

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

FORM 20-F

(Mark One)

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

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number: 000-55135

**POET TECHNOLOGIES INC.**

(Exact name of Registrant as specified in its charter)

**Ontario, Canada**

(Jurisdiction of incorporation or organization)

**1107 – 120 Eglinton Avenue East  
Toronto, Ontario, M4P 1E2, Canada**

(Address of principal executive offices)

**Suresh Venkatesan, CEO  
780 Montague Expressway  
Ste 107**

**San Jose, California 95131**

**Email: [svv@poet-technologies.com](mailto:svv@poet-technologies.com)**

(Name, Telephone, Email and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act: None.

Securities registered or to be registered pursuant to Section 12(g) of the Act: Common Stock, no par value.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: Not Required.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes

No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes  No

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," and "emerging growth company" in the Exchange Act.

Large accelerated filer

Accelerated filer

Emerging Growth Company

Non-accelerated filer

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, 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.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP

International Financial Reporting Standards as issued  
by the International Accounting Standards Board

Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).  Yes  No

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POET TECHNOLOGIES INC.  
FORM 20-F ANNUAL REPORT  
TABLE OF CONTENTS

		<u>Page</u>
<u>Introduction</u>		1
	<u>PART I</u>	
<u>ITEM 1.</u>	<u>Identiv of Directors, Senior Management and Advisors</u>	4
<u>ITEM 2.</u>	<u>Offer Statistics and Expected Timetable</u>	4
<u>ITEM 3.</u>	<u>Key Information</u>	4
<u>ITEM 4.</u>	<u>Information on the Company</u>	19
<u>ITEM 4A.</u>	<u>Unresolved Staff Comments</u>	27
<u>ITEM 5.</u>	<u>Operating and Financial Review and Prospects</u>	27
<u>ITEM 6.</u>	<u>Directors, Senior Management, and Employees</u>	40
<u>ITEM 7.</u>	<u>Major Shareholders and Related Party Transactions</u>	52
<u>ITEM 8.</u>	<u>Financial Information</u>	52
<u>ITEM 9.</u>	<u>The Offer and Listing</u>	53
<u>ITEM 10.</u>	<u>Additional Information</u>	54
<u>ITEM 11.</u>	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	63
<u>ITEM 12.</u>	<u>Description of Securities Other Than Equity Securities</u>	64
	<u>PART II</u>	
<u>ITEM 13.</u>	<u>Defaults, Dividend Arrearages and Delinquencies</u>	64
<u>ITEM 14.</u>	<u>Material Modifications to the Rights of Security Holders and Use of Proceeds</u>	64
<u>ITEM 15.</u>	<u>Controls and Procedures</u>	64
<u>ITEM 16.</u>	<u>Reserved</u>	65
<u>ITEM 16A.</u>	<u>Audit Committee Financial Expert</u>	65
<u>ITEM 16B.</u>	<u>Code Of Ethics</u>	65
<u>ITEM 16C.</u>	<u>Principal Accounting Fees and Services</u>	65
<u>ITEM 16D.</u>	<u>Exemptions from the Listing Standards for Audit Committees</u>	66
<u>ITEM 16E.</u>	<u>Purchases of Equity Securities by the Issuer and Affiliated Purchasers</u>	66
<u>ITEM 16F.</u>	<u>Changes in Registrant's Certifying Accountants</u>	66
<u>ITEM 16G.</u>	<u>Corporate Governance</u>	66
<u>ITEM 16H.</u>	<u>Mine Safety Disclosure</u>	66
	<u>PART III</u>	
<u>ITEM 17.</u>	<u>Financial Statements</u>	66
<u>ITEM 18.</u>	<u>Financial Statements</u>	66
<u>ITEM 19.</u>	<u>Exhibits</u>	67

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## INTRODUCTION

POET Technologies Inc. is organized under the Business Corporations Act (Ontario). In this Annual Report, the "Company", "we", "our", "POET" and "us" refer to POET Technologies Inc. and its subsidiaries (unless the context otherwise requires). We refer you to the documents attached as exhibits hereto for more complete information than may be contained in this Annual Report. Our principal Canadian corporate offices are located at Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario M4P 1E2, Canada. Our U.S office is located in the U.S. at Suite 107, 780 Montague Expressway, San Jose, CA, 95131. Our telephone number in Toronto is (416) 368-9411.

We file reports and other information with the Securities and Exchange Commission ("SEC") located at 100 F Street NE, Washington, D.C. 20549. You may obtain copies of our filings with the SEC by accessing their website located at [www.sec.gov](http://www.sec.gov). We also file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing the website [www.sedar.com](http://www.sedar.com).

This Annual Report (including the consolidated audited financial statements for the years ended December 31, 2018, 2017 and 2016 attached thereto, together with the auditors' report thereon), and the exhibits thereto shall be deemed to be incorporated by reference as exhibits to the Registration Statement of the Company on Form F- 10, as amended (File No. 333-227873), and to be a part thereof from the date on which this report was filed, to the extent not superseded by documents or reports subsequently filed or furnished.

Business of POET Technologies Inc.

POET Technologies is a developer and manufacturer of optical light source products for the sensing and data communications markets. Integration of optics and electronics is fundamental to increasing functional scaling and lowering the cost of current photonic solutions. POET believes that its approach to hybrid integration of devices, utilizing a novel dielectric platform and proven advanced wafer-level packaging techniques enables substantial improvements in device cost, efficiency and performance. Optical engines based on this integrated approach have applications ranging from data centers to telecommunication networks to consumer products.

During the year ended December 31, 2018, the Company generated revenues of \$3,888,185 and gross profit of \$2,412,216. The Company currently operates at a loss.

The loss for 2018 was \$16,322,779. 100% of the Company's revenue in 2018 was generated from the sale of sensing products and non-recurring engineering ("NRE") revenue through the Company's subsidiary DenseLight Semiconductor Pte. Ltd. ("DenseLight").

During 2018, the Company spent \$8,692,804 on research and development activities directly related to the development and commercialization of the POET Optical Interposer Platform ("POIP") and the development of photonic sensing products. \$11,689,204 was spent on selling, marketing and administration expenses which included non-cash operating costs of \$6,584,741, of which \$2,562,624 related to depreciation and amortization, and \$4,022,117 related to the fair value stock-based compensation. The 2018 loss included other income of \$1,505,790 of which \$1,481,260 related to the recovery of certain qualifying expenses from the Economic Development Board ("EDB") in Singapore. The recovery includes both collected recoveries and an amount to be received in 2019. EDB recoverable for the year ended December 31, 2018 was \$1,905,593. The Company also had deferred income tax recovery of \$297,940 for the year ended December 31, 2018.

On February 1, 2019, the Company signed a non-binding Letter of Intent (LOI) for the sale of all the outstanding shares of DenseLight. Key terms of the LOI include proposed cash consideration in the range of \$26 - \$30 million, including a \$4 million earn-out provision, no-shop and confidentiality clauses, and an undertaking to enter into key operating agreements, including a preferred supply agreement and a long-term strategic cooperation agreement among the parties. The parties expect to complete the signing of the definitive transaction agreements on or before September 15, 2019. The broad terms of the LOI and the consummation of any transaction are subject to further due diligence, the negotiation of definitive agreements and obtaining required approvals by all parties, including but not limited to the TSX Venture Exchange and a majority of the Company's shareholders.

On February 1, 2019, management committed to a plan to sell its subsidiary, DenseLight. The decision was taken in line with a strategy to focus on the Company's opportunities related to its Optical Interposer. The divestiture of DenseLight will immediately reduce the Company's operating losses and cash burn, while allowing the Company to pursue a "fab-light" strategy with a less capital-intensive business model that is focused on growing the Optical Interposer business through targeted investments in the design, development and sale of vertical market solutions.

The Company's balance sheet as of December 31, 2018 reflects assets with a book value of \$25,137,903 compared to \$25,205,772 as of December 31, 2017. Twenty-seven percent (27%) of the book value as of December 31, 2018, or \$6,888,264, was in current assets consisting primarily of cash and other current assets, compared to thirty-two percent (32%), or \$7,950,712 as of December 31, 2017.

The Company's working capital of \$3,847,842 is not sufficient to support its operating and investing activities over the next 12 months. The Company has several sources of financing that it is considering in order to continue as a going concern. These sources of financing include internal cash generation from operations, financing via public offering, assumption of debt or a combination of all three sources.

In order to provide internal financing, the Company negotiated multiple NRE contracts in excess of US\$3 million with large suppliers of networking and datacom equipment. These NRE contracts extend into 2019 and will generate immediate high margin cash flow.

During 2018, the Company purchased US\$3.7 million of new equipment. The payment terms for the new equipment were negotiated both prior to placing purchase orders and re-negotiated subsequent to taking possession of the equipment. While the Company took possession of the new equipment, it was permitted to defer a portion of purchase cost without penalty or interest cost to 2019.

On March 21, 2018, the Company strengthened its working capital position relative to December 31, 2017 by completing a "bought deal" public offering of 25,090,700 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$10,663,548 (CAD\$13,799,885). Each unit consists of one common share and one-half common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.58 (CAD\$0.75) per share until March 21, 2020. The broker was paid a cash commission of \$639,813 (6%) of the gross proceeds and received 1,505,442 compensation options. Each compensation option is exercisable into one compensation unit of the Company at a price of \$0.425 (CAD\$0.55) per compensation unit until March 21, 2020 with each compensation unit comprising one common share and one-half compensation share purchase warrant. Each whole compensation share purchase warrant entitles the broker to purchase one common share of the Company at a price of \$0.425 (CAD\$0.55) per share until March 21, 2020. The Company paid an additional \$492,177 in other costs related to this financing. The Company received \$9,531,558 net of share issue costs. Additionally, the Company raised \$1,116,445 from the exercise of warrants and stock options.

On November 28, 2018, the Company filed a preliminary short form base shelf prospectus where it advised shareholders of its intent to raise a maximum US\$50 million through a public offering of either equity securities, debt securities or a combination of both. The Company has met with multiple investment bankers in both Canada and the United States who have expressed an interest in assisting the Company with a capital raise.

As at December 31, 2018, the Company has accumulated losses of \$(133,195,932) and working capital of \$3,847,842. During the year ended December 31, 2018, the Company had negative cash flows from operations of \$9,288,588. The Company has prepared a cash flow forecast which indicates that it does not have sufficient cash to meet its minimum expenditure commitments and therefore needs to raise additional funds to continue as a going concern for the next twelve months from the issuance of this Annual Report on Form 20-F. As a result, there is substantial doubt about the Company's ability to continue as a going concern for the next twelve months from the issuance of this Annual Report on Form 20-F.

To address the future funding requirements, management has undertaken the following initiatives:

1. Entered into discussions to secure debt financing.
2. Initiated a strict working capital monitoring program.
3. Continued its focus on maintaining an appropriate level of corporate overheads in line with the Company's available cash resources.
4. Filed a preliminary short-form prospectus to raise a maximum \$50 million through a public offering of either equity securities, debt securities or a combination of both.
5. Initiated a plan for raising capital in Canada via the private placement of convertible debt.

In line with its needs for additional financing, on April 3, 2019, the Company closed the first tranche of a private placement of convertible debentures that raised gross proceeds of CAD\$1,929,000 (the "Debentures"). The Debentures are unsecured, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021. Insiders of the Company subscribed for over 47% of the first tranche of Convertible Debentures, including the Company's board of directors, senior management team and financial advisors, IBK Capital. Successive tranche closings in the coming months are each subject to approval by the TSX Venture Exchange.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

#### Financial and Other Information

In this Annual Report, unless otherwise specified, all dollar amounts are expressed in United States Dollars ("US\$", "USD" or "\$").

#### Cautionary Statements Regarding Forward-Looking Statements

This Annual Report on Form 20-F and other publicly available documents, including the documents incorporated herein and therein by reference contain forward-looking statements and information within the meaning of U.S. and Canadian securities laws. Forward-looking statements and information can generally be identified by the use of forward-looking terminology or words, such as, "continues", "with a view to", "is designed to", "pending", "predict", "potential", "plans", "expects", "anticipates", "believes", "intends", "estimates", "projects", and similar expressions or variations thereon, or statements that events, conditions or results "can", "might", "will", "shall", "may", "must", "would", "could", or "should" occur or be achieved and similar expressions in connection with any discussion, expectation, or projection of future operating or financial performance, events or trends. Forward-looking statements and information are based on management's current expectations and assumptions, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict.

Our actual results, performance and achievements may differ material from those expressed in, or implied by, the forward-looking statements and information in this Annual Report as a result of various risks, uncertainties and other factors, many of which are difficult to predict and generally beyond the control of the Company, including without limitation:

- o we have a limited operating history;
- o our need for additional financing, which may not be available on acceptable terms or at all;
- o the possibility that we will not be able to compete in the highly competitive semiconductor market;
- o the risk that our objectives will not be met within the timelines we expect or at all;
- o research and development risks;
- o the risks associated with successfully protecting patents and trademarks and other intellectual property;
- o the need to control costs and the possibility of unanticipated expenses;
- o manufacturing and development risks;
- o the risk that the price of our common stock will be volatile;
- o the risk that shareholders' interests will be diluted through future stock offerings, option and warrant exercises; and
- o other risks and uncertainties described in ITEM 3.D. "Risk Factors".

For all of the reasons set forth above, investors should not place undue reliance on forward-looking statements. Other than any obligation to disclose material information under applicable securities laws or otherwise as maybe required by law, we undertake no obligation to revise or update any forward-looking statements after the date hereof.

Data relevant to estimated market sizes for our technologies under development are presented in this Annual Report. These data have been obtained from a variety of published resources including published scientific literature, websites and information generally available through publicized means. The Company attempts to source reference data from multiple sources whenever possible for confirmatory purposes. However, the Company has not independently verified the accuracy and completeness of this data.

#### PART I

##### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

A. Not Required.

##### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Required.

##### ITEM 3. KEY INFORMATION

###### A. Selected Financial Data

The selected financial data of the Company for the years ended December 31, 2018, 2017 and 2016 was derived from the audited annual consolidated financial statements of the Company, which have been audited by Marcum LLP, independent registered public accounting firm. Selected financial data of the Company for the years ended December 31, 2015 and 2014 was derived from the consolidated financial statements of the Company, which are not included in this Annual Report.

The information contained in the selected financial data for the 2018, 2017 and 2016 years is qualified in its entirety by reference to the Company's audited consolidated financial statements and related notes included under the heading "ITEM 17". Financial Statements" and should be read in conjunction with such financial statements and related notes and with the information appearing under the heading "ITEM 5".

Operating and Financial Review and Prospects." Except where otherwise indicated, all amounts are presented in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

Since its formation, the Company has financed its operations from public and private sales of equity securities, proceeds received upon the exercise of warrants and stock options, research and development contracts from U.S. government agencies, sales of the Company's photonic products and, prior to 2012, by sales of solar energy equipment products. The Company has never been profitable, so its ability to finance operations has been dependent on equity financings. While the Company has been generating cash flow from the sale of its photonic sensing products and NRE, we believe that it will also need to rely on the sale of our equity securities, debt securities or a combination of both to provide funds for its activities. See ITEM 3.D. "Risk Factors."

The Company has not declared any dividends since incorporation and does not anticipate that it will do so in the foreseeable future.

Consolidated Statements of Operations Under  
International Financial Reporting Standards  
(US\$)

	2018		2017		2016		2015		2014	
Revenue	\$	3,888,185	\$	2,794,044	\$	1,861,747	\$	-	\$	-
Cost of revenue		1,475,969		1,342,691		946,001		-		-
Gross profit		2,412,216		1,451,353		915,746		-		-
Operating expenses										
Selling, marketing and administration		11,689,204		10,870,741		11,421,604		8,614,109		9,677,705
Research and development		8,692,804		5,442,873		3,165,825		3,532,492		2,277,927
Impairment loss		156,717		-		63,522		-		-
Loss on disposal of property and equipment		-		-		46,738		-		-
Other income, including interest		(1,505,790)		(1,766,524)		(66,872)		(76,431)		(169,832)
Operating expenses		19,032,935		14,547,090		14,630,817		12,070,170		11,785,800
Net loss from operations		(16,620,719)		(13,095,737)		(13,715,071)		(12,070,170)		(11,785,800)
Change in fair value contingent consideration		-		-		(283,130)		-		-
Net loss before income tax recovery		(16,620,719)		(13,095,737)		(13,431,941)		(12,070,170)		(11,785,800)
Income tax recovery		(297,940)		(297,940)		(207,257)		-		-
Net loss for the year		(16,322,779)		(12,797,797)		(13,224,684)		(12,070,170)		(11,785,800)
Deficit, beginning of year		(116,873,153)		(104,075,356)		(90,850,672)		(78,780,502)		(66,994,702)
Deficit, end of year	\$	(133,195,932)	\$	(116,873,153)	\$	(104,075,356)	\$	(90,850,672)	\$	(78,780,502)
Basic and diluted loss per share:	\$	(0.06)	\$	(0.05)	\$	(0.06)	\$	(0.07)	\$	(0.08)

Certain prior period figures have been reclassified to conform with the current period's presentation



Consolidated Statements of Financial Position  
Under International Financial Reporting Standards  
(US\$)

	December 31,					
	2018	2017	2016	2015	2014	
<b>Assets</b>						
Cash and cash equivalents	\$ 2,567,868	\$ 4,974,478	\$ 14,376,282	\$ 14,409,996	\$ 11,287,864	
Short-term investments	-	-	589,275	-	-	
Accounts receivable	946,944	493,925	292,849	-	-	
Prepays and other current assets	2,936,619	1,957,727	758,917	150,923	243,501	
Inventory	436,833	524,582	1,116,880	-	-	
Property and equipment	9,299,513	8,278,170	9,364,210	947,107	1,058,860	
Patents and licenses	466,714	456,250	449,676	426,813	260,721	
Intangible assets	802,409	839,637	876,865	-	-	
Goodwill	7,681,003	7,681,003	7,681,003	-	-	
<b>Total Assets</b>	<b>\$ 25,137,903</b>	<b>\$ 25,205,772</b>	<b>\$ 35,505,957</b>	<b>\$ 15,934,839</b>	<b>\$ 12,850,946</b>	
<b>Liabilities</b>						
<b>Current Liabilities</b>						
Accounts payable and accrued liabilities	\$ 3,040,422	\$ 810,593	\$ 1,624,344	\$ 515,421	\$ 451,724	
Deferred tax liability	1,000,427	1,298,367	1,596,307	-	-	
Deferred rent	1,814	24,031	42,665	-	-	
<b>Total Liabilities</b>	<b>4,042,663</b>	<b>2,132,991</b>	<b>3,263,316</b>	<b>515,421</b>	<b>451,724</b>	
<b>Shareholders' Equity</b>						
Share capital	112,028,194	103,616,221	103,357,862	81,027,171	61,688,953	
Warrants	8,303,738	5,985,378	5,985,378	2,013,747	6,458,659	
Contributed surplus	36,042,754	32,102,967	29,062,874	25,618,159	23,616,664	
Accumulated other comprehensive loss	(2,083,514)	(1,758,632)	(2,088,117)	(2,388,987)	(584,552)	
Deficit	(133,195,932)	(116,873,153)	(104,075,356)	(90,850,672)	(78,780,502)	
<b>Total Equity</b>	<b>21,095,240</b>	<b>23,072,781</b>	<b>32,242,641</b>	<b>15,419,418</b>	<b>12,399,222</b>	
<b>Total Liabilities and Equity</b>	<b>\$ 25,137,903</b>	<b>\$ 25,205,772</b>	<b>\$ 35,505,957</b>	<b>\$ 15,934,839</b>	<b>\$ 12,850,946</b>	

## B. Capitalization and Indebtedness

Not Required.

## C. Reasons for the Offer and Use of Proceeds

Not Required.

## D. Risk Factors

We are subject to various risks, including those described below, which could materially adversely affect our business, financial condition and results of operations and, in turn, the value of our securities. In addition, other risks not presently known to us or that we currently believe to be immaterial may also adversely affect our business, financial condition and results of operations, perhaps materially. The risks discussed below also include forward-looking statements and information within the meaning of U.S. and Canadian securities laws that involve risks and uncertainties. The Company's actual results may differ materially from the results discussed in the forward-looking statements and information Factors that might cause such differences include those discussed. Before making an investment decision with respect to any of our securities, you should carefully consider the following risks and uncertainties described below and elsewhere in this Annual Report. See also "Cautionary Statement Regarding Forward-Looking Statements."

### Risks Related to Our Business

*We have agreed in principle to divest our major operating asset, have adopted a new "fab-light" strategy, and plan to focus on the Optical Interposer as our main business, any or all of which may have a material adverse effect on the results of our operations, financial position and cash flows, and pose further risks to the successful operation of our business over the short and long-term, as well as to the interpretation of our financial results by shareholders and our share price.*

There are substantial risks associated with our proposed sale of our DenseLight business located in Singapore and adoption of a "fab-light" strategy, including the immediate loss of all or a substantial part of our revenue, the loss of control over an internal development asset, and the loss of key technical knowledge available from personnel who will no longer be employed by the Company, whom we may have to replace.

At the present time we have executed a non-binding Letter of Intent (LOI) for the DenseLight sale and are in the process of negotiating definitive agreements. We cannot guarantee that we will reach a final agreement and any material renegotiation of the terms represented in the LOI may result in significant write-offs, including those related to goodwill and other intangible assets, which may have a material adverse effect on our results of operations and financial position. The negotiation process itself is a diversion of management's attention from other business concerns, which also may have a material adverse effect on the business. If we do not reach agreement with the current potential buyer, we have committed to seek other buyers as part of our "fab-light" strategy, which would be a time-consuming process that may continue to divert management's attention from other business concerns and which we cannot guarantee would be successful. If we are not successful in selling DenseLight or if there is material delay in the sale or a substantial reduction in the price at which it can be sold, then our financial position and cash flows will be adversely affected, we may have to repay any borrowings on the secured credit facility (see next risk factor) or absorb a substantial increase in interest cost, and may not be able to sustain operations at their current levels or at all.

We have some previous experience with managing development without an internal development resource under a similar "fab-light" strategy which was not successful, and there is no guarantee that our new approach to operating a company with our chosen strategy will be successful. Further, our strategy will be solely dependent on the future market acceptance and sale of Optical Interposer-based solutions, which are not yet fully developed and which no customer has yet adopted in a production product.

We cannot guarantee that the measures we have taken to protect POET's intellectual property in the Optical Interposer while performing development activities at our DenseLight facility have been effective or that some or all of the proprietary information and know-how on which the Optical Interposer is based has not been learned by the engineers working on Optical Interposer related projects. Following divestment, we will have little or no control over any leakage of such proprietary information or know-how either within or outside the DenseLight operation. In addition, we anticipate engaging with DenseLight to complete certain development projects, which will further expose our intellectual property to parties that we cannot control. Further, we cannot guarantee that DenseLight or any other third-party that we rely on to perform development, manufacturing, packaging or testing services will perform as expected and produce the devices we will need to grow our Optical Interposer business.

As "discontinued operations" our reported financial statements will immediately reflect the fact that all of our sales have been produced from our DenseLight operating unit. We may elect not to allocate any revenue to POET based on our current interpretation of the LOI and shareholders and analysts may form a poor opinion about the future prospects of the Company based on having little no revenue. If our development projects and discussions with customers for the adoption of all or portions of our Optical Interposer solutions are not successful, we may report little or no revenue for some period of time following the divestment of DenseLight. These and other factors may have a material adverse effect on the results of our operations and our share price.

There can be no assurance that we will be successful in addressing these or any other significant risks we may encounter in the divestment of DenseLight, the adoption of a "fab-light" strategy or the focus of our business solely on the Optical Interposer.

*We may not be able to generate sufficient cash to service our recently acquired debt obligations.*

We recently sold unsecured convertible debentures and secured financing with a bridge lender in the form of a secured credit facility. Our ability to make payments on our debt will depend on our financial and operating performance, which may fluctuate significantly from quarter to quarter, and is subject to prevailing economic conditions and financial, business and other factors, many of which are beyond our control. In addition, we have certain covenants in the secured credit facility that if not met would result in an significant increase in our interest cost and there are conditions which if not met would prevent us from accessing any additional funds from this facility. We cannot assure you that we will be able to generate sufficient cash flow or that we will be able to borrow funds from another source in amounts sufficient to enable us to service our debt or to meet our working capital requirements. If we are not able to generate sufficient cash flow from operations or to borrow sufficient funds to service our debt, we may be required to sell equity or assets, reduce expenditures, refinance all or a portion of our existing debt or obtain additional financing. We cannot assure you that we will be able to refinance our debt, sell assets or equity or borrow more funds on terms acceptable to us, if at all.

*The process of developing new, technologically advanced products in semiconductor manufacturing and photonics products is highly complex and uncertain, and we cannot guarantee a positive result.*

The development of new, technologically advanced products is a complex and uncertain process requiring frequent innovation, highly-skilled engineering and development personnel and significant capital, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully or on a timely basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to product introductions by competitors, technological changes or emerging industry standards. We also may not be able to develop the underlying core technologies necessary to create new products and enhancements, license these technologies from third parties, or remain competitive in our markets.

*Customer demand is difficult to forecast accurately and, as a result, we may be unable to match production with customer demand.*

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of product demand and customer requirements. Our products are typically sold pursuant to individual purchase orders. While our customers may provide us with their demand forecasts, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. Furthermore, many of our customers may increase, decrease, cancel or delay purchase orders already in place without significant penalty. The short-term nature of commitments by our customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. If any of our customers decrease, stop or delay purchasing our products for any reason, we will likely have excess manufacturing capacity or inventory and our business and results of operations would be harmed.

*If our customers do not qualify our products for use on a timely basis, our results of operations may suffer.*

Prior to the sale of new products, our customers typically require us to "qualify" our products for use in their applications. At the successful completion of this qualification process, we refer to the resulting sales opportunity as a "design win." Additionally, new customers often audit our manufacturing facilities and perform other evaluations during this qualification process. The qualification process involves product sampling and reliability testing and collaboration with our product management and engineering teams in the design and manufacturing stages. If we are unable to accurately predict the amount of time required to qualify our products with customers, or are unable to qualify our products with certain customers at all, then our ability to generate revenue could be delayed or our revenue would be lower than expected and we may not be able to recover the costs associated with the qualification process or with our product development efforts, which would have an adverse effect on our results of operations.

*The markets in which we operate are highly competitive, which could result in lost sales and lower revenues.*

The market for optical components and modules is highly competitive and this competition could result in our existing customers moving their orders to our competitors. We are aware of a number of companies that have developed or are developing optical component products, including LEDs, lasers, pluggable components, modules and subsystems, among others, that compete (or may in the future compete) directly with our current and proposed product offerings.

Some of our current competitors, as well as some of our potential competitors, have longer operating histories, greater name recognition, broader customer relationships and industry alliances and substantially greater financial, technical and marketing resources than we do. We may not be able to compete successfully with our competitors and aggressive competition in the market may result in lower prices for our products and/or decreased gross margins. Any such development could have a material adverse effect on our business, financial condition and results of operations.

*Our products, including those sold by predecessor company, OPEL Solar, could contain defects that may cause us to incur significant costs or result in a loss of customers or subject us to claims for which we may not be fully insured.*

Our predecessor company, Opel Solar, sold solar systems and products between 2007 and 2012, and some of those products may still be under warranty. We have not undertaken to quantify the size of that warranty obligation and it is not recorded on our balance sheet because it is not determinable. Although we carry product liability insurance, this insurance may not adequately cover our costs arising from defects or warranty claims related to those products.

Our current products sold by Denselight are complex and undergo quality testing as well as formal qualification by our customers. Our customers' testing procedures are limited to evaluating our products under likely and foreseeable failure scenarios and over varying amounts of time. For various reasons, such as the occurrence of performance problems that are unforeseeable in testing or that are detected only when products age or are operated under peak stress conditions, our products may fail to perform as expected long after customer acceptance. Failures could result from faulty components or design, problems in manufacturing or other unforeseen reasons. As a result, we could incur significant costs to repair or replace defective products under warranty, particularly when such failures occur in installed systems. Our products are typically embedded in, or deployed in conjunction with, our customers' products, which incorporate a variety of components, modules and subsystems and may be expected to interoperate with modules produced by third parties. As a result, not all defects are immediately detectable and when problems occur, it may be difficult to identify the source of the problem. We will continue to face this risk going forward because our products are widely deployed in many demanding environments and applications worldwide. In addition, we may in certain circumstances honor warranty claims after the warranty has expired or for problems not covered by warranty to maintain customer relationships. Any significant product failure could result in litigation, damages, repair costs and lost future sales of the affected product and other products, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems, all of which would harm our business. Although we carry product liability insurance, this insurance may not adequately cover our costs arising from defects in our products or otherwise.

*The business that we acquired did not have a history of profitable operations. Our ability to successfully manage our manufacturing operations is essential to our overall success, and if we fail to do so, our financial results will suffer.*

At the time of the acquisition of Denselight Semiconductors, Pte. Ltd. in May of 2016, the company had been operating at a loss for several years and was at a minimum staffing level. Since the acquisition we have committed substantial capital and management attention to improving the operation, increasing sales and driving to profitability. Even though substantial changes in the management and personnel have been made, the results to date have been less than anticipated and more improvement will be required in order to make the Denselight operation profitable. We cannot guarantee that our efforts to improve the Denselight operation will be successful, and if they are not, the operation will continue to need capital and attention from the senior management of the Company and our financial results may suffer as a result.

*If we encounter manufacturing problems or if manufacturing at our Singapore operation is discontinued for any reason, including an industrial or workplace accident, we may lose sales and damage our customer relationships, or be subject to claims for which we may not be fully insured.*

We may experience delays, disruptions or quality control problems in our manufacturing operations. These and other factors may cause less than acceptable yields at our wafer fabrication facility. Manufacturing yields depend on a number of factors, including the quality of available raw materials, the degradation or change in equipment calibration and the rate and timing of the introduction of new products. Changes in manufacturing processes required as a result of changes in product specifications, changing customer needs and the introduction of new products may significantly reduce our manufacturing yields, resulting in low or negative margins on those products. In addition, because of our wafer size, we use equipment that is not readily available on the open market and for which spare parts and qualified service people may not be available. If any of our key equipment were to be damaged or destroyed for any reason, our manufacturing process would be severely disrupted. Any such manufacturing problems would likely delay product shipments to our customers, which would negatively affect our sales, competitive position and reputation.

Our operations in Singapore are subject to government regulations that protect the workplace safety of employees. We strive to maintain an accident-free workplace, but we cannot guarantee that industrial accidents will not take place, or that we will not be subject to liability for these and other workplace related claims. We have obtained insurance policies to protect the Company against claims for workplace related claims, but we cannot guarantee that these and other insurance policies carried by the Company will be sufficient to cover the full costs of such claims, which could have a material adverse effect on the Company.

*We have limited operating history in the datacom market, and our business could be harmed if this market does not develop as we expect.*

The initial target market for our Optical Interposer-based optical engine is the datacom market and we have no experience in selling products in this market. We may not be successful in developing a product for this market and even if we do, it may never gain widespread acceptance by large data center operators. If our expectations for the growth of the datacom market are not realized, our financial condition or results of operations may be adversely affected.

*We depend on a limited number of suppliers and key contract manufacturers who could disrupt our business and technology development activities if they stopped, decreased, delayed or were unable to meet our demand for shipments of their products or manufacturing of our products.*

We depend on a limited number of suppliers of epitaxial wafers and contract manufacturers for our Indium Phosphide ("InP") development and production activities. Some of these suppliers are sole source suppliers. We typically have not entered into long-term agreements with our suppliers. As a result, these suppliers generally may stop supplying us materials and other components at any time. Our reliance on a sole supplier or limited number of suppliers could result in delivery problems, reduced control over technology development, product development, pricing and quality, and an inability to identify and qualify another supplier in a timely manner. Some of our suppliers that may be small or under-capitalized may experience financial difficulties that could prevent them from supplying us materials and other components. In addition, our suppliers, including our sole source suppliers, may experience manufacturing delays or shut downs due to circumstances beyond their control such as earthquakes, floods, fires, labor unrest, political unrest or other natural disasters. A Change in supplier could require technology transfer that could require multiple iterations of test wafers. This could result in significant delays in resumption of production.

Any supply deficiencies relating to the quality or quantities of materials or equipment we use to manufacture our products could materially and adversely affect our ability to fulfill customer orders and our results of operations. Lead times for the purchase of certain materials and equipment from suppliers have increased, and in some cases have limited our ability to rapidly respond to increased demand and may continue to do so in the future. To the extent we introduce additional contract manufacturing partners, introduce new products with new partners and/or move existing internal or external production lines to new partners, we could experience supply disruptions during the transition process. In addition, due to our customers' requirements relating to the qualification of our suppliers and contract manufacturing facilities and operations, we cannot quickly enter into alternative supplier relationships, which prevents us from being able to respond immediately to adverse events affecting our suppliers.

*Our international business and operations expose us to additional risks.*

Products shipped to customers located outside Canada and the United States account for a majority of our revenues. In addition, we have significant tangible assets located outside Canada and the United States. Our manufacturing facilities are located in Singapore. Conducting business outside Canada and the United States subjects us to a number of additional risks and challenges, including:

- periodic changes in a specific country's or region's economic conditions, such as recession;
- licenses and other trade barriers;
- the provision of services may require export licenses;
- environmental regulations;
- certification requirements;
- fluctuations in foreign currency exchange rates;
- inadequate protection of intellectual property rights in some countries;
- preferences of certain customers for locally produced products;
- potential political, legal and economic instability, foreign conflicts, and the impact of regional and global infectious illnesses in the countries in which we and our customers, suppliers and contract manufacturers are located;
- Canadian and U. S. and foreign anticorruption laws;
- seasonal reductions in business activities in certain countries or regions; and
- fluctuations in freight rates and transportation disruptions.

These factors, individually or in combination, could impair our ability to effectively operate one or more of our foreign facilities or deliver our products, result in unexpected and material expenses, or cause an unexpected decline in the demand for our products in certain countries or regions. Our failure to manage the risks and challenges associated with our international business and operations could have a material adverse effect on our business.

*If we fail to attract and retain key personnel, our business could suffer.*

Our future success depends, in part, on our ability to attract and retain key personnel, including executive management. Competition for highly skilled technical personnel is extremely intense and we may face difficulty identifying and hiring qualified engineers in many areas of our business. We may not be able to hire and retain such personnel at compensation levels consistent with our existing compensation and salary structure. Our future success also depends on the continued contributions of our executive management team and other key management and technical personnel, each of whom would be difficult to replace. The loss of services of these or other executive officers or key personnel or the inability to continue to attract qualified personnel could have a material adverse effect on our business.

*Our prior acquisitions created a large amount of goodwill, which may be impaired in the future and as a result may adversely affect our financial results. In addition, past and any future acquisitions involve numerous risks and may adversely affect our financial condition and results of operations.*

As part of our business strategy, we have in the past and may in the future pursue acquisitions of companies that we believe could enhance or complement our current product portfolio, augment our technology roadmap or diversify our revenue base. Acquisitions involve numerous risks, any of which could harm our business, including:

- difficulties integrating the acquired business;
- unanticipated costs, capital expenditures, liabilities or changes to product development efforts;
- difficulties integrating the business relationships with suppliers and customers of the acquired business with our existing operations;
- acts or omissions by the acquired company prior to the acquisition that may subject us to unknown risks or liabilities;
- risks associated with entering markets in which we have little or no prior experience;
- potential loss of key employees, particularly those of the acquired organizations; and
- diversion of financial and management resources from our existing business;

Our prior acquisitions have resulted, and future acquisitions may result in the recording of goodwill and other intangible assets subject to potential impairment in the future, adversely affecting our operating results. We may not achieve the anticipated benefits of an acquisition if we fail to evaluate it properly, and we may incur costs in excess of what we anticipate. A failure to evaluate and execute an acquisition appropriately or otherwise adequately address these risks may adversely affect our financial condition and results of operations.

*Our predecessor company received and our current companies receive and expect to receive in the future subsidies and other types of funding from government agencies in the locations in which we operate. The funding agreements stipulate that if we do not comply with various covenants, including eligibility requirements, and/or do not achieve certain pre-defined objectives, those government agencies may reclaim all or a portion of the funding provided. If this were to occur, we would either not be in a position to repay the claimed amounts or would have to borrow large sums in order to do so or refinance with dilutive financing, which could adversely affect our financial condition.*

Our predecessor company, Opel Solar and its wholly-owned subsidiary ODIS, received research and development grants from the United States Air Force and from NASA; our recently acquired subsidiary company, DenseLight Semiconductor, Pte. Ltd. is expected to receive funding for new product development activities conducted in Singapore from the Economic Development Board; and we expect that our recently acquired subsidiary company BB Photonics U.K., may also apply for certain grants to defer the cost of development in the U.K. The rules for eligibility vary widely across government agencies, are complex and may be subject to different interpretations. Furthermore, some of the grants set pre-defined development or spending objectives, which we may not achieve. We cannot guarantee that one or more agencies will not seek repayment of all or a portion of the funds provided, and if this were to occur, we could have to borrow large sums or refinance with dilutive financing in order to make the repayments, which would adversely affect our financial condition.

*Uncertainties in the interpretation and application of the 2017 Tax Cuts and Jobs Act could materially affect our tax obligations and effective tax rate.*

On December 22, 2017, the U.S. Tax Cuts and Jobs Act of 2017, or the "2017 Tax Act," was signed into law and includes several key tax provisions that affected us, including a reduction of the statutory corporate tax rate from 35% to 21% effective for tax years beginning after December 31, 2017, elimination of certain deductions, and changes to how the United States imposes income tax on multinational corporations, among others. The 2017 Tax Act requires complex computations to be performed that were not previously required in U.S. tax law, significant judgments to be made in interpretation of the provisions of the 2017 Tax Act, significant estimates in calculations, and the preparation and analysis of information not previously relevant or regularly produced. The U.S. Treasury Department, the IRS, and other standard-setting bodies will continue to interpret or issue guidance on how provisions of the U.S. Tax Act will be applied or otherwise administered. As future guidance is issued, we may make adjustments to amounts that we have previously recorded that may materially impact our financial statements in the period in which the adjustments are made.

*A significant disruption in, or breach in security of, our information technology systems or violations of data protection laws could materially adversely affect our business and reputation.*

In the ordinary course of business, we collect and store confidential information, including proprietary business information belonging to us, our customers, suppliers, business partners and other third parties and personally identifiable information of our employees. We rely on information technology systems to protect this information and to keep financial records, process orders, manage inventory, coordinate shipments to customers, and operate other critical functions. Our information technology systems may be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, telecommunication failures and user errors. If we experience a disruption in our information technology systems, it could result in the loss of sales and customers and significant incremental costs, which could materially adversely affect our business. We may also be subject to security breaches caused by computer viruses, illegal break-ins or hacking, sabotage, or acts of vandalism by disgruntled employees or third parties. The risk of a security breach or disruption, particularly through cyberattack or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Our information technology network and systems have been and, we believe, continue to be under constant attack. Accordingly, despite our security measures or those of our third-party service providers, a security breach may occur, including breaches that we may not be able to detect. Security breaches of our information technology systems could result in the misappropriation or unauthorized disclosure of confidential.

*We have a history of large operating losses. We may not be able to achieve or sustain profitability in the future and as a result we may not be able to maintain sufficient levels of liquidity.*

The Company's balance sheet as of December 31, 2018 reflects assets with a book value of \$25,137,903 compared to \$25,205,772 as of December 31, 2017. Twenty-seven percent (27%) of the book value as of December 31, 2018, or \$6,888,264, was in current assets consisting primarily of cash and other current assets, compared to thirty-two percent (32%), or \$7,950,712 as of December 31, 2017.

The Company's working capital of \$3,847,842 is not sufficient to support its operating and investing activities over the next 12 months. The Company has several sources of financing that it is considering in order to continue as a going concern for the next twelve months from the issuance of this Annual Report on Form 20-F. These sources of financing include internal cash generation from operations, financing via public offering, assumption of debt or a combination of all three sources.

In order to provide internal financing, the Company negotiated multiple non-recurring engineering (NRE) contracts in excess of US\$3 million with large suppliers of networking and datacom equipment. These NRE contracts extend into 2019 and will generate immediate high margin cash flow.

During 2018, the Company purchased US\$3.7 million of new equipment. The payment terms for the new equipment were negotiated both prior to placing purchase orders and re-negotiated subsequent to taking possession of the equipment. While the Company took possession of the new equipment, it was permitted to defer a portion of purchase cost without penalty or interest cost to 2019.

On March 21, 2018, the Company strengthened its working capital position relative to December 31, 2017 by completing a "bought deal" public offering of 25,090,700 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$10,663,548 (CAD\$13,799,885). Each unit consists of one common share and one-half common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.58 (CAD\$0.75) per share until March 21, 2020. The broker was paid a cash commission of \$639,813 (6% of the gross proceeds and received 1,505,442 compensation options. Each compensation option is exercisable into one compensation unit of the Company at a price of \$0.425 (CAD\$0.55) per compensation unit until March 21, 2020 with each compensation unit comprising one common share and one-half compensation share purchase warrant. Each whole compensation share purchase warrant entitles the broker to purchase one common share of the Company at a price of \$0.425 (CAD\$0.55) per share until March 21, 2020. The Company paid an additional \$492,177 in other costs related to this financing. The Company received \$9,531,558 net of share issue costs. Additionally, the Company raised \$1,116,445 from the exercise of warrants and stock options.

On November 28, 2018, the Company filed a preliminary short form base shelf prospectus where it advised shareholders of its intent to raise a maximum US\$50 million through a public offering of either equity securities, debt securities or a combination of both. The Company has met with multiple investment bankers in both Canada and the United States who have expressed an interest in assisting the Company with a capital raise.

As at December 31, 2018, the Company has accumulated losses of \$(133,195,932) and working capital of \$3,847,842. During the year ended December 31, 2018, the Company had negative cash flows from operations of \$9,288,588. The Company has prepared a cash flow forecast which indicates that it does not have sufficient cash to meet its minimum expenditure commitments and therefore needs to raise additional funds to continue as a going concern for the next twelve months from the issuance of this Annual Report on Form 20-F. As a result, there is substantial doubt about the Company's ability to continue as a going concern for the next twelve months from the issuance of this Annual Report on Form 20-F.

To address the future funding requirements, management has undertaken the following initiatives:

1. Entered into discussions to secure debt financing.
2. Initiated a strict working capital monitoring program.
3. Continued its focus on maintaining an appropriate level of corporate overheads in line with the Company's available cash resources.
4. Filed a preliminary short-form prospectus to raise a maximum \$50 million through a public offering of either equity securities, debt securities or a combination of both.
5. Initiated a plan for raising capital in Canada via the private placement of convertible debt.

In line with its needs for additional financing, on April 3, 2019, the Company closed the first tranche of a private placement of convertible debentures that raised gross proceeds of CAD\$1,929,000 (the "Debentures"). The Debentures are unsecured, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021. Insiders of the Company subscribed for over 47% of the first tranche of Convertible Debentures, including the Company's board of directors, senior management team and financial advisors, IBK Capital. Successive tranche closings in the coming months are each subject to approval by the TSX Venture Exchange.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

The optical communications industry is subject to significant operational fluctuations. In order to remain competitive, we incur substantial costs associated with research and development, qualification, production capacity and sales and marketing activities in connection with products that may be purchased, if at all, long after we have incurred such costs. In addition, the rapidly changing industry in which we operate, the length of time between developing and introducing a product to market, frequent changing customer specifications for products, customer cancellations of products and general down cycles in the industry, among other things, make our prospects difficult to evaluate. As a result of these factors, it is possible that we may not (i) generate sufficient positive cash flow from operations; (ii) raise funds through the issuance of equity, equity-linked or convertible debt securities; or (iii) otherwise have sufficient capital resources to meet our future capital or liquidity needs. There are no guarantees we will be able to generate additional financial resources beyond our existing balances.

*We may not be able to obtain additional capital when desired, on favorable terms or at all.*

We operate in a market that makes our prospects difficult to evaluate and, to remain competitive, we will be required to make continued investments in capital equipment, facilities and technology. We expect that substantial capital will be required to continue technology and product development, to expand our manufacturing capacity if we need to do so and to fund working capital for anticipated growth. If we do not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs, we may need additional financing to implement our business strategy.

If we raise additional funds through the issuance of our common stock or convertible securities, the ownership interests of our stockholders could be significantly diluted. These newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. Additional financing may not, however, be available on terms favorable to us, or at all, if and when needed, and our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our infrastructure or respond to competitive pressures could be significantly limited. If we cannot raise required capital when needed, including under our Short Form Prospectus filed with the Canadian Securities Exchange and the SEC in October 2016 and refiled in November 2018, we may be unable to continue technology and product development, meet the demands of existing and prospective customers, adversely affecting our sales and market opportunities and consequently our business, financial condition and results of operations.

*We may be subject to disruptions or failures in information technology systems and network infrastructures that could have a material adverse effect on our business and financial condition.*

We rely on the efficient and uninterrupted operation of complex information technology systems and network infrastructures to operate our business. A disruption, infiltration or failure of our information technology systems as a result of software or hardware malfunctions, system implementations or upgrades, computer viruses, third-party security breaches, employee error, theft or misuse, malfeasance, power disruptions, natural disasters or accidents could cause a breach of data security, loss of intellectual property and critical data and the release and misappropriation of sensitive competitive information and partner, customer, and employee personal data. Any of these events could harm our competitive position, result in a loss of customer confidence, cause us to incur significant costs to remedy any damages and ultimately materially adversely affect our business and financial condition.

*If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.*

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patent registrations in Canada, the U.S. and other countries, some of which have been issued. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. A failure to obtain patents or trademark registrations or a successful challenge to our registrations in Canada, the U.S. or other countries may limit our ability to protect the intellectual property rights that these applications and registrations intended to cover.

Policing unauthorized use of our technology is difficult and we cannot be certain that the steps we have taken will prevent the misappropriation, unauthorized use or other infringement of our intellectual property rights. Further, we may not be able to effectively protect our intellectual property rights from misappropriation or other infringement in foreign countries where we have not applied for patent protections, and where effective patent, trademark, trade secret and other intellectual property laws may be unavailable, or may not protect our proprietary rights as fully as Canadian or U.S. law. We may seek to secure comparable intellectual property protections in other countries. However, the level of protection afforded by patent and other laws in other countries may not be comparable to that afforded in Canada and the U.S.

We also attempt to protect our intellectual property, including our trade secrets and know-how, through the use of trade secret and other intellectual property laws, and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and independent consultants. We also use non-disclosure agreements with other third parties who may have access to our proprietary technologies and information. Such measures, however, provide only limited protection, and there can be no assurance that our confidentiality and non-disclosure agreements will not be breached, especially after our employees end their employment, and that our trade secrets will not otherwise become known by competitors or that we will have adequate remedies in the event of unauthorized use or disclosure of proprietary information. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products, otherwise obtain and use our intellectual property, or may independently develop similar or equivalent trade secrets or know-how. If we fail to protect our intellectual property and other proprietary rights, or if such intellectual property and proprietary rights are infringed or misappropriated, our business, results of operations or financial condition could be materially harmed.

In the future, we may need to take legal actions to prevent third parties from infringing upon or misappropriating our intellectual property or from otherwise gaining access to our technology. Protecting and enforcing our intellectual property rights and determining their validity and scope could result in significant litigation costs and require significant time and attention from our technical and management personnel, which could significantly harm our business. We may not prevail in such proceedings, and an adverse outcome may adversely impact our competitive advantage or otherwise harm our financial condition and our business.

***We may be involved in intellectual property disputes in the future, which could divert management's attention, cause us to incur significant costs and prevent us from selling or using the challenged technology.***

Participants in the markets in which we sell our products have experienced frequent litigation regarding patent and other intellectual property rights. There can be no assurance that third parties will not assert infringement claims against us and we cannot be certain that our products would not be found infringing on the intellectual property rights of others. Regardless of their merit, responding to such claims can be time consuming, divert management's attention and resources and may cause us to incur significant expenses. Intellectual property claims against us could result in a requirement to license technology from others, discontinue manufacturing or selling the infringing products, or pay substantial monetary damages, each of which could result in a substantial reduction in our revenue and could result in losses over an extended period of time.

***If we fail to obtain the right to use the intellectual property rights of others that are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.***

From time to time we may choose to or be required to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third party licenses will be available to us on commercially reasonable terms, if at all. Generally, a license, if granted, would include payments of up-front fees, ongoing royalties or both. These payments or other terms could have a significant adverse impact on our results of operations. Our inability to obtain a necessary third-party license required for our product offerings or to develop new products and product enhancements could require us to substitute technology of lower quality or performance standards, or of greater cost, either of which could adversely affect our business. If we are not able to obtain licenses from third parties, if necessary, then we may also be subject to litigation to defend against infringement claims from these third parties. Our competitors may be able to obtain licenses or cross-license their technology on better terms than we can, which could put us at a competitive disadvantage.

***If we fail to maintain effective internal control over financial reporting in the future, the accuracy and timing of our financial reporting may be adversely affected.***

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. The Sarbanes-Oxley Act in the U.S. requires, among other things, that as a publicly traded company we disclose whether our internal control over financial reporting and disclosure controls and procedures are effective. As long as we qualify as an "emerging growth company" under the JOBS Act, we will not have to provide an auditor's attestation report on our internal controls. During the course of any evaluation, documentation or attestation, we or our independent registered public accounting firm may identify weaknesses and deficiencies that we may not otherwise identify in a timely manner or at all as a result of the deferred implementation of this additional level of review.



Our internal controls cannot guarantee that no accounting errors exist or that all accounting errors, no matter how immaterial, will be detected because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute assurance that the control system's objectives will be met. If we are unable to implement and maintain effective internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely impacted. This could result in late filings of our annual and quarterly reports under the Canadian Securities Act and the Securities Exchange Act of 1934, or the Exchange Act, restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock by the TSX Venture Exchange, or other material adverse effects on our business, reputation, results of operations or financial condition.

*Our ability to use our net operating losses and certain other tax attributes may be limited.*

As of December 31, 2018, we had accumulated net operating losses (NOLs), of approximately \$133 million. Varying jurisdictional tax codes have restrictions on the use of NOLs, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs, R&D credits and other pre-change tax attributes to offset its post-change income may be limited. An ownership change is generally defined as a greater than 50% change in equity ownership. Based upon an analysis of our equity ownership, we do not believe that we have experienced such ownership changes and therefore the annual utilization of our NOLs may not be subject to such limitation at this time. However, should we experience additional ownership changes, our NOL carry forwards may be limited.

*We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.*

We are subject to export and import control laws, trade regulations and other trade requirements that limit which raw materials and technology we can import or export and which products we sell and where and to whom we sell our products. Specifically, the Bureau of Industry and Security of the U.S. Department of Commerce is responsible for regulating the export of most commercial items that are so called dual-use goods that may have both commercial and military applications. A limited number of our products are exported by license under certain classifications. Export Control Classification requirements are dependent upon an item's technical characteristics, the destination, the end-use, and the end-user, and other activities of the end-user. Should the regulations applicable to our products change, or the restrictions applicable to countries to which we ship our products change, then the export of our products to such countries could be restricted. As a result, our ability to export or sell our products to certain countries could be restricted, which could adversely affect our business, financial condition and results of operations. Changes in our products or any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could result in delayed or decreased sales of our products to existing or potential customers. In such event, our business and results of operations could be adversely affected.

*Our manufacturing operations are subject to environmental regulation that could limit our growth or impose substantial costs, adversely affecting our financial condition and results of operations.*

Our properties, operations and products are subject to the environmental laws and regulations of the jurisdictions in which we operate and sell products. These laws and regulations govern, among other things, air emissions, wastewater discharges, the management and disposal of hazardous materials, the contamination of soil and groundwater, employee health and safety and the content, performance, packaging and disposal of products. Our failure to comply with current and future environmental laws and regulations, or the identification of contamination for which we are liable, could subject us to substantial costs, including fines, clean-up costs, third-party property damages or personal injury claims, and make significant investments to upgrade our facilities or curtail our operations. Identification of presently unidentified environmental conditions, more vigorous enforcement by a governmental authority, enactment of more stringent legal requirements or other unanticipated events could give rise to adverse publicity, restrict our operations, affect the design or marketability of our products or otherwise cause us to incur material environmental costs, adversely affecting our financial condition and results of operations.

*We are exposed to risks and increased expenses and business risk as a result of Restriction on Hazardous Substances, or RoHS directives.*

Following the lead of the European Union ("EU"), various governmental agencies have either already put into place or are planning to introduce regulations that regulate the permissible levels of hazardous substances in products sold in various regions of the world. For example, the RoHS directive for EU took effect on July 1, 2006. The labeling provisions of similar legislation in China went into effect on March 1, 2007. Consequently, many suppliers of products sold into the EU have required their suppliers to be compliant with the new directive. We anticipate that our customers may adopt this approach and will require our full compliance, which will require a significant amount of resources and effort in planning and executing our RoHS program, it is possible that some of our products might be incompatible with such regulations. In such events, we could experience the following consequences: loss of revenue, damages reputation, diversion of resources, monetary penalties, and legal action.

***Failure to comply with the U.S. Foreign Corrupt Practices Act could subject us to penalties and other adverse consequences.***

We are subject to the U.S. Foreign Corrupt Practices Act, which generally prohibits companies operating in the U.S. from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. In addition, we are required to maintain records that accurately and fairly represent our transactions and have an adequate system of internal accounting controls. Non-U.S. companies, including some that may compete with us, may not be subject to these prohibitions, and therefore may have a competitive advantage over us. If we are not successful in implementing and maintaining adequate preventative measures, we may be responsible for acts of our employees or other agents engaging in such conduct. We could suffer severe penalties and other consequences that may have a material adverse effect on our financial condition and results of operations.

***Natural disasters or other catastrophic events could harm our operations.***

Our operations in the U.S., Canada and Singapore could be subject to significant risk of natural disasters, including earthquakes, hurricanes, typhoons, flooding and tornadoes, as well as other catastrophic events, such as epidemics, terrorist attacks or wars. For example, our wafer fabrication facility in Singapore is in an area that is susceptible to hurricanes. Any disruption in our manufacturing facilities arising from these and other natural disasters or other catastrophic events could cause significant delays in the production or shipment of our products until we are able to arrange for third parties to manufacture our products. We may not be able to obtain alternate capacity on favorable terms or at all. Our property insurance coverage with respect to natural disaster is limited and is subject to deductible and coverage limits. Such coverage may not be adequate or continue to be available at commercially reasonable rates and terms. The occurrence of any of these circumstances may adversely affect our financial condition and results of operation.

***Goodwill Impairment Risk***

POET's Board and management are required to analyze on an annual basis whether any intangibles should be impaired, based on a calculation of the likely future cash flows from those assets. The annual impairment test was done by management in the fiscal fourth quarter. Both DenseLight and BB Photonics are regarded by POET's Board and management as a single unit contributing to the Corporation's development of an Optical Interposer platform. At the time of their acquisition in mid-2016, the combined purchase price exceeded their combined asset values, resulting in the creation of Goodwill, valued as of December 31, 2018 at \$7,681,003. At the time of the initial valuation, no value was attributed to DenseLight's Intellectual Property, which POET's Board and management now expect to be a major contributor to the Corporation's anticipated future cash flows. POET's Board and management annually assesses the anticipated future cash flows of the Corporation related to this Goodwill and determines if an impairment is necessary. No provision for impairment was required as of the most recently completed financial year.

**Risks Related to Our Common Stock**

***Our stock price has been and may continue to be volatile.***

The trading price for our common stock on the TSX Venture Exchange ("TSXV") has been and is likely to continue to be highly volatile. Although we have registered our stock with the SEC, the U.S. market for our shares has been slow to develop, and if and as such a market develops, prices on that market are also likely to be highly volatile. The market prices for securities of early stage technology companies have historically been highly volatile.

Factors that could adversely affect our stock price include:

- fluctuations in our operating results and our financial condition;
- announcements of new products, partnerships or technological collaborations and announcements of the results or further actions in respect of any products, partnerships or collaborations, including termination of same;
- innovations by us or our competitors;
- governmental regulation;
- developments in patent or other proprietary rights;
- the results of technology and product development testing by us, our partners or our competitors;
- litigation;
- general stock market and economic conditions;
- number of shares available for trading (float); and
- inclusion in or dropping from stock indexes.

As of April 22, 2019, our 52-week high and low closing market prices for our common stock on the TSXV were CAS0.56 and CAS0.23.

*We have historically obtained, and expect to continue to obtain, additional financing primarily by way of sales of equity, which may result in significant dilution to existing shareholders.*

We have not earned profits, so the Company's ability to finance operations is chiefly dependent on equity financings. Since 2012 we raised approximately US\$60.5 million (net of share issue costs) in equity financing through private placements or the exercise of stock options and warrants in support of the Company's business, which has resulted in significant dilution to existing shareholders. Further equity financings will also result in dilution to existing shareholders, and such dilution could be significant.

*Future sales of common stock or warrants, or the prospect of future sales, may depress our stock price.*

Sales of a substantial number of shares of common stock or warrants, or the perception that sales could occur, could adversely affect the market price of our common stock. Additionally, as of April 22, 2019, there were outstanding options to purchase up to 26,969,384 shares of our common stock that are currently exercisable and additional outstanding options to purchase up to 17,834,345 shares of common stock that are exercisable over the next several years. As of April 22, 2019, there were outstanding warrants to purchase 48,034,350 shares of our stock and broker compensation units to purchase 1,505,442 units. Each compensation unit is convertible into one common share and one-half common share purchase warrant. The holders of these options, warrants and compensation units have an opportunity to profit from a rise in the market price of our common stock with a resulting dilution in the interests of the other shareholders. The existence of these options, warrants and compensation units may adversely affect the terms on which we may be able to obtain additional financing. The weighted average exercise price of issued and outstanding options is CAD\$0.70, the weighted average exercise price of warrants is CAD\$0.56 and the weighted average exercise price of the compensation units is CAD\$0.55, which compares to the CAD\$0.32 market price at closing on April 22, 2019.

*Dilution through exercise of share options could adversely affect the Company's shareholders.*

Because the success of the Company is highly dependent upon its employees, the Company has granted to some or all of its key employees, directors and consultants options to purchase common shares as non-cash incentives. To the extent that significant numbers of such options may be granted and exercised, the interests of the other stockholders of the Company may be diluted. As of April 22, 2019, there were 44,803,729 share purchase options outstanding with a weighted average exercise price of CAD\$0.70, 48,034,350 share purchase warrants outstanding with a weighted average exercise price of CAD\$0.56 and 1,505,442 compensation units outstanding with a weighted average price of CAD\$0.55. If all of these securities were exercised, an additional 94,143,521 common shares would become issued and outstanding. This represents an increase of 32.7% in the number of shares issued and outstanding and would result in significant dilution to current shareholders.

*The risks associated with penny stock classification could affect the marketability of the Company's common shares and shareholders could find it difficult to sell their shares.*

The Company's common shares are subject to "penny stock" rules as defined in Exchange Act Rule 3a51-1. The SEC adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Transaction costs associated with purchases and sales of penny stocks are likely to be higher than those for other securities. Penny stocks generally are equity securities with a price of less than \$5.00 (other than securities listed on certain U.S. national securities exchanges, provided that current price and volume information with respect to transactions in such securities is provided by the exchange).

The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document that provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation.

In addition, the penny stock rules require that prior to a transaction in a penny stock not otherwise exempt from such rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for the Company's common shares in the United States and shareholders may find it more difficult to sell their shares.

*The rights of our shareholders may differ from the rights typically afforded to shareholders of a U.S. corporation.*

We are incorporated under the Business Corporations Act (Ontario) (the "OBCA"). The rights of holders of our common shares are governed by the laws of the Province of Ontario, including the OBCA, by the applicable laws of Canada, and by our Articles of Continuance and all amendments thereto (collectively, the "Articles"), and our by-laws (the "By-laws"). These rights differ in certain respects from the rights of shareholders in typical U.S. corporations. The principal differences include without limitation the following:

Under the OBCA, we have a lien on any common share registered in the name of a shareholder or the shareholder's legal representative for any debt owed by the shareholder to us. Under U.S. state law, corporations generally are not entitled to any such statutory liens in respect of debts owed by shareholders.

With regard to certain matters, we must obtain approval of our shareholders by way of at least 66 2/3% of the votes cast at a meeting of shareholders duly called for such purpose being cast in favor of the proposed matter. Such matters include without limitation: (a) the sale, lease or exchange of all or substantially all of our assets out of the ordinary course of our business; and (b) any amendments to our Articles including, but not limited to, amendments affecting our capital structure such as the creation of new classes of shares, changing any rights, privileges, restrictions or conditions in respect of our shares, or changing the number of issued or authorized shares, as well as amendments changing the minimum or maximum number of directors set forth in the Articles. Under U.S. state law, the sale, lease, exchange or other disposition of all or substantially all of the assets of a corporation generally requires approval by a majority of the outstanding shares, although in some cases approval by a higher percentage of the outstanding shares may be required. In addition, under U.S. state law the vote of a majority of the shares is generally sufficient to amend a company's certificate of incorporation, including amendments affecting capital structure or the number of directors.

Pursuant to our By-laws, two persons present in person or represented by proxy and each entitled to vote thereat shall constitute a quorum for the transaction of business at any meeting of shareholders. Under U.S. state law, a quorum generally requires the presence in person or by proxy of a specified percentage of the shares entitled to vote at a meeting, and such percentage is generally not less than one-third of the number of shares entitled to vote.

Under rules of the Ontario Securities Commission, a meeting of shareholders must be called for consideration and approval of certain transactions between a corporation and any "related party" (as defined in such rules). A "related party" is defined to include, among other parties, directors and senior officers of a corporation, holders of more than 10% of the voting securities of a corporation, persons owning a block of securities that is otherwise sufficient to affect materially the control of the corporation, and other persons that manage or direct, to a substantial degree, the affairs or operations of the corporation. At such shareholders' meeting, votes cast by any related party who holds common shares and has an interest in the transaction may not be counted for the purposes of determining whether the minimum number of required votes have been cast in favor of the transaction. Under U.S. state law, a transaction between a corporation and one or more of its officers or directors can generally be approved either by the shareholders or a by majority of the directors who do not have an interest in the transaction.

Neither Canadian law nor our Articles or By-laws limit the right of a non-resident to hold or vote common shares of the Company, other than as provided in the Investment Canada Act (the "Investment Act"), as amended by the World Trade Organization Agreement Implementation Act (the "WTOA Act"). The Investment Act generally prohibits implementation of a direct reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a "Canadian," as defined in the Investment Act (a "non-Canadian"), unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be of net benefit to Canada. An investment in the common shares of the Company by a non-Canadian (other than a "WTO Investor," as defined below) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company, and the value of the assets of the Company were CA\$5.0 million or more (provided that immediately prior to the implementation of the investment the Company was not controlled by WTO Investors). An investment in common shares of the Company by a WTO Investor (or by a non-Canadian other than a WTO Investor if, immediately prior to the implementation of the investment the Company was controlled by WTO Investors) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company and the value of the assets of the Company equaled or exceeded certain threshold amounts determined on an annual basis. The threshold for a pre-closing net benefit review depends on whether the purchaser is: (a) controlled by a person or entity from a member of the WTO; (b) a state-owned enterprise (SOE); or (c) from a country considered a "Trade Agreement Investor" under the Investment Act. A different threshold also applies if the Canadian business carries on a cultural business. The 2019 threshold for WTO investors that are SOEs will be \$416 million based on the book value of the Canadian business' assets, up from \$398 million in 2018. The 2019 thresholds for review for direct acquisitions of control of Canadian businesses by private sector investor WTO investors (\$1 billion) and private sector trade-agreement investors (\$1.5 billion) remain the same and are both based on the "enterprise value" of the Canadian business being acquired.

A non-Canadian, whether a WTO Investor or otherwise, would be deemed to acquire control of the Company for purposes of the Investment Act if he or she acquired a majority of the common shares of the Company. The acquisition of less than a majority, but at least one-third of the shares, would be presumed to be an acquisition of control of the Company, unless it could be established that the Company is not controlled in fact by the acquirer through the ownership of the shares. In general, an individual is a WTO Investor if he or she is a "national" of a country (other than Canada) that is a member of the WTO ("WTO Member") or has a right of permanent residence in a WTO Member. A corporation or other entity will be a "WTO Investor" if it is a "WTO Investor-controlled entity," pursuant to detailed rules set out in the Investment Act. The U.S. is a WTO Member. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of our common shares if the acquisition were made in connection with the person's business as a trader or dealer in securities;
- an acquisition of control of the Company in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of the Company by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control of the Company, through the ownership of voting interests, remains unchanged. Under U.S. law, except in limited circumstances, restrictions generally are not imposed on the ability of non-residents to hold a controlling interest in a U.S. corporation.

*As a "foreign private issuer", the Company is exempt from certain sections of the Exchange Act which results in shareholders having less complete and timely data than if the Company were a domestic U.S. issuer.*

As a "foreign private issuer," as defined under the U.S. securities laws, we are exempt from certain sections of the Exchange Act. In particular, we are exempt from Section 14 proxy rules that are applicable to domestic U.S. issuers. The submission of proxy and annual meeting of shareholder information (prepared to Canadian standards) on Form 6-K has typically been more limited than the submissions required of U.S. issuers and results in shareholders having less complete and timely data, including, among others, with respect to disclosure of: (i) personal and corporate relationships and age of directors and officers; (ii) material legal proceedings involving the Company, affiliates of the Company, and directors, officers promoters and control persons; (iii) the identity of principal shareholders and certain significant employees; (iv) related party transactions; (v) audit fees and change of auditors; (vi) voting policies and procedures; (vii) executive compensation; and (viii) composition of the Compensation Committee. In addition, due to the Company's status as a foreign private issuer, the officers, directors and principal shareholders of the Company are exempt from the short-swing insider disclosure and profit recovery provisions of Section 16 of the Exchange Act. The foregoing exemption results in shareholders having less data in this regard than is available with respect to U.S. issuers.

*If the Company is characterized as a passive foreign investment company, our U.S. shareholders may suffer adverse tax consequences.*

As more fully described below in ITEM 10.E. "Taxation" — United States Federal Income Tax Considerations — Passive Foreign Investment Company Status", if for any taxable year our passive income, or the value of our assets that produce (or are held for the production of) passive income, exceed specified levels, we may be characterized as a passive foreign investment company ("PFIC") for U.S. federal income tax purposes. This characterization could result in adverse U.S. tax consequences to our U.S. shareholders, including gain on the disposition of our common shares being treated as ordinary income and any resulting U.S. federal income tax being increased by an interest charge. Rules similar to those applicable to dispositions generally will apply to certain "excess distributions" in respect of our common shares.

*The actual allocation of proceeds from any financing undertaken may differ from the Company's initial or current intentions.*

The Company has discretion in the use of the net proceeds from any offering of equity securities. The Company may elect to allocate proceeds differently from its initial or current intentions. The failure by the Company's management to apply these funds effectively could have a material adverse effect on its business.

**Warrants included with financings**

Warrants offered with financings are not listed on any exchange. Investors may be unable to sell the warrants at the prices desired or at all. There is no existing trading market for the warrants and there can be no assurance that a liquid market will develop or be maintained for the warrants, or that an investor will be able to sell any of the warrants at a particular time (if at all). The liquidity of the trading market in the warrants, and the market price quoted for the warrants, may be adversely affected by, among other things:

- changes in the overall market for the warrants;
- changes in the Corporation's financial performance or prospects;
- changes or perceived changes in the Corporation's creditworthiness;
- the prospects for companies in the industry generally;
- the number of holders of the warrants;
- the interest of securities dealers in making a market for the warrants; and
- prevailing interest rates.

**ITEM 4. INFORMATION ON THE COMPANY**

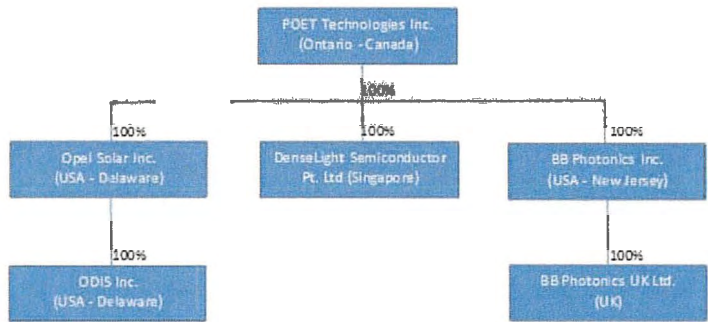
**A. History and Development of the Company**

The legal and commercial name of the Company is POET Technologies Inc. The Company was originally incorporated under the British Columbia Company Act on February 9, 1972 as Tandem Resources Ltd. On November 14, 1985, Tandem Resources Ltd. amalgamated with Stanmar Resources Ltd. and Keezic Resources Ltd., to continue as one company under the name Tandem Resources Ltd. under the British Columbia Company Act. By Articles of Continuance dated January 3, 1997, Tandem Resources Ltd. was continued under the OBCA. By Articles of Amendment dated September 26, 2006, Tandem Resources Ltd. changed its name to OPEL International Inc. By Certificate of Continuance dated January 30, 2007, OPEL International Inc. was continued under the New Brunswick Business Corporations Act. By Articles of Continuance dated November 30, 2010, OPEL International Inc. was continued under the OBCA and changed its name to OPEL Solar International Inc. By Articles of Amendment dated August 25, 2011, OPEL Solar International Inc. changed its name to OPEL Technologies Inc. By Articles of Amendment dated July 23, 2013, OPEL Technologies Inc. changed its name to POET Technologies Inc.

On May 11, 2016, in an all-stock transaction, the Company acquired all the issued and outstanding shares of DenseLight Semiconductor Pte. Ltd. (DenseLight), a privately held Singapore company that provides optical solutions. DenseLight designs, manufactures and sells optical light source products. DenseLight was acquired for \$10,500,000 of the Company's stock. The Company issued 13,611,150 common shares to the former shareholders of DenseLight.

On June 22, 2016, in an all-stock transaction, the Company acquired all the issued and outstanding shares of BB Photonics Inc., a privately held US Company with a wholly owned subsidiary, BB Photonics UK Ltd. Both companies design integrated photonics solutions for the data communications market. BB Photonics and its subsidiary were acquired for consideration of \$1,550,000. The acquisition was settled with the issuance of 1,996,090 common shares of the Company to the former shareholders of BB Photonics.

The following is a graphic description of the Company and its subsidiaries:



OPEL Solar Inc. and ODIS Inc.

**OPEL Solar, Inc. (OPEL)**

OPEL is a wholly-owned subsidiary of POET Technologies and is the assignee for all patents and patent applications filed by the Company.

**ODIS Inc. ("ODIS")**

ODIS is a wholly owned subsidiary of OPEL Solar, Inc. and is the developer of the POET platform semiconductor process IP for fabrication of integrated circuit devices containing both electronic and optical elements in a single package ("hybrid integration").

BB Photonics Inc. and BB Photonics UK Ltd.

BB Photonics develops photonic integrated components for the datacenter market utilizing embedded dielectric technology that is intended to enable on-chip athermal wavelength control which lowers the total solution cost of datacenter photonic integrated circuits.

DenseLight Semiconductor Pte. Ltd.

DenseLight designs, manufactures, and delivers photonic optical light source products and solutions to the communications, medical, instrumentations, industrial, defense, and security industries. DenseLight processes compound semiconductor-based optoelectronic devices and photonic integrated circuits through its in-house wafer fabrication and assembly & test facilities.

On February 4, 2019 the Company announced that it signed a non-binding Letter of Intent (LOI) for the sale of the capital stock of its Singapore-based DenseLight subsidiary. Key terms of the non-binding LOI include proposed cash consideration in the range of US\$26 - \$30 million (CAD\$34.5 - CAD\$40 million), including a US\$4 million (CAD\$5.3 million) earn-out provision, no-shop and confidentiality clauses, and an undertaking to enter into key operating agreements, including a preferred supply agreement and a long-term strategic cooperation agreement among the parties. The parties expect to complete the signing of the definitive transaction agreements on or before September 15, 2019.

The Company operates geographically in the United States, Canada and Singapore

**Capital Expenditures**

Our capital expenditures for the last three years, which principally consist of purchases of research and development equipment and instrumentation and patents are as follows:

Period		Capital Expenditure	Purpose
Fiscal 2018	S	3,785,760	Instruments, equipment and patents
Fiscal 2017	S	1,030,340	Instruments, equipment and patents
Fiscal 2016 <sup>(1)</sup>	S	10,985,852	Instruments, equipment and patents

*(1) As part of the acquisition of DenseLight and BB Photonics, the Company acquired \$8,706,029 of leasehold improvements, machinery and office equipment, and \$900,131 of intangible assets. The Company spent and additional \$1,379,692 in cash (\$1,281,170 spent in 2016 and \$98,522 spent in 2015) in acquiring equipment and patents.*

The Company's registered office is located at Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario, Canada M4P 1E2 and its phone number is (416) 368-9411. The Company has operations at Suite 107, 780 Montague Expressway, San Jose, CA, 95131 and 6 Changi North Street 2, Singapore, 498831.

**B. Business Overview**

Corporate Overview

**Overview**

We design, develop, manufacture and sell both discrete and integrated opto-electronic solutions for the sensing, data communications and telecommunications markets. In addition to manufacturing a range of Indium Phosphide (InP)-based light sources, POET has developed and is marketing its proprietary POET Optical Interposer™ platform. The POET Optical Interposer utilizes a novel dielectric waveguide technology that allows the integration of electronic and photonic devices into a single multi-chip module. The integration of devices into a single package is achieved by applying advanced wafer-level semiconductor manufacturing techniques and novel packaging methods developed by POET. POET's "photronics in a package" eliminates costly components, assembly and testing methods employed in conventional photronics solutions. In addition to lowering costs compared to conventional devices, POET's Optical Interposer provides a flexible and scalable platform for a variety of photronics applications ranging from data centers to consumer products.

POET's Optical Interposer is a platform technology upon which multiple applications can be based, including transceivers for data- and tele-communications, integrated photonics on electronic switching devices, low-cost components for the networking and cellular markets, automotive LIDAR and a plethora of sensing and other applications using light as a medium for data transmission. In each case, devices traditionally associated with photonics, such as laser diodes, light emitting diodes, detectors, amplifiers and the associated waveguides and other passive devices are designed specifically in the context of the Optical Interposer to meet the needs and functions of specific applications.

POET has targeted as the first application of the Optical Interposer the development of Optical Engines for transceivers. Transceivers are used to convert digital electronic signals into light signals and to transmit and receive those light signals via fiber optic cables within datacenters and between datacenters and metropolitan centers in a vast data and tele-communications network. We expect to deliver prototypes of certain types of Optical Engines by mid-2019. These prototypes are expected to address a small portion of the market for Optical Engines. Continued development of the prototypes will add several commonly used communication protocols and data speeds, to increase the functionality of the Optical Engine from receive only to transmit and receive, thus improving device capability and performance. Concurrently, we also intend to develop additional applications for the Optical Interposer platform in the telecom, LIDAR and sensing markets.

Virtually all of POET's R&D expenditures in recent years are in some way connected to the Optical Interposer. We expect to continue to spend the large majority of our R&D resources for the foreseeable future on Optical Interposer-based products across a wide variety of potential applications. The only other R&D expenditures that we have or may incur relate to conventional non-interposer-based products that we develop and manufacture for our legacy sensing product lines that represent the majority of our current sales. However, we intend to develop and transition these products to the Optical Interposer, because of the resulting cost and performance advantages that it provides.

POET's Optical Interposer development program consists of over 20 development projects in three areas: 1) Active Component Development, which includes a variety of application-specific Indium Phosphide (InP)-based lasers, detectors and modulators; 2) Passive Component Development, which includes application-specific filters, mux-demux devices, waveguides and spot size converters, all designed and fabricated using POET's proprietary dielectric materials and processes; and 3) Core Integration Process Development, which includes processes such as assembly, hermetic sealing, flip-chip techniques, reflection management, and wafer-level test. In order to optimize our development resources, we have taken a "building block" approach, beginning with the most fundamental functions needed for the Optical Interposer in each of these three areas. The Optical Interposer is unique in the industry, incorporating several "first time ever" implementations of advanced optics and semiconductor packaging techniques and completely new, novel designs for components. To minimize risk and maximize the probability of successful outcomes, we run parallel development programs, both internal and external. Our external programs engage development partners or subcontractors to provide devices, process expertise or equipment that we do not have internally.

As a platform technology, Optical Interposer development does not have a specific end-point. Each application of the Optical Interposer requires development specific to the application. POET's product roadmap is currently focused on the development of Optical Engines for optical transceivers. Optical Engines include all of the photonics-related components of a transceiver but does not include several of the electronic devices for a functioning transceiver module nor does it include the external packaging and optical fibers. The electronics include such devices as Trans Inductance Amplifiers (TIA's), laser drivers, etc. that are produced by major semiconductor manufacturers. However, Optical Engines represent the majority of the cost and value of most optical transceivers.

The "active" components that are included in a POET Optical Engine include lasers, detectors and modulators fabricated on InP substrates. To exploit the unique functionality of the Optical Interposer, each of these devices must be made to a design that integrates spot size converters ("SSCs") and allows the device to be compatible with a flip-chip assembly process. Our DenseLight subsidiary has been engaged for the past two years in the development of designs and process technologies to build such devices for the Optical Interposer. To accelerate the development process, we have either combined efforts with development partners, purchased wafers to specific designs or licensed technology as a means to supplement our internal development efforts. One of our earliest internal developments is a QuadPIN photodetector, which was introduced to customers for qualification in late 2018 at 25G<sup>1</sup> speeds. We believe the performance of this device can be improved to allow it to be used at 50Gbps speeds, which would be used in 400G transceiver Optical Engines. As we continue that development, we intend to place this device on an Optical Interposer with an integrated thru waveguide in Q2 of 2019, primarily as a means to demonstrate the functionality and versatility of the Optical Interposer platform, rather than as a product for sale. We have supplemented our active component device development with co-development partners and license agreements, including for certain types of lasers and modulators. In particular, we have initiated the development of Optical Interposer-compatible components at Almac, one of our laser development partners. This not only mitigates the risk to internal development and accelerates time to market, but it also ensures a second source of Optical Interposer-compatible active components, a critical part of our strategy going forward.

In parallel to these activities, POET has also directed development programs in the other two areas outside of DenseLight, including Passive Component design and development and Core Integration process development. Passive devices, as mentioned above, include filters, mux-demux devices, waveguides and spot size converters, all designed and fabricated using POET's proprietary dielectric materials and processes. We recently established a waveguide development lab in Ottawa in association with Mill View Photonics. We plan to expand that effort over time in order to design waveguides for specific applications for the Optical Interposer across several vertical markets. The actual fabrication of the passive devices, which are built on 8-inch diameter silicon wafers is performed by our foundry partner, SilTerra Malaysia ("SilTerra"). The devices fabricated at SilTerra represent the base foundational elements of the Optical Interposer on which the active devices are placed. In early 2018 we transferred the basic processes for the deposition and patterning of our proprietary dielectric material from a university lab to SilTerra. We purchased dedicated equipment in order to preserve the intrinsic intellectual property of the processes, and since early 2018 we have continued to improve those processes in order to make them suitable for high volume manufacturing.

<sup>1</sup> Cisco *Visual Networking Index: Forecast and Methodology, 2017-2022. White Paper*, Executive Summary, Feb. 27, 2019



The third area, Core Integration Process Development, highlights the fundamental benefits of the Optical Interposer platform as primarily an advanced packaging technology that allows true wafer-scale assembly and test. We do not believe that such true wafer-scale integration has been achieved by any other technology in the photonics industry. We are able to achieve chip-level integration and wafer-scale assembly, test and packaging because all of the active devices include SSCs and are designed to be placed and “matched” to passive device interfaces on the foundational Optical Interposer wafer using pick-and-place assembly techniques. We achieve high levels of coupling efficiency between each device, eliminating the high cost and cumbersome process of testing each component following placement. Once placed and tested at wafer scale, each Optical Interposer device is sealed, the wafer is separated into hundreds of individual die and the final Optical Engine is ready for shipment to the customer. Each of these process steps, from flip-chipping of devices onto the dielectric, pick and place assembly, hermetic sealing and singulation required substantial innovation and development, including several techniques that are unique in the photonics industry.

In late in 2018 we were approached by two large global networking companies that saw promise in using all or part of our Optical Interposer technology for their 400G transceiver development projects. These projects offered the benefits of payment for development, intersection with major companies at the early stage of their development projects for next generation transceivers, the prestige of working with industry-leading companies, and the potential for our Optical Engines to be included as major components of the planned shipments of transceivers by these companies. We took a major decision to reorder our priorities in order to effectively support these companies. We believe that addressing product-specific requirements with willing partners and committed funding is the optimal way to introduce the Optical Interposer technology to the market. Identifying and overcoming individual technical challenges increases the likelihood of success and promotes innovation. We expect that successful implementation of our designs into component prototypes, combined with the cost advantage inherent in Optical Interposer-based solutions, will lead to additional funding for other products, as well as to contracts for the delivery of production devices, once fully qualified.

The immediate consequence of our decision to work with leading industry partners on 400G transceivers was to accelerate the development of higher performance lasers, modulators and detectors needed for 400G, at the expense of similar programs for 100G. Another factor in our decision-making process was the market forecast for 100G transceivers which has flattened in terms of revenue and appears to be maturing much faster than the industry anticipated. Industry total revenue for 100G transceivers in 2019 is expected to be flat or lower than 2018. With unit volume going up, pricing is down and therefore margins are squeezed even more heavily than before.

Our plan to deliver 400G devices is essentially unchanged from prior plans, which targeted the release of TROE Optical Engine prototypes to customers for qualification<sup>2</sup> for in the second half of 2019. Our revised plan calls for all of the required active components, waveguides for certain standards, and core integration processes to be far enough along to allow the Company to produce both 400G prototypes and 100G prototypes during the second half of 2019. We expect to be able to introduce the less complex standards, such as DR4 for 400G and Parallel Single Mode 4-fiber (“PSM4”) for 100G earlier in the second half than the more complex FR4 for 400G and Coarse Wavelength Division Multiplexing (“CWDM”) standards. In each case we have multiple parallel programs aimed at these prototype products, utilizing both internal and external development resources.

Further, while we had forecasted the completion of a Receive Only Engine (ROE) for 100G as our first planned prototype, we now expect that there will be little demand for a separate ROE, since customers will be able to qualify a full TROE instead, performing one rather than two qualification cycles for a more complete solution. However, a 100G TROE with a CWDM filter represents the second generation of transceivers being adopted and a standard which is expected to be dominant in the 100G datacom market in China. Early adopters of 100G transceivers in the United States utilized PSM4, a standard that does not incorporate the highly complex CWDM filter.

The inherent cost advantage of an Optical Interposer-based 100G Optical Engines should still allow entry into the 100G market, but the level of penetration will depend on how far pricing will have fallen by year-end and into 2020. Nevertheless, because of the size of the market and the need for transceiver module suppliers to address margin concerns, an offering of a 100G CWDM TROE could still have major impact on POET’s data-communications revenue over the next one to two years. Due to the relatively large amount of NRE in our 2019 forecast, we do not expect to have to revise our guidance for 2019. Overall, we believe that our revised development roadmap represents a sound foundation for growth in 2020 and beyond.

In addition to the new products in the data communications market noted above, POET expects a significant increase in its Sensing product revenue in 2019. Recent trends have been positive. With some existing customers expanding order size and the addition of new customers, we have a strong pipeline of committed orders. Expanded laser product-lines in CW, FP and DFB configurations and in high-value NLW modules which address new and complex applications in the sensing market are in high demand. In addition, by incorporating the packaging innovations developed for the Optical Interposer, we expect that in mid- to late 2019 the Company will be in a position to introduce a differentiated sensing product-line at lower cost and higher performance.

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<sup>2</sup> “G” is an abbreviation for “Giga bits per second”, the rate at which the device transmits or receives data.

In recent quarters, POET has taken major steps to advance its development of Interposer-based new products, including through the purchase of equipment, improvement of facilities and the strengthening of its engineering team with more highly qualified talent and larger staff, all represented in POET's consolidated financial statements through additions to fixed assets and increased operating expenses. Certain additional capital equipment may be needed to enhance our development and production capabilities, but we expect only marginal increases in operating expenses over the next 3 to 4 quarters, as we are able to address the needs of our customers with our existing engineering staff and production facilities. The next few quarters will be devoted to the successful completion of funded development programs, the introduction of new devices into qualification cycles with customers, and preparation for higher production volumes in subsequent quarters. As a result of the recently announced contractual commitments for Optical Interposer sub-assembly prototypes, other anticipated Optical Engine prototype orders in late 2019, increases in Sensing product revenue and improvement of overall gross margins described below, we expect our DenseLight subsidiary to have a material increase in revenues in 2019. Should the Company's structure continue with DenseLight as a subsidiary (see "Potential Sale of DenseLight Subsidiary" below), forecasted revenue would be in the range of approximately \$8 to \$10 million, though we do not expect to reach cash break-even until 2020. Gross Margins should increase as a result of the proportion of higher margin development contracts for Non-Recurring Engineering (NRE) compared to products sales, which utilizes POET's existing engineering and operations staff. In addition, we plan to continue product development with an expansion of opportunities in markets beyond data communications for our Optical Interposer technology, such as telecommunications, Automotive LIDAR, and integration with Application Specific Integrated Circuits (ASICs), including switches and graphics generators.

#### Industry Background

Since the introduction of the smartphone, people have fundamentally changed the way they communicate, socialize, and interact among themselves and the data around them. Today, smartphones and other such devices allow us to capture, create and communicate enormous amounts of content. The explosion in data, storage and information distribution is driving extraordinary growth in internet traffic and cloud services. The expected growth in the networking and data communication market is the result of many factors, among them being, the growth of wireless and mobile traffic (which will account for 71% of total Internet Provider (IP) traffic by 2022<sup>3</sup>), social media activity, the progression of video transmission, the emergence of imaging such as virtual/augmented/mixed reality and 3D video, the continued migration to cloud storage, the propagation of sensors feeding the Internet of Things, and the evolution of big data analytics and machine learning/artificial intelligence. These factors will continue to drive a long-term increased demand for more capacity and higher speeds.

Photonics has traditionally been employed to transmit and receive data over long distances because light can carry considerably more content and data at faster speeds than other means of transmission, such as radio waves or copper wires. Optical transmission becomes more energy efficient as compared to electronic alternatives when the transmission length and speed increase. As a natural consequence, optics are systematically replacing copper in many of the data center communication links where speed, bandwidth and energy are at a premium. Data center operators are increasing the size and scale of their facilities, while simultaneously looking to component suppliers for solutions capable of providing higher data transmission rates. Within data centers, data communications over distances 500 m to 2 km have already been transitioned from inherently lower speed copper cable to optical fibers. Furthermore, short reach communications, either rack-to-rack or within the rack as well as those requiring speeds of up to 100G, are now increasingly being converted from copper to optical cables.

Outside the Data Centers, future 5G build-out of mobile communications will drive speed and capacity requirements closer to the user with significant reduction in latency. Compared to 4G, 5G technology standard offers much faster download and upload speed, minimum delay in data communication and processing, as well as much higher density in device connections. 5G will enable advances in virtual reality, augmented reality, autonomous driving, high-definition video, and the Internet of Things, among other applications. All of these applications require advanced photonics devices to provide higher speeds and more bandwidth.

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<sup>3</sup> "Qualification" of new devices or components, demonstrating adherence to both customer specifications and industry standards, is done both by POET and by our individual customers. The period over which device testing occurs may extend from three to six months or longer, depending on the device, the qualification tests required and the customer. We have estimated that the qualification of its "passive" devices, which do not contain "active", light-emitting components should average approximately three months and that active device-containing components should average approximately six months. However, with any particular device, test or customer, the qualification period may be shorter or longer.

## Photonics Markets

The two target markets in which we currently sell or plan to sell products near-term are Photonic Sensing and Optical Data Communications.

The Photonic Sensing market (which consists of fiber optic, image, bio-photonic and other sensors for the oil & gas, defense, transportation, energy, healthcare consumer electronics and other industries) is projected to grow to approximately US\$20 billion by 2022, with about a 15% CAGR between 2016 and 2022.<sup>4</sup> Major segments include the following:

- Test & Measurement - monitoring equipment for communication, components and material testing, as well as sensing equipment such as distributed temperature and strain measurement;
- Structural Health Monitoring - systems to monitor the power grid, and fiber optic-based sensors in rail lines, nuclear facilities, etc.
- Guidance and Navigation - navigational guidance systems, gyrocompasses, and optical-based systems for navigating self-driving automobiles; and
- Medical and Health Care - devices for non-invasive blood glucose monitoring, pulse-oximeter devices, and ophthalmic examination.

Market segments in Photonic Sensing are typically served by large system providers, so component sales of lasers and detectors represents approximately 10% of any given system market segment.

The Optical Communications Market (which includes optical switching equipment, fiber optic transmission systems, transceivers, etc. for all industries) is forecasted to grow at about 9% CAGR over the period from 2017 to 2023, to US\$24 billion from a current US\$15 billion.<sup>5</sup> System and component growth is driven largely by global Internet Provider (IP) traffic, which is expected to nearly triple from 2017 to 2022, representing a 26% CAGR.<sup>6</sup> Within the overall Data Communications market, photonic transceivers will represent a \$25 billion market opportunity in 2025, according to *Oculi, Inc.*<sup>7</sup> The primary segments for photonic transceivers are Ethernet, wide area network (WAN) and dense wavelength division multiplexing (DWDM), all of which are predominantly addressed by InP-based optical technologies. Ethernet transceivers are forecasted to grow to \$7.4 billion by 2025 with 100G driving a majority of the growth. Within Ethernet, singlemode transceivers based on InP devices are forecasted to outgrow multimode transceivers based on GaAs devices by a factor of 6:1. Segmented by distance, the majority of growth is expected in the <10km segment (\$4.3 billion by 2025).<sup>8</sup>

Integrated photonic transceivers, incorporating approaches comparable to that of POET, are expected to overtake those using discrete components by 2021, growing from a current \$3.2 billion to \$20 billion in 2025<sup>9</sup>. Within this market, POET is focused on the highest growth segments, including Wavelength Division Multiplexing (WDM) for medium-reach (500m – 2km) Ethernet datacom connections and Wide Area Network protocols for long-reach or metro applications (2km – 10km). The majority of today's discrete transceiver suppliers are shipping 100G transceivers in a 4x25G format, having developed assembly methods for placing multiple laser chips on one substrate and coupling the output into one fiber using micro-optic filters and other elements. POET's approach is to use the Optical Interposer to combine multiple active and passive devices into a single package, or "Optical Engine", which when combined with control electronics and an outer housing, constitutes a pluggable optical transceiver. We plan to sell our Optical Engines to manufacturers and assemblers of optical transceiver modules. We believe our Optical Engine solution will be cost competitive with conventional modules as well as silicon photonics in the <2km data center market, and it should be scalable to 10km, and support 200G and 400G datacom speeds.

<sup>4</sup> Market Research Future *Photonic Sensors Market Research Report – Global Forecast to 2022*, Feb. 27, 2019

<sup>5</sup> Market Research Future *Optical Communications Market Research Report – Global Forecast to 2023*, January 2019

<sup>6</sup> Cisco *VNI, Forecast Overview*, Feb. 27, 2019

<sup>7</sup> Oculi, Inc, *Estimates for 2025 commissioned by POET Technologies, Inc.*, March 2017

<sup>8</sup> Ibid

<sup>9</sup> Ibid

## Our Products

We are currently engaged in the development of 100G and 400G Transmit and Receive Optical Engines (TROE) for 100G and 400G transceiver assemblies.

We expect our InP-based solutions from our DenseLight subsidiary will add to the Company's current and future product portfolio, including:

- Broadband Super-Luminescent LEDs (Light Emitting Diodes)
- Narrow Linewidth Lasers
- DFB (Distributed Feedback) Lasers for Data Communications
- High Power ELEDs (Edge Emitting Light Emitting Diodes)
- Integrated CWDM Solutions

## Competition

The photonics market is intensely competitive. Because of the unique nature of our product offerings, we do not believe that we face a single major competitor across our various markets. We do, however, experience intense competition in each product area from a number of manufacturers with similar or alternative technologies and we anticipate that competition in the photonics markets will increase. Many of our competitors are larger than we are and have significantly greater financial, marketing and other resources.

In addition, several of our competitors, especially in the datacom markets, have large market capitalizations or cash reserves and are much better positioned to acquire other companies to gain new technologies or products that may displace our products. Data center equipment providers, who we expect to become our customers, and data center service providers, who are supplied by our customers, may decide to manufacture the optical subsystems that we plan to provide. We may also encounter potential customers that, because of existing relationships, are committed to the products offered by these competitors.

We believe the principal competitive factors in our target markets include the following:

- use of internally manufactured components;
- product breadth and functionality;
- timing and pace of new product development;
- breadth of customer base;
- technological expertise;
- reliability of products;
- product pricing; and
- manufacturing efficiency.

We believe that we can compete favorably with respect to the above factors based on our GaAs and InP processes, the projected performance and anticipated inherent reliability of our products, and our technical expertise in photonic engine design and manufacture.

## Intellectual Property

We have 62 issued patents and 14 patent applications pending, including six that have been filed since July of 2018. The patents cover device structures, underlying technology, applications of the technology and fabrication processes. We believe these patents provide a significant barrier to entry against competition, along with trade secrets and know-how acquired from DenseLight and BB Photonics and further developed by POET. We intend to continue to apply for additional patents in the future. Currently, we are working on the design of integrated devices, manufacturing processes, and products for data communication applications in the data center market, along with products for photonic sensing markets that employ novel packaging technologies.

## Fabrication and Assembly Capabilities

We provide one-stop design and manufacturing solutions, from photonics design and simulation, epitaxial growth, wafer fabrication, chip production, in-line optical coating, sub-mounting, photonic measurements, product testing and screening. We are operationally ready for responsive prototyping and quality production. The 50,000 sq. ft. purpose-built facility in Singapore houses our R&D, product design and manufacturing operations under one roof. Its 15,000 sq. ft. clean room is fully equipped for enabling vertically integrated volume manufacturing, from wafer fabrication to test and packaging. We are ISO9001 certified in Singapore processing Indium Phosphide (InP) and Gallium Arsenide (GaAs) based opto-electronic devices and photonic integrated circuits through our in-house wafer fabrication and assembly & test facilities.

We have an experienced team with deep know-how in GaAs and InP semiconductors wafer processing and we continue to build on this technical base. Together with our operationally ready manufacturing and photonics design center, various ODM and design-in programs can be supported for both discrete and integrated optical components.

#### Potential Sale of DenseLight Subsidiary

In January 2019, the Company was approached by a third-party interested in purchasing our DenseLight InP fabrication facility in Singapore. We took this offer seriously for several reasons, including the party's financial strength, its interest in investing in both R&D and high-volume manufacturing capacity for InP-based devices, and our desire to invest more of our limited resources in Optical Interposer-based solutions. Our Board of Directors and senior management engaged in a review of the status of our development programs and the areas in which we would need to invest capital and human resources in the coming months and years. As a result of this review, we concluded that there were significant benefits to the Company and its shareholders if we would adopt a "fab-light"<sup>10</sup> strategy, which is a common business model in the semiconductor industry. Such a strategy would allow the Company to invest more in design and development of Optical Interposer-based solutions, expand our marketing and sales presence globally and spend less on capital equipment and maintenance of facilities, enabling a faster path to profitability. Importantly, our review of our development programs concluded that sufficient fundamental work in the development of "active" InP-based devices designed specifically for the Optical Interposer had been completed. Additional development work that might be needed could continue and be completed under contract with DenseLight or others, without the need to own the facility. On February 3 2019, we signed a non-binding Letter of Intent (LOI) for the sale of the capital stock of our Singapore-based DenseLight subsidiary.

As of the publication of this MD&A, we are engaged with the third-party in detailed negotiations on the specific terms of the transaction, including the terms of a supply agreement with DenseLight for custom InP-based devices for the Optical Interposer, as well as a strategic cooperation agreement intended to keep our mutual objectives for the growth of both companies in concert following the divestment and over the longer term. In addition, we are conducting internal reviews of our plans, programs, personnel and budgets for the Company post-divestment. We are now committed to pursuing our "fab-light" strategy and selling our DenseLight subsidiary, if necessary to another of several interested parties if the current negotiations are not successful. As a direct result of this decision, our Financial Statements beginning with Q1 of 2019 will treat DenseLight as "discontinued operations".

#### Our Strategy

Our vision is to become a global leader in photonics by deploying an Optical Interposer-based approach to the integration of photonics devices into a wide variety of vertical market applications. Our strategy includes the following key elements:

- *Introduce the Optical Interposer concept to suppliers of transceivers and data center operators and form commercial partnerships for product development.* Because of the magnitude of the cost savings that may be derived from the use of POET's Optical Engines for transceiver applications, we expect to generate significant interest among both the suppliers of transceiver modules and their ultimate customers, the data center operators. In addition, the POET Optical Interposer provides a straightforward and cost-effective path to higher speed transceivers, including up to 400G and higher, providing a single platform that can span several device generations. We anticipate that several companies will be interested in pursuing commercial partnerships with POET in order to qualify and design-in our Optical Engines.

- *Promote the POET Optical Interposer as a true platform technology across several photonic applications and markets.* The POET Optical Interposer is designed to be a flexible platform for the combination or integration of various photonic and electronic components. The anticipated low cost makes it suitable for applications like automotive LIDAR. The compatibility of the Optical Interposer manufacturing process with standard silicon CMOS processing opens up a wide variety of other applications where high-speed data communications is needed, such as integration with ASICs, graphics generators and high-speed switches.

- *Pursue multiple potential sources of non-product revenue and strategic partnerships.* In addition to product sales, we have been pursuing Non-Recurring Engineering ("NRE") revenues from end-user customers and/or from strategic partners. In particular, we believe our 100/200/400G transceiver components represent a uniquely attractive opportunity for collaborative development with a strategic partner(s).

- *Continue to invest in our capabilities and infrastructure.* We intend to continue to invest in new products, new technology and our production infrastructure and facilities to maintain and strengthen our competitive position. Our R&D programs in Singapore are partially reimbursed by the Singapore Economic Development Board, whose support will help to defer the costs associated with bringing innovative new products to market.

- *Selectively pursue other opportunities that leverage our existing expertise.* Our expertise in designing and manufacturing photonics devices, both discrete and integrated, positions us well to pursue applications in high growth markets and our Singapore operation is ideally located to support customers in Asia, where much of the growth in photonics is occurring.

#### Geographic Distribution of Revenue

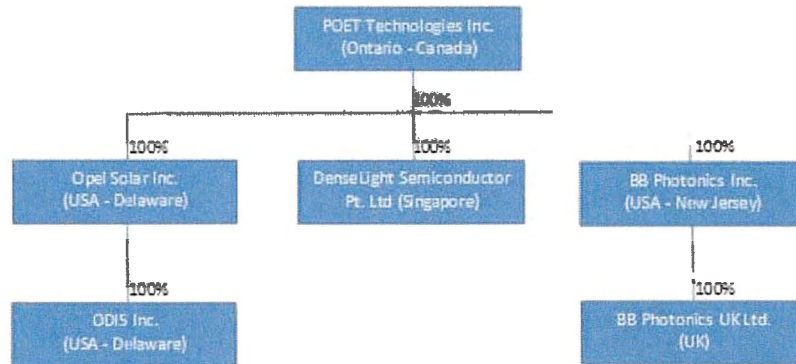
Revenue and geographic markets for 2018, 2017 and 2016 were approximately as follows:

Region	2018		2017		2016	
Asia – Pacific	\$	1,971,000	\$	1,593,000	\$	1,066,000
Europe	\$	1,191,000	\$	866,000	\$	657,000
North & South America	\$	726,000	\$	335,000	\$	138,000

<sup>10</sup> "Fab-light" does not mean "fab-less", as significant portions of our Intellectual Property are embedded in the processes that we have developed that are themselves integral to the equipment and functioning of the Optical Interposer. By purchasing our own equipment and placing the equipment in a foundry, for example, we are able to preserve confidentiality and ownership of such critical IP. As a result, even with a "fab-light" strategy, we expect to continue to invest in capital equipment, but not at the same level as owning and supporting an entire InP wafer fabrication facility.

### C. Organizational Structure

The following graphically displays the organizational structure of the Company:



- (1) There are 28,374,000 Class A Common Shares of OPEL Solar, Inc. issued and outstanding, all of which are held by the Company. There are no other outstanding securities of OPEL Solar, Inc. other than the Class A Common Shares.
- (2) There are 5 Common Shares of ODIS Inc. issued and outstanding, held by OPEL Solar, Inc.
- (3) There are 135,042 Ordinary Shares of DenseLight issued and outstanding, all of which are held by the Company. There are no other outstanding securities of DenseLight.
- (4) There is 1 Ordinary Share of BB Photonics UK Ltd. issued and outstanding, held by BB Photonics Inc.
- (5) There are 1,000,000 Preferred Shares and 1,050,100 Common shares of BB Photonics Inc. issued and outstanding, all of which are held by the Company. There are no other outstanding securities of BB Photonics Inc.

### D. Property, Plants and Equipment

The Company's head Canadian office is located in a 400 sq. ft. leased office space in Toronto, Ontario, Canada. The US based operations are in a leased 2,730 sq. ft. space in San Jose, California. In Singapore, we provide one-stop design and manufacturing solutions, from photonics design and simulation, epitaxial growth, wafer fabrication, chip production, in-line optical coating, sub-mounting, photonic measurements, product tests and screening. The 50,000 sq. ft. purpose-built facility in Singapore houses its R&D, product design and manufacturing operations under one roof. Its 15,000 sq. ft. clean room is fully equipped for enabling vertically integrated volume manufacturing, from wafer fabrication to test and packaging. We are ISO9001 certified in Singapore processing Indium Phosphide (InP) and Gallium Arsenide (GaAs) based optoelectronic devices and photonic integrated circuits through our in-house wafer fabrication and assembly & test facilities

The Company believes that its existing facilities are adequate to meet its needs for the foreseeable future. The adoption of a "fab light" strategy would not result in the need to procure facilities and equipment beyond what the Company currently possesses.

### ITEM 4A. UNRESOLVED STAFF COMMENTS

Not Required.

### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion should be read in conjunction with the audited consolidated financial statements of the Company and the related notes for the years ended December 31, 2018, 2017 and 2016 and the accompanying notes thereto included elsewhere in this Annual Report. This discussion contains forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated by forward-looking information due to factors discussed under "ITEM 3.D. Risk Factors" and "ITEM 4.B. Business Overview."

## A. Operating Results

### Critical Accounting Policies and Estimates

The Company prepares its audited consolidated financial statements in accordance with IFRS as issued by the IASB, which differs from U.S. GAAP. The preparation of financial statements in accordance with IFRS requires the use of certain critical accounting assumptions and estimates. These assumptions are limited by the availability of reliable comparable data and the uncertainty of predictions concerning future events. It also requires management to exercise judgment in applying the Company's accounting policies. The Company believes that the estimates and assumptions upon which it relies are reasonable based upon information available at the time that these estimates and assumptions are made. Actual results could differ from these estimates. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed below.

#### Basis of presentation

These consolidated financial statements include the accounts of POET Technologies Inc. and its subsidiaries. All intercompany balances and transactions have been eliminated on consolidation.

#### Financial Instruments

IFRS 9 introduced new classification and measurement models for financial assets. The investment classifications held-to-maturity and available-for-sale are no longer used and financial assets at fair value through other comprehensive income ("FVTOCI") were introduced. Financial assets held with an objective to hold assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest are measured at amortized cost using the effective interest method. Debt investments held with an objective to hold both assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest as well as selling the asset on the basis of fair value are measured at FVTOCI. All other financial assets are classified and measured at fair value through profit or loss ("FVTPL"). Financial liabilities are classified as either FVTPL or other financial liabilities, and the portion of the change in fair value that relates to the Company's credit risk is presented in other comprehensive income (loss). Instruments classified as FVTPL are measured at fair value with unrealized gains and losses recognized in net income (loss). Other financial liabilities are subsequently measured at amortized cost using the effective interest method.

Transaction costs that are directly attributable to the acquisition or issuance of financial assets and financial liabilities, other than financial assets and financial liabilities classified as FVTPL, are added to or deducted from the fair value on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities classified as FVTPL are recognized immediately in consolidated net income (loss).

#### Derecognition

##### Financial assets

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset. Any interest in transferred financial assets that is created or retained by the Company is recognized as a separate asset or liability.

##### Financial liabilities

A financial liability is derecognized from the balance sheet when it is extinguished, that is, when the obligation specified in the contract is either discharged, cancelled or expires. Where there has been an exchange between an existing borrower and lender of debt instruments with substantially different terms, or there has been a substantial modification of the terms of an existing financial liability, this transaction is accounted for an extinguishment of the original financial liability and the recognition of a new financial liability. A gain or loss from extinguishment of the original financial liability is recognized in profit or loss.

The Company's financial instruments include cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities.

The following table outlines the classification of financial instruments under IAS 39 and the revised classification on the adoption of IFRS 9:

	Original classification under IAS 39	New classification under IFRS 9
<b>Financial Assets</b>		
Cash and cash equivalents	Loans and receivables	Amortized cost
Short-term investments	FVTPL	Amortized cost
Accounts receivable	Loans and receivables	Amortized cost
<b>Financial Liabilities</b>		
Accounts payable and accrued liabilities	Amortized costs	Amortized cost

Convertible debentures are accounted for as a compound financial instrument with a debt component and a separate equity component. The debt component of these compound financial instruments is measured at fair value on initial recognition by discounting the stream of future interest and principal payments at the rate of interest prevailing at the date of issue for instruments of similar term and risk. The debt component is subsequently deducted from the total carrying value of the compound instrument to derive the equity component. The debt component is subsequently measured at amortized cost using the effective interest rate method. Interest expense based on the coupon rate of the debenture and the accretion of the liability component to the amount that will be payable on redemption are recognized through profit or loss as a finance cost.

#### Cash and cash equivalents

Cash and cash equivalents consist of cash in current accounts of \$2,267,868 and funds invested in US Term Deposits of \$300,000 earning interest at 1.31% and maturing in less than 90 days.

Cash and cash equivalents include restricted funds of \$218,888 which serves as a bank guarantee for the purchase of certain equipment. The bank guarantee is reduced on a monthly basis by \$10,424 which is amount paid monthly in settlement of the outstanding balance on the equipment.

#### Short-term investments

The short-term investments of nil at December 31, 2018, nil at December 31, 2017 and \$589,275 at December 31, 2016 consisted of guaranteed investment certificates ("GICs") held with one Canadian chartered bank and earn interest at a rate of 0.50%.

#### Accounts receivable

Accounts receivable are amounts due from customers from the sale of products or services in the ordinary course of business. Accounts receivables are classified as current (on the consolidated statements of financial position) if payment is due within one year of the reporting period date, and are initially recognized at fair value and subsequently measured at amortized cost.

In determining a default provision, the Company utilizes a provision matrix, as permitted under the simplified approach to measure expected credit losses. In doing so we considered historical credit losses, forward-looking factors specific to our debtors and other macro-economic factors to arrive at expected default rates. The default rates are then applied to the Company's aging to determine expected credit losses. The carrying amount of trade receivables is reduced by the expected credit losses. If the financial conditions of these customers were to deteriorate and the Company determines that no recovery of a trade receivable is possible, the amount is deemed irrecoverable and subsequently written-off.

#### Inventory

Inventory consists of raw material inventory, work in process, and finished goods and are recorded at the lower of cost and net realizable value. Cost is determined on a first in first out basis and includes all costs of purchase, costs of conversion and other costs incurred in bringing the inventory to its present condition.

An assessment is made of the net realizable value of inventory at each reporting period. Net realizable value is the estimated selling price less the estimated cost of completion and the estimated costs necessary to make the sale. When circumstances that previously caused inventory to be written down no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of any write down previously recorded is reversed so that the new carrying amount is the lower of the cost and the revised net realizable value. Raw materials are not written down unless the goods in which they are incorporated are expected to be sold for less than cost, in which case, they are written down by reference to replacement cost of the raw materials, as this is the best indicator of net realizable value.

#### Property and equipment

Property and equipment are recorded at cost. Depreciation is calculated based on the estimated useful life of the asset using the following method and useful lives:

Machinery and equipment	Straight Line, 5 years
Leaschold improvements	Straight Line, 5 years or life of the lease, whichever is less
Office equipment	Straight Line, 5 years

#### Patents and licenses

Patents and licenses are recorded at cost and amortized on a straight-line basis over 12 years. Ongoing maintenance costs are expensed as incurred.

#### Impairment of long-lived assets

The Company's tangible and intangible assets are reviewed for indications of impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. An assessment is made at each reporting date whether there is any indication that an asset may be impaired.

An impairment loss is recognized when the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognized in profit and loss for the year. The recoverable amount is the greater of the asset's fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs.

An impairment loss is reversed if there is an indication that there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

The Company reported an impairment loss of \$156,717 for the year ended December 31, 2018 (2017 - nil, 2016 - \$63,522).



#### Goodwill

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable assets acquired net of liabilities assumed. Goodwill is measured at cost less accumulated impairment losses and is not amortized. Goodwill is tested for impairment on an annual basis or whenever facts or circumstances indicate that the carrying amount may exceed its recoverable amount.

The Company performed its annual test for goodwill impairment at December 31, 2018. The Company utilized a five-year cash flow forecast using the annual budget approved by the Board of Directors as a basis for such forecasts. Cash flow forecasts beyond that of the budget were prepared using a stable growth rate for future periods. These forecasts were based on historical data and future trends expected by the Company. The Company's valuation model also takes into account working capital and capital investments required to maintain the condition of the assets. Forecasted cash flows were discounted using an after-tax rate of 32%.

Based on the impairment tests, the value in-use of the CGU to which goodwill is applicable exceeds the carrying amount. As a result, no provision for impairment of goodwill was provided.

#### Income taxes

The Company follows the liability method of accounting for income taxes. Under this method, deferred income taxes are provided on differences between the financial reporting and income tax bases of assets and liabilities and on income tax losses available to be carried forward to future years for tax purposes. Deferred income taxes are measured using the substantively enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. Deferred tax assets are only recognized if the amount is expected to be realized in the future.

#### Recently Enacted U.S. Federal Tax Legislation

Introduced initially as the Tax Cuts and Jobs Act, the Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018 (the "Act") was enacted on December 22, 2017. The Act applies to corporations generally beginning with taxable years starting after December 31, 2017 and reduces the corporate tax rate from a graduated set of rates with a maximum 35% tax rate to a flat 21% tax rate. Additionally, the Act introduces other changes that impact corporations, including a net operating loss ("NOL") deduction annual limitation, an interest expense deduction annual limitation, elimination of the alternative minimum tax, and immediate expensing of the full cost of qualified property. The Act also introduces an international tax reform that moves the U.S. toward a territorial system, in which income earned in other countries will generally not be subject to U.S. taxation. However, the accumulated foreign earnings of certain foreign corporations will be subject to a one-time transition tax, which can be elected to be paid over an eight-year tax transition period, using specified percentages, or in one lump sum. NOL and foreign tax credit ("FTC") carryforwards can be used to offset the transition tax liability. As a result of this new regulation, the Company reduced its deferred tax assets by \$9,472,000 in 2017.

#### Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Company recognizes revenue when it transfers control over a product or service to a customer.

#### Sale of goods

Revenue from the sale of goods is recognized, net of discounts and customer rebates, at the point in time the transfer of control of the related products has taken place as specified in the sales contract and collectability is reasonably assured.

#### Service revenue

The Company provides contract services, primarily in the form of non-recurring revenue ("NRE") where control is passed to the customer over time. The contracts generally provide agreed upon milestones for customer payment which include but are not limited to the delivery of sample products, design reports and test reports. The customer makes payment when it has approved the delivery of the milestone. The Company must determine if the contract is made up of a series of independent performance obligations or a single performance obligation. Where NRE contracts contain multiple performance obligations for which a standalone transaction price can be assessed, revenue is recognized as each performance obligation is satisfied. Where NRE contracts contain a single performance obligation to be settled over time, revenue is recognized progressively based on the output method.

The Company recently adopted IFRS 15 - *Revenue from Contracts from Customers* on January 1, 2018.

#### Interest income

Interest income on cash and cash equivalents classified as fair value through profit or loss is recognized as earned using the effective interest method.

#### Other income

##### Government Grants

Grants received exclusively from governmental agencies such as the Department of Defense of the United States of America, NASA and Productivity and Innovation Credit Scheme Singapore ("PIC Grant"), relating to research and development or expenditure on technology, are recognized as other income.

Government grants from the United States are based on the agreed upon milestones of the projects. PIC Grants are offered as a percentage of qualifying expenditures. PIC Grants are paid out in cash. Other income earned on government grants in 2018 was nil (2017 - nil, 2016 - \$14,027).

##### Research and Development Credits

The Company is eligible to receive cash credits for certain qualifying research and development expenses based on actual spending over a three-year period, with an expectation that the credits will not exceed a certain dollar value over the three year period. At December 31, 2018, the Company has a recoverable amount of \$1,905,593 relating to these research and development credits (2017 - \$1,287,539, 2016 - nil) and is classified as prepaid and other current assets. Qualifying recovery of \$1,481,260 have been recorded for the year ended December 31, 2018 (2017 - \$1,695,383, 2016 - nil) and is included in other income.

#### Intangible assets

##### Research and development costs

Research costs are expensed in the year incurred. Development costs are also expensed in the year incurred unless the Company believes a development project meets IFRS criteria as set out in IAS 38, Intangible Assets, for deferral and amortization. IAS 38 requires all research costs be charged to expense while development costs are capitalized only after technical and commercial feasibility of the asset for sale or use have been established. This means that the entity must intend and be able to complete the intangible asset and either use it or sell it and be able to demonstrate how the asset will generate future economic benefits. Development costs are tested for impairment whenever events or changes indicate that its carrying amount may not be recoverable.

##### In-Process Research and Development

Under IFRS, in-process research and development ("IPR&D") acquired in a business combination that meets the definition of an intangible asset is capitalized with amortization commencing when the asset is ready for use (i.e., when development is complete). The Company acquired \$714,000 of IPR&D when it acquired BB Photonics Inc. in 2016. The development of this IPR&D is still incomplete, therefore no amortization has been charged against IPR&D.

##### Customer relationships

Intangible assets include customer relationships acquired with the acquisition of DenseLight. Customer relationships are an externally acquired intangible asset and are measured at cost less accumulated amortization and any accumulated impairment losses. Customer relationships are amortized on a straight-line basis over their estimated useful lives and is tested for impairment whenever events or changes indicate that their carrying amount may not be recoverable. The useful life of customer relationships was determined to be 5 years.

#### Stock-based compensation

Stock options and warrants awarded to non-employees are accounted for using the fair value of the instrument awarded or service provided whichever is considered more reliable. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option-pricing model with assumptions applicable at the date of grant.

#### Loss per share

Basic loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the year. Diluted loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the year after giving effect to potentially dilutive financial instruments. The dilutive effect of stock options and warrants is determined using the treasury stock method.

#### Recent accounting pronouncements

IFRS 15, *Revenue from Contracts with Customers* ("IFRS 15"). The IASB issued IFRS 15, which is effective for annual periods beginning on or after January 1, 2018. The standard contains a single model that applies to contracts with customers and two approaches to recognizing revenue: at a point in time and over time. The model features a contract-based five-step analysis of transactions to determine whether, how much and when revenue is recognized. New estimates and judgmental thresholds have been introduced, which may affect the amount and/or timing of revenue recognized. The Company adopted the policy using the modified retrospective method.

IFRS 9, *Financial Instruments*, replaces IAS 39, *Financial Instruments: Recognition and Measurement*. The new standard requires entities to classify financial assets as being measured either at amortized cost or fair value depending on the business model and contractual cash flow characteristics of the asset. Financial liabilities are generally classified and measured at fair value at initial recognition and subsequently measured at amortized cost. The Company adopted IFRS 9 on January 1, 2018 using the retrospective approach. The adoption of IFRS 9 did not impact the carrying amounts of the Company's financial assets or liabilities on the adoption date.

#### The following is a summary of recent accounting pronouncements that may affect the Company:

IFRS 16, *Leases* ("IFRS 16") sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, the customer (lessee) and the supplier (lessor). This will replace IAS 17, *Leases* ("IAS 17") and related Interpretations. IFRS 16 provides revised guidance on identifying a lease and for separating lease and non-lease components of a contract. IFRS 16 introduces a single accounting model for all lessees and requires a lessee to recognize right-of-use assets and lease liabilities for leases with terms of more than 12 months, unless the underlying asset is of low value, and depreciation of lease assets is reported separately from interest on lease liabilities in the income statement. Under IFRS 16, lessor accounting for operating and finance leases will remain substantially unchanged. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, with earlier application permitted for entities that apply IFRS 15, *Revenue from Contracts with Customers*. The Company intends to adopt this new standard using the modified retrospective method. The adoption of this new standard will result in a right of use asset and liability of approximately \$890,000 applicable to leases that will be renewed in 2019. Due to the near term expiry of the Company's current leases, 2018 carrying values will not be impacted. The adoption of the new standard will have no impact on the Company's cash flows.

Selected Annual Data

The selected financial data of the Company for the years ended December 31, 2018, 2017 and 2016 was derived from the audited annual consolidated financial statements of the Company, which have been audited by Marcum LLP, independent registered public accounting firm, as described in their report which is included in this Annual Report.

The information contained in the selected financial data for the 2018, 2017 and 2016 years is qualified in its entirety by reference to the Company's consolidated financial statements and related notes included under the heading ITEM 17. "Financial Statements" and should be read in conjunction with such financial statements and with the information appearing under the heading ITEM 5 "Operating and Financial Review and Prospects". Except where otherwise indicated, all amounts are presented in accordance with IFRS as issued by IASB.

The following table relates to the operating results of the Company.

Consolidated Statements of Operations Under International Financial Reporting Standards  
(US\$)

	Years Ended December 31,		
	2018	2017	2016
Revenue	\$ 3,888,185	\$ 2,794,044	\$ 1,861,747
Cost of revenue	1,475,969	1,342,691	946,001
Gross profit	2,412,216	1,451,353	915,746
Operating expenses			
Selling, marketing and administration	11,689,204	10,870,741	11,421,604
Research and development	8,692,804	5,442,873	3,165,825
Impairment loss	156,717	-	63,522
Loss on disposal of property and equipment	-	-	46,738
Other income, including interest	(1,505,790)	(1,766,524)	(66,872)
Operating expenses	19,032,935	14,547,090	14,630,817
Net loss from operations	(16,620,719)	(13,095,737)	(13,715,071)
Change in fair value of contingent consideration	-	-	(283,130)
Net loss before income tax recovery	(16,620,719)	(13,095,737)	(13,431,941)
Income tax recovery	(297,940)	(297,940)	(207,257)
Net loss	(16,322,779)	(12,797,797)	(13,224,684)
Deficit, beginning of year	(116,873,153)	(104,075,356)	(90,850,672)
Net loss	(16,322,779)	(12,797,797)	(13,224,684)
Deficit, end of year	\$ (133,195,932)	\$ (116,873,153)	\$ (104,075,356)
Basic and diluted net loss per share	\$ (0.06)	\$ (0.05)	\$ (0.06)

The selected annual information for 2018, 2017 and 2016 can be further analyzed as follows:

Research and development can be analysed as follows:

	2018	2017	2016
Wages and benefits	\$ 4,641,238	\$ 2,839,088	\$ 1,572,567
Subcontract fees	1,288,566	1,044,936	1,013,539
Stock-based compensation	536,321	369,007	373,196
Supplies	2,226,679	1,189,842	206,523
	\$ 8,692,804	\$ 5,442,873	\$ 3,165,825

Selling, marketing and administration costs can be analysed as follows:

	2018	2017	2016
Stock-based compensation	\$ 3,485,796	\$ 2,805,917	\$ 3,697,068
Wages and benefits	2,468,001	2,574,978	2,800,878
Depreciation and amortization	2,562,624	2,275,160	1,521,566
General expenses	1,178,536	1,038,857	1,292,341
Professional fees	767,351	624,941	715,716
Management and consulting fees	155,169	229,577	611,861
Rent and facility costs	1,071,727	1,321,311	782,174
	\$ 11,689,204	\$ 10,870,741	\$ 11,421,604

#### Factors Affecting Our Results of Operations

During the year ended December 31, 2018, the Company generated gross revenue of \$3,888,185 and gross profit of \$2,412,216 or 62%. The Company's revenue in 2018 was generated from the sale of sensing products, datacom products and non-recurring engineering revenue ("NRE") through the Company's subsidiary DenseLight Semiconductor Pte. Ltd. ("DenseLight"). The Company currently operates at a loss. The loss for 2018 before income taxes was \$16,322,779.

During 2018, the Company spent \$8,692,804 on research and development activities directly related to the development and commercialization of the POET Optical Interposer Platform (POIP) and the development of photonic sensing products. \$11,689,204 was spent on selling, marketing and administration expenses which included non-cash operating costs of \$6,584,741, of which \$2,562,624 related to depreciation and amortization, and \$4,022,117 related to the fair value stock-based compensation. The 2018 loss included other income of \$1,505,790 of which \$1,481,260 related to the recovery of certain qualifying expenses from the Economic Development Board (EDB) in Singapore. The recovery includes both collected recoveries and an amount to be received in 2019. EDB recoverable for the year ended December 31, 2018 was \$1,905,593. The Company also had deferred income tax recovery of \$297,940 for the year ended December 31, 2018.

The Company is not exposed to hyperinflationary risks as the Company's investments and operations are occur in geographic regions with stable economies.

#### Year Ended December 31, 2018 compared to Year Ended December 31, 2017

Net loss before taxes for the year ended December 31, 2018 was \$16,620,719 as compared to net loss before taxes of \$13,095,737 for the year ended December 31, 2017. The following explains the \$3,524,982 (27%) variance in net loss between December 30, 2018 and December 31, 2017.

#### Revenue

During 2018, the Company reported revenue of \$3,888,185 through its DenseLight subsidiary compared to \$2,794,044 in 2017, a 39% increase driven primarily by an increase in product sales and non-recurring engineering (NRE) revenue. In November 2018 the Company received its first orders for POET Optical Interposer-based solutions from leading global networking companies targeting data communication applications, which represented entry into a new served market for the Company's products. The increase in sales of \$1,094,141 contributed to an increase in gross margin from 52% to 62%.

#### R&D

Total R&D increased by \$3,249,931 from \$5,442,873 in 2017 to \$8,692,804 in 2018. For the purposes of the following R&D analysis, non-cash stock-based compensation of \$536,321 (2017 - \$369,007) has been excluded and is included with the analysis of non-cash stock-based compensation below.

The largest increase for the comparative periods was R&D which increased by \$3,082,617 (61%) to \$8,156,483 in 2018 from \$5,073,866 in 2017. Since the acquisition of DenseLight and BB Photonics in May and June of 2016 respectively, the Company has systematically increased its R&D activities in an effort to bring new products to market and expand its product portfolio. The increased R&D activity has contributed to the development of the POET Optical Interposer platform utilizing the Company's proprietary dielectric waveguides. As a result of increased R&D spending in the period, the Company successfully demonstrated the functionality of PIN photodetectors targeting 100G to 400G optical transceivers. New skilled technical human resources, especially in optics and photonics device testing, represent the largest area of increase in R&D. The increase is consistent with the Company's budgeted R&D activity. Our expectation is that the R&D activity conducted in 2018 will lead to sales of new products in 2019.

#### Professional fees

Professional fees in the year increased by \$142,410 (23%) to \$767,351 from \$624,941 in 2017. Professional fees increased in 2018 due to a mandatory requirement to conduct annual audits of EDB filings, the preparation of these audits must be conducted by an independent firm, the cost of which must be borne by the Company. No such audit was conducted in 2017. Additional professional fees, including legal fees, were required as the Company reviewed internal policies for best practices and initiated co-development partnerships and agreements with several counterparties as disclosed in 2018. The Company also incurred professional fees related to the filing of its final short form prospectus filed in November 2018.

#### Non-cash stock-based compensation

Non-cash stock-based compensation increased by \$847,193 (27%) to \$4,022,117 during 2018 from \$3,174,924 in 2017. The valuation of stock options is driven by a number of factors including the number of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest. The stock options vest in accordance with the policies determined by the Board of Directors at the time of the grant consistent with the provisions of the Stock Option Plan, as amended (the "Plan").

#### Depreciation and amortization

Non-cash depreciation and amortization increased by \$287,464 (13%) to \$2,562,624 in 2018 from \$2,275,160 in 2017. The Company has committed to improving its fabrication facilities in Singapore, and its overall manufacturing capabilities, which includes acquiring new equipment for the Optical Interposer program. The addition of new equipment will result in increased depreciation charges.

#### Management and consulting fees

Management and consulting fees decreased by \$74,408 (32%) to \$155,169 in 2018 from \$229,577 in 2017. The decrease was a result of the resignation of the former Executive Chairman of Board in 2017, whose compensation was included in management and consulting fees. Management and consulting fees did not include fees for the newly appointed Executive Chairman in 2018, which were instead charged to Wages and Benefits.

#### Other income

Other income in 2018 decreased by \$260,734 (15%) to \$1,505,790 in 2018 from \$1,766,524 in 2017. The Company is entitled to a recovery of certain qualifying expenses from the EDB in Singapore. The recoverable amount in 2017 was higher than the amount in 2018 in part due to a reduction adjustment in 2018 related to the over accrued recovery for 2017. If the adjustment had not been done, the recovery would have been more comparable year over year.

#### Impairment

During the year ended December 31, 2018, management determined that certain property and equipment would not be used to generate future cash flows and committed to a plan to dispose of the property and equipment by December 31, 2018. Management used a market approach to determine the property and equipment's fair value less cost to sell. Key assumptions included the cost of similar assets, the impact of customization and unique use. The fair value less cost to sell was determined to be \$3,000 which is greater than its value in use. The Company recorded an impairment loss of \$156,717 on the property and equipment and reclassified \$3,000 from property and equipment to non-current assets held for sale. The property and equipment was sold in December 2018.

#### Credit Risk

The Company is exposed to credit risk associated with its accounts receivable. The Company has accounts receivable from both governmental and non-governmental agencies. Credit risk is minimized substantially by ensuring the credit worthiness of the entities with which it carries on business. Credit terms are provided on a case by case basis. The Company has not experienced any significant instances of non-payment from its customers.

The Company's accounts receivable ageing at December 31 was as follows:

	2018	2017	2016
Current	\$ 892,343	\$ 330,731	\$ 125,610
31 - 60 days	34,331	56,094	16,346
61 - 90 days	60,885	-	75,816
> 90 days	-	107,100	75,077
Expected credit losses (1)	(40,615)	-	-
	\$ 946,944	\$ 493,925	\$ 292,849

(1) The Company applies IFRS 9 simplified approach to measuring expected credit losses using a lifetime expected credit loss allowance for trade receivables.

The allowance is included in selling, general and administrative expenses in the consolidated statements of operations and deficit. Amounts charged to the loss allowance account are generally written off when there is no reasonable expectation of recovery.

In prior years, the impairment of trade receivables was assessed based on the incurred loss model and determined by management in accordance with its assessment of recoverability. Receivables for which an impairment provision was recognized were written off against the provision when there was no expectation of recovering additional cash.

#### Exchange Rate Risk

The functional currency of each of the entities included in the accompanying consolidated financial statements is the local currency where the entity is domiciled. Functional currencies include the US, Singapore and Canadian dollar. Most transactions within the entities are conducted in functional currencies. As such, none of the entities included in the consolidated financial statements engage in hedging activities. The Company is exposed to a foreign currency risk with the Canadian and Singapore dollar. A 10% change in the Canadian and Singapore dollar would increase or decrease other comprehensive loss by \$386,391.

#### Liquidity Risk

The Company currently does not maintain credit facilities. The Company's existing cash and cash resources are not considered sufficient to fund operating and investing activities beyond one year from the issuance of these consolidated financial statements. The Company will need to seek additional financing to continue as a going concern.

Year Ended December 31, 2017 compared to Year Ended December 31, 2016

Net loss before taxes for the twelve-month period ended December 31, 2017 was \$13,095,737 compared to net loss before taxes of \$13,431,941 for the twelve months ended December 31, 2016. The loss of the year ended December 31, 2017 includes the operations of DenseLight and BB Photonics for the entire year, while the loss for the prior-year reflected the operations of the Company with those subsidiaries for less than the full twelve months (i.e., from May 11, 2016 for DenseLight and June 22, 2016 for BB Photonics).

#### Revenue

During the twelve-month period ended December 31, 2017, the Company reported revenue of \$2,794,044 through its DenseLight subsidiary compared to revenue of \$1,861,747 for the period reported in 2016. Revenue for the period ended December 31, 2017 was for twelve months, while the revenue in 2016 was only from May 11, 2016.

#### R&D

Total R&D increased by \$2,277,048 from \$3,165,825 in 2016 to \$5,442,873 in 2017. For the purposes of the following R&D analysis, non-cash stock-based compensation of \$369,007 (2016 - \$373,196) has been excluded and is included with the analysis of non-cash stock-based compensation below.

R&D increased by 82% or \$2,281,237 to \$5,073,866 in 2017 from \$2,792,629 in 2016. R&D costs in 2016 included the activities of POET for the full twelve-month period and R&D of DenseLight and BB Photonics only from May 11, 2016 and June 22, 2016, respectively. The first twelve months of 2017 include R&D costs for the GaAs platform and the programs in InP integrated dielectrics and wafer-level packaging all associated with the Company's efforts to expand its product portfolio in datacom and sensing. In addition to 2016 costs only being costs of a partial year, increased HR and related costs also contributed to the increase over the prior year.

#### General expenses

General expenses and rent increased by 14% or \$285,653 to \$2,360,168 in 2017 from \$2,074,515 in 2016. This increase was also a result of shortened activity during the prior-year related to the dates of acquisition of DenseLight and BB Photonics (i.e., May 11, 2016 and June 22, 2016, respectively).

#### Stock-based compensation

Non-cash stock-based compensation decreased by 22% or \$895,340 to \$3,174,924 in 2017 from \$4,070,264 in 2016. Departing employees and consultants who had unvested stock options contributed to the substantial reduction in 2017, as their unvested options were returned to the Company. The valuation of stock options is driven by a number of factors including the number of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest. The stock options vest in accordance with the policies determined by the Board of Directors at the time of the grant consistent with the provisions of the Stock Option Plan, as amended (the "Plan").

#### Management and consulting fees

Management and consulting fees decreased by 62% or \$382,284 from 2016. The expense in 2017 was \$229,577 as compared to \$611,861 in 2016. The resignation of Mr. Manocha from the position of Executive Chairman of the Board in February 2017 contributed to the decrease. This reduction in management and consulting fees was partially offset by an increase in wages and benefits for the compensation paid to Mr. Lazovsky who replaced Mr. Manocha as the Executive Chairman of the Board. Mr. Lazovsky is paid \$200,000 annually in his capacity as Executive Chairman as compared to \$500,000 that previously paid to Mr. Manocha.

#### Wages and benefits

Wages and benefits decreased by 8% or \$225,900 to \$2,574,978 in 2017 compared to \$2,800,878 in the prior-year. Three principal factors contributed to the decrease: (1) 2016 wages included an accrued bonus of \$550,000 to the CEO and former COO, which was deferred and eventually paid in 2017; (2) 2016 wages also included wages paid to the former Executive Co-Chairman of the Board of \$136,655; and (3) 2016 wages included twelve months of wages for the former COO, Dr. Deshmukh who resigned in Q1 2017. These decreases were offset by: (1) the inclusion of the compensation of the new Executive Chairman of the Board; and (2) wages of DenseLight and BB Photonics for the entire 2017 as compared to only the period from May 11, 2016 and June 22, 2016 respectively.

#### Depreciation and amortization

Depreciation and amortization increased by 50% or \$753,594 to \$2,275,160 in 2017 from \$1,521,566 in the prior-year. The increase was a result of depreciation and amortization related to the property and equipment, patents and licenses, and intangible assets acquired during and after the acquisition of DenseLight and BB Photonics in 2016. The Company acquired \$11,118,460 of property and equipment, patents and licenses and intangible assets since May 2016.

#### Other Income

Other income in 2017 was \$1,766,524 as compared to \$66,872 in 2016. The Company is entitled to a recovery of certain qualifying expenses from the Economic Development Board (EDB) in Singapore. The increase is a result of both collected recoveries and an amount accrued to be received in 2018.

#### Exchange Rate Risk

The Company is exposed to foreign currency risk with the Canadian dollar and Singapore dollar due to cash reserves and other current assets and liabilities that are maintained in those currencies, all of which are exposed to currency fluctuations. Most of the Company's operations are transacted in US dollars and Singapore Dollars. A 10% change in the Canadian dollar and Singapore dollar would increase or decrease other comprehensive loss by \$260,175.

#### Interest Rate Risk

Cash equivalents bear interest at fixed rates, and as such, are subject to interest rate risk resulting from changes in fair value from market fluctuations in interest rates. The Company does not depend on interest from its investments to fund its operations.

## Credit Risk

The Company is exposed to credit risk associated with its accounts receivable. The Company has accounts receivable from both governmental and non-governmental agencies. Credit risk is minimized substantially by ensuring the credit worthiness of the entities with which it carries on business. Credit terms are provided on a case-by-case basis. The Company has not experienced any significant instances of non-payment from its customers.

The Company's accounts receivable ageing at December 31 was as follows:

	2017	2016
Current	\$ 330,731	\$ 125,610
31 - 60 days	56,094	16,346
61 - 90 days	-	75,816
> 90 days	107,100	75,077
	\$ 493,925	\$ 292,849

## B. Liquidity and Capital Resources

The Company had working capital of \$3,847,842 on December 31, 2018 as compared to \$7,140,119 on December 31, 2017.

The Company's balance sheet as of December 31, 2018 reflects assets with a book value of \$25,137,903 compared to \$25,205,772 as of December 31, 2017. Twenty-seven percent (27%) of the book value as of December 31, 2018, or \$6,888,264, was in current assets consisting primarily of cash and other current assets, compared to thirty-two percent (32%), or \$7,950,712 as of December 31, 2017.

The Company's working capital of \$3,847,842 is not sufficient to support its operating and investing activities over the next 12 months. The Company has several sources of financing that it is considering in order to continue as a going concern. These sources of financing include internal cash generation from operations, financing via public offering, assumption of debt or a combination of all three sources.

In order to provide internal financing, the Company negotiated multiple non-recurring engineering (NRE) contracts in excess of US\$3 million with large suppliers of networking and datacom equipment. These NRE contracts extend into 2019 and will generate immediate high margin cash flow.

During 2018, the Company purchased US\$3.7 million of new equipment. The payment terms for the new equipment were negotiated both prior to placing purchase orders and re-negotiated subsequent to taking possession of the equipment. While the Company took possession of the new equipment, it was permitted to defer a portion of purchase cost without penalty or interest cost to 2019.

On March 21, 2018, the Company strengthened its working capital position relative to December 31, 2017 by completing a "bought deal" public offering of 25,090,700 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$10,663,548 (CAD\$13,799,885). Each unit consists of one common share and one-half common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.58 (CAD\$0.75) per share until March 21, 2020. The broker was paid a cash commission of \$639,813 (6%) of the gross proceeds and received 1,505,442 compensation options. Each compensation option is exercisable into one compensation unit of the Company at a price of \$0.425 (CAD\$0.55) per compensation unit until March 21, 2020 with each compensation unit comprising one common share and one-half compensation share purchase warrant. Each whole compensation share purchase warrant entitles the broker to purchase one common share of the Company at a price of \$0.425 (CAD\$0.55) per share until March 21, 2020. The Company paid an additional \$492,177 in other costs related to this financing. The Company received \$9,531,558 net of share issue costs. Additionally, for the year ended December 31, 2018, the Company raised \$1,116,445 from the exercise of warrants and stock options.

On November 28, 2018, the Company filed a preliminary short form base shelf prospectus where it advised shareholders of its intent to raise a maximum US\$50 million through a public offering of either equity securities, debt securities or a combination of both. The Company has met with multiple investment bankers in both Canada and the United States who have expressed an interest in assisting the Company with a capital raise.

As at December 31, 2018, the Company has accumulated losses of \$(133,195,932) and working capital of \$3,847,842. During the year ended December 31, 2018, the Company had negative cash flows from operations of \$(9,288,588). The Company has prepared a cash flow forecast which indicates that it does not have sufficient cash to meet its minimum expenditure commitments and therefore needs to raise additional funds to continue as a going concern.

To address the future funding requirements, management has undertaken the following initiatives:

1. Entered into discussions to secure debt financing.
2. Initiated a strict working capital monitoring program.
3. Continued its focus on maintaining an appropriate level of corporate overheads in line with the Company's available cash resources.
4. Filed a preliminary short-form prospectus to raise a maximum \$50 million through a public offering of either equity securities, debt securities or a combination of both.
5. Initiated a plan for raising capital in Canada via the private placement of convertible debt.

In line with its needs for additional financing, on April 3, 2019, the Company closed the first tranche of a private placement of convertible debentures that raised gross proceeds of CAD\$1,929,000 (the "Debentures"). The Debentures are unsecured, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

The following is a summary of Company's cash flows and working capital:

	2018	2017	2016
	\$	\$	\$
Net cash used in operating activities	(9,288,588)	(9,163,689)	(9,961,419)
Net cash used in investing activities	(3,535,600)	(441,065)	(2,323,332)
Net cash from financing activities	10,648,003	123,528	11,783,144
Effect of exchange rate changes on cash	(230,425)	79,422	467,893
Change in cash	(2,406,610)	(9,401,804)	(33,714)
Opening cash	4,974,478	14,376,282	14,409,996
Ending cash	2,567,868	4,974,478	14,376,282



#### Operating Activities

During 2018, the Company had losses from operations of \$16,322,779 (2017 - \$12,797,797, 2016 - \$13,224,684). Net loss from operations included non-cash depreciation and amortization of \$2,562,624 (2017 - \$2,275,160, 2016 - \$1,521,566) and non-cash stock-based compensation of \$4,022,117 (2017 - \$3,174,924, 2016 - \$4,070,264).

During 2018, other operating items not affecting cash flows included impairment loss \$156,717 (2017 - nil, 2016 - \$63,522), deferred income tax recovery of \$297,940 (2017 - \$297,940, 2016 - \$207,257), deferred rent of \$21,992 (2017 - nil, 2016 - \$42,665) and expected credit losses of \$40,615 (2017 - nil, 2016 - nil).

As a consequence of increased revenue year over year, accounts receivable has also increased. The increase in accounts receivable has resulted in a net cash out flow of \$508,094 (2017 - \$171,257, 2016 - \$77,415).

Prepaid and other current assets have also increased year over year, primarily due to the large recoverable amount due from the Economic Development Board of Singapore. This increase is reflected as a net cash out flow of \$1,025,256 (2017 - \$1,116,758, 2016 - \$443,590).

Due to cash management strategies initiated during 2018, the Company negotiated with certain vendors to extend its payment terms, the extension resulted in cash in-flows of \$2,026,667. In 2017 and 2016, the Company settled large commitments, primarily to employees which resulted in net cash outflows of \$894,013 and \$628,292 respectively.

#### Investing Activities

During 2018, the Company either spent cash or accrued \$3,718,152 on certain critical equipment, primarily consisting of ; die pick tool, Omega etch, APM PECVD and C2L Transport. Certain tools were required to either enhance the Company's capabilities or meet the growing demand for its products. The Company spent cash of \$969,797 and \$1,208,352 on capability enhancement tools in 2017 and 2016 respectively.

Additionally, in 2017, the \$589,275 of an investment that was made in 2016 matured. These funds were used to fund operations or equipment purchases.

In addition to the purchase of the short-term investment in 2016, the Company also incurred a capital cost of \$500,000 as part of the cost of acquiring its subsidiary DenseLight.

#### Financing Activities

On November 2, 2016 the Company completed a Short Form Base Shelf and Supplemental Prospectus offering of 34,800,000 units at a price of \$0.269 (CAD\$0.36) per unit for gross proceeds of \$9,349,254 (CAD\$12,528,000). Each unit consists of one common share and one common share purchase warrant. Each whole warrant entitles the holder to purchase one additional common share of the Company at a price of \$0.388 (CAD\$0.52) per share for a period of five years. The agents received cash commissions in the aggregate of \$654,447 (CAD\$876,960). Additional issue costs approximated \$510,570 (CAD\$666,618).

On March 21, 2018, the Company completed a brokered "bought deal" public offering of 25,090,700 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$10,663,548 (CAD\$13,799,885). Each unit consists of one common share and one-half common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.58 (CAD\$0.75) per share until March 21, 2020. The broker was paid a cash commission of \$639,813 (6%) of the gross proceeds and received 1,505,442 compensation options. Each compensation option is exercisable into one compensation unit of the Company at a price of \$0.425 (CAD\$0.55) per compensation unit until March 21, 2020 with each compensation unit comprising one common share and one-half compensation share purchase warrant. Each whole compensation share purchase warrant entitles the broker to purchase one common share of the Company at a price of \$0.425 (CAD\$0.55) per share until March 21, 2020. The Company paid an additional \$492,177 in other costs related to this financing.

Certain management participated in the "bought-deal" public offering, by acquiring 281,000 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$119,425 (CAD\$154,550).

On November 28, 2018, the Company filed a preliminary short form base shelf prospectus where it advised shareholders of its intent to raise a maximum US\$50 million through a public offering of either equity securities, debt securities or a combination of both. The Company has met with multiple investment bankers in both Canada and the United States who have expressed an interest in assisting the Company with a capital raise.

In line with its needs for additional financing, on April 3, 2019, the Company closed the first tranche of a private placement of convertible debentures that raised gross proceeds of CAD\$1,929,000 (the "Debentures"). The Debentures are unsecured, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

#### Capital Expenditures

The Company has an approved capital budget of \$2,629,000 for the 2019 fiscal year related to research and development equipment, manufacturing equipment and patent registration. In 2018, \$3,785,760 (2017 - \$1,030,340, 2016 - \$1,281,170) was either spent in cash or accrued for acquiring development and manufacturing equipment and new patents.

### C. Research and Development

Virtually all of POET's R&D expenditures in recent years are in some way connected to the Optical Interposer. We expect to continue to spend the large majority of our R&D resources for the foreseeable future on Optical Interposer-based products across a wide variety of potential applications. The only other R&D expenditures that we have or may incur relate to conventional non-interposer-based products that we develop and manufacture for our legacy sensing product lines that represent the majority of our current sales. However, we intend to develop and transition these products to the Optical Interposer, because of the resulting cost and performance advantages that it provides.

POET's Optical Interposer development program consists of over 20 development projects in three areas: 1) Active Component Development, which includes a variety of application-specific Indium Phosphide (InP)-based lasers, detectors and modulators; 2) Passive Component Development, which includes application-specific filters, mux-demux devices, waveguides and spot size converters, all designed and fabricated using POET's proprietary dielectric materials and processes; and 3) Core Integration Process Development, which includes processes such as assembly, hermetic sealing, flip-chip techniques, reflection management, and wafer-level test. In order to optimize our development resources, we have taken a "building block" approach, beginning with the most fundamental functions needed for the Optical Interposer in each of these three areas. The Optical Interposer is unique in the industry, incorporating several "first time ever" implementations of advanced optics and semiconductor packaging techniques and completely new, novel designs for components. To minimize risk and maximize the probability of successful outcomes, we run parallel development programs, both internal and external. Our external programs engage development partners or subcontractors to provide devices, process expertise or equipment that we do not have internally.

Internally generated research costs, including the costs of developing intellectual property and maintaining patents are expensed as incurred. Internal development costs are expensed as incurred unless such costs meet the criteria for deferral and amortization under IFRS, which to date has not occurred.

We incurred \$8,692,804, \$5,442,873 and \$3,165,825 of research and development expenses in 2018, 2017 and 2016, respectively, which includes non-cash stock-based compensation of \$536,321, \$369,007 and \$373,196 respectively. Other expenses related to research and development expenditures in the semiconductor business include costs associated with salaries, material costs, license fees, consulting services and third-party contract manufacturing. The expenses in all years presented can be analyzed as follows:

	2018		2017		2016	
Wages and benefits	\$	4,641,238	\$	2,839,088	\$	1,572,567
Subcontract fees		1,288,566		1,044,936		1,013,539
Stock-based compensation		536,321		369,007		373,196
Supplies		2,226,679		1,189,842		206,523
	\$	8,692,804	\$	5,442,873	\$	3,165,825

### D. Trend Information

Other than as may be disclosed elsewhere in this annual report and specifically in ITEM 4.B. "Business Overview," we are not aware of any trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on our net revenues, income from operations, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial condition.

### E. Off-Balance Sheet Arrangements

The Company has no material off-balance sheet arrangements in place at this time.

### F. Tabular Disclosures of Contractual Obligations

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2018:

Contractual Obligations	Payments due by period (US\$)					
	Total	<1 year	1-3 years	3-5 years	>5 years	
Operating Lease Obligations	\$ 1,225,102	\$ 416,348	\$ 808,754	\$ -	\$ -	-

### G. Safe Harbor

See "Forward Looking Statements" on page 1 of this Annual Report.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information regarding our Directors and Officers for the most recent financial year.

Name	Positions	Age	Date First Elected or Appointed a Director or Officer
Jean-Louis Malinge (3)	Director	65	September 5, 2017
Peter Charbonneau (1)(3)	Corporate Governance and Nominating Committee Chair and Director	65	March 28, 2018
Dr. Suresh Venkatesan	Chief Executive Officer and Director	52	June 11, 2015
Kevin Barnes	Corporate Controller and Treasurer	47	December 1, 2012
Thomas R. Mika	Chief Financial Officer	67	November 2, 2016
Don Listwin (2)	Director	60	January 22, 2018
John F. O'Donnell (2)(3)(4)	Former Corporate Governance and Nominating Committee Chair and Director	72	February 14, 2012
Chris Tsiofas (1)(2)(3)	Audit and Compensation Committee Chair and Director	51	August 21, 2012
Todd A. DeBonis (2)(4)	Former Director	54	April 8, 2015
David E. Lazovsky (2)	Chairman and Director	47	April 8, 2015
Mohandas Warrior (1)	Director	58	June 15, 2015
Rajan Rajgopal	President – DenseLight Semiconductor Pte. Ltd.	55	January 23, 2017
Richard Zoccolillo	Senior Vice President – Strategic Marketing and Product Management	57	September 20, 2018

(1) Member of Audit Committee

(2) Member of Compensation Committee

(3) Member of Corporate Governance and Nominating Committee

(4) Resigned in 2018

Dr. Suresh Venkatesan as CEO. Dr. Venkatesan was most recently Senior Vice President, Technology Development at Global Foundries and was responsible for the Company's Technology Research and Development. Dr. Venkatesan joined Global Foundries in 2009, where he led the development and ramp up of the 28nm node and was instrumental in the technology transfer and qualification of 14nm. In addition, he was responsible for the qualification and ramp up of multiple mainstream value-added technology nodes.

Mr. Thomas Mika as EVP & CFO. Prior to joining POET, Mika served for one year as the Executive Chairman of Rennova Health, Inc., following its merger in 2016 with CollabRx, Inc., the successor company to Tegal Corporation, a semiconductor capital equipment company (NASDAQ: TGAL). Following its spin-out from Motorola, Mika served on the Board of Directors of Tegal from 1992 to 2002 and became Tegal's CFO in 2002. From 2005-2012, he was Tegal's Chairman, President and CEO, and continued in those positions following the acquisition of CollabRx, which he later merged into Rennova Health. In 1980, Mika co-founded IMTEC, a boutique M&A, investment and consulting firm, serving clients in the U.S., Europe and Japan over a period of 20 years, taking on the role of CEO in several ventures. Earlier in his career, Mika was a managing consultant with Cresap, McCormick & Paget and a policy analyst for the National Science Foundation. He holds a Bachelor of Science in Microbiology from the University of Illinois at Urbana-Champaign and a Master of Business Administration from the Harvard Graduate School of Business.

Mr. Kevin Barnes has been serving as Corporate Controller and Treasurer since 2008 and briefly as Chief Financial Officer (2016 – 2016). Mr. Barnes holds a Master of Business Administration and is a member of the Institute of the Certified Management Accountants of Australia and an Accredited Chartered Secretary. Mr. Barnes served as a Corporate Controller and Business Performance Manager for EC English, one of the world's largest language training institutes between 2006 and 2014. Mr. Barnes also serves as Chief Financial Officer of VVC Exploration Corporation, a minerals exploration company since 2006. From 2000 to 2006, he was a reporting manager with Duguay and Ringler Corporate Services, which specializes in financial reporting for publicly traded companies.

Mr. John F. O'Donnell has a BA (Economics) and an LLB, has practiced law in the City of Toronto since 1973 and has been on the Board of Directors of the Company since February of 2012. He is currently counsel to Stikeman Keeley Spiegel LLP. His practice is primarily in the field of corporate and securities law and, as such, he is and has been counsel to several publicly traded companies. Mr. O'Donnell is currently also Chairman of the Board of Peloton Mining Corporation. (PM: CSE). Mr. O'Donnell resigned from the board of directors on December 31, 2018.

Mr. Chris Tsioufas, CA, CPA, earned a Bachelor's of Commerce Degree from the University of Toronto and is a member of the Chartered Professional Accountants of Canada and the Canadian Tax Foundation. He has been on the Board of Directors since August of 2012. He is a partner with the Toronto Chartered Professional Accountancy firm of Myers Tsioufas Norheim LLP.

Todd A. DeBonis is a veteran semiconductor executive with over 27 years of expertise in sales, marketing and corporate development. For the last decade Mr. DeBonis was the Vice President of Global Sales and Strategic Development at TriQuint Semiconductor. Mr. DeBonis played an integral part in the recent merger of TriQuint with RFMD and subsequent creation of Qorvo, Inc. Mr. DeBonis previously held the position of Vice President, Worldwide Sales and Marketing at Centillum Communications. Mr. DeBonis also served as the Vice President, Worldwide Sales for Isoni Networks and Vice President, Sales & Marketing for the Communications Division of Infineon Technologies North America. Mr. DeBonis has a B.S. degree in Electrical Engineering from the University of Nevada. Mr. DeBonis resigned from the board of directors on January 22, 2018.

David E. Lazovsky is the founder of Intermolecular and served as that company's President and Chief Executive Officer and as a member of the board of directors from September 2004 to October 2014. Mr. Lazovsky has an in-depth knowledge of the semiconductor industry, technology and markets. Prior to founding Intermolecular, Mr. Lazovsky held several senior management positions at Applied Materials (NASDAQ: AMAT). From 1996 through August 2004, Mr. Lazovsky held management positions in the Metal Deposition and Thin Films Product Business Group where he was responsible for managing more than \$1 billion in Applied Materials' semiconductor manufacturing equipment business. Mr. Lazovsky holds a B.S. in mechanical engineering from Ohio University and, as of March 31, 2014, held 41 pending or issued U.S. patents. Mr. Lazovsky was appointed as the Chairman of the Board on February 1, 2017.

Mr. Mohan Warrior was president and chief executive officer (CEO) of Alfalight Inc. ("Alfalight") from February 2004 to Sep 2016. Alfalight is a GaAs based high power diode laser manufacturing company with headquarters in Madison, Wisconsin. Alfalight serves military, telecom and industrial customers. Mr. Warrior established Alfalight as a leading provider of high-powered laser diode solutions in both commercial and defense segments. Alfalight was sold to Gooch and Housego in 2016. Prior to joining Alfalight, Mr. Warrior's career included 15 years at Motorola Semiconductors (now Freescale) where he led the test and assembly operations, a group of 3500 employees, in the US, Scotland and Korea. Mr. Warrior earned his Bachelor's degree in Chemical Engineering from Indian Institute of Technology, Delhi, a Master's degree in Chemical Engineering from Syracuse University, New York and an MBA from the Kellogg School of Management at Northwestern University.

Mr. Jean-Louis Malinge serves as partner with ARCH Venture Partners, an early-stage venture capital firm with nearly \$2 billion under management. Additionally, he also serves as a managing director for YADAIS, a leading consulting firm in the photonics and telecommunications industries, and is a board member of EGIDE SA and CALabs. EGIDE SA designs, manufactures and sells hermetic packages for the protection and interconnection of several types of electronic and photonic chips and CALabs is a venture-backed French innovative start-up founded in 2013 which has developed a unique spatial multiplexing platform. From 2004 to 2013 Jean-Louis was President and CEO of Kotura, a Silicon Photonics pioneer which was acquired in 2013 by Mellanox Technologies. Prior to Kotura Mr. Malinge was an executive with Corning Inc for 15 years. Jean-Louis hold an Executive M.B.A. from MIT Sloan School in Boston, Massachusetts. He also holds an engineering degree from the Institut National des Sciences Appliquées in Rennes, France.

Mr. Don Listwin has over 30 years of technology investing and management experience, highlighted by a decade at Cisco Systems, where he served as executive vice president. During his tenure at Cisco, he built several multi-billion-dollar lines of business, including the company's Service Provider line of business that underpins much of today's global Internet infrastructure. More recently, Listwin served as chief executive officer of both Sana Security and Openwave Systems. In addition, Listwin founded and holds the role of chief executive officer of the Canary Foundation, a non-profit research organization focused on the early detection of cancer. He also serves as a director on the boards of AwareX, Calix, D-wave, iSchemaView, Robin Systems and Teradici. Previously, he also served on the boards or was an advisor to JDS Uniphase, PLUMgrid, Redback Networks, E-TEK Dynamics, the Cellular Telecommunications & Internet Association (CTIA) and the Business Development Bank of Canada (BDC).

Mr. Rajan Rajgopal is a seasoned semiconductor executive with senior previous roles at top multi-national leaders such as Micron, Global Foundries and Texas Instruments. He holds an MSEE degree from the University of Maine and a BSEE degree from the University of Texas at Austin.

Mr. Charbonneau was a general partner at Skypoint Capital Corporation for almost 15 years, where he was jointly responsible for the placement of \$100 million of capital in early-stage telecommunications and data communication companies. Charbonneau currently serves on the board of directors of Teradici Corporation, a collaboration solutions Company and the creator of PCoIP protocol technology and Cloud Access Software. He recently served on the Board of Mitel Networks Corporation, a leading global provider of cloud and on-site business communications until November 2018 when it was sold to a private equity firm. He served as Lead Director, Chair of the Nominating and Governance Committee and Chair of the Audit Committee. He previously served as Chairman of the Board of Trustees for the CBC Pension Board and a director on the board of the Canadian Broadcasting Corporation as well as many technology and networking companies, including March Networks Corporation, TELUS Corporation, Breconridge Corporation and Dragonwave Incorporated.

Mr. Zoccolillo joined the Company with extensive experience in the photonics industry, including senior management roles at Infinera, Opnext and Lucent Technology's optical networking business. He has held senior management roles in Operations as well as General Management roles executing on growth-oriented business strategies. Mr. Zoccolillo has served on the Advisory Board for Kaiam Corporation and the School of Science and Technology of Monmouth University.

The Directors, unless otherwise noted above, have served in their respective capacities since their election and/or appointment, and will serve until the next Company's annual general meeting or until a successor is duly elected, unless the office is vacated in accordance with the Articles of Continuance.

The Board has adopted a written Code of Business Conduct and Ethics to promote a culture of ethical business conduct and relies upon the selection of persons as directors, senior management and employees who they consider to meet the highest ethical standards. The Company's Code of Business Ethics can be found on the Company's web site at: [www.poet-technologies.com](http://www.poet-technologies.com).

There are no family relationships between any of our Directors or senior management. There are no arrangements or understandings with major shareholders, customers, suppliers or others, pursuant to which any person referred to above was selected as a Director or member of senior management.

#### B. Compensation

##### Fixed Stock Option Plan

On September 21, 2007, the Directors approved a fixed 20% vesting Stock Option Plan (the "Plan") to replace the Rolling Stock Option Plan that had been in effect since May 4, 2005. The Plan was approved by the disinterested shareholders of the Company at the Shareholders' Meeting of June 19, 2008 and accepted for filing by the TSXV. Under the Plan, the maximum number of shares (the "Maximum Number") which may be issued pursuant to options granted under the Plan or otherwise granted cannot exceed 20% of the issued and outstanding shares. The shareholders fixed the Maximum Number at 11,930,000. Thereafter, the Plan has been amended by the Directors, and such amendments have been approved by the shareholders in 2009, 2011, 2013, 2014, 2015, 2016 and 2018. The Maximum Number is currently 57,611,360 shares.

The purpose of the Plan is to assist the Company in attracting, retaining and motivating directors, employees and consultants of the Company and any of its subsidiaries and to closely align the personal interests of such directors, employees and consultants with those of the shareholders by providing them with the opportunity, through options, to acquire common shares in the capital of the Company.

The Plan provides that the number of common shares issuable pursuant to options granted under the Plan and pursuant to other previously granted options is limited to the Maximum Number, currently fixed at 57,611,360. Any subsequent increase in the Maximum Number must be approved by shareholders of the Company and cannot exceed 20% of the issued and outstanding shares of the Company at the time of the shareholders' approval. There is no other limit to the number of options granted to any individual, except for:

- (i) 2% on a yearly basis to any one consultant and (ii) 2% on a yearly basis to any employee providing "Investor Relations Activities."

The following paragraphs summarize some of the terms of the Plan:

**Eligibility.** Options may be granted under the Plan to directors, employees, consultants and consultant companies of the Company and any of its subsidiaries. Options may also be granted to individuals referred to as "Management Company Employees" which are employed by a company providing management services to the Company, except for services involving "Investor Relations Activities."

**Plan Administration.** The Board of Directors is the plan administrator, subject to the advice and recommendations of our Compensation Committee. The plan administrator will determine the provisions and terms and conditions of each grant.

**Exercise Price.** The exercise price subject to an option shall be determined by the Board and set forth in the option agreement, but shall be either (i) not less than the last closing price of the Company's common shares as traded on the TSXV, unless discounted by the Board or (ii) such other price agreed by the Board and accepted by the TSXV. Except in certain circumstance, the Company can amend the other terms of a stock option only where prior TSXV acceptance is obtained and where the following requirements are met:

- (i) if the amendment is in respect of an option held by an insider of the Company, but excluding amendments to extend the length of the stock option term, the Company obtains disinterested shareholder approval;
- (ii) if the option exercise price is amended, at least six months have elapsed since the later of the date of commencement of the term, the date the Company's shares commenced trading, or the date the option exercise price was last amended;
- (iii) if the option price is amended to the discounted market price, the exchange hold period is applied from the date of the amendment (and for more certainty where the option price is amended to the market price, the exchange hold period will not apply); and
- (iv) if the length of the stock option term is amended, any extension of the length of the term of the stock option is treated as a grant of a new option, and therefore the amended option must comply with the pricing and other requirements of the policy as if it were a newly granted option. The term of an option cannot be extended so that the effective term of the option exceeds 10 years in total. An option must be outstanding for at least one year before the Company can extend its term.

The TSXV must accept a proposed amendment before the option may be exercised as amended. If the Company cancels a stock option and within one year grants new options to the same individual, the new options will be subject to the requirements in sections (i) to (iv) above.

**Option Agreement.** Options granted under the plan are evidenced by an option agreement that sets forth the terms, conditions and limitations for each grant.

**Term of the Awards.** At the meeting of the Board of Directors held on February 25, 2016, based on the report of Compensia, it was determined that stock options should generally have a term of 10 years.

**Vesting Schedule.** In general, options granted under the Plan vest 25% immediately and 25% every six months from the date of issue, until fully vested. The directors may, at their discretion, specify a different vesting period, provided that options granted to consultants performing "Investor Relations Activities" must vest in stages over 12 months with no more than 25% of the options vesting in any three-month period. At the meeting of the Board of Directors held on February 25, 2016, based on the report of Compensia, it was determined that stock options should vest 25% at the end of one year from the date of issue with the remaining 75% vesting equally on a quarterly basis over the remaining 3 years for a total vesting period of 4 years. At a meeting of the Board of Directors held on March 30, 2017, the board approved a revised one-year vesting schedule for options granted for service on the board to conform to the term for which a director is elected. Such options will vest 25% at the end of each quarter served in office.

**Transfer Restrictions.** Options granted under the Plan may not be transferred in any manner by the option holder other than by will or the laws of succession and may be exercised during the lifetime of the option holder only by the option holder. Securities that are subject to restrictions may not be transferred during the period of restriction.

**Change of Control and Alteration of Capital.** The Plan provides that if a Change of Control, as defined herein, occurs, the shares subject to option shall immediately become vested and may thereupon be exercised in whole or in part by the option holder. The Plan also provides for automatic adjustments in the number of optioned shares and/or the exercised price, in the event of an alteration in the share capital of the Company.

**Termination of Options.** In the event that the award recipient ceases employment with us or ceases to provide services to us, the options will terminate after a period of time following the termination of employment. Our Board of Directors has the authority to amend or terminate the plan subject to shareholder approval with respect to certain amendments. However, no such action may adversely affect in any material way any awards previously granted unless agreed upon by the recipient.

#### **Officer Compensation**

Total cash compensation accrued and/or paid (directly and/or indirectly) to all of our Officers during fiscal year 2018 was \$1,333,919 (refer to ITEM 7. "Major Shareholders and Related Party Transactions" for information regarding indirect payments)

In order to assist the Board of Directors in fulfilling its oversight responsibilities with respect to human resources matters, the Board established a Compensation Committee. The Compensation Committee reviews and makes determinations with respect to senior officer compensation on a regular basis with any discretionary compensation used only for extraordinary projects or significant milestone results that advance the Company's growth potential. When determining Executive Officers' compensation, the Compensation Committee receives input and guidance from the Executive Chairman of the Board and the Chief Executive Officer of the Company. In the past, the Compensation Committee has engaged an outside consultant to conduct a peer group review to provide guidance to the Compensation Committee with respect to appropriate comparative terms for executive compensation and stock option grants. The Company also utilizes peer group comparisons from subsidiary locations to assist in its salary review of various positions in those locations. The Compensation Committee utilizes such comparative reviews to assist it in making appropriate recommendations to the Board.

In addition to his or her fixed base salary, each officer may be eligible to receive variable pay compensation or bonus meant to motivate him or her to achieve short-term goals. Currently, the Company does not have in place established procedures for determining variable pay compensation. Stock options are an important element of the variable pay compensation and do not require cash disbursement from the Company. Stock options are also generally awarded to officers, qualifying employees and consultants at the time of hire and are used as a recruitment tool to attract highly qualified and experienced executives, employees and consultants to the Company. Stock options are also granted at other times during the year. As the Company is continuing to develop its Optical Interposer technology, it must conserve its limited financial resources and control costs to ensure that funds are available when needed to complete its scheduled developments. As a result, the Compensation Committee generally considers not only the financial situation of the Company at the time of the determination of the compensation, but also the estimated financial situation in the mid- and long-term. The use of stock options encourages and rewards performance by aligning an increase in each officer's compensation with increases in the Company's performance and in shareholder value.

The following table sets forth all annual and long-term compensation for services in all capacities to the Company for fiscal year 2018 of the Company.

Name and Principal Position	Fiscal Year	Salary (2) (US\$)	Share-Based Awards (1) (2) (US\$)	Options-Based Awards(1) (2)		Non-Equity Incentive Plan Compensation			All Other Comp. (US\$)	Total Comp. (US\$)
				No. of Options	(US\$)(1) (2)	Annual Incentive Plans	Long-term Incentive Plans	Pension Value (US\$)		
David Lazovsky, Executive Chairman	2018	200,000	—	950,000	347,856	—	—	—	—	547,856
Dr. Suresh Venkatesan Chief Executive Officer	2018	440,000	—	3,900,000	1,845,488	—	—	—	—	2,285,488
Richard Zoccolillo, SVP Strategic Marketing	2018	72,917	—	1,750,000	477,796	—	—	—	—	550,713
Kevin Barnes Treasurer and Controller	2018	117,669	—	150,000	54,925	—	—	—	—	172,594
Thomas Mika Chief Financial Officer	2018	283,333	—	950,000	347,856	—	—	—	—	631,189
Rajan Rajgopal President of DenseLight	2018	220,000	—	250,000	91,541	—	—	—	—	311,541

(1) The Company used the Black-Scholes model as the methodology to calculate the grant date fair value. The fair value will be recorded as an operating expense as the options vest based on the stock options vesting schedule from the date of grant.

(2) The exchange rate used in these calculations to convert CAD to USD is based on the exchange rate applicable at the date of grant.

The following table sets forth information concerning all awards outstanding under a stock option plan to each of the current officers, as of December 31, 2018:

Name	Option-Based Awards				Share-Based Awards		Market or Payout Value of Share-Based Awards That Have Not Vested (US\$)
	No. of Shares Underlying Unexercised Options (#)	Option Exercise Price (CA\$/share)	Option Expiration Date	Value of Unexercised In-The Money Options (1) (US\$)	Number of Shares or Units of Shares That Have Not Vested (#)		
David Lazovsky	25,000	1.54	Jun 12, 2020	-	N/A	N/A	
	250,000	1.99	April 08, 2020	-	N/A	N/A	
	150,000	0.86	July 07, 2026	-	N/A	N/A	
	3,000,000	0.39	Feb 1, 2027	-	N/A	N/A	
	950,000	0.52	Mar 28, 2028	-	N/A	N/A	
Richard Zoccolillo Manocha	1,750,000	0.39	Sep 24, 2028	-	N/A	N/A	
Kevin Barnes	25,000	0.23	Feb. 16, 2022	733	N/A	N/A	
	25,000	0.51	Sep. 28, 2021	-	N/A	N/A	
	50,000	0.76	Feb. 28, 2021	-	N/A	N/A	
	50,000	1.24	Aug. 12, 2019	-	N/A	N/A	
	50,000	1.54	June 12, 2020	-	N/A	N/A	
	25,000	1.08	Aug. 13, 2020	-	N/A	N/A	
	100,000	0.86	July 7, 2026	-	N/A	N/A	
	250,000	0.28	July 31, 2027	-	N/A	N/A	
	150,000	0.52	Mar 28, 2028	-	N/A	N/A	
Thomas Mika	1,000,000	0.62	Nov 2, 2026	-	N/A	N/A	
	500,000	0.385	Jan 16, 2027	-	N/A	N/A	
	1,000,000	0.28	July 13, 2027	-	N/A	N/A	
	950,000	0.52	Mar 28, 2028	-	N/A	N/A	
Dr. Suresh Venkatesan	6,357,000	1.40	June 15, 2020	-	N/A	N/A	
	300,000	0.86	July 7, 2026	-	N/A	N/A	
	3,000,000	0.28	July 13, 2027	-	N/A	N/A	
	3,900,000	0.52	Mar 28, 2028	-	N/A	N/A	
Rajan Rajgopal	500,000	0.36	Jan 23, 2027	-	N/A	N/A	
	250,000	0.52	Mar 28, 2028	-	N/A	N/A	
	500,000	0.28	Jul 13, 2027	-	N/A	N/A	

(1) This amount is calculated based on the difference between the market value of the shares underlying the options as of December 31, 2018, being CAD \$0.27 (US\$0.20), and the exercise or base price of the option. The exchange rate used in these calculations to convert CAD to USD was 0.7333, being the closing exchange rate at December 31, 2018.

The value vested or earned during fiscal year 2018 of incentive plan awards granted to NEOs are as follows:

NEO Name	Option-Based Awards	Value	Share-Based Awards – Value Vested	Non-Equity Incentive Plan Compensation – Value Earned
	Vested During the Year (1) (US\$)		During the Year (US\$)	During the Year (US\$)
Richard Zoccolillo	-	-	N/A	N/A
Kevin Barnes	-	-	N/A	N/A
Suresh Venkatesan	-	-	N/A	N/A
Thomas Mika	-	-	N/A	N/A
Rajan Rajgopal	-	-	N/A	N/A
David Lazovsky	-	-	N/A	N/A

(1) This amount is the dollar value that would have been realized and is computed by obtaining the difference between the market price of the underlying securities on the vesting date and the exercise or base price of the options under the option-based award. For the named executive officers to realize this value, they would have had to exercise their options and sell the shares on the day of vesting. The exchange rates used in these calculations to convert CAD to USD were the rates applicable on the vesting dates.



Director Compensation

The following table details compensation paid/accrued for fiscal year 2018 for each director who is not also an officer.

Name and Principal Position	Fiscal Year	Salary (cash) (2) (US\$)	Share-Based Awards (1)		Options-Based Awards(1)(2)				Non-Equity Incentive Plan Compensation			All	Total
			No. of Shares	(US\$)	Annual Incentive	Long-term	Pension	Other					
John F. O'Donnell (3)(4)	2018	40,000	—	433,333	100,968	—	—	—	—	—	—	140,968	
Todd A. DeBonis (4)	2018	2,500	—	—	—	—	—	—	—	—	—	2,500	
Don Listwin	2018	27,500	—	867,750	165,696	—	—	—	—	—	—	193,196	
Chris Tsiofas	2018	50,000	—	487,666	111,064	—	—	—	—	—	—	161,064	
Mohan Warrior	2018	30,000	—	399,000	90,871	—	—	—	—	—	—	120,871	
Peter Charbonneau	2018	22,500	—	553,730	90,871	—	—	—	—	—	—	113,371	
Jean-Louie Malinge	2018	30,000	—	399,000	90,871	—	—	—	—	—	—	120,871	

(1) The Company used the Black-Scholes model as the methodology to calculate the grant date fair value. The fair value will be recorded as an operating expense as the stock options vest from the date of grant.

(2) The exchange rate used in these calculations to convert CAD to USD was the rate of exchange applicable on the date of grant.

(3) The firm of Stikeman Keeley Spiegel LLP, of which Mr. O'Donnell is counsel, billed the sum of \$115,740 for legal fees and disbursements incurred in 2018.

(4) Resigned from the board in 2018

The following table sets forth information concerning all awards outstanding under the stock option plans to each of the current Directors who are not also named executive officers as of December 31, 2018:

Name	Option-Based Awards			Share-Based Awards		Market or Payout Value of Share-Based Awards That Have Not Vested (US\$)
	No. of Shares Underlying Unexercised Options (#)	Option Exercise Price (CA\$/share)	Option Expiration Date	Value of Unexercised In-The Money Options (1) (US\$)	Number of Shares or Units of Shares That Have Not Vested (#)	
John F. O'Donnell	150,000	0.23	16-Feb-22	4,400		N/A
	12,500	0.345	19-Aug-20	-		N/A
	625,000	0.28	13-Jul-27	-		N/A
	300,000	1.24	12-Aug-19	-		N/A
	443,333	0.33	21-Jun-28	-		N/A
	100,000	1.54	12-Jun-20	-		N/A
	150,000	0.86	07-Jul-26	-		N/A
Chris Tsiofas	687,500	0.28	13-Jul-27	-		N/A
	300,000	1.24	12-Aug-19	-		N/A
	300,000	1.54	12-Jun-20	-		N/A
	150,000	0.86	07-Jul-26	-		N/A
	487,666	0.33	21-Jun-28	-		N/A
Peter Charbonneau DeBonis	399,000	0.33	21-Jun-28	-		N/A
	154,730	0.52	28-Mar-28	-		N/A
	562,500	0.28	13-Jul-27	-		N/A
Don Listwin	399,000	0.33	21-Jun-28	-		N/A
	468,750	0.22	22-Jan-28	17,187		N/A
Jean-Louis Malinge	525,000	0.30	05-Sep-27	-		N/A
	399,000	0.33	21-Jun-28	-		N/A
Mohan Warrior	562,500	0.28	13-Jul-27	-		N/A
	250,000	1.54	12-Jun-20	-		N/A
	399,000	0.33	21-Jun-28	-		N/A
	150,000	0.86	07-Jul-26	-		N/A

(1) This amount is calculated based on the difference between the market value of the shares underlying the options as of December 31, 2018, being CAD \$0.27 (US\$0.20), and the exercise or base price of the option. The exchange rate used in these calculations to convert CAD to USD was 0.7333, being the closing price at December 31, 2018.

The value vested or earned during fiscal year 2018 of incentive plan awards granted to Directors who are not also named executive officers are as follows:

Director Name	Option-Based Awards – Value Vested During the Year (1) (US\$)	Share-Based Awards – Value Vested During the Year (US\$)	Non-Equity Incentive Plan Compensation – Value Earned During the Year (US\$)
Peter Charbonneau	-	N/A	N/A
John F. O'Donnell	-	N/A	N/A
Jean-Louis Malinge	-	N/A	N/A
Chris Tsiofas	-	N/A	N/A
Don Listwin	-	N/A	N/A
Mohan Warrior	-	N/A	N/A

(1) This amount is the dollar value that would have been realized and is computed by obtaining the difference between the market price of the underlying securities on the vesting date and the exercise or base price of the options under the option-based award.

#### Termination and Change of Control Benefits

Other than disclosed below in "Written Management Agreements," the Company has no plans or arrangements in respect of remuneration received or that may be received by the Officers the Company to compensate such Officers, in the event of termination of employment (as a result of resignation, retirement, change of control) or a change of responsibilities following a change of control.

#### Pension Plan Benefits

The Company does not provide a defined benefit plan to the Officers or any of its employees.

The Company offers a defined contribution plan that is a 401k Plan but does not contribute toward such plan. The Company does not have any deferred compensation plans other than that described above.

#### Written Management Agreements

The Company and/or its subsidiaries have employment contracts with the following current and former Officers as follows:

Dr. Venkatesan entered into an Executive Employment Agreement with an effective date of June 10, 2015 wherein (i) he will be paid US\$550,000 per year under at-will terms of employment; (ii) he will be eligible for annual and special bonuses as determined by the Board of Directors; (iii) he was granted 6,357,000 stock options vesting over 4 years; (iv) he became eligible for a signing bonus of US \$450,000 payable on the first anniversary of the effective date; (v) he will receive a severance of twelve months on termination of employment by the Company, other than for cause. Mr. Venkatesan agreed to a permanent reduction of his cash compensation by 20% effective October 2016, reducing his compensation from US\$550,000 to US\$440,000 per year.

Mr. Mika entered into an Executive Employment Agreement with an effective date of November 2, 2016 wherein (i) he will be paid US\$250,000 per year under at-will terms of employment (ii) he will be eligible for annual and special bonuses as determined by the Board of Directors; (iii) he was granted 1,000,000 stock options vesting over 4 years; (iv) he will receive an additional 500,000 stock options vesting over 4 years in Q1 2017 (v) he will be entitled to compensation of three months' salary on termination of employment by the Company, if termination is other than for cause. Mr. Mika's compensation was adjusted to US\$300,000 on May 1, 2018.

On July 1, 2016, Mr. Lazovsky entered into a Consulting Agreement with the Company to provide strategic, technological, integration and other general consulting services. For his services, Mr. Lazovsky was paid \$150,000 for the term from July 1, 2016 to December 31, 2016.

Mr. Lazovsky entered into an Executive Employment Agreement to provide services as the Executive Chairman of the Board, with an effective date of February 1, 2017. He will (i) be paid US\$200,000 per year under at-will terms of employment (ii) be eligible for annual and special bonuses as determined by the Board of Directors; (iii) granted 3,000,000 stock options vesting over 4 years; (iv) be entitled to compensation of six months' salary on termination prior to 2 years of employment by the Company, if termination is other than for cause.

Mr. Barnes has an arrangement with the Company to provide consulting services starting January 1, 2013 for a period of one year with an automatic one-year renewal at a monthly rate of CA\$13,750. The Company may terminate the arrangement without cause on six months' notice or equivalent compensation.

Effective December 30, 2016, Mr. Rajan Rajgopal entered into an employment agreement with DenseLight to provide services as the President and General Manager of DenseLight. As per the agreement, Mr. Rajgopal will (i) be paid be paid US\$220,000 per year (ii) be eligible for annual and special bonuses as determined by the Board of Directors; (iii) be granted 500,000 stock options vesting over 4 years; (iv) be granted an additional 500,000 stock options no later than June 30, 2017 (v) be entitled to compensation of one month salary on termination of employment by the Company, if termination is other than for cause.

Effective September 10, 2018, Mr. Zocolillo entered into an employment agreement to provide services as the Senior Vice President Strategic Marketing and Product Management. As per the agreement, Mr. Zocolillo will (i) be paid be paid US\$250,000 per year (ii) be eligible for annual and special bonuses as determined by the Board of Directors; and (iii) be granted 1,750,000 stock options vesting over 4 years.

### C. Board Practices

Our Board of Directors currently consists of seven (7) directors, including five (5) independent directors. Each director holds office until the next annual general meeting of the Company or until his successor is elected or appointed, unless his office is earlier vacated in accordance with the Articles of Amalgamation and all amendments thereto (the "Articles"), or with the provisions of the OBCA. The Company's Officers are appointed to serve at the discretion of the Board, subject to the terms of the employment agreements described above.

The Board and committees of the Board schedule regular meetings over the course of the year.

During fiscal 2018, the Board held 12 regularly scheduled meetings, including committee meetings. If for various reasons, Board members may not be able to attend a Board meeting, all Board members are provided information related to each of the agenda items before each meeting, and, therefore, can provide counsel outside the confines of regularly scheduled meetings.

The Board has adopted standards for determining whether a director is independent from management. The Board reviews, consistent with the Company's corporate governance guidelines, whether a director has any material relationship with the Company that would impair the director's independent judgment. The Board has affirmatively determined, based on its standards, that Messrs. Tsiofas, Malinge, Charbonneau, Listwin and Warrior are independent.

#### Directors' Service Contracts

Messrs. Venkatesan and Lazovsky entered into employment contracts as explained above in "Written Management Agreements."

#### Audit and Compensation Committees of the Board of Directors

We currently have three board committees: (1) an Audit Committee, (2) a Compensation Committee, and (3) a Corporate Governance and Nominating Committee. Committee charters can be found on the Company's website (poet-technologies.com). The names of the members and a summary of the terms of the charter for each the Audit Committee and the Compensation Committee is provided below.

#### Audit Committee

The Audit Committee is currently comprised of three members: Chris Tsiofas (Chair), Peter Charbonneau and Mohandas Warrior. All three members are independent directors of the Company. Mr. Tsiofas was appointed chair of the Audit Committee on August 21, 2012. The Board has determined that Mr. Tsiofas satisfies the criteria of "audit committee financial expert" within the meaning of Item 401(h) of Regulation S-K and is independent in accordance with Rule 4200 of the NASDAQ Marketplace Rules. All members of the audit committee are financially literate, meaning they have the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements.

The Audit Committee is responsible for reviewing the Company's financial reporting procedures, internal controls and the performance of the Company's external auditors. The Audit Committee is also responsible for reviewing the annual and quarterly financial statements and accompanying Management's Discussion and Analysis prior to their approval by the full Board. The Audit Committee also reviews the Company's financial controls with the auditors of the Company on an annual basis.

The Company's independent auditor is accountable to the Board and to the Audit Committee. The Board, through the Audit Committee, has the ultimate responsibility to evaluate the performance of the independent auditor, and through the shareholders, to appoint, replace and compensate the independent auditor. Any non-audit services must be pre-approved by the Audit Committee.

#### Compensation Committee

The Compensation Committee is currently comprised of three members: Chris Tsiofas (Chair), David Lazovsky and Don Listwin. Mr. Tsiofas was appointed chair of the Compensation Committee on November 14, 2014. Both Mr. Tsiofas and Mr. Listwin are independent directors. David Lazovsky currently serves as the Executive Chairman of the Board and is not independent. However, the Board of Directors determined that Mr. Lazovsky's extensive knowledge of local employment conditions, practices and salary level made him a valuable addition to the Committee. The Board has determined that all members of the Compensation Committee are qualified as members based on the following:

Mr. Chris Tsiofas, CA, CPA, Chairman of the Compensation Committee, earned a Bachelor's of Commerce Degree from the University of Toronto in 1991 and has been a member of the Institute of Chartered Accountants of Ontario since 1993. He has been on the Board of Directors of the Company since August of 2012. Mr. Tsiofas is a partner with the Toronto Chartered Professional Accountancy firm of Myers Tsiofas Norheim LLP, a position he has held since 1994. Mr. Tsiofas has served as Chairman of the Company's Compensation Committee since 2014 and has directed past engagements with the Company's outside executive compensation consultants. Mr. Tsiofas is also the Chairman of the Audit Committee of the Board of Directors. He brings to the Compensation Committee specialized knowledge regarding the tax impact of certain compensation policies and practices on individuals and on the Company.

Mr. Don Listwin has over 30 years of technology investing and management experience, highlighted by a decade at Cisco Systems, where he served as its Executive Vice President. Mr. Listwin currently serves as chief executive officer of iSchema View and in the recent past served as chief executive officer of both Sana Security and Openwave Systems. Mr. Listwin also currently serves as a director on the boards of AwareX, Calix, D-wave, Robin Systems and Teradici. Previously, he also served on the boards or was an advisor to JDS Uniphase, PLUMgrid, Redback Networks, E-TEK Dynamics, the Cellular Telecommunications & Internet Association (CTIA) and the Business Development Bank of Canada (BDC). In these capacities, Mr. Listwin had extensive direct experience with executive compensation matters as both a chief executive and board member of an assortment of companies, large and small, including companies within industries directly relevant to the Company.

Mr. David E. Lazovsky is the founder of Intermolecular and served as that company's President and Chief Executive Officer and as a member of the board of directors from September 2004 to October 2014. Mr. Lazovsky has an in-depth knowledge of the semiconductor industry, technology and markets. Prior to founding Intermolecular, Mr. Lazovsky held several senior management positions at Applied Materials (NASDAQ: AMAT). From 1996 through August 2004, Mr. Lazovsky held management positions in the Metal Deposition and Thin Films Product Business Group where he was responsible for managing more than \$1 billion in Applied Materials' semiconductor manufacturing equipment business. Mr. Lazovsky holds a B.S. in mechanical engineering from Ohio University and, as of March 31, 2014, held 41 pending or issued U.S. patents. Mr. Lazovsky was appointed as the Chairman of the Board on February 1, 2017 and was recently appointed to the Compensation Committee.

The Compensation Committee has extensive direct relevant experience in determining executive compensation policies and practices on behalf of the Company. In addition to being supported by outside compensation consultants on a periodic basis for peer group review, the members of the Committee are professional executives familiar with best practices associated with executive compensation, are knowledgeable about the tax implications to the Company and its executive officers of changes in the tax laws pertaining to executive compensation and have direct relevant experience with the incentives used throughout the Company's industry to align the interests of executive management with company and shareholder interests. This gives these individuals strong insight as to the incentive structures and programs appropriate for companies of a comparable size. The seniority, experience and level of achievement of the three current members of the Compensation Committee speak to the independent judgement exercised in making decisions about the suitability of the Company's compensation policies and practices.

The Compensation Committee discusses and makes recommendations to the Board for approval of compensation issues that pertain to the senior executives of the Company, and on issues involving employment company-wide compensation policies and practices. In general, the compensation programs of the Company are designed to reward performance and to be competitive with the compensation agreements of other comparable semiconductor companies. The Compensation Committee is responsible for evaluating the compensation of the senior management of the Company and assuring that they are compensated effectively in a manner consistent with the Company's business, stage of development, financial condition and prospects, and the competitive environment. Specifically, the Compensation Committee is responsible for: (i) reviewing the compensation practices and policies of the Company to ensure that they are competitive and that they provide appropriate motivation for corporate performance and increased shareholder value; (ii) overseeing the administration of the Company's compensation programs, and reviewing and approving the employees who receive compensation and the nature of the compensation provided under such programs, and ensuring that all management compensation programs are linked to meaningful and measurable performance targets; (iii) making recommendations to the Board regarding the adoption, amendment or termination of compensation programs and the approval of the adoption, amendment and termination of compensation programs of the Company, including for greater certainty, ensuring that if any equity-based compensation plan is subject to shareholder approval, and that such approval is sought; (iv) periodically surveying the executive compensation practices of other comparable companies; (v) establishing and ensuring the satisfaction of performance goals for performance-based compensation; (vi) annually reviewing and approving the annual base salary and bonus targets for the senior executives of the Company, other than the Chief Executive Officer (the "CEO"); (vii) reviewing and approving annual corporate goals and objectives for the CEO and evaluating the CEO's performance against such goals and objectives; (viii) annually reviewing and approving, based on the Compensation Committee's evaluation of the CEO, the CEO's annual base salary, the CEO's bonus, and any stock option grants and other awards to the CEO under the Company's compensation programs (in determining the CEO's compensation, the Compensation Committee will consider the Company's performance and relative shareholder return, the compensation of CEOs at other companies, and the CEO's compensation in past years); and (ix) reviewing the annual report on executive compensation required to be prepared under applicable corporate and securities legislation and regulation including the disclosure concerning members of the Compensation Committee and settling the reports required to be made by the Compensation Committee in any document required to be filed with a regulatory authority and/or distributed to shareholders.

In 2016, the Compensation Committee contracted with Compensia to perform an executive compensation review (the "Review") of certain senior positions within the then-current executive management team. Base salaries and annual and long-term incentives were benchmarked against a group of public companies in the communications equipment, semiconductor, and electronic component industries. The data provided was one of the elements considered by the Compensation Committee, with adjustments made for the differences in stage of development, revenues, profitability and other characteristics that distinguished the Company from the benchmarks.

The benchmarks comprised the following companies: Alliance Fiber Optic Product, Amtech Systems, Applied Optoelectronics, Clearfield, CyberOptics, Dynasil, EMCORE, Exar, GigPeak, GSI Technology, Intermolecular, LightPath Technologies, Micropac Industries, Nanometrics, PDF Solutions, QuickLogic and Ultratech. The data came from each company's public filings available as of April 2016. The positions benchmarked were CEO, COO, CTO, VP-Product Development and VP-Design Enablement. Due to cost and relevance, the Company elected not to repeat the Review with Compensia for its consideration of executive compensation for fiscal years subsequent to December 31, 2016.

#### Code of Ethics

The Board has adopted a written code of business conduct and ethics. All transgressions of the code of business conduct and ethics are required to be promptly reported to the Chair of the Board or of any committee, who in turn, reports them to the Corporate Governance and Nominating Committee. The Corporate Governance and Nominating Committee is charged with investigating alleged violations of the code of business conduct and ethics. Any findings of the Corporate Governance and Nominating Committee are then reported to the full Board, which will take such action as it deems appropriate. The Company's Code of Ethics may be inspected on the Company's website ([poet-technologies.com](http://poet-technologies.com)) and is filed as an Exhibit to this Annual Report.

#### D. Employees

As of December 31, 2018, the Company had ninety-nine (99) full-time employees and four (4) consultants, including one (1) in a senior management position. Seven (7) employees and one (1) consultant work at our lab facility either as support staff or are engaged in research and development initiatives; one (1) employee and three (3) consultants are employed at the Canadian office; ninety-one (91) employees are employed at our fabrication facility in Singapore. None of the Company's employees are covered by collective bargaining agreements.

As of December 31, 2017, the Company had sixty-eight (68) full-time employees and five (5) consultants, including senior management. Five (5) employees and one (1) consultant worked at our lab facility either as support staff or were engaged in research and development initiatives; One (1) employee and three (3) consultants were employed at the Canadian office; sixty-three (63) employees were employed at our fabrication facility in Singapore. None of the Company's employees were covered by collective bargaining agreements.

As of December 31, 2016, the Company had seventy-one (71) full-time employees and two (2) consultants, including senior management. Eight (8) employees and one (1) consultant worked at our lab facility either as support staff or are engaged in research and development initiatives; 1 employee and 1 consultant are employed at the Canadian office; 62 employees are employed at our fabrication facility in Singapore. None of the Company's employees are covered by collective bargaining agreements.

#### E. Share Ownership

The following table sets forth certain information regarding the beneficial ownership of our outstanding common shares for: (i) each of our Directors and Officers individually; (ii) all of our Directors and Officers as a group; and (iii) each other person known to us to own beneficially more than 5% of our common shares as of April 22, 2019. Beneficial ownership of shares is determined under rules of the SEC and generally includes any shares over which a person exercises sole or shared voting or investment power. The table also includes the number of shares underlying options that are exercisable within sixty (60) days of April 22, 2019. Ordinary shares subject to these options are deemed to be outstanding for the purpose of computing the ownership percentage of the person holding these options, but are not deemed to be outstanding for the purpose of computing the ownership percentage of any other person.

The shareholders listed below do not have any different voting rights from our other shareholders.

	Number of Shares	
	Beneficially Owned (1)	Percent of Class
Directors and Officers:		
Chris Tsiofas	25,000	0.01%
John F. O'Donnell	30,000 (2)	0.01%
Thomas Mika	100,000	0.03%
Kevin Barnes	17,463	0.01%
David Lazovsky	181,000	0.06%
Suresh Venkatesan	115,000	0.04%
Don Listwin	632,250	0.22%
Rajan Rajgopal	25,000	0.01%
Directors and Officers Subtotal	1,095,713	0.38%
Major Shareholders:		
None that we are aware of.		

(1) The number of shares set forth for each Director, Officer and Major Shareholder is determined in accordance with Rule 13d-3 of the General Rules and Regulations under the Exchange Act.  
(2) Resigned from the Board on December 31, 2018

See "ITEM 6.B. Compensation" for the exercise prices of options.

	Number of Options exercisable within		Percent of class
	60 days		
Kevin Barnes	381,250	0.86%	
Peter Charbonneau	315,548	0.71%	
David Lazovsky	1,868,750	4.20%	
Don Listwin	668,250	1.50%	
Jean-Louis Malinge	724,500	1.63%	
Thomas Mika	1,187,500	2.67%	
John O'Donnell	1,502,917	3.38%	
Rajan Rajgopal	437,500	0.98%	
Chris Tsiofas	1,625,083	3.65%	
Suresh Venkatesan	6,647,839	14.95%	
Mohandas Warrior	1,105,750	2.49%	
Richard Zoccolillo	-	-	
	16,464,887	37.03%	

	Number of Warrants exercisable		Exercise price CAS	Percent of class
	within 60 days			
Suresh Venkatesan	37,500	0.52	0%	
Rajan Rajgopal	12,500	0.52	0%	
David Lazovsky	90,500	0.52	0%	
	140,500		0.003%	

## ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

### A. Major Shareholders

#### Holdings by Major Shareholders

Please refer to ITEM 6.E. "Share Ownership" for details regarding securities held by Directors, Officers and Major Shareholders. The Company's major shareholders do not have any different or special voting rights.

#### U.S. Share Ownership

As of April 22, 2019, there were a total of 448 holders of record of our common shares with addresses in the U.S. We believe that the number of U.S. beneficial owners is substantially greater than the number of U.S. record holders, because a large portion of our common shares are held in broker "street names." As of April 22, 2019, U.S. holders of record held approximately 1.25% of our outstanding common shares.

#### Control of Company

The Company is a publicly owned Ontario corporation, the shares of which are owned by Canadian residents, U.S. residents and other foreign residents. The Company is not controlled by any foreign government or other person(s) except as described in ITEM 4.A. "History and Progress of the Company" and ITEM 6.E. "Share Ownership."

#### Change of Control of Company Arrangements

None

### B. Major Shareholders and Related Party Transactions

No shareholder beneficially owns 5% or more of the Company's common shares.

Compensation to key management personnel (Executive Chairman, CEO, CFO, President and General Manager of Denselight) was as follows:

	2018	2017	2016
Salaries	\$ 1,216,250	\$ 932,133	\$ 2,047,634
Share-based payments (1)	2,449,683	2,110,773	3,061,686
Total	\$ 3,665,933	\$ 3,042,906	\$ 5,109,320

(1) Share-based payments are the fair value of options granted to key management personnel and expensed during the various years as calculated using the Black-Scholes model.

In 2016, the Company paid or accrued \$150,000 in consulting fees to David Lazovsky, a director, for strategic, technology, integration and general business consulting services.

The Company paid or accrued \$115,740 in fees for the year ended December 31, 2018 (2017 - \$115,660, 2016 - \$113,250) to a law firm, (Stikeman Keeley Spiegel LLP), of which a former director (John O'Donnell), is counsel, for legal services rendered to the Company. Mr. O'Donnell resigned from the Board of Directors effective December 31, 2018 and will continue as a consultant to the Company on an unpaid basis until the next Annual General Meeting.

### C. Interests of Experts and Counsel

Not applicable.

## ITEM 8. FINANCIAL INFORMATION

### A. Consolidated Statements and Other Financial Information

The Company's financial statements are stated in U.S. dollars and are prepared in accordance with IFRS as issued by the IASB.

The financial statements as required under "ITEM 17. Financial Statements" are attached hereto and found immediately following the text of this Annual Report. The audit report of Marcum LLP, independent registered public accounting firm, is included herein immediately preceding the consolidated financial statements.

#### Legal Proceedings

The directors and the senior management of the Company do not know of any material, either active or pending, legal proceedings against them, nor is the Company involved as a plaintiff in any material proceeding or pending litigation.

The directors and the senior management of the Company know of no active or pending proceedings against anyone that might materially adversely affect an interest in the Company.

#### Dividend Policy

The Company has not paid, and has no current plans to pay, dividends on its common shares. We currently intend to retain future earnings, if any, to finance the development of our business. Any future dividend policy will be determined by the Board, and will depend upon, among other factors, our earnings, if any, financial condition, capital requirements, any contractual restrictions with respect to the payment of dividends, the impact of the distribution of dividends on our financial condition, tax liabilities, and such economic and other conditions as the Board may deem relevant.

## B. Significant Changes

On April 1, 2019 the Company announced that it arranged for certain financing required to bridge the Company to the previously announced anticipated sale of its DenseLight subsidiary. That sale is scheduled to be completed in September 2019, subject to certain conditions including shareholder and other approvals. The Company expects to generate cash proceeds of approximately CAD\$34.5 million to CAD\$40 million upon completion of the DenseLight sale.

The first component of the financing consists of the issuance of up to CAD\$14 million principal amount of 12% convertible unsecured debentures (the "Convertible Debentures") of the Company. The Convertible Debentures will be sold in multiple tranches over several months, as needed, on a brokered private placement basis through the Company's financial advisors, IBK Capital. The Company closed the first tranche of Convertible Debentures, for gross proceeds of CAD\$1,929,000 on April 3, 2019. Further indications of interest amounting to approximately CAD\$1.6 million from parties who could not participate in the first tranche are expected to be included in subsequent tranches.

The Debentures are unsecured, bearing interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021. The Debentures are convertible at the option of the holders thereof into units at any time after October 31, 2019 at a conversion price of CAD\$0.40 per unit for a total 4,822,500 units of the Company. Each unit will consist of one common share and one common share purchase warrant. Each common share purchase warrant will entitle the holder to purchase one common share of the Company at a price of CAD\$0.50 per share for a period of two years from the date upon which the convertible debenture is converted into units. In the event that the sale of the Company's DenseLight subsidiary is completed, holders of Debentures have the right to cause the Company to repurchase the Debentures at face value, subject to certain restrictions. The Debentures are governed by a trust indenture dated April 3, 2019 between the Company and TSX Trust Company as trustee.

Insiders of the Company subscribed for 37% or \$710,000 of the first tranche of Convertible Debentures, including the Company's board of directors and senior management team. Insiders of IBK Capital subscribed for 10% or \$200,000 of this first tranche. Successive tranche closings in the coming months are each subject to approval by the TSX Venture Exchange.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

## ITEM 9. THE OFFER AND LISTING

### A. Offer and Listing Details

The Company's common shares began trading on the TSXV in Toronto, Ontario, Canada, on June 25, 2007. The current Stock symbol is "PTK". The CUSIP/ISN numbers are 73044W104 / 73044W1041.

The following table lists the high and low sales price on the TSXV for the Company's common shares for: the last six months; the last ten fiscal quarters; and the last five fiscal years.

Period Ended	High (CA\$)	Low (CA\$)
<b>MONTHLY</b>		
March 31, 2019	0.40	0.315
February 28, 2019	0.46	0.305
January 31, 2019	0.34	0.27
December 31, 2018	0.285	0.25
November 30, 2018	0.34	0.245
October 31, 2018	0.40	0.255
<b>QUARTERLY</b>		
March 31, 2019	0.46	0.27
December 31, 2018	0.40	0.245
September 30, 2018	0.44	0.23
June 30, 2018	0.44	0.27
March 31, 2018	0.79	0.19
December 31, 2017	0.36	0.28
September 30, 2017	0.42	0.17
June 30, 2017	0.43	0.27
March 31, 2017	0.51	0.31
<b>YEARLY</b>		
December 31, 2018	0.79	0.19
December 31, 2017	0.51	0.17
December 31, 2016	1.44	0.27
December 31, 2015	2.00	0.62
December 31, 2014	2.87	0.49

### B. Plan of Distribution

Not Required.

### C. Markets

The Company's common shares trade on the TSXV in Canada under the symbol "PTK". The Company's common shares also trade on the OTCQX International Marketplace under the symbol "POETF".

### D. Selling Shareholders

Not Required.



E. Selling Shareholders

Not Required.

F. Expenses of the Issue

Not Required.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not Required.

B. Articles of the Corporation

The Company was originally formed under the British Columbia Company Act on February 9, 1972 as Tandem Resources Ltd. ("Tandem"). The Company took its current form after Tandem amalgamated with Sunmar Resources Ltd. and Keezic Resources Ltd. pursuant to Articles of Amalgamation on November 14, 1985. Tandem moved to Ontario by Articles of Continuance on January 3, 1997. Tandem changed its name to OPEL International Inc. by Articles of Amendment on September 26, 2006. OPEL International Inc. was continued under the New Brunswick Business Corporations Act on January 30, 2007, then back to Ontario by Articles of Continuance on November 30, 2010, changing its name to OPEL Solar International Inc. By Articles of Amendment on August 25, 2011, OPEL Solar International Inc. changed its name to OPEL Technologies, Inc. By Articles of Amendment on July 23, 2013, OPEL Technologies Inc. changed its name to POET Technologies Inc. Today, the Company is an Ontario corporation governed by the OBCA. The following are summaries of material provisions of our Articles of Continuance, as amended from time to time (the "Articles"), in effect as of the date of this Annual Report insofar as they relate to the material terms of our ordinary shares.

Register, Entry Number and Purposes

Our Articles of Continuance became effective on November 30, 2010. Our corporation number in Ontario is 641402. The Articles of Continuance do not contain a statement of the Company's objects and purposes. However, the Articles of Continuance provide that there are no restrictions on business that the Company may carry on or the powers the Company may exercise as permitted under the OBCA.

Board of Directors

Pursuant to our By-laws and the OBCA, a director or officer who is a party to, or who is a director or officer of, or has a material interest in, any person who is a party to, a material contract or proposed material contract with the Company, shall disclose the nature and extent of his interest at the time and in the manner provided by the OBCA. Any such contract or proposed contract shall be referred to the Board or shareholders for approval even if such contract is one that in the ordinary course of the Company's business would not require approval by the Board or shareholders, and a director interested in a contract so referred to the Board shall not vote on any resolution to approve the same unless the contract or transaction: (i) relates primarily to his or her remuneration as a director of the Company or an affiliate; (ii) is for indemnity or insurance of or for the director or officer as permitted by the OBCA; or (iii) is with an affiliate.

Directors shall be paid such remuneration for their services as the Board may determine by resolution from time to time, and will be entitled to reimbursement for traveling and other expenses properly incurred by them in attending meetings of the Board or any committee thereof. Neither the Company's Articles nor By-laws require an independent quorum for voting on director compensation. Directors are not precluded from serving the Company in any other capacity and receiving remuneration therefor. A director is not required to hold shares of the Company. There is no age limit requirement respecting the retirement or non-retirement of directors.

The directors may sign the name and on behalf of the Company, or appoint any officer or officers or any other person or persons on behalf of the Corporation either to sign on behalf of the Company, all instruments in writing and any instruments in writing so signed shall be binding upon the Company without further authorization or formality. The term "instruments in writing" includes contracts, documents, powers of attorney, deeds, mortgages, hypothecs, charges, conveyances, transfers and assignments of property (real or personal, immovable or movable), agreements, tenders, releases, receipts and discharges for the payment of money or other obligations, conveyances, transfers and assignments of shares, stocks, bonds, debentures or other securities, instruments of proxy and all paper writing.

Nothing in the Company's By-laws limits or restricts the borrowing of money by the Company on bills of exchange or promissory notes made, drawn, accepted or endorsed by or on behalf of the Company.

#### Rights, Preferences and Restrictions Attaching to Common Shares

The holders of common shares are entitled to vote at all meetings of the shareholders, except meetings at which only holders of a specified class of shares are entitled to vote. Each common share carries with it the right to one vote. Subject to the rights, privileges, restrictions and conditions attaching to any other class or series of shares of the Company, the holders of the common shares are entitled to receive any dividends declared and payable by the Company on the common shares. Dividends may be paid in money or property or by issuing fully paid shares of the Company. Subject to the rights, privileges, restrictions and conditions attaching to any other class or series of shares of the Company, the holders of the common shares are entitled to receive the remaining property of the Company upon dissolution.

No shares have been issued subject to call or assessment. There are no preemptive or conversion rights and no provisions for redemption or purchase for cancellation, surrender, or sinking or purchase funds. The common shares must be issued as fully-paid and non-assessable, and are not subject to further capital calls by the Company. The common shares are without par value. All of the common shares rank equally as to voting rights, participation in a distribution of the assets of the Company on a liquidation, dissolution or winding-up of the Company and the entitlement to dividends.

The Company does not currently have any preferred shares outstanding.

#### Ordinary and Special Shareholders' Meetings

The OBCA provides that the directors of a corporation shall call an annual meeting of shareholders not later than 15 months after holding the last preceding annual meeting. The OBCA also provides that, in the case of an offering corporation, the directors shall place before each annual meeting of shareholders, the financial statements required to be filed under the Ontario Securities Act and the regulation thereunder relating to the period that began immediately after the end of the last completed financial year and ended not more than six months before the annual meeting and the immediately preceding financial year, if any.

The Board has the power to call a special meeting of shareholders at any time.

Notice of the date, time and location of each meeting of shareholders must be given not less than 21 days or more than 50 days before the date of each meeting to each director, to the auditor of the Company and to each shareholder who at the close of business on the record date for notice is entered in the securities register as the holder of one or more shares carrying the right to vote at the meeting.

Notice of a meeting of shareholders called for any other purpose other than consideration of the minutes of an earlier meeting, financial statements, reports of the directors or auditor, setting or changing the number of directors, the election of directors and reappointment of the incumbent auditor, must state the general nature of the special business in sufficient detail to permit the shareholder to form a reasoned judgment on such business, must state the text of any special resolution to be submitted to the meeting, and must, if the special business includes considering, approving, ratifying, adopting or authorizing any document or the signing of or giving of effect to any document, have attached to it, a copy of the document or state that a copy of the document will be available for inspection by shareholders at the Company's records office or another accessible location.

The only persons entitled to be present at a meeting of shareholders are those entitled to vote, the directors of the Company and the auditor of the Company. Any other person may be admitted only on the invitation of the chairman of the meeting or with the consent of the meeting. In circumstances where a court orders a meeting of shareholders, the court may direct how the meeting may be held, including who may attend the meeting.

#### Limitations on Rights to Own Securities

No share may be issued until it is fully paid.

Neither Canadian law nor our Articles or By-laws limit the right of a non-resident to hold or vote common shares of the Company, other than as provided in the Investment Canada Act (the "Investment Act"), as amended by the World Trade Organization Agreement Implementation Act (the "WTOA Act"). The Investment Act generally prohibits implementation of a direct reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a "Canadian," as defined in the Investment Act (a "non-Canadian"), unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be of net benefit to Canada. An investment in the common shares of the Company by a non-Canadian (other than a "WTO Investor," as defined below) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company, and the value of the assets of the Company were CA\$5.0 million or more (provided that immediately prior to the implementation of the investment the Company was not controlled by WTO Investors). An investment in common shares of the Company by a WTO Investor (or by a non-Canadian other than a WTO Investor if, immediately prior to the implementation of the investment the Company was controlled by WTO Investors) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company and the value of the assets of the Company equaled or exceeded certain threshold amounts determined on an annual basis.

The threshold for a pre-closing net benefit review depends on whether the purchaser is: (a) controlled by a person or entity from a member of the WTO; (b) a state-owned enterprise (SOE); or (c) from a country considered a "Trade Agreement Investor" under the Investment Act. A different threshold also applies if the Canadian business carries on a cultural business. The 2019 threshold for WTO investors that are SOEs will be \$416 million based on the book value of the Canadian business' assets, up from \$398 million in 2018. The 2019 thresholds for review for direct acquisitions of control of Canadian businesses by private sector investor WTO investors (\$1 billion) and private sector trade-agreement investors (\$1.5 billion) remain the same and are both based on the "enterprise value" of the Canadian business being acquired.

A non-Canadian, whether a WTO Investor or otherwise, would be deemed to acquire control of the Company for purposes of the Investment Act if he or she acquired a majority of the common shares of the Company. The acquisition of less than a majority, but at least one-third of the shares, would be presumed to be an acquisition of control of the Company, unless it could be established that the Company is not controlled in fact by the acquirer through the ownership of the shares. In general, an individual is a WTO Investor if he or she is a "national" of a country (other than Canada) that is a member of the WTO ("WTO Member") or has a right of permanent residence in a WTO Member. A corporation or other entity will be a "WTO Investor" if it is a "WTO Investor-controlled entity," pursuant to detailed rules set out in the Investment Act. The U.S. is a WTO Member. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of the shares if the acquisition were made in the ordinary course of that person's business as a trader or dealer in securities;
- an acquisition of control of the Company in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of the Company by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control in fact of the Company, through the ownership of voting interests, remains unchanged.

#### Procedures to Change the Rights of Shareholders

In order to change the rights of our shareholders with respect to certain fundamental changes as described in Section 168 of the OBCA, the Company would need to amend our Articles to effect the change. Such an amendment would require the approval of holders of two-thirds of the votes of the Company's common shares, and any other shares carrying the right to vote at any general meeting of the shareholders of the Company, cast at a duly called special meeting. The OBCA also provides that a sale, lease or exchange of all or substantially all of the property of a corporation other than in the ordinary course of business of the corporation likewise requires the approval of the shareholders at a duly called special meeting. For such fundamental changes and sale, lease and exchange, a shareholder is entitled under the OBCA to dissent in respect of such a resolution amending the Articles and, if the resolution is adopted and the Company implements such changes, demand payment of the fair value of the shareholder's common shares.

#### Impediments to Change of Control

In 2016, the Canadian Securities Administrators (the "CSA") enacted amendments (the "Bid Amendments") to the Take-Over Bid Regime. The Bid Amendments, which are very significant, are contained in National Instrument (NI) 62-104.

The Bid Amendments were intended to enhance the quality and integrity of the take-over bid regime and rebalance the current dynamics among offerors, offeree issuer boards of directors ("Offeree Boards"), and offeree issuer security holders by (i) facilitating the ability of offeree security holders to make voluntary, informed and coordinated tender decisions, and (ii) providing the Offeree Board with additional time and discretion when responding to a take-over bid.

Specifically, the Bid Amendments require that all non-exempt take-over bids

- (1) receive tenders of more than 50% of the outstanding securities of the class that are subject to the bid, excluding securities beneficially owned, or over which control or direction is exercised, by the offeror or by any person acting jointly or in concert with the offeror (the Minimum Tender Requirement);
- (2) be extended by the offeror for an additional 10 days after the Minimum Tender Requirement has been achieved and all other terms and conditions of the bid have been complied with or waived (the 10 Day Extension Requirement); and

(3) remain open for a minimum deposit period of 105 days (the Minimum 105 Day Bid Period) unless

(a) the offeree board states in a news release a shorter deposit period for the bid of not less than 35 days, in which case all contemporaneous take-over bids must remain open for at least the stated shorter deposit period, or

(b) the issuer issues a news release that it intends to effect, pursuant to an agreement or otherwise, a specified alternative transaction, in which case all contemporaneous take-over bids must remain open for a deposit period of at least 35 days.

The Bid Amendments involved fundamental changes to the bid regime to establish a majority acceptance standard for all non-exempt take-over bids, a mandatory extension period to alleviate offeree security holder coercion concerns, and a 105 day minimum deposit period to address concerns that offeree boards did not have enough time to respond to an unsolicited take-over bid. The CSA determined not to amend National Policy 62-202 Defensive Tactics (NP 62-202) in connection with these amendments. They reminded participants in the capital markets of the continued applicability of NP 62-202, which means that securities regulators will be prepared to examine the actions of offeree boards in specific cases, and in light of the amended bid regime, to determine whether they are abusive of security holder rights.

After canvassing several commentaries concerning the new regime, we have concluded that:

- It will be much more difficult for hostile bidders as a result of target issuers having a much longer period of time to respond, concurrent with the added risk and cost to such bidders.
- There is good reason to expect that, except in unusual circumstances, regulators will not permit SRPs to remain in effect after a 105 day bidding period.
- A significant number of reporting issuers have not sought re-approval of their SRPs since the amendments were introduced and those that have sought to renew their SRPs have been required to amend the plans to comply with the new rules.
- A large part of the traditional rationale for adopting SRPs has now been eliminated.

We believe that the amended take-over bid rules provide adequate protection against hostile bids. Having said that, it has been suggested that the new rules do not protect against creeping take-over bids for control which are exempt from the rules (such as the accumulation of 20% or more of the issuer's shares through market transactions or the acquisition of a control block through private agreements with a few large shareholders). These activities would however be identifiable through the early warning filing requirements. If, prior to making a determination that the Company ought to adopt a "strategic" SRP at an annual or special meeting of shareholders, the Company were faced with a hostile bid that we believed was not in the best interests of the Company and its shareholders, the directors could adopt a "tactical" plan which we could take to the shareholders for approval. Nevertheless, at this point in time, we are of the opinion that such action is not necessary and the shareholders should be the best arbiters of when "the pill must go".

#### Stockholder Ownership Disclosure Threshold in Bylaws

Neither our Articles nor By-laws contain a provision governing the ownership threshold above which shareholder ownership must be disclosed. Pursuant to securities legislation, an Early Warning Report and an Insider Report must be filed if a shareholder obtains ownership on a partially diluted basis of 10% or greater of the Company.

#### Special Conditions for Changes in Capital

The conditions imposed by the Company's Articles are not more stringent than required under the OBCA.

#### C. Material Contracts

In addition to any contracts described in "ITEM 7.B. Related Party Transactions" or "ITEM 4. Business Overview", below is a summary of material contracts, other than those entered into by the Company in the ordinary course of business, to which we are or have been a party during the two years immediately preceding the date of this document. Other than contracts entered into in the ordinary course of business, we have not been a party to any other material contract within such two-year period.

1. On May 11, 2016 the Company acquired all the issued and outstanding shares of DenseLight Semiconductor Pte. Ltd. in an all-stock acquisition for \$10,500,000 satisfied through the issuance of 13,611,150 common shares.
2. On June 22, 2016, the Company acquired all the issued and outstanding shares of BB Photonics, a New Jersey company and its subsidiary BB Photonics UK Ltd, collectively BB Photonics, a designer of integrated photonic solutions for the data communications market for consideration of \$1,550,000. The all-stock purchase was accomplished with the issuance of 1,996,090 common share of the Company at a price of \$0.777 per share.
3. On October 19, 2016, the Company announced that it had entered into an agreement with Singapore's Economic Development Board (EDB) to expand the Company's research and development operations in Singapore. Under this agreement, the Company is eligible to receive support up to a maximum of S\$10.7 million (US\$7.7 million) over five years subject to certain expenditure, capital acquisition and head count thresholds.
4. On April 18, 2019, the Company signed loan and security agreements for a senior secured credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which grants the Company access to a maximum US\$5,000,000. On April 23, 2019 the Company received the initial advance against the credit facility in the amount of US\$2,000,000. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.

#### D. Exchange Controls

Canada has no system of exchange controls. There are no Canadian restrictions on the repatriation of capital or earnings of a Canadian public company to non-resident investors. There are no laws in Canada or exchange restrictions affecting the remittance of dividends, profits, interest, royalties and other payments to non-resident holders of the Company's securities, except as discussed in "ITEM 10.E. Taxation" below.

#### E. Taxation

##### Canadian Federal Income Tax Considerations

The Company believes the following is a brief summary of the material principal Canadian federal income tax consequences to a U.S. Holder (as defined below) of common shares of the Company who deals at arm's length with the Company, holds the shares as capital property and who, for the purposes of the Income Tax Act (Canada) (the "Tax Act") and the Canada — U.S. Income Tax Convention (1980) (the "Treaty"), is at all relevant times resident in the U.S., is not and is not deemed to be resident in Canada and does not use or hold and is not deemed to use or hold the shares in carrying on a business in Canada. Special rules, which are not discussed below, may apply to a U.S. Holder that is an insurer that carries on business in Canada and elsewhere. U.S. Holders are urged to consult their own tax advisors with respect to their particular circumstances.

This summary is based upon the current provisions of the Tax Act, the regulations thereunder in force at the date hereof, all specific proposals to amend such regulations and the Tax Act publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof and the current provisions of the Convention and the current administrative practices of the Canada Revenue Agency published in writing prior to the date hereof. This summary does not otherwise take into account or anticipate any changes in law or administrative practices whether by legislative, governmental or judicial decision or action, nor does it take into account tax laws of any province or territory of Canada or of the U.S. or of any other jurisdiction outside Canada.

For the purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of the common shares must be converted into Canadian dollars based on the relevant exchange rate applicable thereto.

This summary does not address all aspects of Canadian federal income taxation that may be relevant to any particular U.S. Holder in light of such holder's individual circumstances. Accordingly, U.S. Holders should consult with their own tax advisors for advice with respect to their own particular circumstances.

Under the Tax Act and the Treaty, a U.S. Holder of common shares will generally be subject to a 15% withholding tax on dividends paid or credited or deemed by the Tax Act to have been paid or credited on such shares. The withholding tax rate is 5% where the U.S. Holder is a corporation that beneficially owns at least 10% of the voting shares of the Company and the dividends may be exempt from such withholding in the case of some U.S. Holders such as qualifying pension funds and charities.

A U.S. Holder will generally not be subject to tax under the Tax Act on any capital gain realized on a disposition of common shares, provided that the shares do not constitute "taxable Canadian property" to the U.S. Holder at the time of disposition. Generally, common shares will not constitute taxable Canadian property to a U.S. Holder provided that such shares are listed on a designated stock exchange (which currently includes the TSXV) at the time of the disposition and, during the 60-month period immediately preceding the disposition, the U.S. Holder, persons with whom the U.S. Holder does not deal at arm's length, or the U.S. Holder together with all such persons has not owned 25% or more of the issued shares of any series or class of the Company's capital stock. If the common shares constitute taxable Canadian property to a particular U.S. Holder, any capital gain arising on their disposition may be exempt from Canadian tax under the Convention if at the time of disposition the common shares do not derive their value principally from real property situated in Canada.

#### U.S. Federal Income Tax Considerations

Subject to the limitations described herein, the following discussion summarizes certain U.S. federal income tax consequences to a U.S. Holder of our common shares. A "U.S. Holder" means a holder of our common shares who is:

- an individual who is a citizen or resident of the U.S. for U.S. federal income tax purposes;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the U.S. or under the laws of the U.S. or any political subdivision thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust (i) if, in general, a court within the U.S. is able to exercise primary supervision over its administration and one or more U.S. persons have the authority to control all of its substantial decisions, or (ii) that has in effect a valid election under applicable U.S. Treasury Regulations to be treated as a U.S. person.

Unless otherwise specifically indicated, this discussion does not consider the U.S. tax consequences to a person that is not a U.S. Holder (a "Non-U.S. Holder"). This discussion considers only U.S. Holders that will own our common shares as capital assets (generally, for investment) and does not purport to be a comprehensive description of all of the tax considerations that may be relevant to each U.S. Holder's decision to purchase our common shares.

This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended (the "Code"), current and proposed Treasury Regulations promulgated thereunder, and administrative and judicial decisions as of the date hereof, all of which are subject to change, possibly on a retroactive basis. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to any particular U.S. Holder in light of such holder's individual circumstances. In particular, this discussion does not address the potential application of the alternative minimum tax or the U.S. federal income tax consequences to U.S. Holders that are subject to special treatment, including U.S. Holders that:

- are broker-dealers or insurance companies;
- have elected market-to-market accounting;
- are tax-exempt organizations or retirement plans;
- are financial institutions or "financial services entities";
- hold our common shares as part of a straddle, "hedge" or "conversion transaction" with other investments;
- acquired our common shares upon the exercise of employee stock options or otherwise as compensation;
- own directly, indirectly or by attribution at least 10% of our voting power;
- have a functional currency that is not the U.S. Dollar;
- are grantor trusts;
- are certain former citizens or long-term residents of the U.S.; or
- are real estate trusts or regulated investment companies.

If a partnership (or any other entity treated as a partnership for U.S. federal income tax purposes) holds our common shares, the tax treatment of the partnership and a partner in such partnership will generally depend on the status of the partner and the activities of the partnership. Such a partner or partnership should consult its own tax advisor as to its tax consequences.

In addition, this discussion does not address any aspect of state, local or non-U.S. laws or the possible application of U.S. federal gift or estate taxes.

Each potential U.S. Holder of our common shares is advised to consult its own tax advisor with respect to the specific tax consequences to it of purchasing, holding or disposing of our common shares, including the applicability and effect of federal, state, local and foreign income tax and other laws to its particular circumstances.

#### Distributions

Subject to the discussion below under "Passive Foreign Investment Company Status," a U.S. Holder will be required to include in gross income as ordinary dividend income the amount of any distribution paid on our common shares, including any non-U.S. taxes withheld from the amount paid, to the extent the distribution is paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. Distributions in excess of such earnings and profits will be applied against and will reduce the U.S. Holder's basis in our common shares and, to the extent in excess of such basis, will be treated as gain from the sale or exchange of our common shares. The dividend portion of such distributions generally will not qualify for the dividends received deduction available to corporations.

Subject to the discussion below under "Passive Foreign Investment Company Status," dividends that are received by U.S. Holders that are individuals, estates or trusts may qualify for taxation at the rate applicable to long-term capital gains (a maximum marginal federal income tax rate of 20%), provided that such U.S. Holders satisfy certain holding period requirements and such dividends meet the requirements of "qualified dividend income." For this purpose, dividends paid by a non-U.S. corporation may qualify if the non-U.S. corporation is eligible for benefits of a comprehensive income tax treaty with the U.S., which benefits include an information exchange program and is determined to be satisfactory by the U.S. Secretary of the Treasury. The IRS has determined that the U.S.- Canada Tax Treaty is satisfactory for this purpose. Dividends that fail to meet such requirements, and dividends received by corporate U.S. Holders, are taxed at ordinary income rates.

Distributions of current or accumulated earnings and profits paid in foreign currency to a U.S. Holder (including any non-U.S. taxes withheld therefrom) will be includible in the income of a U.S. Holder in a U.S. Dollar amount calculated by reference to the exchange rate on the day the distribution is received. A U.S. Holder that receives a foreign currency distribution and converts the foreign currency into U.S. dollars subsequent to receipt may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. dollar, which will generally be U.S. source ordinary income or loss. A loss might not be deductible due to certain limitation.

U.S. Holders will have the option of claiming the amount of any non-U.S. income taxes withheld at source either as a deduction from gross income or as a dollar-for-dollar credit against their U.S. federal income tax liability. Individuals who do not claim itemized deductions, but instead utilize the standard deduction, may not claim a deduction for the amount of the non-U.S. income taxes withheld, but such amount may be claimed as a credit against the individual's U.S. federal income tax liability. The amount of non-U.S. income taxes which may be claimed as a credit in any taxable year is subject to complex limitations and restrictions, which must be determined on an individual basis by each shareholder. These limitations include, among others, rules that limit foreign tax credits allowable with respect to specific classes of income to the U.S. federal income taxes otherwise payable with respect to each such class of income. A U.S. Holder will be denied a foreign tax credit with respect to non-U.S. income tax withheld from a dividend received on the common shares if such U.S. Holder does not satisfy certain holding period requirements.

Distributions of current or accumulated earnings and profits generally will be foreign source income for U.S. foreign tax credit purposes.

#### Disposition of Common Shares

Subject to the discussion below under "Passive Foreign Investment Company Status," upon the sale, exchange or other taxable disposition of our common shares, a U.S. Holder will recognize capital gain or loss in an amount equal to the difference between such U.S. Holder's basis in such common shares, which is usually the cost of such shares, and the amount realized on the disposition. Capital gain from the sale, exchange or other disposition of common shares held more than one year is long-term capital gain, and is eligible for a reduced rate of taxation for individuals (currently a maximum marginal federal income tax rate of 20%). Gains recognized by a U.S. Holder on a sale, exchange or other disposition of common shares generally will be treated as U.S. source income for U.S. foreign tax credit purposes. A loss recognized by a U.S. Holder on the sale, exchange or other taxable disposition of common shares generally is allocated to U.S. source income. The deductibility of capital losses recognized on the sale, exchange or other taxable disposition of common shares is subject to limitations. A U.S. Holder that receives foreign currency upon disposition of common shares and converts the foreign currency into U.S. dollars subsequent to the settlement date or trade date (whichever date the taxpayer was required to use to calculate the value of the proceeds of sale) may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. Dollar, which will generally be U.S. source ordinary income or loss. Such loss may not be deductible due to certain limitations.

#### Passive Foreign Investment Company Status

We would be a passive foreign investment company (a "PFIC") if (taking into account certain "look-through" rules with respect to the income and assets of our corporate subsidiaries in which we own 25 percent (by value) of the stock) either (i) 75 percent or more of our gross income for the taxable year was passive income or (ii) the average percentage (by value) of our total assets that are passive assets during the taxable year was at least 50 percent.

If we were a PFIC, each U.S. Holder would (unless it made one of the elections discussed below on a timely basis) be taxable on gain recognized from the disposition of our common shares (including gain deemed recognized if the common shares are used as security for a loan) and upon receipt of certain "excess distributions" (generally, distributions that exceed 125% of the average amount of distributions in respect to such common shares received during the preceding three taxable years or, if shorter, during the U.S. Holder's holding period prior to the distribution year) with respect to our common shares as if such income had been recognized ratably over the U.S. Holder's holding period for the common shares. The U.S. Holder's income for the current taxable year would include (as ordinary income) amounts allocated to the current taxable year and to any taxable year period prior to the first day of the first taxable year for which we were a PFIC. Tax would also be computed at the highest ordinary income tax rate in effect for each other taxable year period to which income is allocated, and an interest charge on the tax as so computed would also apply. Additionally, if we were a PFIC, U.S. Holders who acquire our common shares from decedents (other than nonresident aliens) would be denied the normally available step-up in basis for such shares to fair market value at the date of death and, instead, would have a tax basis in such shares equal to the decedent's basis, if lower.

As an alternative to the tax treatment described above, a U.S. Holder could elect to treat us as a "qualified electing fund" (a "QEF"), in which case the U.S. Holder would be taxed currently, for each taxable year that we are a PFIC, on its pro rata share of our ordinary earnings and net capital gain (subject to a separate election to defer payment of taxes, which deferral is subject to an interest charge). Special rules apply if a U.S. Holder makes a QEF election after the first taxable year in its holding period in which we are a PFIC. In the event that we conclude that we will be classified as a PFIC, we will make a determination at such time as to whether we will be able to provide U.S. Holders with the information that is necessary to make a QEF election. Amounts includable in income as a result of a QEF election will be determined without regard to our prior year losses or the amount of cash distributions, if any, received from us. A U.S. Holder's basis in its common shares will increase by any amount included in income and decrease by any amounts not included in income when distributed because such amounts were previously taxed under the QEF rules. So long as a U.S. Holder's QEF election is in effect with respect to the entire holding period for its common shares, any gain or loss realized by such holder on the disposition of its common shares held as a capital asset ordinarily will be capital gain or loss.



As an alternative to making the QEF election, a U.S. Holder of PFIC stock which is regularly traded on a qualified exchange may avoid the negative effects of the PFIC rules by electing to mark the stock to market and recognizing as ordinary income or loss, each taxable year that we are a PFIC, an amount equal to the difference as of the close of the taxable year between the fair market value of the PFIC stock and the U.S. Holder's adjusted tax basis in the PFIC stock. Losses would be allowed only to the extent of net mark-to-market gain previously included by the U.S. Holder under the election for prior taxable years. This election is available for so long as the Company's common shares constitute "marketable stock," which includes stock of a PFIC that is "regularly traded" on a "qualified exchange or other market." Generally, a "qualified exchange or other market" includes a national market system established pursuant to Section 11A of the Exchange Act, or a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located and that has certain characteristics. A class of stock that is traded on one or more qualified exchanges or other markets is "regularly traded" on an exchange or market for any calendar year during which that class of stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter, subject to special rules relating to an initial public offering. It is not entirely clear whether either the OTCBB or TSXV are qualified exchanges or other markets, or whether there will be sufficient trading volume with respect to the Company's common shares, and accordingly, whether the common shares will be "marketable stock" for these purposes. Furthermore, there can be no assurance that the Company's common shares will continue to trade on any of the exchanges listed above.

We believe we were not a PFIC for the year ending December 31, 2018 and do not expect to be classified as a PFIC for the year ending December 31, 2019. However, PFIC status is determined as of the end of each taxable year and is dependent on a number of factors, including the value of our passive assets, the amount and type of our gross income, and our market capitalization. Therefore, there can be no assurance that we will not become a PFIC for the current taxable year ending December 31, 2019 or in a future taxable year. U.S. Holders which are individuals, estates and trusts and whose income exceeds certain thresholds will be required to pay a 38% surtax on "net investment income" including, among other things, dividends (if any) and net gain realized from our common shares. U.S. Holders should consult with their own tax advisors regarding the application of this tax. We will notify U.S. Holders in the event we conclude that we will be treated as a PFIC for any taxable year.

#### Information Reporting and Backup Withholding

U.S. Holders (other than exempt recipients, such as corporations) generally are subject to information reporting requirements with respect to dividends paid on, or proceeds from the disposition of, our common shares. U.S. Holders are also generally subject to backup withholding (currently at a rate of 28%) on dividends paid on, or proceeds from the disposition of, our common shares unless the U.S. Holder provides IRS Form W-9 or otherwise establishes an exemption.

The amount of any backup withholding will be allowed as a credit against a U.S. or Non-U.S. Holder's U.S. federal income tax liability and may entitle such holder to a refund, provided that certain required information is furnished to the IRS.

#### F. Dividends and Paving Agents

Not Required.

#### G. Statements by Experts

The consolidated financial statements of POET Technologies Inc. as of December 31, 2018, 2017 and 2016 included herein, have been audited by Marcum LLP, our independent registered accounting firm for that period, 555 Long Wharf Drive, 8<sup>th</sup> Floor, New Haven, CT 06511, USA, as stated in their report appearing herein, and are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

#### H. Documents on Display

The Company's documents can be viewed at its Canadian office, located at: Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario M4P 1E2, Canada. Further, we file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing their website at [www.sedar.com](http://www.sedar.com). The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the Exchange Act), and files reports, Annual Reports and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at [www.sec.gov](http://www.sec.gov). The Company's reports, Annual Reports and other information can be inspected on the SEC's website.

As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file annual, and other reports and financial statements with the SEC as frequently or as promptly as United States domestic companies whose securities are registered under the Exchange Act.

We maintain a corporate website at [www.poet-technologies.com](http://www.poet-technologies.com). Information contained on, or that can be accessed through, our website does not constitute a part of this Annual Report on Form 20-F. We have included our website address in this Annual Report on Form 20-F solely as an inactive textual reference.

**I. Subsidiary information**

Not Required.

**ITEM 11. Quantitative and Qualitative Disclosures About Market Risk**

**Interest Rate Risk**

Short-term investments bear interest at fixed rates, and as such, are subject to interest rate risk resulting from changes in fair value from market fluctuations in interest rates. The Company does not depend on interest from its investments to fund its operations.

**Exchange Rate Risk**

The Company is exposed to foreign currency risk with the Canadian and Singapore dollar. The Company maintains bank accounts and cash reserves in US, Canadian and Singapore dollars with the majority of reserves currently split between Canadian and US dollars. The Canadian dollar reserves are exposed to currency fluctuations. Most of the company's operations are transacted in US and Singapore dollars. A 10% change in the Canadian and Singapore dollar would have increased or decreased other comprehensive loss by \$386,391.

The following table shows exchange rates, from CAD to USD, for the past six months:

Period	High (1)	Low (1)	Average (2)
March 2019	0.7623	0.7425	0.7481
February 2019	0.7652	0.7493	0.7575
January 2019	0.7623	0.7318	0.7519
December 2018	0.7597	0.7318	0.7435
November 2018	0.7660	0.7485	0.7579
October 2018	0.7824	0.7592	0.7677
October 2018 — March 31, 2019	0.8163	0.7629	0.7544

(1) Bank of Canada monthly average rates

(2) Bank of Canada daily closing average rates

The following table shows exchange rates, from SGD to USD, for the past six months:

Period	High (1)	Low (1)	Average (2)
March 2019	0.7427	0.7342	0.7384
February 2019	0.7432	0.7345	0.7388
January 2019	0.7432	0.7315	0.7372
December 2018	0.7336	0.7261	0.7291
November 2018	0.7299	0.7213	0.7269
October 2018	0.7290	0.7213	0.7246
October 2018 — March 31, 2019	0.7432	0.7213	0.7325

(1) Bank of Singapore monthly average rates

(2) Bank of Singapore daily closing average rates

Market Risk

Market risk arises from the possibility that changes in market prices will affect the value of the financial instruments of the Company. The Company is exposed to fair value fluctuations on its cash equivalents. The Company's other financial instruments (cash and accounts payable and accrued liabilities) are not subject to market risk, due to the short-term nature of these instruments.

ITEM 12. Description of Securities Other than Equity Securities

A. Debt Securities

Not Required.

B. Warrants and Rights

Not Required.

C. Other Securities

Not Required.

D. American Depositary Shares

Not Required.

PART II

ITEM 13. Defaults, Dividend Arrearages and Delinquencies

Not Required.

ITEM 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

Not Required.

ITEM 15. Controls and Procedures

(a) Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, our disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported accurately and within the time frames specified in the SEC's rules and forms and accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. Notwithstanding the foregoing, there can be no assurance that our disclosure controls and procedures will detect or uncover all failures of persons within the Company to disclose material information otherwise required to be set forth in our reports.

(b) Management's Annual Report on Internal Control over Financial Reporting

The Company's Board of Directors and management are responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance to management and the Board of Directors regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. In making this assessment, it used the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that assessment and those criteria, management concluded that, as of December 31, 2018, the Company's internal control over financial reporting was effective.

(c) Attestation Report of Registered Public Accounting Firm

Not applicable.

(d) Changes in Internal Controls over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the year ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [RESERVED]

ITEM 16A. Audit Committee Financial Expert

Our Board of Directors has determined that Chris Tsiofas is the audit committee financial expert. The Board has determined that Mr. Tsiofas satisfies the criteria of "audit committee financial expert" within the meaning of Item 401(h) of Regulation S-K and is independent in accordance with Rule 4200 of the Nasdaq Marketplace Rules.

ITEM 16B. Code of Ethics

In December 2007, our Board of Directors adopted a Code of Business Conduct and Ethics (the "Code") that applies to all our employees, including without limitation our chief executive officer, chief financial officer and principal accounting officer. Our Code may be viewed on our website at [www.post-technologies.com](http://www.post-technologies.com) and is filed as an Exhibit to this Annual Report. A copy of our Code may be obtained, without charge, upon a written request addressed to our office at, 120 Eglinton Avenue East, Suite 1107, Toronto, Ontario M4P 1E2, Canada.

ITEM 16C. Principal Accountant Fees and Services Fees Paid to Independent Registered Public Accounting Firm

The following table sets forth, for each of the years indicated, the fees billed by our independent registered public accounting firm, Marcum LLP.

Services Rendered	Year Ended December 31,	
	2018	2017
	(in US\$)	
Audit Fees (1)	\$ 189,500	\$ 165,000
Tax Fees (2)	11,700	18,690
Total	\$ 201,200	\$ 183,690

(1) Audit fees consist of services that would normally be provided in connection with statutory and regulatory filings or engagements, including services that generally only the independent accountant can reasonably provide.

(2) Tax fees relate to tax compliance, planning and advice.

Our Audit Committee, in accordance with its charter, reviews and pre-approves all audit services and permitted non-audit services (including the fees and other terms) to be provided by our independent auditors. All of the services provided by Marcum LLP over the past two years were pre-approved by the Audit Committee.

ITEM 16D. Exemptions from the Listing Standards for Audit Committees

Not Required.

ITEM 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not Required.

ITEM 16F. Change in Registrant's Certifying Accountants

Not Required.

ITEM 16G. Corporate Governance

Not Required.

ITEM 16H. Mine Safety Disclosure

Not Required.

### PART III

ITEM 17. Financial Statements

The Company's consolidated financial statements are stated in U.S. dollars and are prepared in accordance with IFRS as issued by the International Accounting Standards Board.

The consolidated financial statements required under ITEM 17 are attached hereto and found immediately following the text of this Annual Report and are incorporated by reference herein. The audit report of Marcum LLP, independent registered public accounting firm, is included herein immediately preceding the audited consolidated financial statements.

a. Audited Financial Statements — for the years ended December 31, 2018, 2017 and 2016 and as of December 31, 2018, 2017 and 2016

ITEM 18. Financial Statements

The Company has elected to provide financial statements pursuant to ITEM 17.

ITEM 19. Exhibits

<u>1.1</u>	<u>Certificate and Articles of Continuance (1)</u>
<u>1.2</u>	<u>Amended and Restated Bylaws (2)</u>
<u>4.1</u>	<u>Asset Purchase Agreement with Tracker Acquisition, Inc., dated December 17, 2012 (1)</u>
<u>4.2</u>	<u>Agreement with BAE Systems Information And Electronic Svstems Integration, Inc., dated May 21, 2008 (1)</u>
<u>4.3</u>	<u>License Agreement with the University of Connecticut, dated April 28, 2003, as amended April 15, 2014 (1)</u>
<u>4.4</u>	<u>Lease Agreement with the University of Connecticut, dated December 11, 2014.(2)</u>
<u>4.5</u>	<u>Agency Agreement with IBK Capital Corp., dated February 14, 2013 (1)</u>
<u>4.6</u>	<u>Credit Agreement with TCA Global Credit Master Fund, L.P, dated March 30, 2012 (1)</u>
<u>4.7</u>	<u>Memorandum of Understanding with Ajiit Manocha, dated July 3, 2014 (2)</u>
<u>4.8</u>	<u>Letter of Agreement with Daniel DeSimone, dated March 28, 2014 (2)</u>
<u>4.9</u>	<u>Executive Employment Agreement with Peter Conetti, dated June 30, 2014 (2)</u>
<u>4.10</u>	<u>Shareholder Rights Plan Agreement between the Company and TMX Equiv Transfer Services, Inc.(2)</u>
<u>4.11</u>	<u>Consulting Agreement with Dr. Geoff Taylor, dated January 12, 2015 (2)</u>
<u>4.12</u>	<u>Employment Agreement with Stephane Gagnon, dated November 5, 2013 (1)</u>
<u>4.13</u>	<u>Employment Agreement with Suresh Venkatesan, dated June 10, 2015 (3)</u>
<u>4.14</u>	<u>Employment Agreement with Subhash Deshmukh, dated June 8, 2015 (3)</u>
<u>4.15</u>	<u>Employment Agreement with Rajan Rajgopal, dated December 27, 2016 (4)</u>
<u>4.16</u>	<u>Employment Agreement with Thomas Mika, dated November 2, 2016 (4)</u>
<u>4.17</u>	<u>Employment Agreement with Dave Lazovsky, dated February 1, 2017 (4)</u>
<u>4.18</u>	<u>Consulting Agreement with Dave Lazovsky, dated July 1, 2016 (4)</u>
<u>4.19</u>	<u>Agreement with the Singapore Economic Development Board, dated August 15, 2016 (4)</u>
<u>4.20</u>	<u>Sale and Purchase Agreement for Denselight Semiconductors PTE, LTD, dated April 27, 2016 (4)</u>
<u>4.21</u>	<u>Sale and Purchase Agreement for BB Photonics Inc, dated May 16, 2016 (4)</u>
<u>4.22</u>	<u>2018 Stock Option Plan (5)</u>
<u>4.23</u>	<u>Form of Option Agreement(1)</u>
<u>4.24</u>	<u>Form of Warrant for Purchase of Common Shares (1)</u>
<u>4.25</u>	<u>Stock Specimen Certificate (1)</u>
<u>4.26</u>	<u>Credit Facility Agreement (5)</u>
<u>4.27</u>	<u>Agreement with Swansea University (4)</u>
<u>8.1</u>	<u>List of Subsidiaries: See ITEM 4.C.</u>
<u>11.1</u>	<u>Code of Business Conduct and Ethics (2)</u>
<u>12.1</u>	<u>Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a)(***)</u>
<u>12.2</u>	<u>Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a)(***)</u>
<u>13.1</u>	<u>Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(***)</u>
<u>13.2</u>	<u>Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(***)</u>
<u>23.1</u>	<u>Consent of Marcum LLP, independent registered accounting firm (5)</u>

101.INS(\*\*) XBRL Instance Document  
101.SCH(\*\*) XBRL Taxonomy Extension Schema Linkbase Document  
101.CAL(\*\*) XBRL Taxonomy Extension Calculation Linkbase Document  
101.DEF(\*\*) XBRL Taxonomy Extension Definition Linkbase Document  
101.LAB(\*\*) XBRL Taxonomy Extension Label Linkbase Document  
101.PRE(\*\*) XBRL Taxonomy Extension Presentation Linkbase Document

(1) Filed as an exhibit to the Company's registration statement under the Securities and Exchange Act on Form 20-F/A on May 15, 2014 and incorporated herein by reference.

(2) Filed as an exhibit to the Company's annual Form 20-F on April 13, 2015 and incorporated herein by reference.

(3) Filed as an exhibit to the Company's annual Form 20-F on March 18, 2016 and incorporated herein by reference.

(4) Filed as an exhibit to the Company's annual Form 20-F on April 18, 2017 and incorporated herein by reference.

(5) Filed as an exhibit to this annual Form 20-F.

(\*\*) In accordance with Rule 402 of Regulation S-T, the information in these exhibits shall not be deemed to be "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

(\*\*\*) Filed herewith

WHERE TO FIND ADDITIONAL INFORMATION

We file reports and other information with the Securities and Exchange Commission; you may obtain copies of our filings with the SEC by accessing their website located at www.sec.gov. Further, we file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing their website at www.sedar.com.

#### MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

The accompanying consolidated financial statements of the Company and other financial information contained in this Annual Report are the responsibility of management. The consolidated financial statements have been prepared in conformity with IFRS, using management's best estimates and judgments, where appropriate. In the opinion of management, these consolidated financial statements reflect fairly the financial position and the results of operations and cash flows of the Company within reasonable limits of materiality. The financial information contained elsewhere in this Annual Report has been reviewed to ensure consistency with that in the consolidated financial statements.

To assist management in discharging these responsibilities, the Company maintains a system of procedures and internal control which is designed to provide reasonable assurance that its assets are safeguarded against loss from unauthorized use or disposition, that transactions are executed in accordance with management's authorization and that the financial records form a reliable base for the preparation of accurate and reliable financial information.

The Board of Directors endeavors to ensure that management fulfills its responsibilities for the financial reporting and internal control. The Board of Directors exercises this responsibility through its independent Audit Committee comprising a majority of unrelated and outside directors. The Audit Committee meets periodically with management and annually with the external auditors to review audit recommendations and any matters that the auditors believe should be brought to the attention of the Board of Directors. The Audit Committee also reviews the consolidated financial statements and recommends to the Board of Directors that the statements be approved for issuance to the shareholders.

The consolidated financial statements for the years ended December 31, 2018, 2017 and 2016 have been audited by Marcum LLP, independent registered public accounting firm, which has full and unrestricted access to the Audit Committee. Marcum's report on the consolidated financial statements is presented herein.

#### SIGNATURES

The Registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

POET TECHNOLOGIES INC.

/s/ Suresh Venkatesan

Suresh Venkatesan

CEO

Date: April 29, 2019



**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and Board of Directors of POET Technologies Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated statements of financial position of POET Technologies Inc. (the "Company") as of December 31, 2018, 2017 and 2016, the related consolidated statements of operations and deficit, comprehensive loss, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

**Explanatory Paragraph – Going Concern**

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company has a significant working capital deficiency, has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with both the Public Company Accounting Oversight Board (United States) ("PCAOB") and the Canadian Public Accounting Board ("CPAB") and are required to be independent with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

*Marcum LLP*

We have served as the Company's auditor since 2009, such date takes into account the acquisition of a portion of UHY LLP by Marcum LLP in April 2010.

New Haven, CT  
April 29, 2019



Marcum LLP • 555 Long Wharf Drive • 12th Floor • New Haven, Connecticut 06511 • Phone 203.781.9600 • Fax 203 781.9601 • [www.marcumllp.com](http://www.marcumllp.com)

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POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION  
(Expressed in US Dollars)

December 31,	2018	2017	2016
<b>Assets</b>			
<b>Current</b>			
Cash and cash equivalents	\$ 2,567,868	\$ 4,974,478	\$ 14,376,282
Short-term investments (Note 2)	-	-	589,275
Accounts receivable (Notes 2 and 4)	946,944	493,925	292,849
Prepays and other current assets (Note 5)	2,936,619	1,957,727	758,917
Inventory (Note 6)	436,833	524,582	1,116,880
	6,888,264	7,950,712	17,134,203
Property and equipment (Note 7 and 21)	9,299,513	8,278,170	9,364,210
Patents and licenses (Note 8)	466,714	456,250	449,676
Intangible assets (Note 9)	802,409	839,637	876,865
Goodwill (Note 22)	7,681,003	7,681,003	7,681,003
	\$ 25,137,903	\$ 25,205,772	\$ 35,505,957
<b>Liabilities</b>			
<b>Current</b>			
Accounts payable and accrued liabilities (Note 10)	\$ 3,040,422	\$ 810,593	\$ 1,624,344
	3,040,422	810,593	1,624,344
Deferred tax liability (Notes 22 and 23)	1,000,427	1,298,367	1,596,307
Deferred rent	1,814	24,031	42,665
	4,042,663	2,132,991	3,263,316
<b>Shareholders' Equity</b>			
Share capital (Note 11(b))	112,028,194	103,616,221	103,357,862
Warrants (Note 12)	8,303,738	5,985,378	5,985,378
Contributed surplus (Note 13)	36,042,754	32,102,967	29,062,874
Accumulated other comprehensive loss	(2,083,514)	(1,758,632)	(2,088,117)
Deficit	(133,195,932)	(116,873,153)	(104,075,356)
	21,095,240	23,072,781	32,242,641
	\$ 25,137,903	\$ 25,205,772	\$ 35,505,957

Commitments and contingencies (Note 15)

On behalf of the Board of Directors

/s/ Chris Tsiofas  
Director

/s/ Suresh Venkatesan  
Director

POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND DEFICIT

(Expressed in US Dollars)

For the Years Ended December 31,

	2018	2017	2016
Revenue	\$ 3,888,185	\$ 2,794,044	\$ 1,861,747
Cost of revenue	1,475,969	1,342,691	946,001
Gross margin	2,412,216	1,451,353	915,746
Operating expenses			
Selling, marketing and administration (Note 20)	11,689,204	10,870,741	11,421,604
Research and development (Note 20)	8,692,804	5,442,873	3,165,825
Impairment loss (Notes 2, 7 and 21)	156,717	-	63,522
Loss on disposal of property and equipment (Note 7)	-	-	46,738
Other income, including interest (Note 2)	(1,505,790)	(1,766,524)	(66,872)
Operating expenses	19,032,935	14,547,090	14,630,817
Net loss from operations	(16,620,719)	(13,095,737)	(13,715,071)
Change in fair value of contingent consideration (Note 22)	-	-	(283,130)
Net loss before income tax recovery	(16,620,719)	(13,095,737)	(13,431,941)
Income tax recovery (Note 23)	(297,940)	(297,940)	(207,257)
Net loss	(16,322,779)	(12,797,797)	(13,224,684)
Deficit, beginning of year	(116,873,153)	(104,075,356)	(90,850,672)
Net loss	(16,322,779)	(12,797,797)	(13,224,684)
Deficit, end of year	\$ (133,195,932)	\$ (116,873,153)	\$ (104,075,356)
Basic and diluted net loss per share (Note 14)	\$ (0.06)	\$ (0.05)	\$ (0.06)

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(Expressed in US Dollars)

For the Years Ended December 31,

	2018	2017	2016
Net loss	\$ (16,322,779)	\$ (12,797,797)	\$ (13,224,684)
Other comprehensive (loss) income - net of income taxes			
Exchange differences on translating foreign operations	(324,882)	329,485	300,870
Comprehensive loss	\$ (16,647,661)	\$ (12,468,312)	\$ (12,923,814)

POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY  
(Expressed in US Dollars)

For the Years Ended December 31,	2018	2017	2016
<b>Share Capital</b>			
Beginning balance	\$ 103,616,221	\$ 103,357,862	\$ 81,027,171
Funds from the exercise of warrants and compensation warrants	1,028,471	-	1,943,919
Fair value of warrants and compensation warrants exercised	447,270	-	901,417
Funds from the exercise of stock options	87,974	123,528	1,654,988
Fair value of stock options exercised	82,330	134,831	1,737,879
Common shares issued on business acquisitions	-	-	12,050,000
Common shares issued to settle liabilities	-	-	1,843,629
Common shares issued on public offering	10,663,548	-	9,349,254
Share issue costs	(1,131,990)	-	(1,165,017)
Fair value of warrants issued on public offering	(2,286,426)	-	(5,985,378)
Fair value of compensation options issued to brokers	(479,204)	-	-
<b>December 31,</b>	<b>112,028,194</b>	<b>103,616,221</b>	<b>103,357,862</b>
<b>Warrants</b>			
Beginning balance	5,985,378	5,985,378	2,013,747
Fair value of warrants issued on public offering	2,286,426	-	5,985,378
Fair value of compensation options issued to brokers	479,204	-	-
Fair value of warrants and compensation warrants exercised	(447,270)	-	(901,417)
Fair value of expired warrants	-	-	(1,112,330)
<b>December 31,</b>	<b>8,303,738</b>	<b>5,985,378</b>	<b>5,985,378</b>
<b>Contributed Surplus</b>			
Beginning balance	32,102,967	29,062,874	25,618,159
Stock-based compensation	4,022,117	3,174,924	4,070,264
Fair value of stock options exercised	(82,330)	(134,831)	(1,737,879)
Fair value of expired warrants	-	-	1,112,330
<b>December 31,</b>	<b>36,042,754</b>	<b>32,102,967</b>	<b>29,062,874</b>
<b>Accumulated Other Comprehensive Loss</b>			
Beginning balance	(1,758,632)	(2,088,117)	(2,388,987)
Other comprehensive (loss) income attributable to common shareholders - translation adjustment	(324,882)	329,485	300,870
<b>December 31,</b>	<b>(2,083,514)</b>	<b>(1,758,632)</b>	<b>(2,088,117)</b>
<b>Deficit</b>			
Beginning balance	(116,873,153)	(104,075,356)	(90,850,672)
Net loss	(16,322,779)	(12,797,797)	(13,224,684)
<b>December 31,</b>	<b>(133,195,932)</b>	<b>(116,873,153)</b>	<b>(104,075,356)</b>
<b>Total Shareholders' Equity</b>	<b>\$ 21,095,240</b>	<b>\$ 23,072,781</b>	<b>\$ 32,242,641</b>

POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS  
(Expressed in US Dollars)  
For the Years Ended December 31,

	2018	2017	2016
CASH AND CASH EQUIVALENTS (USED IN) PROVIDED BY:			
OPERATING ACTIVITIES			
Net loss	\$ (16,322,779)	\$ (12,797,797)	\$ (13,224,684)
Adjustments for:			
Depreciation of property and equipment (Note 7)	2,468,604	2,183,963	1,448,525
Amortization of patents and licenses (Note 8)	56,792	53,969	49,775
Amortization of intangibles (Note 9)	37,228	37,228	23,266
Loss on disposal of property and equipment (Note 7)	-	-	46,738
Impairment loss (Notes 2, 7 and 21)	156,717	-	63,522
Stock-based compensation (Note 13)	4,022,117	3,174,924	4,070,264
Change in fair value of contingent consideration (Note 22)	-	-	(283,130)
Income tax recovery (Notes 22 and 23)	(297,940)	(297,940)	(207,257)
Deferred rent	(21,992)	-	42,665
Expected credit loss allowance (Notes 2 and 4)	40,615	-	-
	(9,860,638)	(7,645,653)	(7,970,316)
Net change in non-cash working capital accounts:			
Accounts receivable	(508,094)	(171,257)	(77,415)
Prepaid and other current assets	(1,025,256)	(1,116,758)	(443,590)
Inventory	78,733	663,992	(841,806)
Accounts payable and accrued liabilities	2,026,667	(894,013)	(628,292)
Cash flows from operating activities	(9,288,588)	(9,163,689)	(9,961,419)
INVESTING ACTIVITIES			
Cash proceeds from acquisitions	-	-	18,791
Proceeds from the disposal of property and equipment (Note 7)	-	-	37,195
Purchase of property and equipment (Note 7)	(3,467,992)	(969,797)	(1,208,532)
Purchase of patents and licenses (Note 8)	(67,608)	(60,543)	(72,638)
Advances made prior to acquisition (Note 22)	-	-	(500,000)
Proceeds from the sale of short-term investments	-	589,275	(598,148)
Cash flows from investing activities	(3,535,600)	(441,065)	(2,323,332)
FINANCING ACTIVITIES			
Issue of common shares for cash, net of issue costs (Note 11)	10,648,003	123,528	11,783,144
Cash flows from financing activities	10,648,003	123,528	11,783,144
EFFECT OF EXCHANGE RATE CHANGES ON CASH	(230,425)	79,422	467,893
NET CHANGE IN CASH AND CASH EQUIVALENTS	(2,406,610)	(9,401,804)	(33,714)
CASH AND CASH EQUIVALENTS, beginning of year	4,974,478	14,376,282	14,409,996
CASH AND CASH EQUIVALENTS, end of year	\$ 2,567,868	\$ 4,974,478	\$ 14,376,282
SUPPLEMENTAL DISCLOSURE OF NON-CASH INVESTING ACTIVITIES			
Purchase of property and equipment financed through accounts payable	\$ 250,160	\$ -	\$ -

**POET TECHNOLOGIES INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(Expressed in US Dollars)**

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**1. DESCRIPTION OF BUSINESS AND LIQUIDITY**

POET Technologies Inc. is incorporated in the Province of Ontario. POET Technologies Inc. and its subsidiaries (the "Company") are developers and manufacturers of optical source products and photonic integrated devices for the sensing, datacom and telecom markets. The Company's head office is located at 120 Eglinton Avenue East, Suite 1107, Toronto, Ontario, Canada M4P 1E2. These consolidated financial statements of the Company were approved by the Board of Directors of the Company on April 29, 2019.

The financial statements have been prepared on the going concern basis which assumes that the Company will have sufficient cash to pay its debts, as and when they become payable, for a period of at least 12 months from the date the financial report was authorised for issue.

As at December 31, 2018, the Company has accumulated losses of \$(133,195,932) and working capital of \$3,847,842. During the year ended December 31, 2018, the Company had negative cash flows from operations of \$(9,288,588). The Company has prepared a cash flow forecast which indicates that it does not have sufficient cash to meet its minimum expenditure commitments and therefore needs to raise additional funds to continue as a going concern. As a result, there is substantial doubt about the Company's ability to continue as a going concern.

To address the future funding requirements, management has undertaken the following initiatives:

1. Entered into discussions to secure debt financing.
2. Initiated a strict working capital monitoring program.
3. Continued their focus on maintaining an appropriate level of corporate overheads in line with the Company's available cash resources.
4. Filed a preliminary short-form prospectus to raise a maximum \$50 million through a public offering of either equity securities, debt securities or a combination of both.

In line with its needs for additional financing, on April 3, 2019, the Company closed the first tranche of a private placement of convertible debentures that raised gross proceeds of CAD\$1,929,000 (the "Debentures"). The Debentures are unsecured, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021.

Additionally, the Company arranged for a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019.

**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

These consolidated financial statements of the Company and its subsidiaries were prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB").

The preparation of financial statements in accordance with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise judgment in applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed below:

**Basis of presentation**

These consolidated financial statements include the accounts of POET Technologies Inc. and its subsidiaries; ODIS Inc. ("ODIS"), Opel Solar Inc., BB Photonics Inc., BB Photonics UK Limited (collectively "BB Photonics") and DenseLight Semiconductors Pte. Ltd ("DenseLight"). All intercompany balances and transactions have been eliminated on consolidation.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

**Business combinations**

Acquisitions of businesses are accounted for using the acquisition method. The acquisition cost is measured at the acquisition date at the fair value of the consideration transferred, including all contingent consideration.

Subsequent changes in contingent consideration are accounted for through the consolidated statements of operations and deficit and consolidated statements of comprehensive loss in accordance with the applicable standards.

Goodwill arising on acquisition is initially measured at cost, being the difference between the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree and the net recognized amount (generally fair value) of the identifiable assets and liabilities assumed at the acquisition date. If the net of the amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognized immediately in the consolidated statements of operations and deficit as a bargain purchase gain.

Acquisition-related costs, other than those that are associated with the issue of debt or equity securities that the Company incurs in connection with a business combination, are expensed as incurred.

**Foreign currency translation**

These consolidated financial statements are presented in U.S. dollars ("USD"), which is the Company's presentation currency.

Items included in the financial statements of each of the Company's subsidiaries are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transaction. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities not denominated in the functional currency of an entity are recognized in the statement of operations and deficit.

Assets and liabilities of entities with functional currencies other than U.S. dollars are translated into the presentation currency at the year end rates of exchange, and the results of their operations are translated at average rates of exchange for the year. The resulting translation adjustments are included in accumulated other comprehensive loss in shareholders' equity. Additionally, foreign exchange gains and losses related to certain intercompany loans that are permanent in nature are included in accumulated other comprehensive loss. Elements of equity are translated at historical rates.

**Financial instruments**

IFRS 9 introduced new classification and measurement models for financial assets. The investment classifications held-to-maturity and available-for-sale are no longer used and financial assets at fair value through other comprehensive income ("FVTOCI") were introduced. Financial assets held with an objective to hold assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest are measured at amortised cost using the effective interest method. Debt investments held with an objective to hold both assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest as well as selling the asset on the basis of fair value are measured at FVTOCI. All other financial assets are classified and measured at fair value through profit or loss ("FVTPL"). Financial liabilities are classified as either FVTPL or other financial liabilities, and the portion of the change in fair value that relates to the Company's credit risk is presented in other comprehensive income (loss). Instruments classified as FVTPL are measured at fair value with unrealized gains and losses recognized in net income (loss). Other financial liabilities are subsequently measured at amortised cost using the effective interest method.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Transaction costs that are directly attributable to the acquisition or issuance of financial assets and financial liabilities, other than financial assets and financial liabilities classified as FVTPL, are added to or deducted from the fair value on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities classified as FVTPL are recognized immediately in consolidated net income (loss).

**Derecognition**

*Financial assets*

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset. Any interest in transferred financial assets that is created or retained by the Company is recognized as a separate asset or liability.

*Financial liabilities*

A financial liability is derecognized from the balance sheet when it is extinguished, that is, when the obligation specified in the contract is either discharged, cancelled or expires. Where there has been an exchange between an existing borrower and lender of debt instruments with substantially different terms, or there has been a substantial modification of the terms of an existing financial liability, this transaction is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. A gain or loss from extinguishment of the original financial liability is recognized in profit or loss.

The Company's financial instruments include cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities.

The following table outlines the classification of financial instruments under IAS 39 and the revised classification on the adoption of IFRS 9:

	Original classification under IAS 39	New classification under IFRS 9
<b>Financial Assets</b>		
Cash and cash equivalents	Loans and receivables	Amortized cost
Short-term investments	FVTPL	Amortized cost
Accounts receivable	Loans and receivables	Amortized cost
<b>Financial Liabilities</b>		
Accounts payable and accrued liabilities	Amortized costs	Amortized cost

Convertible debentures are accounted for as a compound financial instrument with a debt component and a separate equity component. The debt component of these compound financial instruments is measured at fair value on initial recognition by discounting the stream of future interest and principal payments at the rate of interest prevailing at the date of issue for instruments of similar term and risk. The debt component is subsequently deducted from the total carrying value of the compound instrument to derive the equity component. The debt component is subsequently measured at amortized cost using the effective interest rate method. Interest expense based on the coupon rate of the debenture and the accretion of the liability component to the amount that will be payable on redemption are recognized through profit or loss as a finance cost.



POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

**Cash and cash equivalents**

Cash and cash equivalents consist of cash in current accounts of \$2,267,868 and funds invested in US Term Deposits of \$300,000 earning interest at 1.31% and maturing in less than 90 days.

Cash and cash equivalents include restricted funds of \$218,888 which serves as a bank guarantee for the purchase of certain equipment. The bank guarantee is reduced on a monthly basis by \$10,424 which is amount paid monthly in settlement of the outstanding balance on the equipment.

**Short-term investments**

The short-term investments of nil at December 31, 2018, nil at December 31, 2017 and \$589,275 at December 31, 2016 consisted of guaranteed investment certificates ("GICs") held with one Canadian chartered bank and earn interest at a rate of 0.50%.

**Accounts receivable**

Accounts receivable are amounts due from customers from the sale of products or services in the ordinary course of business. Accounts receivables are classified as current (on the consolidated statements of financial position) if payment is due within one year of the reporting period date, and are initially recognized at fair value and subsequently measured at amortized cost.

In determining a default provision, the Company utilizes a provision matrix, as permitted under the simplified approach to measure expected credit losses. In doing so management considered historical credit losses, forward-looking factors specific to the Company's debtors and other macro-economic factors to arrive at expected default rates. The default rates are then applied to the Company's aging to determine expected credit losses. The carrying amount of trade receivables is reduced by the expected credit losses. If the financial conditions of these customers were to deteriorate and the Company determines that no recovery of a trade receivable is possible, the amount is deemed irrecoverable and subsequently written-off (Note 4).

**Inventory**

Inventory consists of raw material inventory, work in process, and finished goods and are recorded at the lower of cost and net realizable value. Cost is determined on a first in first out basis and includes all costs of purchase, costs of conversion and other costs incurred in bringing the inventory to its present condition.

An assessment is made of the net realizable value of inventory at each reporting period. Net realizable value is the estimated selling price less the estimated cost of completion and the estimated costs necessary to make the sale. When circumstances that previously caused inventories to be written down no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of any write down previously recorded is reversed so that the new carrying amount is the lower of the cost and the revised net realizable value. Raw materials are not written down unless the goods in which they are incorporated are expected to be sold for less than cost, in which case, they are written down by reference to replacement cost of the raw materials, as this is the best indicator of net realizable value.

**Property and equipment**

Property and equipment are recorded at cost. Depreciation is calculated based on the estimated useful life of the asset using the following method and useful lives:

Machinery and equipment	Straight Line, 5 years
Leasehold improvements	Straight Line, 5 years or life of the lease, whichever is less
Office equipment	Straight Line, 3 - 5 years

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

**Patents and licenses**

Patents and licenses are recorded at cost and amortized on a straight line basis over 12 years. Ongoing maintenance costs are expensed as incurred.

**Impairment of long-lived assets**

The Company's tangible and intangible assets are reviewed for indications of impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. An assessment is made at each reporting date whether there is any indication that an asset may be impaired.

An impairment loss is recognized when the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognized in profit and loss for the year. The recoverable amount is the greater of the asset's fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs.

An impairment loss is reversed if there is an indication that there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

The Company reported an impairment loss of \$156,717 for the year ended December 31, 2018 (2017 - nil, 2016 - \$63,522) (Note 21).

**Goodwill**

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable assets acquired net of liabilities assumed. Goodwill is measured at cost less accumulated impairment losses and is not amortized. Goodwill is tested for impairment on an annual basis or whenever facts or circumstances indicate that the carrying amount may exceed its recoverable amount.

The Company performed its annual test for goodwill impairment at December 31, 2018. The Company utilized a five-year cash flow forecast using the annual budget approved by the Board of Directors as a basis for such forecasts. Cash flow forecasts beyond that of the budget were prepared using a stable growth rate for future periods. These forecasts were based on historical data and future trends expected by the Company. The Company's valuation model also takes into account working capital and capital investments required to maintain the condition of the assets. Forecasted cash flows were discounted using an after-tax rate of 32%.

Based on the impairment tests, the value in-use of the CGU to which goodwill is applicable exceeds the carrying amount. As a result, no provision for impairment of goodwill was provided.

**Income taxes**

The Company follows the liability method of accounting for income taxes. Under this method, deferred income taxes are provided on differences between the financial reporting and income tax bases of assets and liabilities and on income tax losses available to be carried forward to future years for tax purposes. Deferred income taxes are measured using the substantively enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. Deferred tax assets are only recognized if the amount is expected to be realized in the future.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

**Recently Enacted U.S. Federal Tax Legislation**

Introduced initially as the Tax Cuts and Jobs Act, the Act to Provide for Reconciliation Pursuant to Titles II and V of the Concurrent Resolution on the Budget for Fiscal Year 2018 (the "Act") was enacted on December 22, 2017. The Act applies to corporations generally beginning with taxable years starting after December 31, 2017 and reduces the corporate tax rate from a graduated set of rates with a maximum 35% tax rate to a flat 21% tax rate. Additionally, the Act introduces other changes that impact corporations, including a net operating loss ("NOL") deduction annual limitation, an interest expense deduction annual limitation, elimination of the alternative minimum tax, and immediate expensing of the full cost of qualified property. The Act also introduces an international tax reform that moves the U.S. toward a territorial system, in which income earned in other countries will generally not be subject to U.S. taxation. However, the accumulated foreign earnings of certain foreign corporations will be subject to a one-time transition tax, which can be elected to be paid over an eight-year tax transition period, using specified percentages, or in one lump sum. NOL and foreign tax credit ("FTC") carryforwards can be used to offset the transition tax liability. As a result of this new regulation, the Company reduced its deferred tax assets by \$9,472,000 in 2017. See note 23.

**Revenue recognition**

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Company recognizes revenue when it transfers control over a product or service to a customer.

**Sale of goods**

Revenue from the sale of goods is recognized, net of discounts and customer rebates, at the point in time the transfer of control of the related products has taken place as specified in the sales contract and collectability is reasonably assured.

**Service revenue**

The Company provides contract services, primarily in the form of non-recurring revenue ("NRE") where control is passed to the customer over time. The contracts generally provide agreed upon milestones for customer payment which include but are not limited to the delivery of sample products, design reports and test reports. The customer makes payment when it has approved the delivery of the milestone. The Company must determine if the contract is made up of a series of independent performance obligations or a single performance obligation. Where NRE contracts contain multiple performance obligations for which a standalone transaction price can be assessed, revenue is recognized as each performance obligation is satisfied. Where NRE contracts contain a single performance obligation to be settled over time, revenue is recognized progressively based on the output method.

The Company recently adopted IFRS 15 - *Revenue from Contracts from Customers*, further explained in notes 3 and 24.

**Other income**

**Interest income**

Interest income on cash is recognized as earned using the effective interest method.

**Government Grants**

Grants received exclusively from governmental agencies such as the Department of Defense of the United States of America, NASA and Productivity and Innovation Credit Scheme Singapore ("PIC Grant"), relating to research and development or expenditure on technology, are recognized as other income.

PIC Grants are offered as a percentage of qualifying expenditures. PIC Grants are paid out in cash. Other income earned on government grants in 2018 was nil (2017 - nil, 2016 - \$14,027).

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

**Research and Development Credits**

The Company is eligible to receive cash credits for certain qualifying research and development expenses based on actual spending over a three year period, with an expectation that the credits will not exceed a certain dollar value over the three year period. At December 31, 2018, the Company has a recoverable amount of \$1,905,593 relating to these research and development credits (2017 - \$1,287,539, 2016 - nil) and is classified as prepaid and other current assets. Qualifying recovery of \$1,481,260 have been recorded for the year ended December 31, 2018 (2017 - \$1,695,383, 2016 - nil) and is included in other income.

**Intangible assets**

**Research and development costs**

Research costs are expensed in the year incurred. Development costs are also expensed in the year incurred unless the Company believes a development project meets IFRS criteria as set out in IAS 38, *Intangible Assets*, for deferral and amortization. IAS 38 requires all research costs be charged to expense while development costs are capitalised only after technical and commercial feasibility of the asset for sale or use have been established. This means that the entity must intend and be able to complete the intangible asset and either use it or sell it and be able to demonstrate how the asset will generate future economic benefits. Development costs are tested for impairment whenever events or changes indicate that its carrying amount may not be recoverable.

**In-Process Research and Development**

Under IFRS, in-process research and development ("IPR&D") acquired in a business combination that meets the definition of an intangible asset is capitalized with amortization commencing when the asset is ready for use (i.e., when development is complete). The Company acquired \$714,000 of IPR&D when it acquired BB Photonics Inc. in 2016. The development of this IPR&D is still incomplete, therefore no amortization has been charged against IPR&D.

**Customer relationships**

Intangible assets include customer relationships acquired with the acquisition of DenseLight. Customer relationships is an externally acquired intangible asset and is measured at cost less accumulated amortization and any accumulated impairment losses. Customer relationships are amortized on a straight-line basis over their estimated useful lives and is tested for impairment whenever events or changes indicate that their carrying amount may not be recoverable. The useful life of customer relationships was determined to be 5 years.

**Stock-based compensation**

Stock options and warrants awarded to non employees are measured using the fair value of the goods or services received unless that fair value cannot be estimated reliably, in which case measurement is based on the fair value of the stock options. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option pricing model with assumptions applicable at the date of grant.

**Loss per share**

Basic loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the year. Diluted loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the year after giving effect to potentially dilutive financial instruments. The dilutive effect of stock options and warrants is determined using the treasury stock method.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

3. RECENT ACCOUNTING PRONOUNCEMENTS

**Recently adopted accounting policy**

IFRS 15, *Revenue from Contracts with Customers* ("IFRS 15"). The IASB issued IFRS 15, which is effective for annual periods beginning on or after January 1, 2018. The standard contains a single model that applies to contracts with customers and two approaches to recognizing revenue: at a point in time and over time. The model features a contract-based five-step analysis of transactions to determine whether, how much and when revenue is recognized. New estimates and judgmental thresholds have been introduced, which will affect the amount and/or timing of revenue recognized. The Company adopted the policy using the modified retrospective method (Note 24).

IFRS 9, *Financial Instruments*, replaces IAS 39, *Financial Instruments: Recognition and Measurement*. The new standard requires entities to classify financial assets as being measured either at amortized cost or fair value through profit or loss or fair value through other comprehensive income depending on the business model and contractual cash flow characteristics of the asset. Financial liabilities are generally classified and measured at fair value at initial recognition and subsequently measured at amortized cost. The Company adopted IFRS 9 on January 1, 2018 using the retrospective approach. IFRS 9 includes a new "expected credit loss" model which impacted accounts receivable in the current year. The adoption of IFRS 9 did not impact the carrying amounts of the Company's financial assets or liabilities on the adoption date (Note 2).

The following is a summary of recent accounting pronouncements that may affect the Company:

IFRS 16, *Leases* ("IFRS 16") sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, the customer (lessee) and the supplier (lessor). This will replace IAS 17, *Leases* ("IAS 17") and related Interpretations. IFRS 16 provides revised guidance on identifying a lease and for separating lease and non-lease components of a contract. IFRS 16 introduces a single accounting model for all lessees and requires a lessee to recognize right-of-use assets and lease liabilities for leases with terms of more than 12 months, unless the underlying asset is of low value, and depreciation of lease assets is reported separately from interest on lease liabilities in the income statement. Under IFRS 16, lessor accounting for operating and finance leases will remain substantially unchanged. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, with earlier application permitted for entities that apply IFRS 15, *Revenue from Contracts with Customers*. The Company intends to adopt this new standard using the modified retrospective method. The adoption of this new standard will result in a right of use asset and liability of approximately \$890,000 applicable to leases that will be renewed in 2019. Due to the near term expiry of the Company's current leases 2018 carrying values will not be impacted. The adoption of the new standard will have no impact on the Company's cash flows.

4. ACCOUNTS RECEIVABLE

The carrying amounts of accounts receivable approximate their fair value and are originally denominated in Singapore dollars before conversion to US dollars at December 31:

		2018		2017		2016
Product sales	United States dollar	\$ 713,744	\$	493,925	\$	292,849
Product sales	Singapore dollar	273,815		-		-
Loss allowance		(40,615)		-		-
		\$ 946,944	\$	493,925	\$	292,849

In determining the recoverability of a trade receivable, the Company considers any change in the credit quality of the trade receivable from the date credit was initially granted up to the reporting date. The trade receivables that are neither past due nor impaired relates to customers that the company has assessed to be creditworthy based on the credit evaluation process performed by management which considers both customers' overall credit profile and its payment history with the Company. The loss allowance is determined in accordance IFRS 9 (Note 18).

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

5. PREPAIDS AND OTHER CURRENT ASSETS

The following table reflects the details of prepaids and other current assets at December 31:

	2018	2017	2016
Sales tax recoverable and other current assets	\$ 85,658	\$ 119,482	\$ 147,119
Research and development credit	1,905,593	1,287,539	-
Security deposits on leased properties	233,983	228,170	272,026
Prepaid expenses	711,385	322,536	339,772
	\$ 2,936,619	\$ 1,957,727	\$ 758,917

6. INVENTORY

The following table reflects the details of inventory at December 31:

	2018	2017	2016
Raw materials	\$ 98,370	\$ 112,768	\$ 662,458
Finished goods	212,361	260,105	358,386
Work in process	126,102	151,709	96,036
	\$ 436,833	\$ 524,582	\$ 1,116,880

In 2017, the Company recorded an inventory write-down of \$353,476. Raw materials related to products under development represented the most significant portion of the write-down.

7. PROPERTY AND EQUIPMENT

	Equipment not ready for use	Leasehold improvements	Machinery and equipment	Office equipment	Total
<b>Cost</b>					
Balance, January 1, 2016	\$ -	\$ 16,072	\$ 1,400,103	\$ 81,691	\$ 1,497,866
Additions (1) (Note 21)	602,830	667,342	8,498,051	244,860	10,013,083
Disposals (1) (Note 21)	-	(16,072)	(64,747)	(11,734)	(92,553)
Reclassification (1)(2)	-	-	(98,522)	-	(98,522)
Balance, December 31, 2016	602,830	667,342	9,734,885	314,817	11,319,874
Additions	806,182	-	113,433	50,182	969,797
Reclassification	(874,371)	-	874,371	-	-
Effect of changes in foreign exchange rates	46,433	-	72,779	8,914	128,126
Balance, December 31, 2017	581,074	667,342	10,795,468	373,913	12,417,797
Additions	3,667,894	-	-	50,258	3,718,152
Reclassification (3)	(1,086,895)	-	881,221	202,674	(3,000)
Impairment and disposals (3) (Note 21)	-	-	(611,875)	(3,665)	(615,540)
Effect of changes in foreign exchange rates	(19,920)	-	(46,829)	(1,739)	(68,488)
Balance, December 31, 2018	\$ 3,142,153	\$ 667,342	\$ 11,017,985	\$ 621,441	\$ 15,448,921

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

7. PROPERTY AND EQUIPMENT (Continued)

Accumulated Depreciation										
Balance, January 1, 2016	-	3,104	523,198	24,457	550,759					
Depreciation for the year	-	83,189	1,320,050	45,286	1,448,525					
Impairment and disposals (1)(2)	-	(3,104)	(34,940)	(5,576)	(43,620)					
Balance, December 31, 2016	-	83,189	1,808,308	64,167	1,955,664					
Depreciation for the year	-	133,499	1,857,474	192,990	2,183,963					
Balance, December 31, 2017	-	216,688	3,665,782	257,157	4,139,627					
Depreciation for the year	-	133,809	2,201,133	133,662	2,468,604					
Impairment and disposals (3)	-	-	(455,158)	(3,665)	(458,823)					
Balance, December 31, 2018	-	350,497	5,411,757	387,154	6,149,408					
Carrying Amounts										
At December 31, 2016	\$	602,830	\$	584,153	\$	7,926,577	\$	250,650	\$	9,364,210
At December 31, 2017	\$	581,074	\$	450,654	\$	7,129,686	\$	116,756	\$	8,278,170
At December 31, 2018	\$	3,142,153	\$	316,845	\$	5,606,228	\$	234,287	\$	9,299,513

- (1) During 2016, the Company (a) reduced its operations in Toronto and disposed of \$27,806 of its property and equipment for proceeds of \$2,195 and recorded a loss on the disposal of property and equipment of \$16,931. The Company disposed of an additional \$64,747 of machinery and equipment at a loss of \$29,807 (b) added \$217,722 of new equipment, however, only \$119,200 was purchased during the year. \$98,522 was purchased in 2016 but was classified as a prepaid deposit as it was not placed in use at December 31, 2016 (c) through the acquisition of DenselLight and BB Photonics, the Company acquired \$8,706,029 of leasehold improvements, machinery and office equipment (d) purchased an additional \$1,089,332 of machinery and office equipment at DenselLight, \$602,830 of which has not yet been placed into service.
- (2) During 2016, \$35,000 was reclassified to non-current assets held for sale and was sold in July 2016, while \$63,522 was recorded as an impairment loss on the consolidated statements of operations and deficit (Note 21).
- (3) During 2018, \$3,000 relating to certain property and equipment were reclassified to non-current assets held for sale and was sold in December 2018 while \$156,717 was recorded as an impairment loss on the consolidated statements of operations and deficit (Note 21).

8. PATENTS AND LICENSES

Cost	
Balance, January 1, 2016	\$ 537,249
Additions	72,638
Balance, December 31, 2016	609,887
Additions	60,543
Balance, December 31, 2017	670,430
Additions	67,608
Effect of changes in foreign exchange rates	(352)
Balance, December 31, 2018	737,686
Accumulated Amortization	
Balance, January 1, 2016	110,436
Amortization	49,775
Balance, December 31, 2016	160,211
Amortization	53,969
Balance, December 31, 2017	214,180
Amortization	56,792
Balance, December 31, 2018	270,972

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

8. PATENTS AND LICENSES (Continued)

<b>Carrying Amounts</b>	
At December 31, 2016	\$ 449,676
At December 31, 2017	\$ 456,250
At December 31, 2018	\$ 466,714

9. INTANGIBLE ASSETS

	Technology	Customer Relationships	Total
<b>Cost</b>			
Balance, January 1, 2016	\$ -	\$ -	\$ -
Acquired through the acquisition of DenseLight	-	186,131	186,131
Acquired through the acquisition of BB Photonics	714,000	-	714,000
Balance, December 31, 2016, 2017 and 2018	714,000	186,131	900,131
<b>Accumulated Amortization</b>			
Balance, January 1, 2016	-	-	-
Amortization for the year	-	23,266	23,266
Balance, December 31, 2016	-	23,266	23,266
Amortization for the year	-	37,228	37,228
Balance, December 31, 2017	-	60,494	60,494
Amortization for the year	-	37,228	37,228
Balance, December 31, 2018	-	97,722	97,722
<b>Carrying Amounts</b>			
At December 31, 2016	\$ 714,000	\$ 162,865	\$ 876,865
At December 31, 2017	\$ 714,000	\$ 125,637	\$ 839,637
At December 31, 2018	\$ 714,000	\$ 88,409	\$ 802,409

10. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities at December 31 was as follows:

	2018	2017	2016
Trade payable	\$ 2,269,845	\$ 504,229	\$ 768,066
Payroll related liabilities (1)	595,720	112,913	628,378
Accrued liabilities	174,857	193,451	183,037
Lease commitment	-	-	44,863
	\$ 3,040,422	\$ 810,593	\$ 1,624,344

(1) Payroll related liabilities at December 31, 2016 includes \$450,000 of bonus payable to the CEO along with \$87,751 of past salaries due to some current and former employees of DenseLight.



POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

11. SHARE CAPITAL

(a) AUTHORIZED

Unlimited number of common shares  
One special voting share

(b) COMMON SHARES ISSUED

	Number of Shares	Amount
Balance, January 1, 2016	197,097,815	\$ 81,027,171
Common shares issued on public offering	34,800,000	9,349,254
Share issue costs	-	(1,165,017)
Fair value of warrants issued on public offering	-	(5,985,378)
Common shares issued to settle liabilities	2,386,386	1,843,629
Common shares issued on business acquisitions	15,607,240	12,050,000
Funds from the exercise of stock options	5,648,000	1,654,988
Fair value of stock options exercised	-	1,737,879
Funds from the exercise of warrants and compensation warrants	3,794,412	1,943,919
Fair value of warrants and compensation warrants exercised	-	901,417
<b>Balance, December 31, 2016</b>	<b>259,333,853</b>	<b>103,357,862</b>
Funds from the exercise of stock options	685,000	123,528
Fair value of stock options exercised	-	134,831
Balance, December 31, 2017	260,018,853	103,616,221
Common shares issued on public offering	25,090,700	10,663,548
Share issue costs	-	(1,131,990)
Fair value of warrants issued on public offering	-	(2,286,426)
Fair value of compensation options issued to brokers	-	(479,204)
Funds from the exercise of stock options	372,250	87,974
Fair value of stock options exercised	-	82,330
Funds from the exercise of warrants and compensation warrants	2,600,500	1,028,471
Fair value of warrants and compensation warrants exercised	-	447,270
<b>Balance, December 31, 2018</b>	<b>288,082,303</b>	<b>\$ 112,028,194</b>

On November 2, 2016 the Company completed a Short Form Base Shelf and Supplemental Prospectus offering of 34,800,000 units at a price of \$0.269 (CAD\$0.36) per unit for gross proceeds of \$9,349,254 (CAD\$12,528,000). Each unit consists of one common share and one common share purchase warrant. Each whole warrant entitles the holder to purchase one additional common share of the Company at a price of \$0.388 (CAD\$0.52) per share for a period of five years. The agents received cash commissions in the aggregate of \$654,447 (CAD\$876,960). Additional issue costs approximated \$510,570 (CAD\$666,618).

The fair value of the warrants was estimated using the Black-Scholes option pricing model with the following assumptions: dividend yield of 0%, interest rate of 0.68%, volatility of 91.37% and estimated life of 5 years. The estimated fair value assigned to the warrants was \$5,985,378 (\$8,015,323 CAD).

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

11. SHARE CAPITAL (Continued)

On March 21, 2018, the Company completed a brokered "bought deal" public offering of 25,090,700 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$10,663,548 (CAD\$13,799,885). Each unit consists of one common share and one-half common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$0.58 (CAD\$0.75) per share until March 21, 2020. The broker was paid a cash commission of \$639,813 (6%) of the gross proceeds and received 1,505,442 compensation options. Each compensation option is exercisable into one compensation unit of the Company at a price of \$0.425 (CAD\$0.55) per compensation unit until March 21, 2020 with each compensation unit comprising one common share and one-half compensation share purchase warrant. Each whole compensation share purchase warrant entitles the broker to purchase one common share of the Company at a price of \$0.425 (CAD\$0.55) per share until March 21, 2020. The Company paid an additional \$492,177 in other costs related to this financing.

Certain management participated in the "bought-deal" public offering, by acquiring 281,000 units at a price of \$0.425 (CAD\$0.55) per unit for gross proceeds of \$119,425 (CAD\$154,550).

The fair value of the share purchase warrants and compensation options was estimated using the Black-Scholes option pricing model with the following weighted average assumptions: dividend yield of 0%, risk-free interest rate of 1.86%, volatility of 94.77%, and estimated life of 2 years. The estimated fair values assigned to the warrants and compensation options were \$2,286,426 and \$479,204 respectively.

12. WARRANTS

The following table reflects the continuity of warrants:

	Historical Average Exercise Price	Number of Warrants/ Compensation options	Historical Fair value
Balance, January 1, 2016	\$ 0.79	8,369,233	\$ 2,013,747
Warrants issued	0.39	34,800,000	5,985,378
Warrants and compensation warrants exercised	(0.51)	(3,794,412)	(901,417)
Expired	(1.02)	(4,574,821)	(1,112,330)
Balance, December 31, 2016 and 2017	0.39	34,800,000	5,985,378
Fair value of warrants issued on public offering	0.58	12,545,350	2,286,426
Historical fair value assigned to warrants exercised	0.39	(2,600,500)	(447,270)
Fair value of compensation options issued to brokers	0.43	1,505,442	479,204
Balance, December 31, 2018	\$ 0.44	46,250,292	\$ 8,303,738

13. STOCK OPTIONS AND CONTRIBUTED SURPLUS

Stock Options

On June 21, 2018, shareholders of the Company approved amendments to the Company's fixed 20% stock option plan (as amended, previously referred to as the "2016 plan", now referred to as the "2018 Plan"). Under the 2018 Plan, the board of directors may grant options to acquire common shares of the Company to qualified directors, officers, employees and consultants. The 2018 Plan provides that the number of common shares issuable pursuant to options granted under the 2018 Plan and pursuant to other previously granted options is limited to 57,611,360 (the "Number Reserved"). Any subsequent increase in the Number Reserved must be approved by shareholders of the Company and cannot, at the time of the increase, exceed 20% of the number of issued and outstanding shares. The stock options vest in accordance with the policies determined by the Board of Directors from time to time consistent with the provisions of the 2018 Plan which grants discretion to the Board of Directors.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

13. STOCK OPTIONS AND CONTRIBUTED SURPLUS (Continued)

Stock option transactions and the number of stock options outstanding were as follows:

	Number of Options	Historical Weighted Average Exercise Price
Balance, January 1, 2016	26,718,500	\$ 0.89
Expired/cancelled	(1,290,000)	0.96
Exercised	(5,648,000)	0.37
Granted	4,025,000	0.62
Balance, December 31, 2016	23,805,500	0.96
Expired/cancelled	(5,455,209)	0.73
Exercised	(685,000)	0.19
Granted	15,425,000	0.24
Balance, December 31, 2017	33,090,291	0.68
Expired/cancelled	(1,944,791)	0.74
Exercised	(372,250)	0.26
Granted	13,690,479	0.34
Balance, December 31, 2018	44,463,729	\$ 0.58

During the year ended December 31, 2018, the Company recorded stock-based compensation of \$4,022,117 (2017 - \$3,174,924, 2016 - \$4,070,264) relating to stock options that vested during the year.

The stock options granted were valued using the Black-Scholes option pricing model using the following assumptions:

	2018		2017		2016	
Weighted average exercise price	\$0.34		\$0.24		\$0.62	
Weighted average risk-free interest rate	2.17%		1.87%		1.05%	
Weighted average dividend yield	0%		0%		0%	
Weighted average volatility	103.47%		102.73%		104.3%	
Weighted average estimated life (in years)	10		10		10	
Weighted average share price	\$0.34		\$0.24		\$0.62	
Share price on the various grant dates:	\$0.18	\$0.40	\$0.21	\$0.32	\$0.46	\$0.75
Weighted average fair value	\$0.30		\$0.22		\$0.55	

The underlying expected volatility was determined by reference to the Company's historical share price movements, its dividend policy and dividend yield and past experience relating to the expected life of granted stock options.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

13. STOCK OPTIONS AND CONTRIBUTED SURPLUS (Continued)

The weighted average remaining contractual life and weighted average exercise price of options outstanding and of options exercisable as at December 31, 2018 are as follows:

Exercise Range	Options Outstanding			Options Exercisable		
	Number Outstanding	Historical Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Number Exercisable	Historical Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)
\$0.11 - \$0.20	693,750	\$ 0.19	7.13	576,563	\$ 0.20	7.13
\$0.21 - \$0.24	10,773,750	\$ 0.22	8.63	5,773,438	\$ 0.22	8.63
\$0.25 - \$0.29	3,909,499	\$ 0.26	9.12	1,724,440	\$ 0.26	9.12
\$0.30 - \$0.86	16,604,730	\$ 0.40	8.71	3,473,861	\$ 0.45	8.71
\$0.87 - \$1.64	12,482,000	\$ 1.24	1.29	11,302,527	\$ 1.28	1.29
	44,463,729	\$ 0.58	6.61	22,850,829	\$ 0.78	6.61

Contributed Surplus

The following table reflects the continuity of contributed surplus:

	Amount
Balance, January 1, 2016	\$ 25,618,159
Stock-based compensation	4,070,264
Fair value of stock options exercised	(1,737,879)
Fair value of expired warrants	1,112,330
Balance, December 31, 2016	29,062,874
Stock-based compensation	3,174,924
Fair value of stock options exercised	(134,831)
Balance, December 31, 2017	32,102,967
Stock-based compensation	4,022,117
Fair value of stock options exercised	(82,330)
Balance, December 31, 2018	\$ 36,042,754

14. LOSS PER SHARE

	2018	2017	2016
Numerator			
Net loss	\$ (16,322,779)	\$ (12,797,797)	\$ (13,224,684)
Denominator			
Weighted average number of common shares outstanding	282,098,432	259,771,793	220,058,321
Weighted average number of common shares outstanding - diluted	282,098,432	259,771,793	220,058,321
Basic and diluted loss per share	\$ (0.06)	\$ (0.05)	\$ (0.06)

The effect of common share purchase options, warrants, compensation warrants and shares to be issued on the net loss in 2018, 2017 and 2016 is not reflected as they are anti-dilutive.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

15. COMMITMENTS AND CONTINGENCIES

The Company has operating leases on three facilities; head office located in Toronto, Canada, design and testing operations located in San Jose, California and operating facilities located in Singapore. The Company's design and testing operations terminated a lease on January 31, 2017 and initiated a new lease on February 1, 2017 which expires on January 31, 2020. The lease on the Company's operating facilities expires on February 15, 2019. As at December 31, 2018, the Company's head office was on a month to month lease term.

Rent expense under these leases was \$429,674 for the year ended December 31, 2018 (2017 - \$421,316, 2016 - \$312,842).

Subsequent to December 31, 2018, the Company renewed the lease of its operating facilities in Singapore.

Remaining minimum annual rental payments to the lease expiration date is as follows:

2019	\$	416,348
2020 and beyond		808,754
	\$	1,225,102

16. RELATED PARTY TRANSACTIONS

Compensation to key management personnel were as follows:

	2018	2017	2016
Salaries	\$ 1,216,250	\$ 932,133	\$ 2,047,634
Share-based payments (1)	2,449,683	2,110,773	3,061,686
Total	\$ 3,665,933	\$ 3,042,906	\$ 5,109,320

(1) Share-based payments are the fair value of options granted to key management personnel and expensed during the various years as calculated using the Black-Scholes model.

In 2016, the Company paid or accrued \$150,000 in consulting fees to a director for strategic, technology, integration and general business consulting services.

The Company paid or accrued \$115,740 in fees for the year ended December 31, 2018 (2017 - \$115,660, 2016 - \$113,250) to a law firm, of which a director is counsel, for legal services rendered to the Company.

17. SEGMENT INFORMATION

The Company and its subsidiaries operate in a single segment; the design, manufacture and sale of semi-conductor products and services for commercial applications. The Company's operating and reporting segment reflects the management reporting structure of the organization and the manner in which the chief operating decision maker regularly assesses information for decision making purposes, including the allocation of resources. A summary of the Company's operations is below:

**ODIS**

Odus is the developer of the POET platform semiconductor process IP for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single die.

**BB Photonics**

BB Photonics develops photonic integrated components for the datacom and telecom markets utilizing embedded dielectric technology that enables the low-cost integration of active and passive devices into photonic integrated circuits.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

17. SEGMENT INFORMATION (Continued)

**DenseLight**

DenseLight designs, manufactures, and delivers photonic optical light source products and packaging solutions to the communications, medical, instrumentation, industrial, and security industries. DenseLight processes III-V based optoelectronic devices and photonic integrated circuits through its in-house wafer fabrication and assembly & test facilities.

On a consolidated basis, the Company operates geographically in Singapore, the United States and Canada. Geographical information is as follows:

2018					
As of December 31,	Singapore	US	Canada	Consolidated	
Current assets	\$ 4,283,008	\$ 302,405	\$ 2,302,851	\$ 6,888,264	
Property and equipment	9,136,694	162,819	-	9,299,513	
Patents and licenses	18,464	448,250	-	466,714	
Goodwill and intangible assets	6,718,953	1,764,459	-	8,483,412	
<b>Total Assets</b>	<b>\$ 20,157,119</b>	<b>\$ 2,677,933</b>	<b>\$ 2,302,851</b>	<b>\$ 25,137,903</b>	
Year Ended December 31,	Singapore	US	Canada	Consolidated	
Revenue	\$ 3,888,185	\$ -	\$ -	\$ 3,888,185	
Cost of revenue	1,475,969	-	-	1,475,969	
Selling, marketing and administration	8,252,278	2,337,342	1,099,584	11,689,204	
Research and development	3,533,994	4,706,817	451,993	8,692,804	
Impairment loss	156,717	-	-	156,717	
Other income including interest income	(1,491,556)	-	(14,234)	(1,505,790)	
<b>Net loss from operations before income tax recovery</b>	<b>\$ 8,039,217</b>	<b>\$ 7,044,159</b>	<b>\$ 1,537,343</b>	<b>\$ 16,620,719</b>	
2017					
As of December 31,	Singapore	US	Canada	Consolidated	
Current assets	\$ 3,190,298	\$ 4,621,318	\$ 139,096	\$ 7,950,712	
Property and equipment	8,018,900	259,270	-	8,278,170	
Patents and licenses	18,816	437,434	-	456,250	
Goodwill and intangible assets	6,756,181	1,764,459	-	8,520,640	
<b>Total Assets</b>	<b>\$ 17,984,195</b>	<b>\$ 7,082,481</b>	<b>\$ 139,096</b>	<b>\$ 25,205,772</b>	
Year Ended December 31,	Singapore	US	Canada	Consolidated	
Revenue	\$ 2,794,044	\$ -	\$ -	\$ 2,794,044	
Cost of revenue	1,342,691	-	-	1,342,691	
Selling, marketing and administration	4,955,497	4,872,902	1,042,342	10,870,741	
Research and development	3,237,713	1,877,966	327,194	5,442,873	
Other income including interest income	(1,748,244)	-	(18,280)	(1,766,524)	
<b>Net loss from operations before income tax recovery</b>	<b>\$ 4,993,613</b>	<b>\$ 6,750,868</b>	<b>\$ 1,351,256</b>	<b>\$ 13,095,737</b>	

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

17. SEGMENT INFORMATION (Continued)

2016					
As of December 31,	Singapore	US	Canada	Consolidated	
Current assets	\$ 2,118,561	\$ 10,058,018	\$ 4,957,624	\$ 17,134,203	
Property and equipment	9,039,069	322,633	2,508	9,364,210	
Patents and licenses	-	449,676	-	449,676	
Goodwill and intangible assets	6,793,409	1,764,459	-	8,557,868	
<b>Total Assets</b>	<b>\$ 17,951,039</b>	<b>\$ 12,594,786</b>	<b>\$ 4,960,132</b>	<b>\$ 35,505,957</b>	
Year Ended December 31,	Singapore	US	Canada	Consolidated	
Revenue	\$ 1,861,747	\$ -	\$ -	\$ 1,861,747	
Cost of revenue	946,001	-	-	946,001	
Selling, marketing and administration	3,242,703	7,027,033	1,151,868	11,421,604	
Research and development	1,042,842	2,122,983	-	3,165,825	
Impairment loss	-	63,522	-	63,522	
Loss on disposal of property and equipment	-	29,807	16,931	46,738	
Other income including interest income	(14,027)	-	(52,845)	(66,872)	
Changes in fair value of contingent consideration	(283,130)	-	-	(283,130)	
<b>Net loss from operations before income tax recovery</b>	<b>\$ 3,072,642</b>	<b>\$ 9,243,345</b>	<b>\$ 1,115,954</b>	<b>\$ 13,431,941</b>	

18. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

The Company's financial instruments consist of cash and cash equivalents, non-current assets held for sale, accounts receivable, and accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Company is not exposed to significant interest risk arising from these financial instruments. The Company estimates that the fair value of these instruments approximates fair value due to their short term nature.

The Company has classified financial assets and (liabilities) as follows at December 31:

	2018	2017	2016
Fair value through profit or loss, measured at amortized cost:			
Cash	\$ 2,567,868	\$ 4,974,478	\$ 14,376,282
Short-term investments	-	-	589,275
Accounts receivable, measured at amortized cost:			
Accounts receivable	946,944	493,925	292,849
Other liabilities, measured at amortized cost:			
Accounts payable and accrued liabilities	(3,040,422)	(810,593)	(1,624,344)

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

## 18. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Continued)

**Credit Risk**

The Company is exposed to credit risk associated with its accounts receivable. The Company has accounts receivable from both governmental and non-governmental agencies. Credit risk is minimized substantially by ensuring the credit worthiness of the entities with which it carries on business. Credit terms are provided on a case by case basis. The Company has not experienced any significant instances of non-payment from its customers.

The Company's accounts receivable ageing at December 31 was as follows:

	2018	2017	2016
Current	\$ 892,343	\$ 330,731	\$ 125,610
31 - 60 days	34,331	56,094	16,346
61 - 90 days	60,885	-	75,816
> 90 days	-	107,100	75,077
Expected credit losses <sup>(1)</sup>	(40,615)	-	-
	\$ 946,944	\$ 493,925	\$ 292,849

(1) The Company applies IFRS 9 simplified approach to measuring expected credit losses using a lifetime expected credit loss allowance for trade receivables.

The allowance is included in selling, general and administrative expenses in the consolidated statements of operations and deficit. Amounts charged to the loss allowance account are generally written off when there is no reasonable expectation of recovery.

In prior years, the impairment of trade receivables was assessed based on the incurred loss model and determined by management in accordance with its assessment of recoverability. Receivables for which an impairment provision was recognized were written off against the provision when there was no expectation of recovering additional cash.

**Exchange Rate Risk**

The functional currency of each of the entities included in the accompanying consolidated financial statements is the local currency where the entity is domiciled. Functional currencies include the US, Singapore and Canadian dollar. Most transactions within the entities are conducted in functional currencies. As such, none of the entities included in the consolidated financial statements engage in hedging activities. The Company is exposed to a foreign currency risk with the Canadian and Singapore dollar. A 10% change in the Canadian and Singapore dollar would increase or decrease other comprehensive loss by \$386,391.

**Liquidity Risk**

The Company currently does not maintain credit facilities. The Company's existing cash and cash resources are not considered sufficient to fund operating and investing activities beyond one year from the issuance of these consolidated financial statements. The Company will need to seek additional financing to continue as a going concern.



POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

19. CAPITAL MANAGEMENT

In the management of capital, the Company includes shareholders' equity (excluding accumulated other comprehensive loss and deficit) and cash. The components of capital on December 31, 2018 were:

Cash	\$	2,567,868
Shareholders' equity	\$	156,374,686

The Company's objective in managing capital is to ensure that financial flexibility is present to increase shareholder value through growth and responding to changes in economic and/or market conditions; to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business and to safeguard the Company's ability to obtain financing should the need arise.

In maintaining its capital, the Company has a strict investment policy which includes investing its surplus capital only in highly liquid, highly rated financial instruments.

The Company reviews its capital management approach on an ongoing basis.

20. EXPENSES

Research and development costs can be analysed as follows:

	2018	2017	2016
Wages and benefits	\$ 4,641,238	\$ 2,839,088	\$ 1,572,567
Subcontract fees	1,288,566	1,044,936	1,013,539
Stock-based compensation	536,321	369,007	373,196
Supplies	2,226,679	1,189,842	206,523
	\$ 8,692,804	\$ 5,442,873	\$ 3,165,825

Selling, marketing and administration costs can be analysed as follows:

Stock-based compensation	\$ 3,485,796	\$ 2,805,917	\$ 3,697,068
Wages and benefits	2,468,001	2,574,978	2,800,878
Depreciation and amortization	2,562,624	2,275,160	1,521,566
General expenses	1,178,536	1,038,857	1,292,341
Professional fees	767,351	624,941	715,716
Management and consulting fees	155,169	229,577	611,861
Rent and facility costs	1,071,727	1,321,311	782,174
	\$ 11,689,204	\$ 10,870,741	\$ 11,421,604

21. NON CURRENT ASSET HELD FOR SALE

During the year ended December 31, 2016, the Company reclassified \$98,522 from prepaids and other current assets to property and equipment. During that year management determined that the equipment would not be used to generate future cash flows and committed to a plan to dispose of the equipment by December 31, 2016.

Management used a market approach to determine the equipment's fair value less cost of sell. Key assumptions included the cost of similar assets, the impact of customization and unique use. The fair value less cost to sell was determined to be \$35,000 which is greater than its value in use. The Company recorded an impairment loss of \$63,522 on the equipment and reclassified \$35,000 from property and equipment to non current assets held for sale. The equipment was sold for \$35,000 in July 2016. The Company recorded a loss \$29,807 on the disposal of the equipment.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

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21. NON CURRENT ASSET HELD FOR SALE (Continued)

During the year ended December 31, 2018, management determined that certain property and equipment would not be used to generate future cash flows and committed to a plan to dispose of the property and equipment by December 31, 2018.

Management used a market approach to determine the property and equipment's fair value less cost to sell. Key assumptions included the cost of similar assets, the impact of customization and unique use. The fair value less cost to sell was determined to be \$3,000 which is greater than its value in use. The Company recorded an impairment loss of \$156,717 on the property and equipment and reclassified \$3,000 from property and equipment to non current assets held for sale.

22. BUSINESS ACQUISITIONS

**DenseLight**

On May 11, 2016, the Company acquired all the issued and outstanding shares of DenseLight, a designer, manufacturer and distributor of photonic sensing and optical light source products for consideration of \$10,500,000. The all stock purchase was accomplished with the issuance of 13,611,150 common share of the Company at a price of \$0.7714 per share. The Company also committed to issuing shares representing \$1,000,000 to the sellers in the event that DenseLight meets or exceeds a pre-determined revenue target during calendar 2016. The shares were not issued because the revenue target was not met.

This acquisition provides the Company with direct and preferred access to a fab infrastructure for future product development, access to product sales and channel distribution networks and a broader product portfolio of photonic products, technology and know-how.

Upon closing the acquisition, the Company negotiated a settlement agreement relating to obligations that were due to past or current employees of DenseLight. As part of the settlement agreement, the Company issued 1,738,236 common shares at a price of \$0.7714 per share for a total of \$1,343,629. The Company also paid \$240,266 to current and past employees as part of the debt settlement. Accounts payable and accrued liabilities included \$184,570 that was due to past and current employees have been settled.

The Company also settled a loan of \$500,000 owing to EDB Investments Pte. Ltd., an investor in DenseLight, with the issuance of 648,150 shares at a price of 0.771 per share.

Former management shareholders of DenseLight agreed not to sell, transfer, pledge or otherwise dispose of 50% of their shares of the Company for periods up to twelve months, which have since expired. All management shareholders will be able to sell their remaining 50% after 24 months from closing. Former non-management shareholders of DenseLight are no longer restricted from selling their shares.

On acquisition, DenseLight held accounts receivable and unbilled revenue in the amount of \$198,898 which reflected their fair value. The Company does not expect that there will be any contractual cash flows that may not be realized. The billed receivables at closing have been subsequently collected.

The acquisition has been accounted for using the acquisition method of accounting. Acquisition related costs of \$197,284 were expensed in the year and included in selling, marketing and administrative expenses.

A final assessment of the fair value of identifiable assets and liabilities acquired has been completed. The assessment of the purchase price allocation on the date of purchase has been determined as follows:

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

22.	<b>BUSINESS ACQUISITIONS (Continued)</b>		
	<b>Fair value of consideration paid</b>		
	Fair value of 13,611,150 shares issued	\$	10,500,000
	Contingent consideration payable		283,130
	<b>Total consideration</b>	<b>\$</b>	<b>10,783,130</b>
	<b>Recognised amounts of identifiable net assets:</b>		
	Cash	\$	2,971
	Accounts receivables and unbilled revenue		198,898
	Prepaid and other current assets		293,386
	Inventory		319,257
	Property and equipment		8,635,650
	Customer relationships		186,131
	Goodwill		6,630,544
	Trade payables		(2,979,546)
	Loans and advances		(1,000,000)
	Deferred tax liability		(1,504,161)
	<b>Net assets acquired</b>	<b>\$</b>	<b>10,783,130</b>

Loans and advances include \$500,000 that was advanced to DenseLight by the Company prior to its acquisition. This advance was used by DenseLight to cover the expenses required for the development under the Development Services Agreement between DenseLight and the Company, based on the special pricing negotiated between the parties.

The purchase and sale agreement provides for an additional \$1,000,000 worth of shares to be issued to the sellers should gross revenue from DenseLight exceed certain targets for 2016. The fair value of this contingent consideration payable is determined by estimating the probability of the Company making that future payment and then discounting it to present value using a discount rate of 9% being the estimated cost of debt for the Company. At December 31, 2016, DenseLight did not exceed the established revenue targets for 2016. The Company therefore adjusted the fair value of contingent consideration to nil through earnings on December 31, 2016.

From the date of acquisition through December 31, 2016, DenseLight contributed \$1,861,747 to consolidated revenues and \$3,355,772 to consolidated net loss. Had the acquisition occurred on January 1, 2016, the Company estimates that DenseLight's contribution to consolidated revenue would have been \$2,316,169 (unaudited) and would have contributed net loss of \$2,344,976 (unaudited). In determining these amounts, the Company assumed that the preliminary fair value adjustments that arose on the acquisition date would have been the same had the acquisition occurred on January 1, 2016.

A deferred tax liability of \$1,504,161 was created on the date of purchase and related to the fair value adjustment of the assets acquired. The change in the fair value assets acquired arising from amortization or the sale of assets resulted in a deferred tax recovery of \$297,940 in 2018, \$297,940 in 2017 and \$206,596 in 2016. Deferred tax liability related to this transaction at December 31, 2018, 2017 and 2016 was \$707,687, \$1,005,627 and \$1,303,567 respectively.

**BB Photonics**

On June 22, 2016, the Company acquired all the issued and outstanding shares of BB Photonics, a designer of integrated photonic solutions for the data communications market for consideration of \$1,550,000. The all stock purchase was accomplished with the issuance of 1,996,090 common share of the Company at a price of \$0.777 per share.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

22. BUSINESS ACQUISITIONS (Continued)

The acquisition of BB Photonics provides the Company with additional differentiated intellectual property and know-how for product development which will enable the Company to better service its first identified commercialization market, the end-to-end data communications market, and augment its sensing roadmap.

The acquisition has been accounted for using the acquisition method of accounting. Acquisition related costs of \$59,930 were expensed in the year and included in selling, marketing and administrative expenses.

A final assessment of the fair value of identifiable assets and liabilities acquired has been completed. The assessment of the purchase price allocation on the date of purchase has been determined as follows:

Fair value of consideration paid	
Fair value of 1,996,090 shares issued	\$ 1,550,000
Recognised amounts of identifiable net assets:	
Cash	\$ 15,820
Property and equipment	70,379
Intangibles	714,000
Goodwill	1,050,459
Trade payables	(7,918)
Deferred tax liability	(292,740)
Net assets acquired	\$ 1,550,000

From the date of acquisition through December 31, 2016, BB Photonics contributed nil to consolidated revenues and \$181,782 to consolidated net loss. Had the acquisition occurred on January 1, 2016, the Company estimates that BB Photonics' contribution to consolidated revenue would have been nil (unaudited) and it would have contributed net loss of \$272,793 (unaudited). In determining these amounts, the Company assumed that the preliminary fair value adjustments that arose on the acquisition date would have been the same had the acquisition occurred on January 1, 2016.

A deferred tax liability of \$292,740 was created on the date of purchase and related to the fair value adjustment of the assets acquired. There was no amortization of related intangible assets in 2018, 2017 or 2016, therefore there has been no amortization of the deferred tax liability. Deferred tax liability of \$6,663 assumed by the Company on acquisition was applied to deferred tax recovery.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

23. INCOME TAXES

The following table reconciles the expected income tax recovery at the Canadian statutory income tax rate of 26.5% for 2018 (2017 - 26.5%, 2016 - 26.5%) to the amounts recognized in operations.

For the Year Ended December 31,	2018	2017	2016
Net loss before taxes	\$ 16,620,719	\$ 13,095,737	\$ 13,431,941
Expected current income tax recovery	4,404,491	3,470,370	3,559,000
Deferred tax recovery	297,940	297,940	207,257
	4,702,431	3,768,310	3,766,257
Adjustments to income tax recovery:			
Amounts not deductible for tax purposes	(1,065,900)	(841,000)	(1,079,000)
Other non-deductible items	(509,900)	(463,000)	-
Deductible share issuance costs	77,000	94,000	118,000
Fair value consideration	-	-	116,000
Impact of US statutory income tax rate change <sup>(1)</sup>	-	(9,472,000)	-
Foreign tax differential	(592,000)	(69,000)	507,213
Unrecognized tax recovered (losses)	(2,313,691)	7,280,630	(3,221,213)
Income tax recovery recognized	\$ 297,940	\$ 297,940	\$ 207,257

(1) Due to the reduction of US corporate tax rates from 35% to 21%, the Company will not be able to apply \$9,472,000 against any future US taxes payable.

The following table reflects future income tax assets at December 31:

	2018	2017	2016
Resource assets	\$ 1,024,271	\$ 1,024,271	\$ 1,024,271
Gross unamortized share issue costs	669,000	705,351	1,050,599
Canadian non-capital losses	12,431,000	11,100,672	10,137,652
US non-capital losses	71,594,000	67,654,438	63,725,982
Singapore non-capital losses	46,894,000	43,671,200	37,448,290
	132,612,271	124,155,932	113,386,794
Unrecognized deferred tax assets	(132,612,271)	(124,155,932)	(113,386,794)
Deferred income tax assets recognized	\$ -	\$ -	\$ -

In accordance with Section 382 of the Internal Revenue Code, the usage of the Company's net operating loss carry forward related to the BB Photonics acquisition in 2016 of approximately \$928,000 could be subject to annual limitation since there was greater than 50% ownership change.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

24. REVENUE

On January 1, 2018, the Company adopted IFRS 15 - *Revenue from Contracts with Customers*, using the modified retrospective method. The adoption of this standard did not materially impact the timing of revenue recognition for customer sales prior to fiscal 2018.

**Disaggregated Revenues**

The Company disaggregates revenue by timing of revenue recognition, that is, at a point in time and revenue over time. Disaggregated revenue is as follows:

	2018	2017	2016
Non-contract revenue (at a point in time) <sup>(1)(3)</sup>	\$ 3,261,518	\$ 2,714,044	\$ 1,861,747
Contract revenue (revenue over time) <sup>(2)(3)</sup>	441,667	80,000	-
Contract revenue (at a point in time) <sup>(2)(3)</sup>	185,000	-	-
	\$ 3,888,185	\$ 2,794,044	\$ 1,861,747

(1) Revenue from the sale of products.

(2) Revenue from long-term projects or non-recurring engineering (NRE).

(3) All revenue was generated from the Singapore geographic region.

**Revenue Contract Balances**

	Receivables	Contract Liabilities
Opening balance, January 1, 2016	\$ -	\$ -
Revenues recognized	-	-
Changes due to payment, fulfillment of performance obligations or other	-	(20,000)
Balance, December 31, 2016	-	(20,000)
Revenues recognized	80,000	(60,000)
Changes due to payment, fulfillment of performance obligations or other	(40,000)	80,000
Balance, December 31, 2017	40,000	-
Revenues recognized	626,667	(626,667)
Changes due to payment, fulfillment of performance obligations or other	(606,667)	626,667
Balance, December 31, 2018	\$ 60,000	\$ -

The timing and satisfaction of the the Company's performance obligations under contracts with customers is generally in line with the timing of payments from customers, as a result the Company will either not have material contract assets or liabilities or payment for contract assets will be current.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in US Dollars)

24. REVENUE (Continued)

Performance Obligations

The Company typically satisfies its performance obligations when services are rendered or products are delivered and accepted by the customer. Consideration is fixed and payment terms are consistent with the Company's terms for the sale of its products.

The aggregate amount of the transaction price allocated to the performance obligations that are unsatisfied as of December 31, 2018 was \$2,600,000 (2017 - nil, 2016 - \$80,000). The Company expects to satisfy this amount over the next 12 months.

Judgements were used in determining the amount and timing of revenue from contracts with customers. The timing of satisfaction of performance obligations was determined by the delivery of products or services that met the customer's expectations. The transaction price and the amount allocated to performance obligations was determined using market rates that would be reasonable for the services or products provided.

25. SUBSEQUENT EVENTS

On February 1, 2019, the Company signed a non-binding Letter of Intent (LOI) for the sale of all the outstanding shares of DenseLight. Key terms of the LOI include proposed cash consideration in the range of \$26 - \$30 million, including a \$4 million earn-out provision, no-shop and confidentiality clauses, and an undertaking to enter into key operating agreements, including a preferred supply agreement and a long-term strategic cooperation agreement among the parties. The parties expect to complete the signing of the definitive transaction agreements on or before September 15, 2019. The broad terms of the LOI and the consummation of any transaction are subject to further due diligence, the negotiation of definitive agreements and obtaining required approvals by all parties, including but not limited to the TSX Venture Exchange and a majority of the Company's shareholders.

On February 1, 2019, management committed to a plan to sell its subsidiary, DenseLight. The decision was taken in line with a strategy to focus on the Company's opportunities related to its Optical Interposer. The divestiture of DenseLight will immediately reduce the Company's operating losses and cash burn, while allowing the Company to pursue a "fab-light" strategy with a less capital-intensive business model that is focused on growing the Optical Interposer business through targeted investments in the design, development and sale of vertical market solutions. Consequently, all saleable assets and liabilities relating to DenseLight will be classified as "assets of disposal group held for sale" or "disposal group liabilities".

As at December 31, 2018, the disposal group comprised the following assets and liabilities:

Assets of disposal group held for sale	
Accounts receivable	\$ 946,944
Prepays and other current assets	2,792,750
Inventories	436,833
Equipment	9,123,459
Intangible assets	106,873
Goodwill	6,630,544
Assets of disposal group held for sale	\$ 20,037,403
Disposal group liabilities	
Accounts payable and accrued liabilities	\$ 2,558,805
Deferred liabilities	709,501
Disposal group liabilities	\$ 3,268,306

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

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25. SUBSEQUENT EVENTS (Continued)

On April 1, 2019 the Company announced that it arranged for certain financing required to bridge the Company to the previously announced anticipated sale of its DenseLight subsidiary. That sale is scheduled to be completed in September 2019, subject to certain conditions including shareholder and other approvals. The Company expects to generate cash proceeds of approximately CAD\$34.5 million to CAD\$40 million upon completion of the DenseLight sale.

The first component of the financing consists of the issuance of up to CAD\$14 million principal amount of 12% convertible unsecured debentures (the "Convertible Debentures") of the Company. The Convertible Debentures will be sold in multiple tranches over upcoming months, as needed, on a brokered private placement basis through the Company's financial advisors, IBK Capital. The Company closed the first tranche of Convertible Debentures, for gross proceeds of CAD\$1,929,000 on April 3, 2019. Further indications of interest amounting to approximately CAD\$1.6 million from parties who could not participate in the first tranche are expected to be included in subsequent tranches.

The Debentures are unsecured, bearing interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature on April 3, 2021. The Debentures are convertible at the option of the holders thereof into units at any time after October 31, 2019 at a conversion price of CAD\$0.40 per unit for a total 4,822,500 units of the Company. Each unit will consist of one common share and one common share purchase warrant. Each common share purchase warrant will entitle the holder to purchase one common share of the Company at a price of CAD\$0.50 per share for a period of two years from the date upon which the convertible debenture is converted into units. In the event that the sale of the Company's DenseLight subsidiary is completed, holders of Debentures have the right to cause the Company to repurchase the Debentures at face value, subject to certain restrictions. The Debentures are governed by a trust indenture dated April 3, 2019 between the Company and TSX Trust Company as trustee.

Insiders of the Company subscribed for 37% or \$710,000 of the first tranche of Convertible Debentures, including the Company's board of directors and senior management team. Insiders of IBK Capital subscribed for 10% or \$200,000 of this first tranche. Successive tranche closings in the coming months are each subject to approval by the TSX Venture Exchange.

The second component of the financing consists of a credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which will grant the Company access to a maximum US\$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced US\$2,000,000 on April 23, 2019. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance of US\$2,000,000, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.



## POET TECHNOLOGIES INC.

## 2018 STOCK OPTION PLAN (the "Plan")

**1. Purchase of the Plan**

The purpose of the Plan is to assist the Corporation in attracting, retaining and motivating Directors, Employees and Consultants of the Corporation and which terms are hereinafter collectively referred to as ("Directors, Employees and Consultants") and any of its subsidiaries and to closely align the personal interests of such Directors, Employees and Consultants with those of the shareholders by providing them with the opportunity, through options, to acquire common shares in the capital of the Corporation. Capitalized terms used in this Plan that are not otherwise defined have the meanings ascribed to them in TSX Venture Exchange Policy 4.4 – Incentive Stock Options ("Policy 4.4") or TSX Venture Exchange Policy 1.1 - Interpretation.

**2. Implementation**

The Plan and the grant and exercise of any options under the Plan are subject to compliance with the applicable requirements of each stock exchange ("Exchanges") on which the shares of the Corporation are listed at the time of the grant of any options under the Plan and of any governmental authority or regulatory body to which the Corporation is subject.

Upon approval by the Shareholders of the Corporation, the Plan will replace and supersede the previous Plan known as the "2016 Stock Option Plan" which was approved by Shareholders on July 7, 2016. Notwithstanding that at some future date, the shares of the Corporation are no longer listed on the TSX Venture Exchange, the Plan will remain in effect until amended or discontinued in accordance with section 7, provided that it is in compliance with all applicable corporate and securities laws, rules and regulations.

**3. Administration**

The Plan shall be administered by the Board of Directors of the Corporation which shall, without limitation, subject to the approval of the Exchanges, have full and final authority in its discretion, but subject to the express provisions of the Plan, to interpret the Plan, to prescribe, amend and rescind rules and regulations relating to it and to make all other determinations deemed necessary or advisable for the administration of the Plan. The Board of Directors may delegate any or all of its authority with respect to the administration of the Plan and any or all of the rights, powers and discretions with respect to the Plan granted to it hereunder to such committee of directors of the Corporation as the Board of Directors may designate and upon such delegation such committee of directors, as well as the Board of Directors, shall be entitled to exercise any or all of such authority, rights, powers and discretions with respect to the Plan. When used hereafter in the Plan, "Board of Directors" shall be deemed to include a committee of directors acting on behalf of the Board of Directors.

**4. Shares Issuable Under the Plan**

Subject to the requirements of the TSX Venture Exchange:

- (a) the aggregate number of shares ("Optioned Shares") that may be issuable pursuant to options granted under the Plan will not exceed 57,611,360 shares (being an increase of 13,258,475 since last shareholders' approval) hereinafter referred to as the "Fixed Number";
- (b) this Plan, in order to be implemented, requires the approval of the majority of the shareholders of the Corporation;
- (c) unless this Plan is approved by the majority of the disinterested shareholders of the Corporation (the "Disinterested Approval"),
  - (i) the aggregate number of shares reserved for issuance under stock options granted to Insiders of the Corporation (as a group), at any point in time, under this Plan and all outstanding stock option plans or grants of options may not exceed 10% of the issued shares of the Corporation;
  - (ii) no options exceeding an aggregate of 10% of the issued shares of the Corporation, calculated at

the date an option is granted to an Insider, may be granted to Insiders (as a Group) within a 12 month period under this Plan and all outstanding stock option plans or grants of options;

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- (iii) no options exceeding an aggregate of 5% of the issued shares of the Corporation, calculated on the date an option is granted to the Person, may be granted to any one Person (and, where permitted under Policy 4.4, any Companies wholly owned by that Person) within a 12 month period under this Plan and all outstanding stock option plans or grants of options;
- (iv) upon the Corporation obtaining the requisite Disinterested Approval, the provisions set out in this subsection 4 (c) shall no longer apply;
- (d) no options exceeding an aggregate of 2% of the issued shares of the Corporation, calculated at the date an option is granted to the Consultant, may be granted to any one Consultant in a 12 month period;
- (e) no options exceeding an aggregate of 2% of the issued shares of the Corporation, calculated at the date an option is granted to any such Person, may be granted to all Persons retained to provide Investor Relations Activities in any 12 month period. Persons retained to provide Investor Relations Activities shall include any Consultant that performs Investor Relations Activities and any Employee or Director whose role and duties primarily consist of Investor Relations Activities.
- (f) Policy 4.4 requires that the Board of Directors, through the establishment of appropriate procedures, monitor the trading in the securities of the Issuer by all Optionees performing Investor Relations Activities. These procedures may include, for example, the establishment of a designated brokerage account through which the Optionee conducts all trades in the securities of the Issuer or a requirement for such Optionees to file insider trade reports with the Board.

## 5. Eligibility

### (a) General

Options may be granted under the Plan to Directors, Employees, Consultants, and Consultant Companies of the Corporation and any of its subsidiaries (collectively the "Optionees" and individually an "Optionee"). Subject to the provisions of the Plan, the total number of Optioned Shares to be made available under the Plan and to each Optionee, the time or times and price or prices at which options shall be granted, the time or times at which such options are exercisable, and any conditions or restrictions on the exercise of options, shall be in the full and final discretion of the Board of Directors.

### (b) Consultant Company and other Companies

Provided that a Form 4F (*Certification and Undertaking Required from a Company Granted an Incentive Stock Option*) duly completed and signed by the Optionee in the form attached hereto as Schedule "B" or such other form as may be amended by the TSX Venture Exchange from time to time, options may also be granted under the Plan to:

- (i) Except in relation to a Consultant Company, a company which is providing consulting services to the Corporation and is wholly owned by individuals eligible for an option grant.

### (c) Management Company Employees

Options may also be granted to individuals (hereinafter referred to as "Management Company Employees") employed by a company providing management services to the Corporation, which services are required for the ongoing successful operation of the business enterprise of the Corporation, except for services involving Investor Relations Activities.

### (d) Options Granted to Employees, Consultants or Management Company Employees

The Corporation and the Optionee are responsible for ensuring and confirming that, in the event it wishes to grant options under the Plan to Employees, Consultants, Consultant Companies or Management Company Employees, it will only grant such options to Optionees who are bona fide Employees, Consultants, Consultant Companies or Management Company Employees, as the case may be.

## 6. Terms and Conditions

All options under the Plan shall be granted upon and subject to the terms and conditions hereinafter set forth.

### (a) Exercise price

The exercise price to each Optionee for each Optioned Share shall be determined by the Board of Directors, but shall be:

- (i) not less than the last closing price of the Corporation's common shares as traded on the TSX Venture Exchange before the date of the stock option grant, unless the price determined by the Board of Directors is discounted, in which case shall not be less than the Discounted Market Price of the Corporation's common shares as traded on the TSX Venture Exchange, or
- (ii) such other price as may be agreed to by the Corporation and accepted by the TSX Venture Exchange,

provided that the exercise price for each Optioned Share in respect of options granted within 90 days of a Distribution by a Prospectus shall not be less than the greater of the Discounted Market Price and the price per share paid by public investors for listed shares of the Corporation under the Distribution.

(b) Reduction in the Exercise Price of Options Granted to Insiders

In the event the Corporation wishes to reduce the exercise price of any options held by Insiders of the Corporation at the time of the proposed reduction, the approval of the disinterested Shareholders of the Corporation will be required prior to the exercise of any such options at the reduced exercise price.

(c) Option Agreement

All options shall be granted under the Plan by means of an agreement (the "Option Agreement") between the Corporation and each Optionee in the form attached hereto as Schedule "A" or such other form as may be approved by the Board of Directors, such approval to be conclusively evidenced by the execution of the Option Agreement by any one director or officer of the Corporation, or otherwise as determined by the Board of Directors.

(d) Length of Grant

Subject to sections 6 (k), 6 (m), 6 (n), 6 (o), 6 (p) and 6 (s), all options granted under the Plan shall be for a term determined by the Board of Directors, provided that no options shall expire later than that date which is 10 years from the date such options were granted.

(e) Non-Assignability of Options

All options granted under the Plan are non-transferable and non-assignable (whether absolutely or by way of mortgage, pledge or other charge) by an Optionee other than by will or other testamentary instrument or the laws of succession (subject to section 6 (p) hereof) and may be exercisable during the lifetime of the Optionee only by such Optionee.

(f) Vesting Schedules

The following vesting schedules will apply to incentive stock options granted under the Plan. Each Optionee who is granted options under the Plan will become vested with the right to exercise one-quarter (1/4) of the options on the date of the grant of the options and a further one-quarter (1/4) upon the conclusion of every six months subsequent to the date of the grant of the options, such that that Optionee will be vested with the right to exercise one hundred percent (100%) of his options upon the conclusion of 18 months from the date of the grant of the options. The Board of Directors may, at the time of grant, apply a different vesting schedule for any or all options granted, including such schedule whereby the options will vest immediately, provided that options granted to Persons retained to provide "Investor Relations Activities" must vest in stages over a period of not less than 12 months with no more than one-quarter (1/4) of the options vesting in any three month period.

(g) Right to Postpone Exercise

Each Optionee, upon becoming entitled to exercise the option in respect of any Optioned Shares in accordance with the Option Agreement, shall thereafter be entitled to exercise the option to purchase such Optioned Shares at any time prior to the expiration or other termination of the Option Agreement or the option rights granted thereunder in accordance with such agreement.

(h) Exercise and Payment

Any option granted under the Plan may be exercised by an Optionee or, if applicable, the legal

representatives of an Optionee, giving notice to the Corporation specifying the number of shares in respect of which such option is being exercised, accompanied by payment (by bank draft or certified cheque/check payable to the Corporation) of the entire exercise price (determined in accordance with the Option Agreement) for the number of shares specified in the notice. Upon any such exercise of an option by an Optionee the Corporation shall cause the transfer agent and registrar of shares of the Corporation to promptly deliver to such Optionee or the legal representatives of such Optionee, as the case may be, a share certificate in the name of such Optionee or the legal representatives of such Optionee, as the case may be, representing the number of shares specified in the notice. If the Corporation has engaged an administrator to administer the Plan, such as an Internet-based administration platform, which also includes the availability of a broker-assisted exercise process, the Optionee agrees to follow the procedures established by the Corporation or such administrator with respect to the exercise of options.

(i) Rights of Optionees

The Optionees shall have no rights whatsoever as shareholders in respect of any of the Optioned Shares (including, without limitation, voting rights or any right to receive dividends, warrants or rights under any rights offering) other than Optioned Shares in respect of which Optionees have exercised their option to purchase and which have been issued by the Corporation.

(j) Effect of a Take-Over Bid

If a bona fide offer (an "Offer") for Shares is made to the Optionee or to shareholders of the Corporation generally or to a class of shareholders which includes the Optionee, which Offer, if accepted in whole or in part, would result in the offeror becoming a control person of the Corporation, within the meaning of subsection 1(1) of the Securities Act, the Corporation shall, immediately upon receipt of notice of the Offer, notify each Optionee of full particulars of the Offer, whereupon (subject to the approval of the Exchanges) all Option Shares subject to such Offer will become fully vested and the Option may be exercised in whole or in part by the Optionee so as to permit the Optionee to tender the Option Shares received upon such exercise, pursuant to the Offer. However, if:

- (i) the Offer is not completed within the time specified therein; or
- (ii) all of the Option Shares tendered by the Optionee pursuant to the Offer are not taken up or paid for by the offeror in respect thereof;

then the Option Shares received upon such exercise, or in the case of clause (b) above, the Option Shares that are not taken up and paid for, may be returned by the Optionee to the Corporation and reinstated as authorized but unissued Shares and with respect to such returned Option Shares, the Option shall be reinstated as if it had not been exercised and the terms upon which such Option Shares were to become vested pursuant to section 6 (f) shall be reinstated. If any Option Shares are returned to the Corporation under this section 6 (g), the Corporation shall immediately refund the exercise price to the Optionee for such Option Shares.

(k) Acceleration of Expiry Date

If at any time when an Option granted under the Plan remains unexercised with respect to any Unissued Option Shares, an Offer is made by an offeror, the Directors may, upon notifying each Optionee of full particulars of the Offer, declare all Option Shares issuable upon the exercise of Options granted under the Plan, fully vested, and declare that the Expiry Date for the exercise of all unexercised Options granted under the Plan is accelerated so that all Options will either be exercised or will expire prior to the date upon which Shares must be tendered pursuant to the Offer. The Directors shall give each Optionee as much notice as possible of the acceleration of the Options under this section, except that not less than 5 business days' and not more than 30 calendar days' notice is required.

(l) Effect of a Change of Control

If a Change of Control occurs, all Option Shares subject to each outstanding Option will become fully vested, whereupon such Option may be exercised in whole or in part by the Optionee, subject to the approval of the Exchanges if necessary.

(m) Alterations in Shares

In the event of a stock dividend, subdivision, redivision, consolidation, share reclassification (other than pursuant to the Plan), amalgamation, merger, corporate arrangement, reorganization, liquidation or the like, or by the Corporation, the Board of Directors may make such adjustment, if any, of the number of Optioned Shares, or of the exercise price, or both, as it shall deem appropriate to give proper effect to such event. If because of a proposed merger, amalgamation or other corporate arrangement or reorganization, the exchange or replacement of shares in the Corporation for those in another corporation is imminent, the Board of Directors may, in a fair and equitable manner, determine the manner in which all unexercised option rights granted under the Plan shall be treated including, for example, requiring the acceleration of the time for the exercise of such rights by the Optionees and of the time for the fulfilment of any conditions or restrictions on such exercise. All determinations of the Board of Directors under this section 6 (m) shall be full and final.

(n) Termination for Cause

If an Optionee ceases to be either a Director, Employee, Consultant or Management Company Employee of the Corporation or of any of its subsidiaries as a result of having been dismissed from any such position for cause, all unexercised option rights of that Optionee under the Plan shall immediately become terminated and shall lapse, notwithstanding the original term of the option granted to such Optionee under the Plan.

(o) Termination Other Than For Cause

- (i) If an Optionee ceases to be either an Employee, Consultant or Management Company Employee of the Corporation or any of its subsidiaries for any reason other than as a result of having been dismissed for cause as provided in section 6 (n) or as a result of the Optionee's death, such Optionee shall have the right for a period of 90 days (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to be either an Employee, Consultant or Management Company Employee to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent they were exercisable on the date of ceasing to be either an Employee, Consultant or Management Company Employee. Upon the expiration of such 90 day period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.
- (ii) If an Optionee ceases to be either a Director or Officer of the Corporation or any of its subsidiaries for any reason other than as a result of having been dismissed for cause as provided in section 6 (n) or as a result of the Optionee's death, such Optionee shall have the right for a period of one year (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to be either a Director or Officer to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent they were exercisable on the date of ceasing to be either a Director or Officer. Upon the expiration of such one year period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.
- (iii) If an Optionee engaged in providing Investor Relations Activities to the Corporation ceases to be employed in providing such Investor Relations Activities, such Optionee shall have the right for a period of 30 days (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to provide such Investor Relations Activities to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent there were exercisable on the date of ceasing to provide such Investor Relations Activities. Upon the expiration of such 30-day period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.

(p) Deceased Optionee

In the event of the death of any Optionee, the legal representatives of the deceased Optionee shall have the right for a period of one year (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of death of the deceased Optionee to exercise the deceased Optionee's option with respect to all of the Optioned Shares of the deceased Optionee to the extent they were exercisable on the date of death. Upon the expiration of such period all unexercised option rights of the deceased Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to the deceased Optionee under the Plan.

(q) **Hold Period**

In addition to any resale restrictions under securities legislation, securities regulation and securities rules, as amended, and the policies, notices, instruments and blanket orders in force from time to time that are applicable to an Issuer, and any other circumstances for which the Exchange Hold Period may apply, where the exercise price of the stock option is at a discount to the Market Price, all stock options and any Option Shares issued under stock options exercised prior to the expiry of the Exchange Hold Period must be legended with the Exchange Hold Period commencing on the date the stock options were granted.

(r) **Cancelled or Expired Options**

Options that have been cancelled or that have expired without being exercised continue to be issuable under the plan under which they were approved.

(s) **Extension of Options during Blackout Period.**

Stock options governed by this plan that have an expiry date which falls within a period (a "blackout period") during which the Corporation prohibits Optionees from exercising their stock options are automatically extended as set out below. The following requirements are applicable to any such automatic extension provision:

- (i) The blackout period must be formally imposed by the Corporation pursuant to its internal trading policies as a result of the bona fide existence of undisclosed Material Information. For greater certainty, in the absence of the Corporation formally imposing a blackout period, the expiry date of any options will not be automatically extended in any circumstances.
- (ii) The blackout period must expire upon the general disclosure of the undisclosed Material Information. The expiry date of the affected stock options can be extended to no later than ten (10) business days after the expiry of the blackout period.
- (iii) The automatic extension of an Optionee's options will not be permitted where the Optionee or the Issuer is subject to a cease trade order (or similar order under Securities Laws) in respect of the Issuer's securities.

**7. Amendment and Discontinuance of Plan**

Subject to the acceptance of the Exchanges, the Board of Directors may from time to time amend or revise the terms of the Plan or may discontinue the Plan at any time, provided that no such action may in any manner adversely affect the rights under any options earlier granted to an Optionee under the Plan without the consent of that Optionee.

**8. No Further Rights**

Nothing contained in the Plan nor in any option granted hereunder shall give any Optionee or any other person any interest or title in or to any shares of the Corporation or any rights as a shareholder of the Corporation or any other legal or equitable right against the Corporation whatsoever other than as set forth in the Plan and pursuant to the exercise of any option, nor shall it confer upon the Optionees any right to continue as a Director, Employee or Consultant of the Corporation or of any of its subsidiaries.

**9. Compliance with Laws**

The obligations of the Corporation to sell shares and deliver share certificates under the Plan are subject to such compliance by the Corporation and the Optionees as the Corporation deems necessary or advisable with all applicable corporate and securities laws, rules and regulations.

Approved by the Shareholders on June 21, 2018

SCHEDULE "A"

POET TECHNOLOGIES INC.

**STOCK OPTION PLAN - OPTION AGREEMENT**

This Option Agreement dated ● (the "Grant Date") is entered into between POET TECHNOLOGIES INC. ("the Corporation") and ● (the "Optionee") pursuant to the Corporation's Stock Option Plan (the "Plan"). A copy of the current version of the Plan is available for download from SEDAR ([www.sedar.com](http://www.sedar.com)) or from the Company's website (<http://www.poet-technologies.com/documents/Stock-Option-Plan.pdf>).

The parties agree and confirm that: (i) the Optionee was granted ● options (the "Options"), each option entitling the optionee to purchase one common share (an "Option Share" or collectively the "Optioned Shares") of the Corporation for the price of ● per share (the "Exercise Price"); (ii) the Options will vest according to the vesting schedule set forth below, and only the vested Options are exercisable; (iii) unless exercised or cancelled earlier, the Options expire and this agreement will terminate on ● (the "Expiry Date"); (iv) the Options are subject to the conditions set out in the Plan and subject to there being no objection by the TSX Venture Exchange to the grant of the Option to the Optionee.

[INSERT VEST SCHEDULE TABLE]

For greater certainty, the Options continue to be exercisable until the termination or cancellation thereof as provided in this Option Agreement and the Plan.

By signing this Option Agreement, the Optionee acknowledges that the Optionee (i) is either a bona fide Director, Officer, Employee, Consultant, or Management Company Employee of the Corporation (as defined in Policy 4.4 of the TSX Venture Exchange), (ii) has read and understands the Plan, and (iii) agrees to the terms and conditions of the Plan and this Option Agreement.

The Optionee hereby agrees to comply with all applicable Canadian securities laws, all applicable securities laws of the Subscriber's jurisdiction of residence and all applicable Rules, Regulations and Policies of the TSX Venture Exchange for the exercise of Options and the sale of the Optioned Shares. Any sale of shares issuable under this Option Agreement prior to the effective date of the exercise is considered a short sale under applicable securities laws.

The Corporation has engaged Solium Capital Inc. ("Solium") to administer the Plan using an Internet-based administration platform, which also includes the availability of a broker-assisted exercise process. The Optionee can exercise his Option by executing an "Exercise and Hold" or "Exercise and Sell" transaction by accessing Solium's website or by telephone. For Exercise and Hold transactions, the aggregate Exercise Price along with the applicable withholding income taxes ("Taxes") will need to be sent to the Secretary of the Corporation before the Optioned Shares can be issued and sent to the Optionee. For Exercise and Sell transactions, the aggregate Exercise Price along with the applicable Taxes will be paid to Corporation by Solium from the proceeds of the sale of the Optioned Shares.

Upon any exercise of Options pursuant to an Exercise and Sell transaction, if the Optionee is a person residing in the United States at the time of exercising his Option, the Optionee covenants, agrees and certifies that as at the date of such exercise,

- he is not an affiliate of the Corporation, as that term is defined in the U.S Securities Act of 1933, (or if he is, he is an affiliate of the Corporation only by virtue of being an officer or director of the Corporation),
- he has not offered, and has not instructed any person to offer, the Optioned Shares to a person in the United States;
- the sale of his Optioned Shares should only be executed in, on or through the facilities of The TSX Venture Exchange and neither he nor any person acting on his behalf know that a sale has been prearranged with a buyer in the United States,
- neither he nor any affiliate of his nor any person acting on his behalf has engaged or will engage in any directed selling efforts in the United States in connection with the offer and sale of such Optioned Shares,
- the sale will be bona fide and not for the purpose of "washing off" any resale restrictions imposed,
- he does not intend to replace the shares sold with fungible unrestricted securities; and
- his sale or contemplated sale is not a transaction, or part of a series of transactions which is part of a plan or scheme to evade the registration provisions of the 1933 Act.

Executed by the Corporation as of ●.

POET TECHNOLOGIES INC.

Per: \_\_\_\_\_  
Authorized Signatory

Acceptance

\_\_\_\_\_  
OPTIONEE (Employee Number)

Dated:

SCHEDULE "B"



FORM 4F  
CERTIFICATION AND UNDERTAKING REQUIRED FROM A  
COMPANY GRANTED AN INCENTIVE STOCK OPTION

Re: \_\_\_\_\_ (the "Issuer")

Trading Symbol: \_\_\_\_\_

\_\_\_\_\_ (the "Option Holder") certifies that all securities of the Option Holder are owned by \_\_\_\_\_, a Person eligible to be granted an incentive stock option, and undertakes, for the duration of the time that the Option Holder is the holder of an incentive stock option in the securities of the Issuer, that it will not:

1. effect or permit any transfer of ownership or option of securities of the Option Holder; or
2. allot and issue further securities of any class of shares of the Option Holder to any other individual or entity.

**Acknowledgement - Personal Information**

"Personal Information" means any information about an identifiable individual, and includes the information contained in the first paragraph of this Form.

The undersigned hereby acknowledges and agrees that it has obtained the express written consent of each individual to:

- (a) the disclosure of Personal Information by the undersigned to the Exchange (as defined in Appendix 6A) pursuant to this Form; and
- (b) the collection, use and disclosure of Personal Information by the Exchange for the purposes described in Appendix 6A or as otherwise identified by the Exchange, from time to time.

Dated

\_\_\_\_\_  
[Name of Option Holder]

Authorized signatory





300 - 8 King Street East  
Toronto, Ontario M5C 1B5  
www.espressocapital.com  
+1 (877) 604-7733

CREDIT FACILITY AGREEMENT

April 18, 2019

PROPRIETARY AND CONFIDENTIAL

POET Technologies Inc., and each entity listed in the Schedule of Borrowers attached to this Credit Facility Agreement  
1107 - 120 Eglinton Avenue East  
Toronto, Ontario, M4P 1E2  
tm@poet-technologies.com  
(416) 368-9411

Attention: Thomas Mika, CFO

RE: Credit Facility

Espresso Capital Ltd. ("Espresso") is pleased to present this Credit Facility Agreement (this "Agreement") to POET Technologies Inc., and each entity listed in the Schedule of Borrowers attached to this Credit Facility Agreement (each, a "Borrower" and collectively, "Borrowers"). The Schedules to this Agreement form part of and are integral to this Agreement.

The Deposit of CDNS\$20,000 previously paid will be applied against the Fees (as set out in Schedule A).

If Borrowers agree with the terms and conditions of this Agreement, then Borrowers shall return a signed copy to Espresso no later than 5:00 pm ET on April 11, 2019. Upon receipt by Espresso, this Agreement shall be the binding and governing agreement between Espresso and Borrowers about the Credit Facility (as defined in Schedule A) with effect the date first written above.

Yours truly,

Espresso Capital Ltd.	Acknowledged and Agreed: Poet Technologies Inc.
<i>(signed) Enio Lazzar</i>	<i>(signed) Thomas Mika</i>
Per: Enio Lazzar, COO	Per: Thomas Mika, CFO

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Toronto, Ontario M5C 1B5  
www.espressocapital.com  
+1 (877) 604-7733

Acknowledged and Agreed:  
BB Photonics Inc.

*(signed) Thomas Mika*

Per: Thomas Mika, CFO

Acknowledged and Agreed:  
ODIS Inc.

*(signed) Thomas Mika*

Per: Thomas Mika, CFO

Acknowledged and Agreed:  
OPEL Inc.

*(signed) Thomas Mika*

Per: Thomas Mika, CFO

**Schedule A: Credit Terms at the date first written above**

<b>Establishment of Credit Facility</b>	Espresso hereby establishes in favour of Borrowers a revolving credit facility (the "Credit Facility") to finance the Credit Items identified in the Authorized Credit Table below, with advances made, from time to time (each, an "Advance") in accordance with this Schedule A, and thereafter as may be mutually agreed, provided no Advance will be made after an Event of Default or in excess of the Credit Limit. In this Agreement the "Principal" means the then current aggregate of all unrepaid Advances, and the "Indebtedness" means the Principal, accrued and unpaid Interest, incurred and unpaid Fees and all other amounts payable by Borrower under this Agreement.
<b>Credit Limit</b>	The lesser of \$5,000,000 and the Aggregate Authorized Credit, from time to time. Any amount outstanding in excess of the then current Credit Limit shall be repayable on demand.
<b>Aggregate Authorized Credit</b>	As set out in the Authorized Credit Table and adjusted, from time to time by Espresso, as a result of a change in the Value of any Credit Item.
<b>Interest Rate and Payment</b>	Interest of 15% per annum, calculated daily (the "Cash Rate") shall be paid on the outstanding balance of each Advance, by pre-authorized debit, on the last day of each month, until such Advance is repaid in full. Additional interest of 2.25% per annum, calculated daily (the "Deferred Rate") shall accrue and be payable on the earlier of (a) the Maturity Date (defined below), or (b) the Sale of DenseLight (defined below), and the Cash Rate and the Deferred Rate shall together comprise an annual interest rate of 17.25%, calculated daily (the "Interest Rate"). If Borrower has not completed the sale of its subsidiary DenseLight Semiconductors Pte Ltd. ("DenseLight") to a buyer disclosed to Espresso ("Buyer") by October 15, 2019, interest of 19.25% per annum, calculated daily shall be retroactively payable from the date of each Advance until paid in full.
<b>Advance Fee</b>	2.0% of each Advance. Each extension of the Maturity Date shall be deemed an Advance of the Principal outstanding and subject to the Advance Fee on the day Espresso confirms its agreement to such extension. The Advance Fee shall be paid on any Advance requested by a Borrower and approved by Espresso even if Borrower does not draw down such Advance.
<b>Legal Fees</b>	Borrowers shall reimburse Espresso for all reasonable costs and expenses incurred by it in connection with the preparation of this Agreement and ancillary documents, the perfection of its rights, and recovery of amounts not paid when due under this Agreement, in an amount not to exceed \$25,000 (the "Legal Fees"). Espresso shall provide Borrowers with a copy of the account issued to Espresso by its legal counsel.
<b>Initial Advance</b>	\$2,000,000 is hereby requested by Borrowers for April 12, 2019 and hereby approved by Espresso subject to the conditions in this Agreement applicable to Advances.
<b>Advances Subsequent to the Initial Advance</b>	Borrowers, subject to the Credit Limit and conditions in this Agreement applicable to Advances, may request Advances, from time to time after receipt of the Initial Advance no less than 30 days prior to the date upon which Borrowers wish to receive such Advance.

**Financial Covenants**

Poet Technologies Inc. ("Poet") shall, while Indebtedness remains outstanding, maintain Net Working Capital of no less than \$2,500,000. "Net Working Capital" means current assets (including available and undrawn Aggregate Authorized Credit) minus current liabilities (not including any Advance), determined in accordance with generally accepted accounting principals.

Borrower shall notify Espresso immediately upon the occurrence of each and every event which may reasonably be expected to result in (i) a material change to the terms of the transaction (including any adjustment to the sale consideration) outlined in the Letter of Intent between Poet and Buyer dated February 3, 2019 in respect of the sale of DenseLight to Buyer (the "Sale of DenseLight"); (ii) a delay in the execution of any agreement relating to the Sale of DenseLight past September 15, 2019; or (iii) the termination of discussions between Poet and Buyer in respect of the Sale of DenseLight.

<b>Debt In Priority to Espresso</b>	Not to exceed \$180,000.
<b>Warrant Terms</b>	3,289,500 common shares of Poet on terms provided by Poet and agreed to by Espresso at a strike price equal to CDN \$0.35 per share.
<b>Minimum Interest Period</b>	The Initial Advance may be prepaid, in whole or part, prior to the Maturity Date, provided a minimum of 9 months' Interest has been, or is paid on such Advance at the Interest Rate from the date of such Advance. Subsequent Advances shall not be subject to the Minimum Interest Period.
<b>Maturity Date</b>	12/31/2019
<b>Borrowers' Bank Accounts</b>	Borrowers' accounts from which amounts due under this Agreement shall without duplication, be drawn and to which Advances will be deposited. Borrowers shall deliver void cheques for the Borrowers, Bank Accounts prior to the Initial Advance.
<b>Reporting</b>	Borrowers--- shall report, through Espresso's portal, consolidated financial and operational information including (i) a balance sheet, income statement and cash flow, no later than 30 days after month end, (ii) financial statements for each financial year consisting of an audited balance sheet, income statement and cash flow within 120 days of such financial year end, and (iii) within 5 days of request such additional information as Espresso shall reasonably request.
<b>Other Conditions</b>	<p>(i) All of Poet's obligations under this Agreement are subject to TSX Exchange approval.</p> <p>(ii) Initial Advance is conditional upon Poet completing a minimum equity raise (or equivalent funding) equal to \$1,400,000 (the "First Closing"). Each subsequent Advance shall be subject to Poet meeting the conditions set out in the Forecast Advance Table.</p> <p>(iii) Poet shall use commercially reasonable efforts to raise an additional \$3,600,000 in equity (or equivalent funding) by May 31, 2019. If Poet is unable to raise at least \$5,000,000 (the "Minimum Raise") by May 31, 2019 (inclusive of the amount raised during the First Closing), the interest on the Principal shall be paid at the Default Interest Rate until at least \$5,000,000 in equity (or equivalent) is raised, at which point interest payable shall revert back to the Interest Rate. The failure to satisfy this condition shall not constitute an Event of Default.</p>

(iv) If: (a) Poet and Buyer fail to reach definitive agreements in respect of the Sale of DenseLight on or prior to July 15, 2019, (b) Poet fails to send a circular to shareholders of DenseLight requesting approval of the Sale of DenseLight by July 15, 2019, (c) Poet has not received shareholder approval for the Sale of DenseLight by September 1, 2019, or (d) Poet or Buyer terminate discussions in respect to the Sale of DenseLight at any time then, all receipts by DenseLight that come from an incentive program or scheme established by the Singapore Economic Development Board ("EDB") or in any way relate to EDB shall be deposited and held in a restricted cash account with HSBC (the Company's bank) for the sole benefit of Espresso, such receipts to be immediately applied to the repayment of the Credit Facility.

(v) The Indebtedness shall be immediately due and payable upon Poet completing the Sale of DenseLight. If Poet or Buyer terminate discussions relating to the Sale of DenseLight, the Indebtedness shall be due and payable no later than 60 days following the termination of such discussions.

(vi) Espresso shall have the right, in its sole discretion, to request repayment of all, or a portion of the Indebtedness, upon Poet completing any subsequent capital raises in excess of the Minimum Raise (including proceeds received by Poet upon exercise of warrants). No repayment so requested by Espresso shall be subject to the Minimum Interest Period.

(vii) Borrowers shall deliver to Espresso, the executed Guarantee and Guarantor's Security Agreement, no later than 20 days following the Initial Advance.

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\*Authorized Credit Table at the date first written above. Poet Technologies Inc.'s Fiscal Year End 12-31.

Credit Item	Period	Value	Loan to Value	Authorized Credit*	Advanced to Date Above	Due Date
Bridge to Asset Sale	2019-09-30	\$26,000,000	20.0%	\$5,200,000		Earlier of: (i) 2019-12-31, and (ii) the Sale of DenseLight
<b>Aggregate Authorized Credit</b>				<b>\$5,200,000</b>		

\*Authorized Credit amounts rounded up to nearest \$5,000

#### Creditor Table

Creditor	Requirement
HSBC Bank of Canada	Borrowers to ensure that indebtedness to this Creditor does not exceed \$180,000.
Royal Bank of Canada	Not less than two days following Initial Advance, Borrowers to discharge PPSA registration.

#### Forecast Advance Table

Date	Amount	Notes
2019-04-12	\$2,000,000	Conditional upon Poet completing a minimum equity raise (or equivalent funding) of \$1,400,000.
2019-05-15	\$500,000	Conditional upon Poet completing an additional minimum equity raise (or equivalent funding) of \$500,000.
2019-07-01	\$1,000,000	Conditional upon (i) definitive agreements being reached in respect of the Sale of DenseLight, for minimum cash proceeds of \$26,000,000 payable on closing, and such sale being scheduled to be completed no later than September 30, 2019; (ii) Poet having distributed a circular in respect of the Sale of DenseLight to shareholders for approval; and (iii) Poet having raised \$5,000,000 in the aggregate (inclusive of the \$1,900,000 outlined in the Forecast Advance Table above) of equity or equivalent funding.
2019-08-15	\$1,500,000	Conditional upon Poet and Buyer each receiving all required approvals in respect of the Sale of DenseLight.

## Schedule B: Business Terms

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### Due Date and Maturity Date

The Indebtedness shall be due and paid no later than the Maturity Date.

### Security Requirements

To secure due payment of the Indebtedness, each Borrower shall grant a security interest to Espresso in all its undertaking and assets, in Espresso's standard form (the "Security Agreement"), subject only to such encumbrances and on terms set out in the Creditor Table. In addition OPEL Inc. (USA) Inc. and ODIS Inc. (USA) Inc. shall each grant a security interest specifically in its intellectual property, in Espresso's standard form (the "IP Security Agreements"), each subject only to such encumbrances and on terms set out in the Creditor Table.

### Unlimited Guarantee:

As additional security DenseLight Semiconductors Pte Ltd. ("Guarantor") shall deliver Espresso's standard form of guarantee of Borrowers' due performance of this Agreement, and Guarantor shall grant a first security interest to Espresso in Guarantor's undertaking and assets in Espresso's standard form ("Guarantor's Security Agreement").

### Promissory Note

Borrowers shall deliver Espresso's standard promissory note in the form of Schedule D (the "Note") to evidence, each Advance and its repayment.

### Conditions of Advance

Espresso shall have no obligation to make any Advance unless,

- (a) Espresso is satisfied, acting reasonably, there has been no material adverse change to the results of its due diligence of a Borrower,
- (b) Espresso has received the executed Note,
- (c) Espresso has received the executed Security Agreements,
- (d) Espresso has received the executed IP Security Agreements,
- (e) Espresso has received for each Advance, its form of requisition and direction executed by an officer of Borrowers,
- (f) Espresso has entered into the inter-creditor agreements identified in the Creditor Table, on terms satisfactory to Espresso,
- (g) Espresso has received the executed Canada Revenue Agency ("CRA") Level 1 Authorization ,
- (h) Espresso has received the void cheques for Borrowers' Bank Accounts,
- (i) Borrowers have directed Espresso to pay from the Advance, all arrears, if any, due CRA or any other government agency, and
- (j) Espresso has received all other deliverables reasonably requested by Espresso.



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The conditions are for Espresso' sole benefit and may be waived by it in whole or part at any time or times prior to any Advance.

**Public Notice**

Espresso may disclose this financing on its website and in its promotional material; provided that Espresso may not disclose any confidential information related to Borrowers that is not in Borrowers' securities filings.

**Entire Agreement**

This Agreement, and other documents to be delivered pursuant to this Agreement, constitute the entire agreement between Borrowers and Espresso about the Credit Facility and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, of Borrowers and Espresso.

**Jurisdiction**

This Agreement shall be governed by the laws of the Province of Ontario, and the laws of Canada applicable in Ontario.

**Communications**

**To Espresso:**

Address as above, [REDACTED]

**To Each Borrower:**

As above



**Schedule C: Standard Terms**

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**Evidence of Indebtedness**

Espresso shall maintain and reconcile records of Advances, accruals and receipts of Interest, repayments of Advances and all other amounts due under this Agreement. Espresso's records shall constitute *prima facie* evidence of the Indebtedness, absent manifest error.

**Default Interest Rate**

Interest of 22.0% per annum, calculated daily and compounded monthly, both before and after demand and judgment (the "Default Rate") shall be paid on overdue Interest until paid in full, and Interest at the Default Rate shall be paid on the Principal from the day following Borrowers' failure to pay or remit any amount when required to be paid or remitted under this Agreement, until cured.

**Fees**

Borrowers hereby authorize Espresso to, deduct the Advance Fee and the Legal Fees (collectively, the "Fees") as they become due from the Advance next payable, or draw them, without duplication, from Borrowers' Bank Accounts. Interest shall accrue on unpaid Fees from the date such Fees were incurred at the Default Rate.

**Interest Not to Be Excessive**

If the aggregate of Interest and charges, paid or payable in respect of the Advances under this Agreement (the "Charges") would exceed the annual effective rate permitted by applicable law, then the Charges shall be reduced by the minimum amount necessary so they do not exceed the permitted rate, and any amount paid in excess will be repaid forthwith to Borrowers. If a dispute over the Charges arises, a Fellow of the Canadian Institute of Actuaries appointed by Espresso shall determine the effective rate, the reduction and the repayment, which determination shall be conclusive and binding on Espresso and Borrower, absent manifest error.

**Representations and Warranties**

Each Borrower hereby represents and warrants as follows:

- (a) It is a corporation duly constituted and validly subsisting.
- (b) It has taken all necessary action, corporate or otherwise, to authorize the execution, delivery and performance of this Agreement, the Security Agreement and all other documents delivered by it.
- (c) The execution, delivery and performance of this Agreement, the Security Agreement and all other documents delivered by it to Espresso do not conflict with, nor will result in a violation of its constating documents or by-laws, or any law or regulation applicable, in any way, to it, its business or its property.
- (d) It is not in violation of any, and has filed, reported, deducted and remitted as required under all, laws, rules and regulations relating in any way to it, its business and its property, except for any such violation or any such failure which would not result in an adverse effect on it, its business or property.
- (e) All written information (other than financial projections) provided to Espresso by it was, at the time provided to Espresso, complete and accurate in all material respects and it is not aware of any fact it had not disclosed that would have been necessary in order to make the statements contained in such information not misleading. All financial projections provided by it to Espresso were prepared in good faith on assumptions it believed, acting in good faith, to have been reasonable at the time.

- (f) There are no actions, suits, inquiries, claims or proceedings pending, or to its knowledge threatened, which would be reasonably expected to have a material adverse effect on its business, operations, property or prospects, or adversely affect, in any material respect, its ability to observe and perform its obligations under this Agreement, the Security Agreement or other documents it has delivered to Espresso.

#### Covenants

Each Borrower agrees to, and shall during the currency of this Agreement:

- (a) pay, without duplication, all amounts, as and when due under this Agreement, and remit taxes and all other deductions and payments required to be paid to CRA or Provincial authorities as they become due,
- (b) notify Espresso immediately upon becoming aware of an Event of Default,
- (c) strictly comply with all Financial Covenants,
- (d) strictly comply with all laws, rules and regulations relating in any way to it, its business or its property, except where failure to do so would not have a material effect,
- (e) maintain a policy or policies of insurance on its assets and undertaking for their full replacement value, and upon Espresso's request, assign such insurance to Espresso, provided if a Borrower fails to maintain such insurance, Espresso may, but shall not be obliged to, maintain or effect such insurance and add the cost to the Principal,
- (f) not, without Espresso's prior written consent,
  - (i) merge or amalgamate with any person,
  - (ii) redeem, repurchase, or pay dividends on, any of its shares or securities,
  - (iii) incur indebtedness to anyone other than Espresso, its primary lender under a line of credit (existing at the date first written above) or its trade creditors, in the normal course of its business and consistent with past practice,
  - (iv) except for salaries, bonuses, commissions and benefits payable to employees and consultants in the normal course and consistent with past practice,
    - a) make any distribution, loan, advance,
    - b) provide any financial assistance to,
    - c) guarantee the obligations of,
    - d) make any investment in, or
    - e) grant any security in favour of,any of its affiliates, shareholders, directors, officers, employees, consultants or any non-arm's length person,
  - (v) enter into any arrangement, by which it may pay a share of its profit or revenue to any person,
  - (vi) sell any of its receivables,

- (vii) dispose of or transfer any of its assets, other than in the normal course of its business and consistent with past practice,
- (vii) none of the above, however, shall prohibit it from (a) entering into capital leases secured only by the equipment or assets subject of such leases, (b) issuing share capital or debt, convertible into share capital from its treasury, provided a change of Control (as defined below) will not be effected, and such debt by its terms, shall not prior to the Maturity Date (x) be repayable, except for interest at a reasonable commercial rate, nor (y) permit acceleration of the payment of the principal amount for any reason, or (c) issuing convertible debentures pursuant to the convertible debenture indenture to be dated on or about April 12, 2019, and
- (g) not, without Espresso's prior written consent change, in any material respect, the role or responsibilities within Borrower's business, of Dr. Suresh Venkatesan (CEO) and Thomas Mika (CFO), and
- (h) permit Espresso's continued viewing access to Poet's accounts with the relevant taxing authorities, and
- (i) Borrowers shall deliver, prior to Initial Advance, a binder confirming Espresso as first loss payee to Borrowers' insurance policies.

#### Events of Default

Upon the occurrence of any of the following (each an "Event of Default") the Indebtedness shall, at Espresso's the option, become immediately due and payable:

- (a) A Borrower fails to pay any amount owing by it to Espresso when due and such failure has not been cured within three business days of delivery of notice of such failure.
- (b) A Borrower fails to comply with or perform any provision of: (i) this Agreement, other than a failure to pay an amount when due, (ii) any other agreement between a Borrower and Espresso, or (iii) any undertaking by a Borrower to Espresso, and such failure has not been cured within ten days of delivery of notice specifying such failure and the required cure.
- (c) A Borrower is in continuing default of any material loan agreement or arrangement with any person other than Espresso (including an agreement with a Creditor identified in the Creditor Table above) and such default has resulted or may result in an acceleration or demand for immediate repayment of the debt associated with such loan agreement or arrangement.
- (d) Espresso reasonably determines any representation or warranty of a Borrower in this Agreement, or any information (other than financial projections) in a certificate, financial statement, report, notice or instrument furnished by a Borrower to Espresso is or was false, or misleading in some material respect.
- (e) In Espresso's opinion, acting reasonably, there has been a material adverse change in the financial condition or operation of a Borrower or Guarantor.
- (f) A receiver, receiver and manager, or trustee is appointed over any property of a Borrower or Guarantor, or a Borrower or Guarantor fails to pay or admits its inability to pay its debts as they become due, or ceases or threatens to cease to carry on its business, or is adjudged or declared bankrupt or insolvent, or makes an assignment for the benefit of its creditors, petitions, or applies for the appointment of a receiver, receiver and manager, or trustee for it or any of its property, or makes a proposal or similar application under the *Bankruptcy and Insolvency Act* (Canada), the *Companies Creditors' Arrangement Act* (Canada) or similar legislation, or commences proceedings relating to it under any reorganization, arrangement, readjustment of debt, dissolution or liquidation law, or by any act indicates its consent to, approval of, or acquiescence in, any such proceeding, or any of its property becomes subject to distress, execution or seizure.

- (g) Control of a Borrower changes after the date of this Agreement. "Control" means (i) the right to exercise at least 51% of outstanding voting securities of a Borrower or Guarantor, or (ii) the direct or indirect right to direct the management and policies of a Borrower or whether through ownership of voting securities, by agreement, or otherwise.
- (h) The Guarantor, revokes, or attempts to revoke, repudiates or disputes its liability under the Guarantee.
- (i) Any asset material to a Borrower's business is sequestered, attached or seized by a creditor of a Borrower.

**Costs**

In connection with any Event of Default, Espresso may, in addition to the Legal Fees and all costs which it is entitled under the Security Agreement, charge Borrower \$150 per hour for each of its or its affiliates own personnel employed or engaged to monitor a Borrower's affairs, negotiate with CRA, or otherwise assist to collect amounts due to Espresso, all of which are payable on demand.

**Materiality**

In this Agreement 'material' means of such nature as Espresso would reasonably consider significant.

**Authorization to Debit Borrower's Bank Account**

Borrowers hereby authorize Espresso to debit and initiate a wire, without duplication, from Borrowers' Bank Accounts to Espresso, from time to time, of all amounts as and when due Espresso under this Agreement, and this authorization shall continue until Espresso has been paid, in full, all amounts due under this Agreement, but no more than such amounts. Revocation, cancellation or termination of this authorization shall not terminate this Agreement nor Borrower's obligations under this Agreement. Borrowers agree the information in this Agreement necessary to complete such debit and wire may be disclosed to Borrowers' banks as required to complete such debit or wire.

**Borrowers Derive Mutual Benefit from and Are Joint and Several Obligors under This Agreement**

All obligations, representations, warranties, covenants, waivers and indemnities in this Agreement shall be joint and several. Espresso shall have the right to deal with any officer of any Borrower about all matters concerning the rights and obligations of Espresso and Borrowers under this Agreement, and pursuant to applicable law, about the transactions contemplated by this Agreement. Each Borrower hereby appoints each other Borrower as its true and lawful attorney-in-fact, with full right and power, for purposes of exercising all rights of such Borrower under this Agreement and under applicable law about the transactions contemplated by this Agreement. The representations and undertakings by each Borrower in this paragraph are a material inducement to Espresso to enter into this Agreement and to complete the transactions contemplated by this Agreement. Each Borrower represents, for purposes of this agreement, it is operated as part of one consolidated business entity and is directly dependent upon each other Borrower for and in connection with their respective business activities and combined financial resources. Each Borrower hereby agrees it will receive a direct and material economic and financial benefit from the Advances made under this Agreement and, accordingly, the related incurrence of obligations under this Agreement is in the best interests of each Borrower.



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**Notice of Principal Repayment**

Notwithstanding any other provision of this Agreement, Borrower may not repay any amount of Principal prior to the Maturity Date, or a Due Date, if any, except by giving Espresso sixty days prior notice of the amount and date of such repayment or paying Espresso a fee equal to sixty days Interest on the amount to be repaid, in lieu of such notice.

**Notices**

Any communication which is required or permitted between a Borrower and Espresso relating to this Agreement or the Security Agreement shall be in writing and shall be delivered either personally or electronically. Any such communication shall be sent to the intended recipient at the municipal address or email address contained in this Agreement, or such other municipal address or email address as a Borrower or Espresso may from time to time notify the other.

**Amendment and Waiver**

Except as may otherwise be provided in this Agreement, no supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the person to be so bound. No waiver of any of the provisions of this Agreement, nor the acceptance of any payment under this Agreement shall constitute a waiver of any other provision nor shall such waiver constitute a continuing waiver unless otherwise expressly provided in such waiver.

**Currency**

The word "dollar" and sign "\$" refer to currency of United States of America, unless otherwise provided.

**Severability**

Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall not invalidate the remaining provisions and such invalid or unenforceable provision shall be deemed severed in such jurisdiction.

**Assignment and Enurement**

Neither this Agreement nor any right or obligation under it may be assigned by a Borrower without Espresso's prior written consent.

**Further Assurances**

Borrowers shall with reasonable diligence, do all things and provide all reasonable assurances as may be required to complete and give effect to the transactions contemplated by this Agreement.

**Person**

In this Agreement "person" is to be broadly interpreted and includes any individual, partnership, limited partnership, joint venture, syndicate, sole proprietorship or corporation with or without share capital, unincorporated association, trust, executor or other legal personal representative, regulatory body or agency, government or governmental agency, authority or entity however designated or constituted.



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**Counterparts**

This Agreement may be executed in counterparts and delivered electronically, each of which when so executed and delivered shall be an original, and such counterparts shall together constitute one and the same instrument.

**Confidentiality**

Unless previously disclosed by Espresso, or disclosure is required by a governmental authority (including securities regulators and public exchanges) Borrowers shall maintain the terms and conditions of this Agreement as confidential using procedures no less stringent than those used for its own confidential information, and disclose such terms and conditions only to such of its personnel and consultants who have a need to know.



**Schedule D: Form of Promissory Grid Note ("Note")**

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**PROMISSORY GRID NOTE**

[sample]

FOR VALUE RECEIVED, the undersigned ("Borrowers"): (i) agree each capitalized word and term in this Promissory Grid Note (this "Note") not otherwise defined in this Note shall have the meaning ascribed to it in the Credit Facility Agreement between Borrower and ESPRESSO CAPITAL LTD. ("Espresso") dated [sample] as amended, modified, restated or replaced from time to time (the "Credit Facility Agreement"), and (ii) jointly and severally promise to pay to or to the order of Espresso at 300-8 King Street East, Toronto, Ontario, M5C 1B5 (or at such other address as Espresso shall notify Borrower), the amount outstanding (the "Principal Amount") set forth on the grid attached to this Note (as amended, supplemented, restated or otherwise modified from time to time in accordance with the terms hereof, the "Grid") together with Interest on the Principal Amount no later than the Maturity Date, provided each Advance and Interest on such Advance shall be paid in accordance with the terms and conditions of the Credit Facility Agreement.

Interest at the Interest Rate shall be paid on each Advance from the date of each such Advance, by pre-authorized payment, on the last day of each month. Interest on overdue Interest shall accrue and be calculated daily, both before and after demand and judgment at the Default Interest Rate.

All Advances and any partial prepayments will be recorded on the Grid by Espresso. Each Advance may be prepaid, in whole or part, prior to the Maturity Date and subject to minimum Interest payment in accordance with the Credit Facility Agreement. All amounts due under this Note shall immediately become due and payable upon the occurrence of an Event of Default.

Borrowers waive presentment for payment, notice of non-payment, notice of dishonour and notice of protest of this Note and waives any defences based upon indulgences which may be granted by Espresso to Borrowers.

This Note shall be governed by the laws of the Province of Ontario, and the laws of Canada applicable in Ontario. This Note shall enure to the benefit of Espresso, its successors and assigns, and be binding upon Borrowers, their successors and assigns.

This Note has been executed at the date first written above and may be delivered by facsimile or other means of electronic communication and when so delivered shall be deemed an original.

**Schedule D-1: Grid**

Date	Advanced	Repaid	Outstanding	Notation
Sample	Sample	Sample	Sample	Sample



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+1 (877) 604-7733

**Schedule of Borrowers**

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<b>Borrower</b>	<b>Address</b>
BB Photonics Inc.	780 Montague Express Way #107, San Jose, CA, 95131
OPEL Inc.	780 Montague Express Way #107, San Jose, CA, 95131
ODIS Inc.	780 Montague Express Way #107, San Jose, CA, 95131

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**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-  
OXLEY ACT OF 2002**

I, Suresh Venkatesan, certify that:

1. I have reviewed this annual report on Form 20-F of POET Technologies Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: April 29, 2019

By: /s/ Suresh Venkatesan  
Suresh Venkatesan  
Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-  
OXLEY ACT OF 2002

I, Thomas Mika, certify that:

1. I have reviewed this annual report on Form 20-F of POET Technologies Inc.; and
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.

Date: April 29, 2019

By: /s/ Thomas Mika  
Thomas Mika  
Chief Financial Officer

**Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as  
Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Suresh Venkatesan, the Chief Executive Officer of POET Technologies Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 20-F for the year ended 2018 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is provided solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002 and is not intended to be used or relied upon for any other purpose.

Date: April 29, 2019

/s/ Suresh Venkatesan  
Name: Suresh Venkatesan  
Title: Chief Executive Officer

**Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as  
Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Thomas Mika, the Chief Financial Officer of POET Technologies Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 20-F for the year ended 2018 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is provided solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002 and is not intended to be used or relied upon for any other purpose.

Date: April 29, 2019

/s/ Thomas Mika  
Name: Thomas Mika  
Title: Chief Financial Officer



INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statement of POET Technologies Inc. on Form F-10 (File No. 333-213422) of our report dated April 29, 2019, with respect to our audits of the consolidated financial statements of POET Technologies Inc. as of December 31, 2018, December 31, 2017 and December 31, 2016 and for the years ended December 31, 2018, December 31, 2017 and December 31, 2016, which report is included in this Annual Report on Form 20-F of POET Technologies Inc. for the year ended December 31, 2018.

*Marcum LLP*

New Haven, CT  
April 29, 2019