30,440,113 shares of Common Stock underlying the \$80.0 million, 7% unsecured convertible note due in 5 years (the "Convertible Note Instrument") issued to the Seller, which is convertible in up to two conversions, comprising (a) 12,521,653 shares in the first conversion and (b) 17,918,460 shares from the second conversion (the second conversion of the Convertible Note Instrument is also subject to the Company obtaining stockholder approval prior to such second conversion); and (2) 5,000,000 shares of Convertible Preferred Stock. On September 5, 2025, as part of the first conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to the Seller.

Determined in accordance with Section 6(b) of the Securities Act, a rate equal to \$153.10 per \$1,000,000 of the proposed maximum aggregate offering price.

The registration fee is calculated in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act"), based on the proposed maximum aggregate offering price.

- (3) Pursuant to Rule 416(a), there are also being registered an indeterminable number of additional securities as may be issued to prevent dilution resulting from share sub-divisions, share dividends or similar transactions.

Estimated solely for the purpose of calculating the amount of the registration fee.

This Registration Statement on Form S-3 covers: (1) shares of common stock, par value of \$0.01 per share ("Common Stock"), of T1 Energy, Inc. (the "Company" or "Registrant"), (i) issued as part of the total consideration for the transactions under the transaction agreement dated November 6, 2024 between the Company and Trina Solar (Schweiz) AG (the "Seller"), by the Company to the Seller in aggregate amount of 15,437,847 shares of Common Stock; (ii) issuable in an aggregate of up to 29,411,764 shares of Common Stock underlying the 5,000,000 preferred shares (the "Convertible Preferred Stock"), which comprises one of two tranches of 5,000,000 shares of Convertible Preferred Stock purchased by certain funds and accounts managed by Encompass Capital Advisors LLC ("Encompass") pursuant to a preferred stock purchase agreement dated as of November 6, 2024, as amended, among the Company and Encompass, pursuant to which Encompass purchased non-voting Convertible Preferred Stock of the Company in exchange for \$100.0 million, to be funded across two tranches of \$50.0 million each, and with a conversion price of (x) \$1.70 per share of Common Stock for the first tranche issuance of such Convertible Preferred Stock, and (y) \$1.90 per share of Common Stock for the second tranche issuance of such Convertible Preferred Stock if the 10-day VWAP of the Common Stock immediately prior to the conversion date of the Convertible Preferred Stock is \$2.50 or more per share of Common Stock (being the greater of the conversion prices for the second tranche issuance), and assuming no accrued and unpaid dividends; the conversion price of the second tranche issuance will be reduced to \$1.70 per share of Common Stock in the event that the 10-day VWAP of the Common Stock immediately prior to the conversion date is less than \$2.50 per share of Common Stock; and (iii) 30,440,113 shares of Common Stock underlying the \$80.0 million, 7% unsecured convertible note due in 5 years (the "Convertible Note Instrument") issued to the Seller, which is convertible in up to two conversions, comprising (a) 12,521,653 shares in the first conversion and (b) 17,918,460 shares from the second conversion (the second conversion of the Convertible Note Instrument is also subject to the Company obtaining stockholder approval prior to such second conversion); and (2) 5,000,000 shares of Convertible Preferred Stock. On September 5, 2025, as part of the first conversion of the Convertible Note Instrument, the Company issued 12,521,653 shares of Common Stock underlying the Convertible Note Instrument to the Seller.

Determined in accordance with Section 6(b) of the Securities Act, a rate equal to \$153.10 per \$1,000,000 of the proposed maximum aggregate offering price.

Estimated in accordance with Rule 457(c) of the Securities Act, and solely for the purpose of calculating the registration fee, the proposed maximum offering price for the Common Stock in connection with the Common Stock is an amount equal to \$1.825, the average of the high (\$1.79) and low (\$1.70) prices of the Company's Common Stock on the NYSE on September 16, 2025.