

January 10, 2012

Robert D. Pomeroy, Jr., Chief Executive Officer
Horizon Technology Finance Corporation
312 Farmington Avenue
Farmington, Connecticut 06032

RE: Horizon Technology Finance Corporation
File Nos.: 333-178516 and 814-00802

Dear Mr. Pomeroy:

On December 15, 2011, you filed a registration statement on Form N-2 under the Securities Act of 1933 ("1933 Act") on behalf of Horizon Technology Finance Corporation ("Fund"). The registration statement was filed, pursuant to Rule 415 under the 1933 Act, to register the Fund's common and preferred shares, warrants, subscription rights, units, and debt securities for sale by the Fund and also to register 1,322,669 shares of the Fund's common shares to be offered for resale by "selling stockholders." The Fund has previously elected to be treated as a business development company under the Investment Company Act of 1940 ("1940 Act"). We have used the captions and page numbers from the registration statement to indicate the sections of the registration statement to which our comments relate. However, you should consider a comment made with respect to one section to be applicable to similar disclosure elsewhere in the registration statement. We have the following comments.

Prospectus

Cover Pages

1. Following the statement in the second paragraph of the front cover that "[w]e will not receive any of the proceeds from the sale of shares of our common stock by any selling stockholders," please add that these sales may negatively affect the market price of the Fund's shares.
2. Immediately before the sentence with the cross reference required by Item 1.1.j. of Form N-2, please include the following statement in the same bold face type as the rest of paragraph:

The securities in which the Fund invests will not be rated by any rating agency. If they were, they would be rated as below investment grade or "junk." Indebtedness of below investment

grade quality has predominantly speculative characteristics with respect to the issuer's capacity to pay interest and repay principal.

3. In the same paragraph, please revise the statement that “[i]nvesting in our securities is speculative and involves numerous risks...” to state that such investments are “highly speculative” and “involve a high degree of risk.”
4. We note that the market price of the Fund's shares is currently below the Fund's net asset value. We also note that the Fund held a special meeting on July 12, 2011, to request shareholder approval to offer its shares below NAV for the next 12 months, as provided in Section 63(2) of the 1940 Act. If this proposal was approved by shareholders, or if the Fund intends to again seek shareholder approval to offer its shares below NAV, it should be disclosed in the third paragraph of the cover and, where appropriate, in the prospectus.
5. The “selling stockholders” will not be restricted by Section 23(b) of the 1940 Act from selling their shares when the market price is below NAV. Please mention this fact with respect to the Fund shares being registered for resale in the fourth paragraph of the cover page. Because the “overhang” of insider shares being registered for resale is significant, please also mention in the fourth paragraph of the cover, as well as disclosing prominently in the prospectus, the negative effect on market price that may result from insider selling.
6. Please disclose specifically the amount of expenses that the Fund will bear “in connection with the registration and sale of the common stock being offered by the selling stockholders.” Please provide us with a copy of the agreement between the Fund and the selling stockholders that requires the Fund to pay the registration and offering expenses of their shares. Please inform us whether the Fund's board has made a good faith determination with respect to the Fund's payment of these the expenses.
7. Please provide us with a legal analysis addressing how the Fund's offering of “units” is consistent with the requirements of the 1940 Act. This discussion should include discussions of the following issues. What Fund securities may be combined in the units? If the Fund's shares are trading at a discount, how will the units be priced? Are the units separately transferable? What are the securities being registered – the units or the units together with their underlying securities? Please provide us with a representation that the Fund will file a post-effective amendment prior to offering units, so that the staff has adequate opportunity to review the terms of their offering.
8. Please inform us how the Fund will account for the offering expenses related to the shares being registered.
9. How do the number of Fund shares that are currently held by the public and the number of shares being registered that will be offered currently by the Fund compare to the approximately 1.3 million shares being registered for resale by the “selling stockholders”?

Prospectus Summary

1. The subsection “Our Company,” on page 2, indicates that the Fund’s principal strategy is “Venture Lending.” It would be helpful to investors if this term were defined specifically, as is the term “enterprise value lending” in the “Strategy” subsection on page 3. (The first bullet, on page 57, of the prospectus provides a useful definition of “Venture Lending.”)
2. In the “Use of Leverage” paragraph, on page 4, please discuss the additional leverage that the Fund may create if it issues debt securities and preferred shares in the shelf offerings.
3. In the “Market Opportunity” subsection, on page 4, please change the phrase, “increased level of risk,” to “very high level of risk.”
4. In the “Our Portfolio” subsection, on page 5, the disclosure states “[t]he loans in our loan portfolio generally are not rated by any rating agency.” Immediately after this sentence, please insert a summary of the following disclosure from page 26 of the prospectus:

“[I]nvestments in our portfolio companies, if rated by one or more ratings agency, would typically be rated below “investment grade,” which refers to securities rated by ratings agencies below the four highest rating categories. These companies may also have more limited access to capital and higher funding costs. In addition, development-stage technology markets are generally characterized by abrupt business cycles and intense competition, and the competitive environment can change abruptly due to rapidly evolving technology. Therefore, our portfolio companies may face considerably more risk than companies in other industry sectors. Accordingly, these factors could impair their cash flow or result in other events, such as bankruptcy, which could limit their ability to repay their obligations to us and may materially adversely affect the return on, or the recovery of, our investments in these businesses.”

5. In the “Risk Factors” subsection, on pages 5-6, please make the following revisions:

- a) Please add a bullet stating:

The securities in which we invest have no market price and we value them based on estimates. Our valuations are inherently uncertain and may differ materially from the values that would be assessed if a ready market for these securities existed. (See page 18 of the prospectus.)

- b) Please add a bullet disclosing that the Fund’s quarterly distributions may be paid out of the paid-in capital of investors. Please explain that such a distribution would be a return of the investor’s original investment, net of Fund expenses, rather than a distribution of earnings and profits. Please also explain that, while such a distribution may not be taxable immediately, it would lower an investor’s basis in the shares, such that if they are sold, the investor would pay higher taxes, even if the shares were sold for less than the purchase price.

c) On page 6, please delete “typically” from the bullet stating that the Fund’s investments “would be typically rated below ‘investment grade.’” The Fund’s investment strategy is to make “Venture Loans” to “development-stage companies,” which are, by definition, below investment grade investments. In addition, the Fund’s entire current portfolio appears to be investments that, if rated, would be rated below investment grade.

d) On page 6, please revise the bullet describing the risk of “[s]ubsequent sales in the public market of substantial amounts of our common stock...,” to clarify that it is the “subsequent sales” of Fund shares by “selling stockholders” that is referred to and that the registration of a substantial amount of insider shares, whether or not they are actually sold, may have a negative impact on the market price. It also should be clarified that, because the Fund managers are “selling stockholders,” a negative perception could be created in the market about the Fund’s prospects by the resale registration.

e) On pages 6 and 32, please clarify the meaning of the statement that “[w]e may allocate the net proceeds from this offering in ways with which you may not agree.”

f) On page 6, please clarify the bullet statement that “investors in debt securities that we may issue may not receive all of the interest income to which they are entitled.” If the Fund may issue debt securities with original issue discount (“OID”), the nature of this risk for potential investors needs to be explained here, and elsewhere, in the prospectus.

g) On pages 6 and 34, please clarify the meaning of the statement that “[o]ur credit ratings may not reflect all risks of an investment in any debt securities that we may issue.” Will any debt securities to be issued by the Fund be rated by a rating agency?

Offerings, page 7

1. Please disclose the identities of the “selling stockholders,” including that one of the selling stockholders, HTF-CHF, is wholly owned by the Fund’s managers. Disclose why the shares were issued to the selling stockholders and why the Fund is paying the expenses of the resale registration. Disclose whether all contractual lock-ups and any other restrictions applicable to sales by insiders have expired. Disclose whether the Fund managers intend to sell their shares within a year of the effective date of the registration.

2. In the paragraph, “Sales of Common Stock Below Net Asset Value,” please disclose that sales by the selling stockholders, like those by any third-party seller, are not subject to the restrictions on sales below NAV.

Fees and Expenses, page 10

1. Please confirm that the calculation of net assets is based on an estimate of the Fund's average net assets for the current fiscal year, taking into account the net proceeds of this offering expected to be received by the Fund in the current fiscal year.
2. At the end of the line item "Other Expenses," please add the phrase "(estimated for the current fiscal year)."
3. Please provide an "Acquired Fund Fees and Expenses" line item if any of the Fund's assets will be invested in an "acquired fund," including a money market fund, and the anticipated indirect expenses of such an investment are expected to be equal to, or greater than, one basis point. See Instruction 10 to Item 3.1. of Form N-2.
4. In footnote "4" change the phrase "borne by us" to "borne by the Fund."
5. Please revise footnote "4" to clarify that "gross assets" include the assets estimated to be acquired in the current fiscal year using leverage. Please explain to us the meaning of the statement that "[t]he management fee referenced in the table above assumes the base management fee remains consistent with fees incurred for the three months ended September 30, 2011." The base management fee should be based on the Fund's asset size after giving effect to the anticipated net proceeds of this offering. See Instruction 7(a) to Item 3.1. of Form N-2.
6. Footnote "4" states that "[t]he incentive fee payable to our Advisor is based on the actual amount incurred under the first part of the Investment Management Agreement during the three months ended September 30, 2011, annualized for a full year." Please explain to us why this is a reasonable method of estimating the incentive fee payable for the current fiscal year. Further, footnote "5" also states that "[a]s we cannot predict the occurrence of any capital gains from the portfolio, we have assumed no Incentive Fee Capital Gain. The financial statements indicate that the Fund paid a capital gain incentive fee for the nine-month period ended September 30, 2011. (See page 44 of the prospectus.) Accordingly, please provide an estimated capital gain incentive fee for the current fiscal year.
7. Footnote "6" states that "we have computed the interest expense using the balance outstanding at September 30, 2011." Please explain to us why this is a reasonable estimate of the interest expense for the current fiscal year. Please disclose whether the Fund intends to issue debt securities within a year from the effective date of the registration statement.

Risk Factors, page 14

1. The disclosure, on page 16, describing the risks in "the covenants or restrictions in the Credit Facilities" is too complex. Please revise it in plain English. It appears from the footnotes to the Statement of Investments, on page F-11, that almost all of the investments of the Fund are pledged through the credit facilities. Given that the lender may seize the assets of "Credit I" and "Credit II"

without adjudication, please disclose the extensive security interest in the Fund's assets that has apparently been granted to the lender.

2. The description, on page 17, of the risk that the Fund will be "unable to obtain additional debt financing" is also too complex. It, too, should be revised in plain English. In addition, because the disclosure, on page 18, states that the Fund has withdrawn its application to operate the Longview subsidiaries as SBICs, the bullet, on page 35, about a subsidiary becoming an SBIC should be deleted.

3. The subsection, on page 18, titled, in part, "the value of our investments may not be readily determinable," states that "[o]ur Board employs an independent third-party valuation firm to assist the board in arriving at the fair value of our investments." Does the Board use an independent valuation firm, rather than a pricing service, to value each investment when made by the Fund and, at least, quarterly thereafter? Please provide us with a copy of the valuation policies adopted by the Board.

4. The description, on page 19, of the risks of the "[r]egulations governing...our ability to...raise additional capital..." states that "[w]e may obtain additional capital through the issuance of debt securities, other indebtedness or preferred stock, and we may borrow money from banks or other financial institutions..." Describe the "other indebtedness" mentioned. Disclose whether the Fund intends to issue debt securities and/or preferred stock within a year of the effective date of the registration statement.

5. The risk disclosure, on pages 20 and 22 and elsewhere in the prospectus, indicates that the Fund may "hold debt instruments that are treated under applicable tax rules as having original issue discount (such as debt instruments with payment-in-kind interest or, in certain cases, increasing interest rates or issued with warrants)..." We also note that the disclosure, on page 22, states that "[o]ur governing documents do not limit the number of loans we may make with deferred interest features or the proportion of our income we derive from such loans."

a) Please disclose how much of the Fund's current income is attributable to OID.

b) Disclose whether the Fund has a policy limiting its ability to invest in OID instruments, including payment-in-kind ("PIK") loans.

c) In the Schedule of Investments, on page F-6, and where appropriate in the financial statements, please disclose the amount of PIK interest payable on each loan and the amount of OID attributable to each warrant.

d) If the Fund's OID investments will be significant, please provide summary risk disclosure about the fact that such investments will require the Fund to pay incentive fees and taxes on accrued income that will not be collectible until maturity of the instrument and, ultimately, may not be collected.

6. With respect to the conflicts of interest disclosure on page 21, disclose whether the Advisor has a written policy for resolving conflicts of interest.

7. The discussion about the restrictions on transactions with affiliates, on page 24, does not indicate whether these restrictions actually affect the Fund. Please clarify the disclosure with respect to whether the Fund intends to enter into any principal transactions or joint arrangements with any affiliates. Please also disclose whether the Fund intends to request any exemptive relief under Section 57 of the 1940 Act.

8. Please revise the subsection heading on page 34, as follows: “Subsequent sales in the public market of substantial amounts of our common stock issued to the selling shareholders may have an adverse effect on the market price of our common stock.” The disclosure also needs to be revised, in this subsection and in the summary risk disclosure, to focus on the risks arising from the registration for resale of the Fund shares previously issued to Fund insiders (the “Selling Shareholders”). Please clarify that, as implied from the phrase “the availability of shares for sale,” the mere registration of a substantial amount of insider shares, particularly shares owned by managers, may have a negative impact on the market price of the Fund’s shares.

Price Range of Common Stock and Distributions, page 37

1. The following information, appearing on page 37, also should be disclosed, where appropriate, in the prospectus summary:

“To the extent our taxable earnings fall below the total amount of our distributions for any given fiscal year, a portion of those distributions may be deemed to be a return of capital to our common stockholders for U.S. federal income tax purposes. Thus, the source of a distribution to our stockholders may be the original capital invested by the stockholder rather than our income or gains. Stockholders should read any written disclosure accompanying a dividend payment carefully and should not assume that the source of any distribution is our ordinary income or gains.”

2. Please inform us whether the Fund intends to report a distribution yield. If the Fund intends to report a distribution yield at any point prior to finalizing its tax figures, it should disclose the components of the distribution yield. In addition, any reports containing distribution yields should be accompanied by the SEC total return and/or yield and the Fund should also disclose that the distribution yield does not represent its performance.

Other

1. Does the prospectus describe all of the fundamental policies of the Fund with respect to any of the activities listed in Item 17.2. of Form N-2 and any other policy that the Fund deems fundamental? Does the Fund reserve freedom of action with respect to any of these activities?

2. Does the prospectus describe fully all significant investment policies of the Fund that are not deemed fundamental and that may be changed without the approval of the holders of a majority of the voting securities?
3. Does the prospectus disclose the extent to which the Fund may engage in its fundamental and non-fundamental policies and the risks inherent in such policies?
4. Please inform us whether the officers, directors, and beneficial owners of more than 10% of the Fund's securities have filed the ownership reports (Forms 3, 4, and 5) required by Section 16(a) of the Securities Exchange Act of 1934.
5. Please state in your response letter whether FINRA has reviewed the terms and arrangements of the underwriting.

* * *

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the Fund and its management are in possession of all facts relating to the Fund's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, please furnish a letter acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Fund from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- The Fund may not assert this action as defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Investment Management in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

* * *

Robert D. Pomeroy, Jr.

January 10, 2012

Page 9

You should respond to this letter in the form of a pre-effective amendment filed under Rule 472 of the 1933 Act. Please provide written responses to all comments. Where no changes will be made in response to a comment, please so state in your letter and also state the basis for your position. We may have further comments after reviewing your responses.

If you have any questions about these comments, please call me at 202-551-6943 or e-mail me at o'connorj@sec.gov.

Very truly,

James E. O'Connor
Attorney/Advisor