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July 1, 2014

VIA EDGAR

U.S. Securities and Exchange Commission Division of Investment Management 100 F Street, N.E. Washington, D.C. 20549 Attn: James E. O'Connor and Christina DiAngelo Fettig

Re: Horizon Technology Finance Corporation Registration Statement on Form N-2 File Numbers: 333-178516; 814-00802

Ladies and Gentlemen:

Horizon Technology Finance Corporation, a Delaware corporation (the "<u>Company</u>"), has today filed with the Securities and Exchange Commission (the "<u>Commission</u>") post-effective amendment no. 9 ("<u>Amendment No. 9</u>") to its registration statement on Form N-2 (the "<u>Registration Statement</u>" and the prospectus contained therein, the "<u>Prospectus</u>"). On behalf of the Company, we hereby respond to the comments raised by the staff (the "<u>Staff</u>") of the Commission in a phone call between Christina DiAngelo Fettig of the Staff and Thomas J. Friedmann, outside counsel to the Company, on June 9, 2014 and in a phone call between James E. O'Connor of the Staff and Mr. Friedmann on June 30, 2014.

For your convenience, the Staff's comments are included in this letter and are followed by the applicable response. We will also provide under separate cover courtesy copies of Amendment No. 9, as submitted and marked to show the changes from post-effective amendment no. 8 to the Registration Statement.

Capitalized terms used in this letter and not otherwise defined herein shall have the meanings specified in the Registration Statement.

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PROSPECTUS

Prospectus Summary

1. The Staff notes that the Company's disclosure is unclear with respect to the number of classes of notes that were issued in connection with the 2013-1 Securitization. Please clarify the number of classes of notes so issued.

Response:

As requested, the Company has amended its definition of the Asset-Backed Notes under "– Our Strategy – Use of Leverage" on page 4 of the Prospectus to make clear that a single class of notes was issued in connection with the 2013-1 Securitization.

Fees and Expenses, page 15.

2. The Staff notes the Company's response to Comment 9 provided in the Company's letter to the Staff dated May 29, 2014 and reissues Comment 9, noting that the Company should provide the calculations used for the hypothetical expense example consistent with the form of calculation provided by the Staff.

Response:

As requested, the Company has provided in <u>Appendix A</u> to this letter the calculations used for the hypothetical expense example consistent with the form of calculation provided by the Staff and has modified the disclosure on page 15 of the Prospectus accordingly.

Risk Factors

3. The Staff notes the Company's response to Comment 13(d) in the Company's letter to the Staff dated May 29, 2014 with respect to the Risk Factor captioned "We may have difficulty paying our required distributions if we recognize taxable income before or without receiving cash." Please undertake to disclose in future periods the proportion of any distribution representing income that has been accrued for OID or payment-in-kind income but not yet received by the Company in cash.



Response:

As requested, the Company undertakes to disclose in its Section 19(a) notice and in its corresponding public disclosure the proportion of any distribution clearly attributable to accrued but unpaid income. If the distribution amount arises from several sources, however, such as cash income, proceeds from the sale or refinancing of portfolio assets or the proceeds of offerings of securities, the Company would not expect to make any such attribution in its public disclosures.

Senior Securities, page 68.

4. The Staff notes the Company's response to Comment 18 provided in the Company's letter to the Staff dated May 29, 2014 and reissues Comment 18.

Response:

As requested, the Company has filed as an exhibit to Amendment No. 9 a supplemental audit report covering the senior securities table.

FINANCIAL STATMENTS

5. The Staff notes the Company's responses to Comments 39 and 40 provided in the Company's letter to the Staff dated May 29, 2014. The Staff reissues Comments 39 and 40, noting that the Company has chosen to include financial highlights in the notes to its financial statements and thus should disclose all of the information requested by Item 4.1 of Form N-2.

Response:

As requested, if the Company elects in future periods to include financial highlights in the notes to its financial statements, the Company hereby undertakes to disclose in the financial highlights table (i) the nature of the distributions to stockholders and (ii) net assets of the Company as of the end of the applicable period.

6. The Staff notes the Company's response to Comment 41 provided in the Company's letter to the Staff dated May 29, 2014 and reissues Comment 41.

Response:

As requested, the Company undertakes to disclose any future waiver of management fees by the Company's investment adviser in its Consolidated Statements of Operations. The terms of any such waiver will be disclosed elsewhere in the Prospectus in all future periods.

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The Company hereby acknowledges that (i) it is responsible for the adequacy and accuracy of the disclosure in its filings with the Commission, (ii) Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to any filing and (iii) the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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If you have any questions, please feel free to contact the undersigned by telephone at 202.261.3313 (or by facsimile at 202.261.3333). Thank you for your cooperation and attention to this matter. Very truly yours,

/s/ Thomas J. Friedmann

Thomas J. Friedmann

cc: Christopher M. Mathieu, Horizon Technology Finance Corporation John C. Bombara, Horizon Technology Finance Corporation



<u>Appendix A</u>

Fees and Expense Example Calculation (as of December 31, 2013)

	Balance (beginning of period)	Income (5%)	Expense (14.12%)	Balance (end of period)	Cumulative Expenses
Year 1	1,000.00		141.22		-
Year 2	858.78	42.94			
Year 3	774.38	38.72	114.82	698.28	368.53
Year 4	698.28	34.91	103.54	629.65	
Year 5	629.65	31.48	93.36	567.77	561.61
Year 6	567.77	28.39	84.19	511.97	
Year 7	511.97	25.60	75.91	461.66	
Year 8	461.66	23.08	68.45	416.28	
Year 9	416.28	20.81	61.73	375.37	
Year 10	375.37	18.77	55.66	338.48	909.77

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Fees and Expense Example Calculation (as of March 31, 2014)

	Balance	Income	Expense	Balance	Cumulative
	(beginning of period)	(5%)	(13.86%)	(end of period)	Expenses
Year 1	1,000.00		138.62	861.38	132.46
Year 2	861.38	43.07	125.38	779.07	
Year 3	779.07	38.95	113.40	704.62	363.21
Year 4	704.62	35.23	102.56	637.29	
Year 5	637.29	31.86	92.76	576.40	554.89
Year 6	576.40	28.82	83.90	521.32	
Year 7	521.32	26.07	75.88	471.50	
Year 8	471.50	23.58	68.63	426.45	
Year 9	426.45	21.32	62.07	385.70	
Year 10	385.70	19.28	56.14	348.84	903.82