

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

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR 12(g) OF THE
SECURITIES EXCHANGE ACT OF 1934

HORIZON TECHNOLOGY FINANCE CORPORATION
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or other jurisdiction of incorporation or organization)

27-2114934
(I.R.S. Employer Identification No.)

312 Farmington Avenue, Farmington, Connecticut
(Address of Principal Executive Offices)

06032
(Zip Code)

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

Title of Each Class to be so Registered:
6.25% Notes due 2022

**Name of the Exchange on
Which Each Class is to be so
Registered**
New York Stock Exchange

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c) or (e), please check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d) or (e), please check the following box.

If this form relates to the registration of a class of securities concurrently with a Regulation A offering, check the following box

Securities Act registration statement or Regulation A offering statement file number to which this form relates: **333-201886**

Securities to be registered pursuant to Section 12(g) of the Act: **None**

Item 1. Description of Registrant's Securities to be Registered.

The securities to be registered hereby are the 6.25% Notes due 2022 (the "Notes") of Horizon Technology Finance Corporation, a Delaware corporation (the "Registrant").

For a description of the Notes, reference is made to the information contained in the section entitled "Description of Debt Securities That We May Issue" in the prospectus dated August 1, 2017 (the "Prospectus") included in the Registrant's Registration Statement on Form N-2 (File No. 333-201886) (as amended from time to time, the Registration Statement) as filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), and to the information contained in sections entitled "Description of the Notes", "The Offering" and "United States Federal Income Tax Consequences" in the Company's prospectus supplement dated September 26, 2017 (the "Prospectus Supplement"), as filed with the Commission on September 27, 2017, pursuant to Rule 497 under the Securities Act. The Prospectus and Prospectus Supplement are incorporated by reference herein. Any form of prospectus or prospectus supplement to the Registration Statement that includes such descriptions and that are subsequently filed are hereby also incorporated by reference herein.

Item 2. Exhibits

1. Indenture, dated as of March 23, 2012, between the Registrant and U.S. Bank National Association, as trustee⁽¹⁾
2. First Supplemental Indenture, dated March 23, 2012, between the Registrant and U.S. Bank National Association, as trustee⁽²⁾
3. Form of 7.375% Senior Notes due 2019⁽³⁾
4. Second Supplemental Indenture, dated September 29, 2017, between the Registrant and U.S. Bank National Association, as trustee, relating to the 6.25% Notes due 2022⁽⁴⁾
5. Form of 6.25% Notes due 2022⁽⁵⁾

(1) Incorporated by reference to Exhibit (d)(7) of the Company's Post-Effective Amendment No. 2 to the Registration Statement on Form N-2, File No. 333-178516, filed on March 23, 2012

(2) Incorporated by reference to Exhibit (d)(8) of the Company's Post-Effective Amendment No. 2 to the Registration Statement on Form N-2, File No. 333-178516, filed on March 23, 2012

(3) Incorporated by reference to Exhibit (d)(9) of the Company's Post-Effective Amendment No. 2 to the Registration Statement on Form N-2, File No. 333-178516, filed on March 23, 2012

(4) Incorporated by reference to Exhibit (d)(12) of the Company's Post-Effective Amendment No. 5 on Form N-2, File No. 333-201886, filed on September 29, 2017

(5) Incorporated by reference to Exhibit (d)(13) of the Company's Post-Effective Amendment No. 5 on Form N-2, File No. 333-201886, filed on September 29, 2017

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

HORIZON TECHNOLOGY FINANCE CORPORATION

Date: September 29, 2017

By: /s/ Robert D. Pomeroy, Jr.
Robert D. Pomeroy, Jr.
Chairman and Chief Executive Officer
