

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

FORM S-3
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

Talen Energy Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation
or organization)

47-1197305
(I.R.S. Employer Identification No.)

2929 Allen Pkwy, Suite 2200
Houston, TX 77019
(888) 211-6011
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Mark "Mac" A. McFarland, Chief Executive Officer
Talen Energy Corporation
2929 Allen Pkwy, Suite 2200
Houston, TX 77019
(888) 211-6011
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public:
From time to time after the effective date of this registration statement.

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, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

If this Form is a 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 Accelerated filer Emerging growth company
Non-accelerated filer Smaller reporting 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 Securities Act.

PROSPECTUS



TALEN ENERGY CORPORATION

Up to 2,399,998 Shares of Common Stock by the Selling Stockholders

This prospectus relates to the offer and sale, from time to time, in one or more offerings, by the selling stockholders (including their donees, pledgees, transferees or other successors-in-interest) named herein (the "Selling Stockholders") of up to an aggregate 2,399,998 shares of common stock, par value \$0.001 per share ("common stock") of Talen Energy Corporation (the "Company," "Talen," "we," "our," or "us"), currently owned by the Selling Stockholders, which shares are subject to any appropriate adjustment as a result of any stock dividend, stock split or distribution, or in connection with a combination of shares, and any security into which such shares of common stock shall have been converted or exchanged in connection with a recapitalization, reorganization, reclassification, merger, consolidation, exchange, distribution or otherwise. Talen is not selling any shares of common stock under this prospectus, and we will not receive any proceeds from the sale of our common stock by the Selling Stockholders. See "Selling Stockholders."

We are registering these 2,399,998 shares of common stock (the "Equity Merger Consideration") for resale by the Selling Stockholders pursuant to registration rights granted pursuant to that certain registration rights agreement, dated as of June 15, 2026, by and among the Company and the Selling Stockholders (the "Cornerstone Registration Rights Agreement"), in connection with the acquisition from affiliates of Energy Capital Partners ("ECP") of the 875 megawatt ("MW") Waterford Energy Center and 456 MW Darby Generating Station, both located in Ohio, and the 1,120 MW Lawrenceburg Power Plant located in Indiana (the "Cornerstone Acquisition"). Additionally, the Selling Stockholders agreed to a 90-day lock-up on 50% of the Equity Merger Consideration and a 180-day lock-up on the remaining Equity Merger Consideration. See "Description of Capital Stock—Registration Rights Agreements" for additional information.

This prospectus provides you with a general description of the common stock. We may amend or supplement this prospectus from time to time, as required, by filing amendments or supplements to this prospectus with the U.S. Securities and Exchange Commission (the "SEC"). We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Any prospectus supplement, amendment or free writing prospectus may add, update or change information contained in this prospectus with respect to the offering of our common stock. You should carefully read this prospectus and any applicable prospectus supplement, amendment or free writing prospectus before you invest in any of our common stock. You should also read the documents we have referred you to in the "Where You Can Find More Information" section of this prospectus for information about us, including our financial statements.

The Selling Stockholders may offer and sell shares of our common stock described in this prospectus and any applicable prospectus supplement, amendment or free writing prospectus, from time to time or together or separately, to or through one or more underwriters, dealers and agents, or directly to purchasers, or through a combination of these methods. The Selling Stockholders will determine at what price they may sell the common stock offered by this prospectus, and such sales may be made at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. See the sections of this prospectus entitled "About this Prospectus" and "Plan of Distribution" for more information. No common stock may be sold without delivery of this prospectus and the applicable prospectus supplement, amendment or free writing prospectus, if any, describing the method and terms of the offering of such securities, unless otherwise allowed pursuant to applicable law.

Our common stock is listed on Nasdaq Global Select Market ("Nasdaq") and trades under the symbol "TLN." On June 17, 2026, the last reported sale price of our common stock on Nasdaq was \$409.81 per share.

Investing in our securities involves a high degree of risk. Please carefully read the section entitled "Risk Factors" beginning on page 2 of this prospectus and any other risk factors included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus or any prospectus supplement for a discussion of the factors you should carefully consider before deciding to purchase any securities.

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

The date of this prospectus is June 18, 2026.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended (the “Securities Act”), using a “shelf” registration process for the delayed offering and sale of securities pursuant to Rule 415 under the Securities Act. Under this shelf registration statement, the Selling Stockholders named in this prospectus may, from time to time, offer and sell up to an aggregate 2,399,998 shares of common stock in one or more offerings as described in this prospectus, subject to any appropriate adjustment as a result of any stock dividend, stock split or distribution, or in connection with a combination of shares, and any security into which such shares of common stock shall have been converted or exchanged in connection with a recapitalization, reorganization, reclassification, merger, consolidation, exchange, distribution or otherwise. This prospectus generally describes the Company and its common stock that the Selling Stockholders may offer and sell.

This prospectus provides you with a general description of the shares of common stock the Selling Stockholders may offer. Each time the Selling Stockholders offer shares of common stock under this prospectus, if required by applicable law, we will provide a prospectus supplement that will contain specific information about the terms of such offering. The prospectus supplement, or information incorporated by reference in this prospectus or any prospectus supplement that is of a more recent date, may also add, update or change information contained in this prospectus. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the prospectus supplement. You should read both this prospectus and any prospectus supplement together with the additional information described in the sections entitled “Where You Can Find More Information” and “Incorporation by Reference.” We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings.

Neither we nor the Selling Stockholders have authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or any free writing prospectus we have prepared or expressly referred you to. If information is given or representations are made, you may not rely on that information or representation as having been authorized by us. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy shares of common stock other than the shares of common stock described in such accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy the shares of common stock in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates, unless the information specifically indicates that another date applies. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Neither we nor the Selling Stockholders are making any representation to any purchaser regarding the legality of an investment by such purchaser under any legal investment or similar laws or regulations. You should not consider any information in this prospectus to be legal, business or tax advice. You should consult your own attorney, business advisor and (or) tax advisor for legal, business and (or) tax advice regarding an investment in the securities.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus contains forward-looking statements within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995 concerning expectations, beliefs, plans, objectives, goals, strategies and (or) future performance or other events, as well as underlying assumptions and other statements, that are not statements of historical fact. These statements often include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "target," "project," "forecast," "seek," "will," "may," "should," "could," "would," or similar expressions. Although we believe that the expectations and assumptions reflected in these forward-looking statements are reasonable, there can be no assurance that these expectations and assumptions will prove to be correct. Forward-looking statements are subject to many risks and uncertainties. The results, events or circumstances reflected in forward-looking statements may not be achieved or occur, and actual results, events or circumstances may differ materially from those discussed in forward-looking statements.

These risks and uncertainties could cause actual results to differ materially from those suggested by the forward-looking statements. Forward-looking statements should, therefore, be considered in light of various factors, including those set forth in this prospectus under the section entitled "Risk Factors" or incorporated by reference in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks and uncertainties emerge from time to time, and it is not possible for us to predict all risks and uncertainties that could have an impact on the forward-looking statements contained in this prospectus.

You should not rely on forward-looking statements as predictions of future events. We have based the forward-looking statements contained in this prospectus primarily on our current expectations and assumptions about future events. Furthermore, statements such as "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus. While we believe such information provides a reasonable basis for these statements, such information may be limited or incomplete, and there can be no assurance that any expectations, assumptions, beliefs or opinions will prove to be correct. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and readers are cautioned not to unduly rely on these statements.

We undertake no obligation to update any forward-looking statements made in this prospectus to reflect events or circumstances after the date of this prospectus or the documents incorporated by reference herein, or to reflect the occurrence of unanticipated events, except as required by law.

SUMMARY

This summary highlights information contained or incorporated by reference elsewhere in this prospectus. This summary is not complete and does not contain all of the information that you should consider before investing in our securities. You should read the entire prospectus, including the documents incorporated by reference, and any applicable prospectus supplement (or free writing prospectus), carefully before making an investment decision. This summary contains forward-looking statements that involve risk and uncertainties. Our actual results may differ based on certain factors, including those set forth in this prospectus under the sections entitled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Information."

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to "we," "us," "our," the "Company," and "Talen" refer to Talen Energy Corporation and its direct and indirect subsidiaries, except as expressly stated otherwise or unless the context requires otherwise.

The Company

Talen is a leading independent power producer and energy infrastructure company dedicated to powering the future. We own and operate approximately 15.6 gigawatts of power infrastructure in the United States, including 2.2 gigawatts of nuclear power and a significant dispatchable fossil fleet. We produce and sell electricity, capacity, and ancillary services into wholesale U.S. power markets, with our generation fleet principally located in the Mid-Atlantic, Ohio, Indiana, and Montana. Our team is committed to generating power safely and reliably and delivering the most value per megawatt produced. Talen is also powering the digital infrastructure revolution. We are well-positioned to serve this growing industry, as artificial intelligence data centers increasingly demand more reliable, clean power.

Our Corporate Information

We are a Delaware corporation with our principal executive office located at 2929 Allen Parkway, Suite 2200, Houston, TX 77019. The telephone number for our principal executive office is (888) 211-6011. We maintain a website at www.talenergy.com. Information contained on or accessible from our website is not, and shall not be deemed to be, incorporated by reference into this prospectus or any other filings with the SEC. To find more information about us see the sections entitled "Where You Can Find More Information" and "Incorporation by Reference."

Recent Developments

Cornerstone Acquisition

On June 15, 2026, we completed the Cornerstone Acquisition. The consideration for the Cornerstone Acquisition was, in the aggregate, \$3.5 billion, consisting of \$2.6 billion in cash, subject to working capital and other customary adjustments, and 2,399,998 shares of the Company's common stock. The shares of our common stock were issued in reliance upon the exemption from the registration requirements of the Securities Act, provided by Section 4(a)(2) of the Securities Act as sales by an issuer not involving any public offering.

At the closing of the Cornerstone Acquisition, we entered into the Cornerstone Registration Rights Agreement, pursuant to which we agreed to use our commercially reasonable efforts to cause to be filed a shelf registration statement registering for resale the shares of common stock issued in the Cornerstone Acquisition within three business days following the closing of the Cornerstone Acquisition, and in any event within five business days, and use commercially reasonable efforts to cause such shelf registration statement to become effective promptly thereafter. See "Selling Stockholder" for additional information.

RISK FACTORS

Investing in our common stock offered pursuant to this prospectus and any applicable prospectus supplement, amendment or free writing prospectus involves risk. Prior to making a decision about investing in the securities, you should carefully consider the specific factors discussed under the section entitled "Risk Factors" in our most recent Annual Report on Form 10-K, any subsequent Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K filed with the SEC (other than, in each case, information furnished rather than filed), which are incorporated herein by reference in their entirety, as well as any amendment or updates to our risk factors reflected in any applicable prospectus supplement. If any of these risks actually occurs, our business, results of operations and financial condition could suffer. In that case, the trading price of the securities could decline, and you could lose all or a part of your investment. Before deciding whether to invest in our securities, you should also refer to the other information contained or incorporated by reference into this prospectus, including under the section entitled "Cautionary Note Regarding Forward-Looking Information."

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of common stock being offered by any of the Selling Stockholders. Any proceeds from the sale of common stock under this prospectus will be received by the Selling Stockholders. However, pursuant to the Cornerstone Registration Rights Agreement, we will generally pay all expenses relating to the registration, offering and listing of these shares, except that the Selling Stockholders will pay any underwriting fees, discounts and commissions and attorney's fees.

DESCRIPTION OF CAPITAL STOCK

General

The following is a summary of the rights of our capital stock and certain provisions of our Third Amended and Restated Certificate of Incorporation (the "Charter"), Second Amended and Restated Bylaws (the "Bylaws"), Registration Rights Agreements (as defined below), Stockholders Agreement (as defined below), and relevant provisions of the Delaware General Corporation Law (the "DGCL"). While we believe the following description covers the material terms of our capital stock, it may not contain all information that is important to investors. The following description is not complete and is subject, and qualified in its entirety by reference, to the Charter, Bylaws, Registration Rights Agreements and Stockholders Agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus forms a part, as well as the relevant provisions of the DGCL. Investors are urged to read the Charter, Bylaws, Registration Rights Agreements, and Stockholders Agreement in their entirety. As used in this "Description of Capital Stock," unless otherwise expressly stated or the context otherwise requires, the terms "we," "our," and "us" refer to Talen Energy Corporation and not to any of its subsidiaries.

Authorized Capital Stock

Our Charter authorizes us to issue up to 400,000,000 shares of capital stock, consisting of (i) 350,000,000 shares of our common stock, par value \$0.001 per share; and (ii) 50,000,000 shares of preferred stock, par value \$0.01 per share ("preferred stock"). As of June 18, 2026, there were 47,894,656 shares of our common stock issued and outstanding, and no shares of preferred stock were issued and outstanding. Pursuant to our Charter, our Board of Directors (the "Board") has the authority, without stockholder approval, except as required by the listing standards of Nasdaq, to issue additional shares of our common stock.

Common Stock

All issued and outstanding shares of our common stock are duly authorized, validly issued, fully paid and non-assessable. All authorized but unissued shares of our common stock are available for issuance by our Board without any further stockholder action, except as required by the listing standards of Nasdaq.

The rights, preferences, and privileges of holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Voting Rights

All shares of our common stock have identical rights and privileges. Holders of our common stock are entitled to vote on all matters submitted to a vote of our stockholders, including the election of directors. On all matters to be voted on by the holders of our common stock, the holders will be entitled to one vote for each share of our common stock held of record and will have no cumulative voting rights.

Dividend Rights

Subject to limitations under applicable Delaware law, preferences that may apply to any outstanding shares of our preferred stock, and (or) contractual restrictions, holders of our common stock are entitled to receive dividends or other distributions ratably, when, as, and if declared by our Board. The ability of our Board to declare dividends with respect to our common stock, however, will be subject to such limitations, preferences, and restrictions and the availability of sufficient funds under the DGCL to pay such dividends.

Right to Receive Liquidation Distributions

In the event of our voluntary or involuntary liquidation, dissolution, or winding up, after payment or provision for payment of our then-existing debts and other liabilities, and subject to the rights of the holders of our preferred stock in respect thereof, our remaining assets will be distributed ratably to the holders of our common stock.

Other Matters

Holders of our common stock do not have preemptive, subscription, redemption, or conversion rights.

Registration Rights Agreements

We are party to a Registration Rights Agreement, dated as of May 17, 2023 (the "Initial Registration Rights Agreement" and, together with the Cornerstone Registration Rights Agreement, the "Registration Rights Agreements"), with certain holders of our common stock (the "Initial Registration Rights Holders") that, among other things, grants the Initial Registration Rights Holders and certain of their permitted transferees customary registration rights on Registrable Securities (as defined in the Initial Registration Rights Agreement), including customary demand offering, shelf registration, and piggyback rights. Registrable Securities (as defined in the Initial Registration Rights Agreement) include shares of our common stock initially issued to an Initial Registration Rights Holder until such time as such shares (i) have been registered and disposed of pursuant to an effective registration statement under the Securities Act; (ii) have been sold in applicable transactions under Rule 144 or Rule 145 under the Securities Act and the transferee thereof reasonably notifies us that it did not receive "restricted securities" as defined in Rule 144; (iii) are no longer held by an Initial Registration Rights Holder representing at least 3% of the aggregate voting power of our common stock; or (iv) cease to be outstanding. The Initial Registration Rights Agreement will terminate (i) as to any Initial Registration Rights Holder, when it no longer holds any Registrable Securities (as defined in the Initial Registration Rights Agreement); and (ii) at such time as there are no Registrable Securities (as defined in the Initial Registration Rights Agreement) held by any Initial Registration Rights Holders.

At the closing of the Cornerstone Acquisition, we entered into the Cornerstone Registration Rights Agreement, pursuant to which we agreed to use our commercially reasonable efforts to cause to be filed a shelf registration statement registering for resale the shares of common stock issued in the Cornerstone Acquisition within three business days following the closing of the Cornerstone Acquisition, and in any event within five business days, and use commercially reasonable efforts to cause such shelf registration statement to become effective promptly thereafter. We also agreed, subject to the termination provisions discussed below, to use our commercially reasonable efforts to keep such registration statement current and effective (or file a new shelf registration statement, if applicable, upon expiration of the preceding shelf registration statement) until such time as all of the Registrable Securities (as such term is defined in the Cornerstone Registration Rights Agreement) cease to be Registrable Securities. A Registrable Security ceases to be a Registrable Security when (a) a registration statement covering such Registrable Security has become effective under the Securities Act and such Registrable Security has been disposed of pursuant to such registration statement, (b) it is held by a person that is a transferee that has not taken valid assignment of the rights provided in the Cornerstone Registration Rights Agreement, (c) all Registrable Securities owned by a holder have been sold pursuant to Rule 144 (or any successor provision), (d) such Registrable Securities are held by a holder that beneficially owns shares or common stock representing less than 2% of the aggregate voting power eligible to vote in the election of directors of the Company or (e) such securities shall have ceased to be outstanding.

Additionally, pursuant to the Cornerstone Registration Rights Agreement, the Selling Stockholders agreed to a 90-day lock-up on 50% of the Equity Merger Consideration and a 180-day lock-up on the remaining Equity Merger Consideration.

Stockholders Agreement

We are party to a Stockholders Agreement, dated as of May 17, 2023 (the "Stockholders Agreement"), with certain holders of our common stock (the "Applicable Holders") that, among other things, grants the Applicable Holders certain limited information rights, drag-along rights and tag-along rights. Previously, the Stockholders Agreement also gave certain Applicable Holders rights to require us to pursue an initial public offering and consent to certain key elements of its structure, but those rights ceased to apply when such Applicable Holders ceased to collectively own at least 20% of our outstanding common stock. The Stockholders Agreement will terminate automatically upon the effectiveness of a registration statement in connection with an underwritten public offering of our common stock. The Stockholders Agreement can also be terminated upon the written consent of us and Applicable Holders beneficially owning at least two-thirds of our outstanding common stock; provided that the Stockholders Agreement may not be terminated with respect to any Applicable Holder without such Applicable Holder's consent if such termination would adversely affect such Applicable Holder.

Anti-Takeover Effects of Delaware Law and Our Charter and Bylaws

Some provisions of Delaware law and our Charter and Bylaws could make the following transactions more difficult: an acquisition of us by means of a tender offer, an acquisition of us by means of a proxy contest or otherwise or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board. We believe that the benefits of the increased protection of our potential ability to negotiate

with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Subject to limitations under applicable Delaware law, our Board has the authority, without further action by our stockholders, to issue up to 50,000,000 shares of preferred stock with rights and preferences, including voting rights, designated from time to time by our Board. The existence of authorized but unissued shares of preferred stock enables our Board to discourage or render more difficult an attempt to obtain control of us by means of a merger, tender offer, proxy contest or other means.

Removal of Directors

Our Charter provides that members of our Board may be removed from office, with or without cause, by an affirmative vote of the holders of at least a majority of the outstanding shares of our capital stock entitled to vote thereon voting together as a single class.

Section 203 of the DGCL

In our Charter, we have elected not to be governed by Section 203 of the DGCL ("Section 203"), as permitted under and pursuant to subsection (b)(3) of Section 203. Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination, such as a merger, with a person or group owning 15% or more of the corporation's outstanding voting stock for a period of three years following the date the person became an interested stockholder, unless (with certain exceptions) the business combination or the transaction in which the person became an interested stockholder is approved in a prescribed manner. Accordingly, we are currently not subject to any anti-takeover effects of Section 203, although no assurance can be given that we will not elect to be governed by Section 203 of the DGCL in the future.

Board Vacancies and Board Size

Our Charter and Bylaws provide that any vacant directorships, including newly created directorships, may only be filled by a majority of the directors then in office, even if less than a quorum, or by a sole remaining director. The number of directors constituting the full Board is set by a resolution of the Board.

Special Stockholder Meetings

Except as required by the DGCL or the terms of any class or series of preferred stock issued in the future, special meetings of our stockholders may be called only by (i) the Chair of the Board; (ii) the Board pursuant to a resolution adopted by a majority of a quorum of the Board; or (iii) the Board upon the delivery of a written request complying with the procedures outlined in our Bylaws by the holders of at least 15% of the voting power of the then outstanding shares of capital stock entitled to vote on the matters to be submitted to stockholders at such meeting.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Stockholders must provide timely notice when seeking to:

- bring business before an annual meeting of stockholders;
- bring business before a special meeting of stockholders (if contemplated and permitted by the notice of a special meeting); or
- nominate candidates for election to the Board at an annual meeting of stockholders or at a special meeting of stockholders called for the purpose of electing one or more directors to the Board.

To be timely, a stockholder's notice generally must be received by our Corporate Secretary at our principal executive offices:

- in the case of an annual meeting:
 - not later than the close of business on the 90th day nor earlier than the opening of business on the 120th day prior to the first anniversary of the date on which we first mailed our proxy materials for the immediately preceding year's annual meeting; or
 - if the annual meeting is called for a date that is more than 30 days before or more than 60 days after the first anniversary of the date of the immediately preceding year's annual meeting, or if no annual meeting was held in the immediately preceding year, not earlier than the opening of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the: (i) 90th day prior to the annual meeting; and (ii) 10th day following the day on which we first make public announcement of the date of the annual meeting; or
- in the case of a special meeting called for purposes of electing directors, not earlier than the opening of business on the 120th day prior to the special meeting and not later than the close of business on the later of the: (i) 90th day prior to the special meeting; and (ii) 10th day following the day on which public announcement is first made of the date of the special meeting and the nominees proposed by the Board.

Our Charter and Bylaws also specify requirements as to the form and content of a stockholder's notice. These provisions may preclude stockholders from bringing matters before or proposing director nominees to an annual meeting or a special meeting of stockholders.

Stockholders Not Entitled to Cumulative Voting

The DGCL provides that stockholders are not entitled to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our Charter does not provide for cumulative voting.

Amendment of Bylaws Provision

Our Bylaws may be amended, altered, or repealed, or new bylaws made, by vote of (a) a majority of the directors present at a meeting at which a quorum of the Board is present or (b) the holders of a majority of the voting power of all outstanding shares of our capital stock entitled to vote thereon, voting together as a single class.

Exclusive Forum

Our Charter provides that, unless we consent to the selection of an alternative forum, the sole and exclusive forum for: (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers, other employees or stockholders to us or to our stockholders, (iii) any action asserting a claim arising pursuant to the DGCL, our Charter or our Bylaws, or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware or (iv) any action asserting a claim governed by the internal affairs doctrine shall be the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have, or declines to accept, jurisdiction, another state or federal court located within the State of Delaware that does have jurisdiction).

Our Charter further provides that, unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States of America are the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act against us or any of our directors or officers, except to the extent such jurisdiction is contrary to law. We note that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Although we believe the provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers. Additionally, we cannot be certain that a court will decide that these provisions are either applicable or enforceable, and if a court were to find the choice of forum provisions contained in our Charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results, and financial condition.

Section 27 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision in our Charter will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

Transfer Restrictions

Due to regulatory authorization requirements imposed by federal law and implemented by the Federal Energy Regulatory Commission, our Charter requires prior written consent of our Board in any case where an acquisition or other transfer of voting securities would cause the holdings of the transferee, together with those of its "affiliates" (as such term is defined in 18 C.F.R. §35.36(a)(9)), directly or indirectly, to either (i) equal or exceed 10% of our outstanding voting securities or (ii) equal or exceed 10% of the outstanding voting securities in any public utility subsidiary of ours, after accounting for both our voting securities and the voting securities of the public utility subsidiary held other than indirectly as a result of holding our voting securities. This restriction also applies to the ability of any existing 10% holder to acquire additional shares of our common stock but does not apply to certain secondary market purchases or sales of our common stock made by third-party investors on Nasdaq that are outside of our control, do not directly involve us, and are made without prior notice to us.

Authorized but Unissued Shares

Delaware law does not require stockholder approval for any issuance of authorized shares. Pursuant to our Charter, our Board has the authority, without stockholder approval, except as required by the listing standards of Nasdaq, to issue authorized but unissued shares of our common stock.

Limitations on Liability and Indemnification of Directors and Officers

As permitted by Section 145 of the DGCL, our Bylaws provide that:

- we shall indemnify our directors and executive officers to the fullest extent permitted by the DGCL, subject to limited exceptions, and that we may indemnify other officers, employees or agents;
- we shall advance expenses to our directors and executive officers in connection with a legal proceeding to the fullest extent permitted by the DGCL, subject to limited exceptions; and
- the rights provided in our Bylaws are not exclusive.

Any amendment to, or repeal of, these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to that amendment or repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors or officers of corporations, then the personal liability of our directors and officers will be further limited to the fullest extent permitted by the DGCL.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC. The transfer agent and registrar's address is 48 Wall Street, Floor 23, New York, New York 10005.

Exchange

Our common stock is currently listed on Nasdaq under the symbol "TLN."

SELLING STOCKHOLDERS

The Selling Stockholders (including their donees, pledgees, transferees or other successors-in-interest) identified below may offer to sell from time to time in the future up to an aggregate 2,399,998 shares of our common stock, registered for resale by the Selling Stockholders, subject to any appropriate adjustment as a result of any stock dividend, stock split or distribution, or in connection with a combination of shares, and any security into which such shares of common stock shall have been converted or exchanged in connection with a recapitalization, reorganization, reclassification, merger, consolidation, exchange, distribution or otherwise. The shares of common stock consist of outstanding shares of our common stock issued to the Selling Stockholders as partial consideration for the Cornerstone Acquisition.

We are registering the offering by the Selling Stockholders of the shares of common stock described below pursuant to the provisions of the Cornerstone Registration Rights Agreement entered into in connection with the Cornerstone Acquisition, pursuant to which we agreed to use our commercially reasonable efforts to cause to be filed a shelf registration statement registering for resale the shares of common stock issued in the Cornerstone Acquisition within three business days following the closing of the Cornerstone Acquisition, and in any event within five business days, and use commercially reasonable efforts to cause such shelf registration statement to become effective promptly thereafter. We also agreed, subject to the termination provisions discussed below, to use our commercially reasonable efforts to keep such registration statement current and effective (or file a new shelf registration statement, if applicable, upon expiration of the preceding shelf registration statement) until such time as all of the Registrable Securities (as such term is defined in the Cornerstone Registration Rights Agreement) cease to be Registrable Securities. A Registrable Security ceases to be a Registrable Security when (a) a registration statement covering such Registrable Security has become effective under the Securities Act and such Registrable Security has been disposed of pursuant to such registration statement, (b) it is held by a person that is a transferee that has not taken valid assignment of the rights provided in the Cornerstone Registration Rights Agreement, (c) all Registrable Securities owned by a holder have been sold pursuant to Rule 144 (or any successor provision), (d) such Registrable Securities are held by a holder that beneficially owns shares or common stock representing less than 2% of the aggregate voting power eligible to vote in the election of directors of the Company or (e) such securities shall have ceased to be outstanding.

Pursuant to the Cornerstone Registration Rights Agreement, the Selling Stockholders agreed to a 90-day lock-up on 50% of the Equity Merger Consideration and a 180-day lock-up on the remaining Equity Merger Consideration. Additionally, pursuant to the terms of the Cornerstone Registration Rights Agreement, we will generally pay all expenses relating to the registration, offering and listing of these shares, except that the Selling Stockholders will pay any underwriting fees, discounts and commissions and attorney's fees. We have also agreed to indemnify the Selling Stockholders against certain liabilities, including liabilities under the Securities Act, based upon, arising out of, related to or resulting from any untrue or alleged untrue statement of a material fact contained in any registration statement or prospectus filed by us.

Beneficial ownership is determined in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to such securities. Except as otherwise indicated, all persons listed below have sole voting and investment power with respect to the shares beneficially owned by them, subject to applicable community property laws.

The following table sets forth information as of June 18, 2026 provided by each Selling Stockholder on or prior to such date regarding (i) the beneficial ownership of shares of our common stock and (ii) the number of shares of our common stock that may from time to time be offered or sold pursuant to this prospectus or any applicable prospectus supplement, amendment or free writing prospectus. The percentage of combined voting power prior to, and after, the offering is based on 47,894,656 shares of our common stock outstanding as of June 18, 2026, and includes the issuance of 2,399,998 shares of common stock upon the closing of the Acquisition on June 15, 2026. Information in the table below with respect to beneficial ownership has been furnished by the Selling Stockholders.

We have not sought to verify the information provided by the Selling Stockholders. The Selling Stockholders may hold or acquire at any time shares of common stock in addition to those offered by this prospectus and may have acquired additional shares of common stock since the date on which the information reflected herein was provided to us.

We will supplement or amend this prospectus as required to include additional Selling Stockholders upon provision of all required information to us and subject to the terms of any relevant agreement between us and the Selling Stockholders.

The Selling Stockholders will determine when and how they sell the shares of common stock offered in this prospectus, as described in the Plan of Distribution included in this prospectus. The Selling Stockholders are not obligated to sell any of the shares of our common stock offered by this prospectus. Because the Selling Stockholders identified in the table may sell some or all of the shares of our common stock owned by them that are included in this prospectus, no estimate can be given as to the number of shares covered by this prospectus that will be held by the Selling Stockholders upon termination of this offering. The Selling Stockholders may sell, transfer or otherwise dispose of, at any time and from time to time, their shares of our common stock pursuant to the Plan of Distribution included in this prospectus, including in registered offerings contemplated by the Cornerstone Registration Rights Agreement, or pursuant to an exemption, if available, from the registration requirements of the Securities Act, in each

case after the date on which they provided the information set forth in the table below. See "Plan of Distribution" for additional information. For purposes of the following table we have assumed that the Selling Stockholders will sell all of the shares of our common stock beneficially owned by them that are covered by this prospectus.

Selling Stockholders:	Shares Owned Before the Offering		Shares of Common Stock that may be sold hereby	Shares Owned After the Offering	
	Common Stock ⁽¹⁾	Voting Power (%)		Common Stock	Voting Power (%)
Entities affiliated with ECP ControlCo, LLC ⁽²⁾	2,399,998	5.0%	2,399,998	—	—

(1) Represents the shares of common stock held as of the date of this prospectus.

(2) Includes 371,262 shares of common stock held by ECP V Cornerstone DRE, LP ("ECP V Cornerstone"); 52,253 shares of common stock held by ECP V-B Cornerstone DRE, LP ("ECP V-B"); 757,539 shares of Common Stock held by ECP V-C Cornerstone DRE, LP ("ECP V-C Cornerstone"); 1,156,685 shares of common stock held by ECP V-D Cornerstone DRE, LP ("ECP V-D Cornerstone"); and 62,259 shares of common stock held by ECP V GP Cornerstone DRE, LP ("ECP V Cornerstone GP" and together with ECP V Cornerstone, ECP V-B Cornerstone, ECP V-C Cornerstone and ECP V-D Cornerstone, the "ECP Cornerstone Entities"). ECP V, LLC ("ECP V"), as a result of its indirect control over each of the ECP Cornerstone Entities, may be deemed to share beneficial ownership of the securities held of record by each of the ECP Cornerstone Entities. ECP ControlCo, LLC ("ECP ControlCo") is the managing member of ECP V. ECP ControlCo is controlled by its board of managers, which consists of Douglas Kimmelman, Peter Labbat, Tyler Reeder, Rahman D'Argenio, Raoul Hughes and Xavier Robert (together, the "ECP Managers") all of whom collectively share the power to vote and dispose of the securities beneficially owned by ECP ControlCo. As a result of these relationships, each of ECP ControlCo and the ECP Managers may be deemed to share beneficial ownership of the securities that may be deemed to be beneficially owned by ECP V. Each of the ECP Managers disclaims any such beneficial ownership. The address for each of the entities named in this footnote is c/o ECP, 40 Beechwood Road, Summit, NJ 07901.

PLAN OF DISTRIBUTION

Distributions of the common stock by the Selling Stockholders, or by their partners, pledgees, donees (including charitable organizations), transferees or other successors in interest, may from time to time be offered for sale either directly by such individual, or through underwriters, dealers or agents or on any exchange on which the common stock may from time to time be traded, in the over-the-counter market, or in independently negotiated transactions or otherwise. The methods by which the common stock may be sold by the Selling Stockholders include:

- one or more underwritten offerings on a firm commitment or best efforts basis;
- block trades in which the broker or dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- crosses in which the same broker or dealer acts as an agent on both sides of the trades;
- purchases by a broker or dealer as principal and resale by the broker or dealer for its own account pursuant to this prospectus;
- an exchange distribution in accordance with the rules of any stock exchange on which the shares are listed;
- brokerage transactions and transactions in which the broker solicits purchases;
- privately negotiated transactions;
- short sales, either directly or with a broker-dealer or affiliate thereof;
- through the writing of options on the shares (including the issuance by us of derivative securities), whether or not the options are listed on an options exchange or otherwise;
- through loans or pledges of the shares to a broker-dealer or an affiliate thereof;
- broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per share;
- "at the market" to or through market makers or into an existing market for the securities;
- by pledge to secure debts and other obligations (including obligations associated with derivatives transactions);
- through the distributions of the shares by any Selling Stockholder to its general or limited partners, members, managers, affiliates, employees, directors or stockholders;
- any combination of any of these methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Stockholders may elect to make an in-kind distribution of their shares of common stock to their respective members, partners or stockholders. To the extent that such members, partners or stockholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradeable shares of our common stock pursuant to the distribution through this registration statement.

The Selling Stockholders may also sell shares of common stock under Rule 144 or any other exemption from registration under the Securities Act, in each case if available, rather than under this prospectus.

The Selling Stockholders also may transfer their shares of common stock in other circumstances, in which case the transferees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

Such transactions may be effected by the Selling Stockholders at fixed prices, market prices prevailing at the time of sale, at varying prices determined at the time of sale or at negotiated prices. Underwriters or broker-dealers may receive compensation in the form of discounts or commissions from the Selling Stockholders and may receive commissions from the purchasers of the securities for whom they may act as agent. The Selling Stockholders may agree to indemnify any underwriter, broker-dealer or agent that participates in transactions involving sales of the common stock against certain liabilities, including liabilities arising under the Securities Act. We have agreed to register the common stock for sale under the Securities Act and to indemnify the Selling Stockholders and each person who participates as an underwriter in the offering of the common stock against certain civil liabilities, including certain liabilities under the Securities Act.

In connection with sales of common stock under this prospectus, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, who may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The Selling Stockholders also may sell shares of common

stock short and deliver them to close their short positions, or loan or pledge the securities to broker-dealers that in turn may sell them. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

If any underwriters, dealers or agents are involved in the sale of any shares of our common stock, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement, amendment or free writing prospectus.

The Selling Stockholders will act independently of us in making decisions with respect to the price, timing, manner and size of each sale of securities. Offers to purchase securities may be solicited directly by the Selling Stockholders and the sale thereof may be made by the Selling Stockholders directly to institutional investors or others. In such a case, no underwriters or agents would be involved. The Selling Stockholders may use electronic media, including the internet, to sell offered securities directly. The Selling Stockholders may offer the securities covered by this prospectus into an existing trading market on the terms described herein or in any applicable prospectus supplement, amendment or free writing prospectus relating thereto. If the Selling Stockholders utilize a dealer in the sale of the securities in respect of which this prospectus is delivered, the Selling Stockholders may sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by the dealer at the time of resale.

The Selling Stockholders may from time to time pledge, hypothecate or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424 or other applicable provision of the Securities Act amending the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus.

If the Selling Stockholders use one or more underwriters in the sale, the underwriters will acquire the securities for their own account, and they may resell these securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The securities may be offered and sold to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of such firms. Underwriters may resell the shares to or through dealers, and those dealers may receive compensation in the form of one or more discounts, concessions or commissions from the underwriters and commissions from purchasers for which they may act as agents. We have not, and to our knowledge, the Selling Stockholders have not, entered into any agreement or understanding, directly or indirectly, with any person to distribute the securities offered hereby.

There can be no assurances that the Selling Stockholders will sell, nor are the Selling Stockholders required to sell, any or all of the shares of common stock offered under this prospectus or any applicable prospectus supplement, amendment or free writing prospectus.

To the extent required, this prospectus may be amended and/or supplemented from time to time to describe a specific plan of distribution. If required, we may add transferees, successors and donees by prospectus supplement in instances where the transferee, successor or donee has acquired its shares from holders named in this prospectus after the effective date of this prospectus. Transferees, successors and donees of identified Selling Stockholders may not be able to use this prospectus for resales until they are named in the Selling Stockholders table by prospectus supplement or post-effective amendment. See "Selling Stockholders."

LEGAL MATTERS

Certain legal matters in connection with the common stock offered hereby will be passed upon for us by Kirkland & Ellis LLP, Houston, Texas. If the validity of any common stock is also passed upon by counsel for the underwriters of an offering of such common stock, that counsel will be named in the prospectus supplement relating to that offering.

EXPERTS

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) of Talen Energy Corporation (Successor) incorporated in this prospectus by reference to Talen Energy Corporation's Annual Report on Form 10-K for the year ended December 31, 2025 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's Plan of Reorganization and subsequent emergence from bankruptcy as described in Note 19 to the financial statements, and an explanatory paragraph relating to the exclusion of Freedom and Guernsey entities from management's assessment of internal control over financial reporting and the audit of internal control over financial reporting) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of Talen Energy Supply, LLC (Predecessor) incorporated in this prospectus by reference to Talen Energy Corporation's Annual Report on Form 10-K for the year ended December 31, 2025 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's Plan of Reorganization and subsequent emergence from bankruptcy as described in Note 19 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The audited financial statements of Moxie Freedom, LLC incorporated in this prospectus by reference to the Form 8-K/A filed on February 9, 2026 as of and for the year ended December 31, 2024 have been so incorporated in reliance on the report of KPMG LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The audited consolidated financial statements of Guernsey Power Holdings, LLC incorporated in this prospectus by reference to the Form 8-K/A filed on February 9, 2026 as of and for the year ended December 31, 2024 have been so incorporated in reliance on the report of KPMG 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 are required to file reports and proxy statements with the SEC. These filings include our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and proxy statements on Schedule 14A, as well as any amendments to those reports and proxy statements. Our filings with the SEC are available to the public through the SEC's website at <https://www.sec.gov> and are also available through our website at <https://ir.talenenergy.com/financial-information/sec-filings>. You may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information on our website does not constitute part of, and is not incorporated by reference in, this prospectus (except for the SEC filings expressly incorporated by reference herein as described under the section entitled "Incorporation by Reference").

We have filed with the SEC a registration statement on Form S-3 under the Securities Act relating to the securities being offered by this prospectus. This prospectus, which constitutes part of that registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules which are part of the registration statement. For further information about us and the securities offered, see the registration statement and the exhibits and schedules thereto. Statements contained in this prospectus regarding the contents of any contract or any other document to which reference is made are not necessarily complete, and, in each instance where a copy of a contract or other document has been filed as an exhibit to the registration statement, reference is made to the copy so filed, each of those statements being qualified in all respects by the reference.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference our documents listed below and any future information filed (rather than furnished) with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this prospectus and the date all securities to which this prospectus relates have been sold or the offering is otherwise terminated and also between the date of the initial registration statement and prior to effectiveness of the registration statement, provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any Current Report on Form 8-K in accordance with SEC rules:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2025, filed with the SEC on February 26, 2026;
- our Quarterly Report on [Form 10-Q](#) for the fiscal quarter ended March 31, 2026, filed with the SEC on May 5, 2026;
- the portions of our Definitive Proxy Statement on [Schedule 14A](#), filed with the SEC on March 19, 2026, that are specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2025;
- our Current Reports on Form 8-K or Form 8-K/A (in all cases other than information furnished rather than filed pursuant to any Form 8-K), filed with the SEC on [January 15, 2026](#), [February 9, 2026](#), [April 17, 2026](#), [May 7, 2026](#), [May 21, 2026](#), [June 15, 2026](#) and [June 18, 2026](#); and
- the description of our capital stock contained in our registration statement on [Form 8-A](#), filed with the SEC on July 9, 2024, including any amendments or reports filed for the purpose of updating such descriptions, including the description of our capital stock filed as [Exhibit 4.1](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2024.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of this offering (excluding, in each case, any information furnished to, rather than filed with, the SEC) will be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a copy of these filings at no cost, by writing or telephoning us at the following address:

Talen Energy Corporation
2929 Allen Pkwy, Suite 2200
Houston, TX 77019
Telephone: (888) 211-6011

We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses payable by us in connection with the sale and distribution of the securities being registered hereby. All amounts are estimated except the SEC registration fee.

SEC registration fee	\$	113,935.72
FINRA filing fee (if applicable)		*
Printing fees and expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Other advisors' fees		*
Total		*

* These fees are calculated based on the number of issuances and amount of securities offered and, accordingly, cannot be estimated at this time.

Item 15. Indemnification of Directors and Officers.

Section 145 of the DGCL authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act. Our Charter permits indemnification of our directors and officers to the maximum extent permitted by the DGCL, and our Bylaws provide that we will indemnify our directors and officers and permit us to indemnify our employees and other agents, in each case to the maximum extent permitted by the DGCL.

We have entered into indemnification agreements with our directors and officers, whereby we have agreed to indemnify our directors and officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or officer was, or is threatened to be made, a party by reason of the fact that such director or officer is or was a director or officer of ours, provided that such director or officer acted in good faith, in a manner that the director or officer reasonably believed to be in, or not opposed to, our best interest, and with respect to any criminal proceeding, had no reasonable cause to believe their conduct was unlawful.

The indemnification provisions in our Charter, Bylaws and the indemnification agreements that we have entered into, or will enter into, with our directors and executive officers may discourage stockholders from bringing a lawsuit against our directors and executive officers for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against our directors and executive officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and executive officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving a director or officer of ours regarding which indemnification is sought, nor is the registrant aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act and the Exchange Act that might be incurred by any director or officer in his or her capacity as such. Certain of our non-employee directors may also, through their relationships with their employers, be insured and (or) indemnified against certain liabilities incurred in their capacity as members of our Board of Directors.

Item 16. Exhibits.

Exhibit Number	Description	Incorporated by Reference			Exhibit Number
		Form	File No.	Filing Date	
1.1*	Form of Underwriting Agreement	—	—	—	—
2.1 [#]	Agreement and Plan of Merger, dated as of January 15, 2026, by and among Talen Energy Corporation, Cornerstone Generation Holdings LP, ECP Cornerstone Generation Holdings GP, LLC, ECP V-B (AG IP) Blocker Corp, ECP V-C (AG IP) Blocker Corp, ECP V-D (AG IP) Blocker Corp, ECP V-D, as a holder representative, and solely for the limited purposes set forth therein, ECP GP V, LP.	10-K	001-37388	February 26, 2026	2.1
3.1	Third Amended and Restated Certificate of Incorporation of Talen Energy Corporation.	S-1	333-280341	June 20, 2024	3.1
3.2	Second Amended and Restated Bylaws of Talen Energy Corporation.	S-1	333-280341	June 20, 2024	3.2
4.1	Registration Rights Agreement, dated June 15, 2026, by and among Talen Energy Corporation and the parties from time to time listed on the signature pages thereto.	8-K	001-37388	June 15, 2026	4.1
5.1	Opinion of Kirkland & Ellis LLP.	—	—	—	—
23.1	Consents of PricewaterhouseCoopers LLP, independent registered public accounting firm.	—	—	—	—
23.2	Consents of KPMG LLP, independent registered public accounting firm.	—	—	—	—
23.3	Consent of Kirkland & Ellis LLP (included in Exhibit 5.1).	—	—	—	—
24.1	Power of Attorney (included on the signature pages hereto).	—	—	—	—
107	Calculation of Filing Fee Table.	—	—	—	—

Certain of the schedules and attachments to the exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule or attachment will be furnished to the SEC upon request.

[^] Certain private and immaterial portions of the exhibit have been redacted pursuant to Item 601(a)(6) of Regulation S-K.

* To be filed as an exhibit to a Current Report on Form 8-K and to be incorporated herein by reference or by a post-effective amendment to this registration statement.

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;

(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 a 20% change in the maximum aggregate offering price set forth in the "Calculation of Filing Fee Tables" or "Calculation of Registration Fee" table, as applicable, 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) above 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 Exchange Act 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, 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 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 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 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 undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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 the securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to our Charter and Bylaws, 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 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURE

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, State of Texas, on June 18, 2026.

TALEN ENERGY CORPORATION

By: /s/ Mark A. McFarland
Name: Mark A. McFarland
Title: Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each individual whose signature appears below constitutes and appoints Mark A. McFarland and Cole Muller as his or her true and lawful attorney-in-fact and agent for the undersigned, with full power of substitution, for and in the name, place and stead of the undersigned to sign and file with the SEC under the Securities Act (i) any and all amendments, including post-effective amendments, to this registration statement, (ii) any registration statement relating to this offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933, as amended, (iii) any exhibits to any such registration statement or pre-effective or post-effective amendments, (iv) any and all applications and other documents in connection with any such registration statement or pre-effective or post-effective amendments, and generally to do all things and perform any and all acts and things whatsoever requisite and necessary or desirable to enable Talen Energy Corporation to comply with the provisions of the Securities Act and all requirements of the SEC.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities below as of June 18, 2026.

Signature	Title
<u>/s/ Mark A. McFarland</u> Mark A. McFarland	Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Cole Muller</u> Cole Muller	Chief Financial Officer (Principal Financial Officer)
<u>/s/ Tony Plagens</u> Tony Plagens	Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ Stephen Schaefer</u> Stephen Schaefer	Chairperson of the Board and Director
<u>/s/ Gizman Abbas</u> Gizman Abbas	Director
<u>/s/ Anthony Horton</u> Anthony Horton	Director
<u>/s/ Karen Hyde</u> Karen Hyde	Director
<u>/s/ Joseph Nigro</u> Joseph Nigro	Director
<u>/s/ Christine Benson Schwartzstein</u> Christine Benson Schwartzstein	Director

Calculation of Filing Fee Tables

S-3

Talen Energy Corp

Table 1: Newly Registered and Carry Forward Securities

Not Applicable

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to be Paid	1 Equity	Common Stock, par value \$0.001 per share	457(a)	2,399,998	\$ 343.76	825,023,312.48	\$ 0.0001381	\$ 113,935.72				
Fees Previously Paid												
Carry Forward Securities												
Carry Forward Securities												
Total Offering Amounts:							\$	\$ 113,935.72				
						825,023,312.48						
Total Fees Previously Paid:								\$ 0.00				
Total Fee Offsets:								\$ 0.00				
Net Fee Due:								\$ 113,935.72				

Offering Note

1

The shares of common stock, par value \$0.001 per share ("common stock"), of Talen Energy Corporation (the "registrant"), will be offered for resale by the selling stockholders pursuant to the prospectus contained in this registration statement to which this exhibit is attached. The registration statement registers the resale of an aggregate of 2,399,998 shares of the registrant's common stock.

Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act, based on the average of the high and low sale prices of the Registrant's common stock as reported on the Nasdaq Global Select Market on June 11, 2026, which date is within five business days prior to filing this registration statement, of \$343.76 per share.

Table 2: Fee Offset Claims and Sources

Not Applicable

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rules 457(b) and 0-11(a)(2)											
Fee Offset Claims											
Fee Offset Sources											
Rule 457(p)											
Fee Offset Claims											
Fee Offset Sources											

Table 3: Combined Prospectuses

Not Applicable

Security Type	Security Class Title	Amount of Securities	Maximum Aggregate Offering Price of	Form Type	File Number	Initial Effective Date

			Previously Registered	Securities Previously Registered			
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KIRKLAND & ELLIS LLP

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Facsimile:
+1 713 836 3600

June 18, 2026

Talen Energy Corporation
2929 Allen Pkwy, Suite 2200
Houston, Texas 77019

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We are issuing this opinion in our capacity as special counsel to Talen Energy Corporation, a Delaware corporation (the "Company"), in connection with the preparation of the Registration Statement on Form S-3 (such Registration Statement, as amended or supplemented, is hereinafter referred to as the "Registration Statement"), including the prospectus contained therein (the "Prospectus") filed with the U.S. Securities and Exchange Commission (the "Commission") on or about June 18, 2026 under the Securities Act of 1933, as amended (the "Securities Act"), by the Company. The Registration Statement relates to the offer and sale, from time to time, by the selling stockholders identified in the Prospectus (the "Selling Stockholders"), pursuant to Rule 415 of the General Rules and Regulations promulgated under the Securities Act, of up to an aggregate 2,399,998 shares of common stock, par value \$0.001 per share, of the Company (the "Shares").

For purposes of this letter, we have examined originals, or copies certified or otherwise identified to our satisfaction, of such documents, corporate records and other instruments as we have deemed necessary for the purposes of this opinion, including: (i) the corporate and organizational documents of the Company, (ii) minutes and records of the corporate proceedings of the Company (iii) the Registration Rights Agreement, dated as of June 15, 2026, by and among the Company and the Selling Stockholders and (iv) the Registration Statement and the exhibits thereto.

For purposes of this letter, we have assumed the authenticity of all documents submitted to us as originals, the conformity to the originals of all documents submitted to us as copies and the authenticity of the originals of all documents submitted to us as copies. We have also assumed the legal capacity of all natural persons, the genuineness of the signatures of persons signing all documents in connection with which this opinion is rendered, the authority of such persons signing on behalf of the parties thereto other than the Company and the due authorization, execution and delivery of all documents by the parties thereto other than the Company. We have not independently established or verified any facts relevant to the opinions expressed herein, but have relied upon statements and representations of the officers and other representatives of the Company.

We have also assumed that:

- (i) the Registration Statement will have become effective and comply with all applicable laws;
- (ii) the Registration Statement will be effective and will comply with all applicable laws at the time the Shares are offered or sold as contemplated by the Registration Statement;
- (iii) if applicable, a prospectus supplement or term sheet ("Prospectus Supplement") will have been prepared and filed with the Commission describing the Shares offered thereby and will comply with all applicable laws; and
- (iv) all Shares will be sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement and if applicable, the appropriate Prospectus Supplement.

Based upon and subject to the foregoing qualifications, assumptions and limitations and the further limitations set forth below, we are of the opinion that, with respect to the Shares to be offered by the Selling Stockholders pursuant to the Registration Statement, such Shares are validly issued, fully paid and nonassessable.

Our opinion expressed above is subject to the qualifications that we express no opinion as to the applicability of, compliance with, or effect of (i) any bankruptcy, insolvency, reorganization, fraudulent transfer, fraudulent conveyance, moratorium or other similar law affecting the enforcement of creditors' rights generally, (ii) general principles of equity (regardless of whether enforcement is considered in a proceeding in equity or at law), (iii) public policy considerations which may limit the rights of parties to obtain certain remedies and (iv) any laws except the General Corporation Law of the State of Delaware, including the applicable provisions of the Delaware constitution and reported judicial decisions interpreting these laws.

We hereby consent to the filing of this opinion with the Commission as Exhibit 5.1 to the Registration Statement. We also consent to the reference to our firm under the heading "Legal Matters" in the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

We do not find it necessary for the purposes of this opinion, and accordingly we do not purport to cover herein, the application of the securities or "Blue Sky" laws of the various states to the sale of the Shares.

This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein. This opinion speaks only as of the date hereof, and we assume no obligation to revise or supplement this opinion should the present federal securities laws of the United States or the General Corporation Law of the State of Delaware be changed by legislative action, judicial decision or otherwise after the date hereof.

This opinion is furnished to you in connection with the filing of the Registration Statement in accordance with the requirements of Item 601 (b)(5) of Regulation S-K under the Securities Act, and is not to be used, circulated, quoted or otherwise relied upon for any other purpose. No opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein.

Sincerely,

/s/ Kirkland & Ellis LLP

KIRKLAND & ELLIS LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Talen Energy Corporation of our report dated February 26, 2026 relating to the consolidated financial statements, consolidated financial statement schedule and the effectiveness of internal control over financial reporting of Talen Energy Corporation (Successor), which appears in Talen Energy Corporation's Annual Report on Form 10-K for the year ended December 31, 2025. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
Houston, Texas
June 18, 2026

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of Talen Energy Corporation of our report dated March 14, 2024 relating to the consolidated financial statements of Talen Energy Supply, LLC (Predecessor), which appears in Talen Energy Corporation's Annual Report on Form 10-K for the year ended December 31, 2025. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP
Houston, Texas
June 18, 2026

[KPMG LOGO]

KPMG LLP
Suite 4000
1735 Market Street
Philadelphia, PA 19103-7501

Consent of Independent Auditors

We consent to the incorporation by reference in this registration statement on Form S-3 of Talen Energy Corporation of our report dated September 12, 2025, with respect to the financial statements of Moxie Freedom, LLC, which report appears in the Form 8-K of Talen Energy Corporation dated February 9, 2026.

/s/ KPMG LLP
Philadelphia, Pennsylvania
June 18, 2026

[KPMG LOGO]

KPMG LLP
Suite 4000
1735 Market Street
Philadelphia, PA 19103-7501

Consent of Independent Auditors

We consent to the incorporation by reference in this registration statement on Form S-3 of Talen Energy Corporation of our report dated September 12, 2025, with respect to the consolidated financial statements of Guernsey Power Holdings, LLC, which report appears in the Form 8-K of Talen Energy Corporation dated February 9, 2026.

/s/ KPMG LLP
Philadelphia, Pennsylvania
June 18, 2026