

address, if
changed
since last
report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17

CFR §240.12b-2). Emerging growth company

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

Item 1.01 Entry into a Material Definitive Agreement.

On July 26, 2018, Advanced Energy Industries, Inc., a Delaware corporation (“Advanced Energy”), entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Eclipse Merger Sub, Inc. (“Acquisition Sub”), a Delaware corporation and a wholly-owned subsidiary of Advanced Energy, LumaSense Technologies Holdings, Inc., a Delaware corporation (“LumaSense”), and Shareholder Representative Services LLC, a Colorado limited liability company (“Representative”). Pursuant to the Merger Agreement, Advanced Energy will acquire LumaSense, a leading provider of photonic based, highly engineered, sensing and metrology solutions for critical processing applications, through a reverse triangular merger, whereby Acquisition Sub will merge with and into LumaSense, with LumaSense being the surviving corporation and a wholly-owned subsidiary of Advanced Energy (the “Merger”).

Under the terms of the Merger Agreement, upon the closing of the Merger, shareholders of LumaSense will receive cash in the aggregate amount of \$85,000,000, plus a cash adjustment, plus or minus a working capital adjustment and minus certain closing date indebtedness and unsatisfied transaction costs. The Merger Agreement and the Merger were approved by the boards of directors of each of Advanced Energy, Acquisition Sub and LumaSense. The consummation of the Merger is subject to customary closing conditions, including, but not limited to, obtaining the approval of the shareholders of LumaSense, receipt of customary merger control approval from German competition authorities, receipt of satisfactory evidence that coverage under the representations and warranties insurance policy has been bound and the absence of any change or effect since the date of the Merger Agreement that is materially adverse to the business, financial condition or results of operations of LumaSense, taken as a whole (in the case of Advanced Energy’s obligation to close).

The Merger Agreement contains a customary non-solicitation provision restricting LumaSense with respect to its rights to negotiate or enter into other acquisition or sale transactions before the closing of the Merger. In addition, Advanced Energy, Acquisition Sub and LumaSense each made customary representations, warranties and covenants in the Merger Agreement. The Merger Agreement contains certain termination rights for both Advanced Energy and LumaSense.

The Merger Agreement has been included to provide investors and security holders with information regarding its terms. It is not intended to provide any other factual information about Advanced Energy. The representations, warranties and covenants contained in the Merger Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties, including being qualified by confidential disclosures exchanged between the parties in connection with the execution of the Merger Agreement. The representations and warranties may have been made for the purposes of allocating contractual risk between the parties to the agreement instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors. Investors are not third-party beneficiaries under the Merger Agreement and should not rely on the representations, warranties and covenants or any descriptions thereof as characterizations of the actual state of facts or condition of Advance Energy, LumaSense, or Acquisition Sub or any of their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in Advanced Energy’s public disclosures.

The foregoing description of the Merger Agreement does not purport to be complete and is qualified in its entirety by the actual terms of the Merger Agreement, which is attached as Exhibit 2.1 to this Current Report on Form 8-K and incorporated herein by reference.

Item 8.01 Other Events

On July 30, 2018, Advanced Energy issued a press release announcing the execution of the Merger Agreement, a copy of which is attached hereto as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

2.1 Agreement and Plan of Merger by and among Advanced Energy Industries, Inc., Eclipse Merger Sub, Inc., LumaSense Technologies Holdings, Inc. and Shareholder Representative Services LLC dated July 26, 2018 *

99.1 Press Release dated July 30, 2018

* Schedules have been omitted pursuant to Item 601(b)(2) of Regulation S-K. Advanced Energy Industries, Inc. undertakes to furnish supplemental copies of any of the omitted schedules upon request by the Securities and Exchange Commission

SIGNATURES

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

ADVANCED
ENERGY
INDUSTRIES,
INC.

/s/ Thomas O.
McGimpsey
Thomas O.
McGimpsey
Executive Vice
President,
General
Counsel and
Corporate
Secretary

Date: July 30, 2018