



5N PLUS INC.
Consolidated Financial Statements
for the years ended December 31, 2019 and 2018
(in thousands of United States dollars)

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The consolidated financial statements and related notes have been prepared by management in conformity with generally accepted accounting principles in Canada which incorporate International Financial Reporting Standards. Management is responsible for the selection of accounting policies and making significant accounting judgements and estimates.

Management is also responsible for all other information included in the management's discussion and analysis and for ensuring that this information is consistent with the information contained in the consolidated financial statements.

Management is responsible for establishing and maintaining adequate internal control over financial reporting which includes those policies and procedures that provide reasonable assurance over the safeguarding of assets and over the completeness, fairness and accuracy of the consolidated financial statements.

The Audit and Risk Management Committee, which is comprised entirely of independent directors, reviews the quality and integrity of the Corporation's financial reporting and provides its recommendations, in respect of the approval of the financial statements, to the Board of Directors; oversees management's responsibilities as to the adequacy of the supporting systems of internal controls; provides oversight of the independence, qualifications, and appointment of the external auditor; and, review audit, audit-related, and non-audit fees and expenses. The Board of Directors approves the Corporation's consolidated financial statements and management's discussion and analysis disclosures prior to their release. The Audit and Risk Management Committee meets with management, the internal auditors and external auditors at least four times each year to review and discuss financial reporting, disclosures, auditing and other matters.

The external auditors, PricewaterhouseCoopers LLP, conduct an independent audit of the consolidated financial statements in accordance with Canadian generally accepted auditing standards and express their opinion thereon. Those standards require that the audit is planned and performed to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The external auditors have unlimited access to the Audit and Risk Management Committee and meet with the Committee on a regular basis.

(signed) Arjang J. Roshan
Arjang J. Roshan
President and Chief Executive Officer

(signed) Richard Perron
Richard Perron
Chief Financial Officer

Montreal, Canada
February 25, 2020



Independent auditor's report

To the Shareholders of 5N Plus Inc.

Our opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of 5N Plus Inc. and its subsidiaries (together, the Company) as at December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the IASB (IFRS).

What we have audited

The Company's consolidated financial statements comprise:

- the consolidated statements of financial position as at December 31, 2019 and 2018;
- the consolidated statements of earnings for the years then ended;
- the consolidated statements of comprehensive income for the years then ended;
- the consolidated statements of changes in equity for the years then ended;
- the consolidated statements of cash flows for the years then ended; and
- the notes to the consolidated financial statements, which include a summary of significant accounting policies.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada. We have fulfilled our other ethical responsibilities in accordance with these requirements.

PricewaterhouseCoopers LLP/s.r.l./s.e.n.c.r.l.
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Other information

Management is responsible for the other information. The other information comprises the Management's Discussion and Analysis, which we obtained prior to the date of this auditor's report and the information, other than the consolidated financial statements and our auditor's report thereon, included in the annual report, which is expected to be made available to us after that date.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express an opinion or any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard. When we read the information, other than the consolidated financial statements and our auditor's report thereon, included in the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.



Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Marc-Stéphane Pennee.

PricewaterhouseCoopers LLP¹

Montréal, Quebec
February 25, 2020

¹ CPA auditor, CA, public accountancy permit No.A123642

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(in thousands of United States dollars)

	Notes	December 31 2019	December 31 2018
		\$	\$
Assets			
Current			
Cash and cash equivalents		20,065	26,724
Accounts receivable	4	28,477	22,984
Inventories	5	83,367	96,889
Income tax receivable	15	5,433	4,891
Other current assets	16	7,371	7,797
Total current assets		144,713	159,285
Property, plant and equipment	6, 26	58,590	57,297
Right-of-use assets	7, 26	6,050	-
Intangible assets	8, 26	10,990	11,199
Deferred tax assets	15	8,425	7,872
Other assets	9	1,174	1,404
Total non-current assets		85,229	77,772
Total assets		229,942	237,057
Liabilities			
Current			
Trade and accrued liabilities	10	32,066	39,249
Income tax payable	15	3,374	7,732
Derivative financial liabilities	16	-	197
Current portion of long-term debt	11	107	175
Current portion of convertible debentures	12	-	18,571
Current portion of lease liabilities	7	1,469	-
Total current liabilities		37,016	65,924
Long-term debt	11	55,000	30,000
Deferred tax liabilities	15	269	266
Employee benefit plan obligation	13	15,398	14,619
Lease liabilities	7	4,767	-
Other liabilities	14	195	6,545
Total non-current liabilities		75,629	51,430
Total liabilities		112,645	117,354
Equity		117,297	119,703
Total liabilities and equity		229,942	237,057

Commitments and contingencies (Note 22)

The accompanying notes are an integral part of these consolidated financial statements.

5N PLUS INC.

CONSOLIDATED STATEMENTS OF EARNINGS

Years ended December 31

(in thousands of United States dollars, except per share information)

	Notes	2019	2018
		\$	\$
Revenue		195,971	217,995
Cost of sales	26	161,213	169,061
Selling, general and administrative expenses	26	21,179	23,940
Other expenses (income), net	26	5,351	4,536
Share of loss from joint ventures		-	22
		187,743	197,559
Operating earnings		8,228	20,436
Financial expenses			
Interest on long-term debt		2,914	2,873
Imputed interest and other interest expense	7, 12	1,165	3,422
Foreign exchange and derivative loss		316	225
		4,395	6,520
Earnings before income taxes		3,833	13,916
Income tax expense (recovery)			
Current	15	2,187	848
Deferred	15	(139)	(904)
		2,048	(56)
Net earnings		1,785	13,972
Attributable to:			
Equity holders of 5N Plus Inc.		1,785	13,972
		1,785	13,972
Earnings per share attributable to equity holders of 5N Plus Inc.	20	0.02	0.17
Basic earnings per share	20	0.02	0.17
Diluted earnings per share	20	0.02	0.17

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years ended December 31

(in thousands of United States dollars)

	Notes	2019	2018
		\$	\$
Net earnings		1,785	13,972
Other comprehensive loss			
Items that may be reclassified subsequently to net earnings			
Net changes in cash flow hedges			
Effective portion of changes in fair value of cash flow hedges	16	723	(2,384)
Reclassification to net earnings		(693)	2,461
De-designation of cash flow hedges	12	145	(79)
Income taxes		(21)	(1)
		154	(3)
Currency translation adjustment		(293)	(964)
		(139)	(967)
Items that will not be reclassified subsequently to net earnings			
Remeasurement of employee benefit plan obligation	13	(1,369)	(200)
Income taxes		432	63
		(937)	(137)
Other comprehensive loss		(1,076)	(1,104)
Comprehensive income		709	12,868
Attributable to equity holders of 5N Plus Inc.		709	12,868

The accompanying notes are an integral part of these consolidated financial statements.

5N PLUS INC.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

Years ended December 31

(in thousands of United States dollars, except per share information)

2019	Attributable to equity holders of the Company							
	Number of shares	Share capital	Contributed surplus	Accumulated other comprehensive loss	Deficit	Total shareholders' equity	Non-controlling interest	Total Equity
Balances at beginning of year	84,609,791	\$ 343,480	\$ 4,444	\$ (5,674)	\$ (222,547)	\$ 119,703	\$ -	\$ 119,703
Net earnings for the year	-	-	-	-	1,785	1,785	-	1,785
Other comprehensive loss	-	-	-	(1,076)	-	(1,076)	-	(1,076)
Comprehensive (loss) income	-	-	-	(1,076)	1,785	709	-	709
Reduction of share capital (Note 19)	-	(338,478)	338,478	-	-	-	-	-
Common shares repurchased and cancelled (Note 19)	(1,696,733)	(101)	-	-	(3,889)	(3,990)	-	(3,990)
Exercise of stocks options (Note 21)	488,500	1,060	(337)	-	-	723	-	723
Share-based compensation (Note 21)	-	-	152	-	-	152	-	152
Balances at end of year	83,401,558	5,961	342,737	(6,750)	(224,651)	117,297	-	117,297

2018	Attributable to equity holders of the Company							
	Number of shares	Share capital	Contributed surplus	Accumulated other comprehensive loss	Deficit	Total shareholders' equity	Non-controlling interest	Total equity
Balances at beginning of year	83,901,041	\$ 341,949	\$ 4,586	\$ (4,570)	\$ (236,519)	\$ 105,446	\$ (18)	\$ 105,428
Net earnings for the year	-	-	-	-	13,972	13,972	-	13,972
Other comprehensive loss	-	-	-	(1,104)	-	(1,104)	-	(1,104)
Comprehensive income (loss)	-	-	-	(1,104)	13,972	12,868	-	12,868
Repurchase of non-controlling interest	-	-	-	-	-	-	18	18
Exercise of stocks options (Note 21)	708,750	1,531	(487)	-	-	1,044	-	1,044
Share-based compensation (Note 21)	-	-	345	-	-	345	-	345
Balances at end of year	84,609,791	343,480	4,444	(5,674)	(222,547)	119,703	-	119,703

The accompanying notes are an integral part of these consolidated financial statements.

	Notes	2019	2018
		\$	\$
Operating activities			
Net earnings		1,785	13,972
Adjustments to reconcile net earnings to cash flows			
Depreciation of property, plant and equipment and amortization of intangible assets		9,669	8,810
Depreciation of right-of-use assets	7	1,470	-
Amortization of other assets		173	163
Increase (reversal) for loss allowance	4, 24	23	(29)
Share-based compensation expense	21	1,334	3,422
Deferred income taxes	15	(139)	(904)
Share of loss from joint ventures		-	22
Loss on disposal of investment in joint venture		-	360
Imputed interest	7, 12	792	3,146
Employee benefit plan obligation	13	(313)	(291)
Gain on disposal of property, plant and equipment		(32)	(510)
Unrealized loss (gain) on non-hedge financial instruments		1,249	(124)
Unrealized foreign exchange (gain) loss on assets and liabilities		(457)	370
Realized loss on non-hedge financial instruments		-	670
Realized foreign exchange loss (gain) on assets and liabilities		25	(355)
Loss (gain) on de-designation of cash flow hedges	12	145	(79)
Funds from operations before the following :		15,724	28,643
Net change in non-cash working capital balances	18	(13,043)	(26,448)
Cash from operating activities		2,681	2,195
Investing activities			
Additions to property, plant and equipment	6, 18	(9,447)	(10,098)
Additions of intangible assets	8	(815)	(1,198)
Proceeds on disposal of investment in joint venture		-	417
Proceeds on disposal of property, plant and equipment	6	80	1,125
Cash used in investing activities		(10,182)	(9,754)
Financing activities			
Repayment of long-term debt		(75)	(78)
Proceeds from issuance of long term debt	11	25,000	30,000
Issue expenses related to issuance of long-term debt		-	(679)
Repayment of convertible debentures	12	(19,259)	(29,714)
Common shares repurchased	19	(3,990)	-
Issuance of common shares	19	723	1,044
Principal elements of lease payments		(1,605)	-
Increase in other liabilities	14	-	120
Cash from financing activities		794	693
Effect of foreign exchange rate changes on cash and cash equivalents		48	(434)
Net decrease in cash and cash equivalents		(6,659)	(7,300)
Cash and cash equivalents, beginning of year		26,724	34,024
Cash and cash equivalents, end of year		20,065	26,724
Supplemental information⁽¹⁾			
Income tax paid		6,554	1,190
Interest paid		2,392	2,714

(1) Amounts paid for income tax and interest were reflected as cash flows from operating activities in the consolidated statements of cash flows.

The accompanying notes are an integral part of these consolidated financial statements.

1. Nature of Activities

5N Plus Inc. (“5N Plus” or the “Company”) is a Canadian-based international company. 5N Plus is a leading global producer of engineered materials and specialty chemicals with integrated recycling and refining assets to manage the sustainability of its business model. The Company is headquartered at 4385 Garand Street, Montreal, Quebec (Canada) H4R 2B4. The Company operates R&D, manufacturing and commercial centers in several locations in Europe, the Americas and Asia. 5N Plus deploys a range of proprietary and proven technologies to manufacture products which are used as enabling precursors by its customers in a number of advanced electronics, optoelectronics, pharmaceutical, health, renewable energy and industrial applications. Many of the materials produced by 5N Plus are critical for the functionality and performance of the products and systems produced by its customers, many of whom are leaders within their industry. The Company’s shares are listed on the Toronto Stock Exchange (“TSX”). 5N Plus and its subsidiaries represent the “Company” mentioned throughout these consolidated financial statements. The Company has two reportable business segments, namely Electronic Materials and Eco-Friendly Materials.

These consolidated financial statements were approved by the Board of Directors on February 25, 2020.

2. Summary of Principal Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all periods presented, unless otherwise stated.

Basis of preparation

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the IASB (IFRS). The consolidated financial statements have been prepared under the historical cost convention, except for derivative financial instruments which are recorded at fair value.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of 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 consolidated financial statements, are also further disclosed in this note, in the “Significant management estimation and judgment in applying accounting policies” section.

a) Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Company has control. Control exists when the Company is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through the power over the entity.

The subsidiaries are fully consolidated from the date on which control is transferred to the Company. They are deconsolidated from the date that control ceases.

The following table includes the principal subsidiaries which significantly impact the results or assets of the Company:

	Country of incorporation	% Equity interest	
		2019	2018
5N Plus Inc.	Canada	100%	100%
5N PV GmbH	Germany	100%	100%
5N Plus Lübeck GmbH	Germany	100%	100%
5N Plus Belgium SA	Belgium	100%	100%
5N Plus Asia Limited	Hong Kong	100%	100%
5N Plus Wisconsin Inc.	United States	100%	100%

The US dollar is the functional currency of all those subsidiaries.

Intercompany transactions, balances, income and expenses on transactions between group companies are eliminated. Profits and losses resulting from intercompany transactions that are recognized in assets are also eliminated. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Company.

b) Joint ventures

A joint venture is a contractual agreement whereby the Company agrees with other parties to undertake an economic activity that is subject to joint control, i.e. strategic financial and operating decisions relating to the joint venture's activities require the unanimous consent of the parties sharing control. Investments in joint ventures are accounted for using the equity method. The share of earnings (loss) of joint ventures is recognized in the consolidated statement of earnings and the share of other comprehensive income of joint ventures is included in other comprehensive loss.

Foreign currency translation

a) Functional and presentation currency

The Company's functional and presentation currency is the US dollar. Functional currency is determined for each of the Company's entities, and items included in the financial statements of each entity are measured using that functional currency.

b) Transactions and balances

Monetary assets and liabilities denominated in foreign currencies are translated at the prevailing exchange rate at the reporting date. Non-monetary assets and liabilities, and revenue and expense items denominated in foreign currencies are translated into the functional currency using the exchange rate prevailing at the date of the respective transactions. Foreign exchange gains and losses resulting from the settlement of such transactions are recognized in the consolidated statement of earnings.

Foreign exchange gains and losses are presented in the consolidated statement of earnings within "foreign exchange and derivative loss".

c) Foreign operations

Assets and liabilities of subsidiaries that have a functional currency other than US dollar are translated from their functional currency to US dollars at exchange rates in effect at the reporting date. The resulting translation adjustments are included in the currency translation adjustment in other comprehensive loss. Revenue and expenses are translated at the average exchange rates for the period.

Segment reporting

The Company operates two principal segments: Electronic Materials and Eco-Friendly Materials. Corresponding operations and activities are managed accordingly by the Company's key decision makers. Segmented operating, financial information and labelled key performance indicators are available and used to manage these business segments, review performance and allocate resources.

The Electronic Materials segment manufactures and sells products which are used in a number of applications such as security, aerospace, sensing, imaging, renewable energy and various technical materials.

The Eco-Friendly Materials segment manufactures and sells products which are used in a number of applications such as pharmaceutical, healthcare, animal feed additive, catalytic and extractive as well as various industrial materials.

Corporate expenses associated with the head office and unallocated selling, general and administrative expenses together with financing expenses have been regrouped under the heading "Corporate and unallocated".

Each operating segment is managed separately as each of these service lines requires different technologies, resources and marketing approaches. The financial information of the recycling and trading of complex material is allocated to the two main segments. All intersegment transactions between the Electronic Materials and the Eco-Friendly Materials segments have been eliminated on consolidation.

Revenue recognition

Revenue comprises the sale of manufactured products and the rendering of services and is measured at the amounts specified in the customer's arrangement.

Sales of manufactured products are recognized when products are delivered to the customer, which is also the moment when control of the products is transferred, and when there is no unfulfilled obligation that could affect the customer's acceptance of the products. Delivery occurs when the products have been shipped to the specific location, the risks of loss have been transferred to the customer and has accepted the products in accordance with the sales contract. Revenue from custom refining activities, often referred to as tolling, is recognized when services are rendered, at a point in time.

Accounts receivable are recognized when the products are delivered or services are rendered, as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due. The Company does not expect to have any contracts where the period between the transfer of the promised products or services to the customer and payment by the customer exceeds one year. As a consequence, the Company does not adjust any of the transaction prices for the time value of money. Cash payments received or advances due pursuant to contractual arrangements are recorded as deferred revenue until all of the foregoing conditions of revenue recognition have been met.

Property, plant and equipment

Property, plant and equipment are recorded at cost, net of accumulated depreciation, accumulated impairment losses and subsequent reversals, if applicable. Property, plant and equipment are depreciated using the straight-line method over their estimated useful lives, taking into account any residual values. Useful lives are as follows:

	Period
Land	Not depreciated
Building	25 years
Production equipment	Up to 15 years
Furniture	3 to 10 years
Office equipment	3 to 10 years
Rolling stock	3 to 10 years
Leasehold improvements	Over the term of the lease

Major overhaul and replacement are capitalized in the consolidated statement of financial position as a separate component, with the replaced part or previous overhaul derecognized from the statement. Maintenance and repairs are charged to expense as incurred.

Construction in progress is not depreciated until the assets are put into use. Costs are only capitalized if they are directly attributable to the construction or development of the assets.

Residual values, method of depreciation and useful life of the assets are reviewed annually and adjusted if appropriate.

Leases (since January 1, 2019)

Leases are recognized as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Company. Assets and liabilities arising from a lease are initially measured on a present value basis.

Right-of-use assets

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- restoration costs.

The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Lease liabilities

Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate;
- amounts expected to be payable by the lessee under residual value guarantees;
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise IT-equipment and small items of office furniture.

Extension options are included in a number of property and equipment leases across the Company. These terms are used to maximise operational flexibility in terms of managing contracts. The majority of extension options held are exercisable only by the Company and not by the respective lessor.

Intangible assets

Intangible assets acquired separately are recorded at cost, net of accumulated amortization, accumulated impairment losses and reversals, if applicable. Intangible assets acquired through a business combination are recognized at fair value at the date of acquisition. Intangible assets are amortized on a straight-line basis over their useful lives according to the following annual terms:

	Period
Technology	5 years
Software	5 years
Intellectual property	10 years
Development costs	Not exceeding 10 years

Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets subject to amortization are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets that are not yet available for use are tested for impairment annually or at any time if an indicator of impairment exists.

An impairment loss is recognized if the carrying amount of an asset or a cash-generating unit ("CGU") exceeds its recoverable amount. The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less cost of disposal. The recoverable amount is determined for an individual asset; unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. In such case, the CGU's belonging asset is used to determine the recoverable amount. Impairment losses are recognized in statement of earnings.

The Company evaluates impairment losses for potential reversals at each reporting date. An impairment loss is reversed if there is any indication that the loss has decreased or no longer exists due to changes 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. Such reversal is recognized in statement of earnings.

Financial instruments

Financial assets and liabilities are recognized when the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognized when the rights to receive cash flows from the assets have expired or have been transferred and the Company has transferred substantially all risks and rewards of ownership.

Financial assets and liabilities are offset and the net amount is reported in the consolidated statement of financial position when there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis, or realize the asset and settle the liability simultaneously.

Measurement

At initial recognition, the Company measures a financial asset or financial liability at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss (FVPL), transaction costs that are directly attributable to the acquisition or issue of the financial asset or financial liability. Transaction costs of financial assets or financial liabilities carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

Measurement in subsequent periods depends on the classification of the financial instrument. The Company has classified its financial instruments in the following categories depending on the purpose for which the instruments were acquired and their characteristics.

Financial assets**Debt instruments**

For the subsequent measurement, there are two measurement categories into which the Company classifies its debt instruments:

- Amortized cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss and presented in other gains/(losses), together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the consolidated statement of earnings.
- FVPL (fair value through profit or loss): Assets that do not meet the criteria for amortized cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognized in profit or loss and presented net within other gains/(losses) in the period in which it arises.

Financial liabilities

Financial liabilities are subsequently measured at amortized cost using the effective interest method, except for financial liabilities at fair value through profit or loss. Such liabilities, including derivatives that are liabilities, shall be subsequently measured at fair value.

The Company has classified its financial instruments as follows:

Category	Financial instrument
Financial assets and liabilities at fair value through profit and loss	Other current assets Derivative financial assets ⁽¹⁾ Derivative financial liabilities ⁽¹⁾
Financial assets and liabilities at amortized cost	Cash and cash equivalents Accounts receivable Trade and accrued liabilities Long-term debt Convertible debentures

⁽¹⁾ The derivative financial instruments are designated in a hedge relationship.

Impairment

At each reporting date, the Company assesses, on a forward-looking basis, the expected credit losses associated with its debt instruments carried at amortized cost. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Company applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables (Note 24). The Company assumes that there is no significant increase in credit risk for instruments that have a low credit risk.

Derivative financial instruments and hedging activities

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. The method of recognizing the resulting gain or loss depends on whether the derivative is designated as a hedging instrument and, if so, the nature of the item being hedged. The Company designates certain derivatives as hedges of a particular risk associated with a recognized asset or liability or a highly probable forecast transaction (cash flow hedge).

The fair values of various derivative instruments used for hedging purposes are disclosed in Note 16.

The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than twelve months and as a current asset or liability when the remaining maturity of the hedged item is less than twelve months. Trading derivatives are classified as a current asset or liability.

The Company applies cash flow hedge accounting to certain foreign exchange forward contracts and cross-currency swap entered into to hedge forecasted transactions. In a cash flow hedge relationship, the portion of gains or losses on the hedging item that is determined to be an effective hedge is recognized in other comprehensive income, while the ineffective portion is recorded in consolidated statement of earnings. The amounts recognized in other comprehensive income are reclassified in consolidated statement of earnings as a reclassification adjustment when the hedged item affects net earnings.

Embedded financial liabilities derivatives

Embedded derivatives, which include the debenture conversion option, are recorded at fair value separately from the host contract when their economic characteristics and risks are not clearly and closely related to those of the host contract. Subsequent changes in fair value are recorded in financial expenses in the consolidated statement of earnings.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand.

Inventories

Inventories are carried at the lower of cost and net realizable value. Cost includes all expenditures directly attributable to the manufacturing process as well as suitable portions of related production overheads based on normal operating capacity. Costs of ordinarily interchangeable items are assigned using weighted average cost. Net realizable value is the estimated selling price in the ordinary course of business less costs of completion and any applicable selling expenses. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of the impairment is reversed (i.e. the reversal is limited to the amount of the original impairment) so that the new carrying amount is the lower of the cost and the revised net realizable value.

From time to time, when substantially all required raw materials are in inventory, the Company may choose to enter into long-term fixed-price sales contracts. The quantity of raw materials required to fulfill these contracts is specifically assigned, and the average cost of these raw materials is accounted for separately throughout the duration of the contract.

Income taxes

The tax expense for the year comprises current and deferred tax is recognized in the consolidated statement of earnings, except to the extent that it relates to items recognized in other comprehensive loss or directly in equity. In which case, the tax expense is also recognized in other comprehensive loss or directly in equity, respectively.

a) Current tax

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the date of the consolidated statement of financial position in the countries where the Company and its subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

b) Deferred tax

Deferred income tax is recognized using the liability method on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognized if they arise from the initial recognition of goodwill; deferred income tax is not accounted for, if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that are enacted or substantively enacted at the date of the consolidated statement of financial position and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be used.

Deferred income tax is presented to provide impact of temporary differences arising on investments in subsidiaries and joint ventures, except for deferred income tax liability where the timing of the reversal of the temporary difference is controlled by the Company and it is probable that the temporary difference will not be reversed in the foreseeable future.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities, and when the deferred income tax assets and liabilities relate to income taxes levied by the same taxation authority, on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.

Provisions

A provision is recognized when the Company has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Restructuring provisions comprise mainly employee termination payments. Provisions are not recognized for future operating losses.

Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognized even if the likelihood of an outflow with respect to any one item included in the same class of obligations may be small.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation using a pre-tax rate that reflects current market assessment of the time value of money and the risks specific to the obligation. The increase in the provision due to passage of time is recognized as interest expense.

Restructuring provisions, consisting of severance and other related costs to sites closure, are recognized when a detailed formal plan identifies the business or part of the business concerned, the location and number of employees affected, detailed estimates of the associated costs, and an appropriate timelines which has been communicated to those affected by it.

Research and development expenses

Research expenses are charged to the consolidated statement of earnings in the period they are incurred and are included under other expenses. Development expenses which are directly attributable expenses, either internal or external, are charged to the consolidated statement of earnings, except if the Company can demonstrate all of the following (in that case capitalised as an intangible assets – development costs):

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- Its intention to complete the intangible asset and use or sell it;
- Its ability to use or sell the intangible asset;
- How the intangible asset will generate probable future economic benefits. Among other things, the Company can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- Its ability to measure reliably the expenditure attributable to the intangible asset during its development.

Employee future benefits

The Company contributes to a defined benefit pension plan. The significant policies related to employee future benefits are as follows:

- The cost of pension and other post-retirement benefits earned by employees is actuarially determined using the projected benefit method prorated on service, market interest rates and management's best estimate of expected plan investment performance, retirement age of employees and expected health care costs;
- Fair value is used to value the plan assets for the purpose of calculating the expected return on plan assets; and
- Actuarial gains and losses arising from experience adjustment and change in actuarial assumptions are charged or credited to equity in other comprehensive loss in the period in which they arise.

Share-based payments

The fair value of the equity-settled share-based payment plan is determined using the Black-Scholes model on the grant date. Measurement inputs include the share price on the measurement date, the exercise price of the instrument, expected volatility, weighted average expected life of the instrument, expected dividends, expected forfeiture rate, and the risk-free interest rate. The impact of service and non-market vesting conditions is not taken into account in determining fair value. The compensation expense of the equity-settled awards is recognized in the consolidated statement of earnings over the graded vesting period, where the fair value of each tranche is recognized over its respective vesting period.

For cash-settled share-based payment plans, the compensation expense is determined based on the fair value of the liability incurred at each reporting date until the award is settled. The fair value of compensation expense is calculated by multiplying the number of units expected to vest with the fair value of one unit as of grant date based on the market price of the Company's common shares. Until the liability is settled, the Company re-measures the fair value of the liability at the end of each reporting period and at the date of settlement, with any changes in fair value recognized in income for the period.

Earnings per share

Basic earnings per share is calculated by dividing net earnings for the year attributable to equity owners of the Company by the weighted average number of common shares outstanding during the year.

Diluted earnings per share assume the conversion, exercise or contingent issuance of securities only when such conversion, exercise or issuance would have a dilutive effect on the income per share. The treasury stock method is used to determine the dilutive effect of share options and the if-converted method is used for convertible debentures.

Significant management estimation and judgment in applying accounting policies

The following are significant management judgments used in applying the accounting policies of the Company that have the most significant effect on the consolidated financial statements.

Estimation uncertainty

When preparing the consolidated financial statements, management undertakes a number of judgments, estimates and assumptions about recognition and measurement of assets, liabilities, revenues and expenses. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about the significant judgments, estimates and assumptions that have the most significant effect on the recognition and measurement of assets, liabilities, revenues and expenses are discussed below.

Impairment of non-financial assets

Non-financial assets are reviewed for an indication of impairment at each statement of financial position date upon the occurrence of events or changes in circumstances indicating that the carrying value of the assets may not be recoverable, which requires significant judgement.

An impairment loss is recognized for the amount by which an asset's or CGU's carrying amount exceeds its recoverable amount, which is the higher of fair value less cost of disposal and value in use.

An intangible asset and related equipment that are not yet available for their intended use are tested for impairment at least annually, which also requires significant judgement. To determine the recoverable amount (fair value less cost to dispose of these assets), management estimates expected future cash flows from the asset and determines a suitable interest rate in order to calculate the present value of those cash flows. In the process of measuring expected future cash flows, management makes assumptions about future operating results using the estimated forecasted prices obtained from various market sources including publically available metals information as at December 31, 2019. These key assumptions relate to future events and circumstances. The actual results will vary and may cause adjustments to the Company's intangible and tangible assets in future periods. In most cases, determining the applicable discount rate involves estimating the appropriate adjustment to market risk and to asset-specific risk factors.

By their nature, assets not yet available for intended use have a higher estimation uncertainty, as they depend on future market development and the Company's ability to commercialize and manufacture new products to realize forecasted earnings. For example new manufacturing processes may not be scalable to industrial level within expected timeframe and new products might not receive sufficient market penetration. Management believes that the following assumptions are the most susceptible to change and impact the valuation of these assets in time: a) expected significant growth of the market for different metal products (demand), b) selling prices which have an impact on revenues and metal margins (pricing), and c) the discount rate associated with new processes and products (after considering a premium over the Company's weighted average cost of capital (WACC) to reflect the additional uncertainty).

Inventories

Inventories are carried at the lower of cost and net realizable value, with cost determined using the average cost method. In estimating net realizable values, management takes into account the most reliable evidence available at the time the estimates are made. The Company's core business is subject to changes in foreign policies and internationally accepted metal prices which may cause future selling prices to change rapidly. The Company evaluates its inventories using a group of similar items basis and considers expected future prices as well as events that have occurred between the consolidated statement of financial position date and the date of the completion of the consolidated financial statements. Net realizable value for inventory to satisfy a specific sales contract is measured at the contract price.

Income taxes

The Company is subject to income taxes in numerous jurisdictions. Significant judgment is required in determining the worldwide provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain. The Company recognizes liabilities for anticipated tax audit issues based on estimates of whether additional taxes will be due. Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the current and deferred income tax assets and liabilities in the period in which such determination is made.

The Company has deferred income tax assets that are subject to periodic recoverability assessments. Realization of the Company's deferred income tax assets is largely dependent on its achievement of projected future taxable income and the continued applicability of ongoing tax planning strategies. The Company's judgments regarding future profitability may change due to future market conditions, changes in tax legislation and other factors that could adversely affect the ongoing value of the deferred income tax assets. These changes, if any, may require a material adjustment of these deferred income tax asset balances through an adjustment to the carrying value thereon in the future. This adjustment would reduce the deferred income tax asset to the amount that is considered to be more likely than not to be realized and would be recorded in the period such a determination was to be made (Note 15).

Accounting policies applied until December 31, 2018**Leases (prior to the adoption of IFRS 16)**

Leases were classified as finance leases if the Company bore substantially all risks and rewards of ownership of the leased asset. At inception of the lease, the related asset was recognized at the lower of the fair value and the present value of the minimum lease payments, and a corresponding amount was recognized as a finance lease obligation. Lease payments were split between finance charges and the reduction of the finance lease obligation to achieve a constant proportion of the capital balance outstanding. Finance charges were charged to net earnings over the lease term.

All other leases were classified as operating leases. Operating lease payments were recognized as an expense on a straight-line basis over the lease term.

3. Adoption of New Accounting Standards and Futures Changes in Accounting Policies**Adoption of new accounting standards****IFRS 16 - Leases**

On January 1, 2019, the Company adopted the new accounting standard IFRS 16 using the modified retrospective approach.

Adjustments recognized on adoption of IFRS 16

On adoption of IFRS 16, the Company recognized lease liabilities in relation to leases which had previously been classified as operating leases under the principles of IAS 17 *Leases*. These liabilities were measured at the present value of the remaining lease payments, discounted using the Company's incremental borrowing rate as at January 1, 2019 of 4.45%.

	January 1 2019
	\$
Operating lease commitments disclosed as at December 31, 2018	4,294
Effect of discounting those lease commitments	(260)
Effect of electing to account for short-term and low value leases off balance sheet	(80)
Adjustment as a result of a different treatment of extension options	3,198
Lease liability recognized as at January 1, 2019	7,152
Of which are:	
Current lease liabilities	1,554
Non-current lease liabilities	5,598

The associated right-of-use assets were measured at the amount equal to the lease liability and they relate to the following types of assets:

	January 1 2019
	\$
Land and buildings	6,342
Production equipment	454
Office equipment and rolling stock	356
Total right-of-use assets	7,152

As noted above, the change in accounting policy resulted in the increase of right-of-use assets and lease liabilities by \$7,152 in the balance sheet on January 1, 2019.

Practical expedients applied

In applying IFRS 16 for the first time, the Company has used the following practical expedients permitted by the standard:

- the use of a single discount rate to a portfolio of leases with reasonably similar characteristics;
- the accounting for operating leases with a remaining lease term of less than 12 months as at January 1, 2019 as short-term leases; and
- the use of hindsight in determining the lease term where the contract contains options to extend or terminate the lease.

The Company has also elected not to reassess whether a contract is or contains a lease at the date of initial application. Instead, for contracts entered into before the transition date the Company relied on its assessment made applying IAS 17 and IFRIC 4 Determining whether an Arrangement contains a Lease.

The Company's leasing activities and how these are accounted for

The Company leases various production and warehouse locations, production equipment and furniture, office equipment and rolling stock. Rental contracts are typically made for fixed periods of 2 to 5 years but may have extension options as described below. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants, but leased assets may not be used as security for borrowing purposes.

Until the 2018 financial year, leases of property, plant and equipment were classified as either finance or operating leases. Payments made under operating leases (net of any incentives received from the lessor) were charged to profit or loss on a straight-line basis over the period of the lease.

From January 1, 2019, leases are recognized as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Company. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate;
- amounts expected to be payable by the lessee under residual value guarantees;
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise IT-equipment and small items of office furniture.

Extension options

Extension options are included in a number of property and equipment leases across the Company. These terms are used to maximise operational flexibility in terms of managing contracts. The majority of extension options held are exercisable only by the Company and not by the respective lessor.

IFRIC 23 – Uncertainty over Income Tax Treatments

On January 1, 2019, the Company also adopted the new accounting standard IFRIC 23. The interpretation provides guidance on the accounting for current and deferred tax liabilities and assets in circumstances in which there is uncertainty over income tax treatments. The Company has concluded that there is no significant impact resulting from the application of this new standard on its consolidated financial statements.

4. Accounts Receivable

	2019	2018
	\$	\$
Gross trade receivables	24,837	19,100
Loss allowance (Note 24)	(120)	(97)
Trade receivables	24,717	19,003
Sales taxes receivable	3,261	3,238
Other receivables	499	743
Total accounts receivable	28,477	22,984

All of the Company's accounts receivable are short term. The net carrying value of accounts receivable is considered a reasonable approximation of fair value.

The Company's exposure to credit risks and the calculation of the loss allowance related to accounts receivable are disclosed in Note 24.

Most of the accounts receivable are pledged as security for the revolving credit facility (Note 11).

5. Inventories

	2019	2018
	\$	\$
Raw materials	27,228	32,912
Finished goods	56,139	63,977
Total inventories	83,367	96,889

For the year ended December 31, 2019, a total of \$85,922 of inventories was included as an expense in cost of sales (2018 – \$97,598).

For the year ended December 31, 2019, no amount previously written down was recognized as a reduction of expenses in cost of sales concurrently with the related inventories being sold. For the year ended December 31, 2018, a total of \$3,061 previously written down was recognized as a reduction of expenses in cost of sales concurrently with the related inventories being sold (\$nil for the Eco-Friendly Materials segment and \$3,061 for the Electronic Materials segment).

The majority of inventories are pledged as security for the revolving credit facility (Note 11).

6. Property, Plant and Equipment

	Land and buildings	Production equipment	Furniture, office equipment and rolling stock	Leasehold improvements	Total
	\$	\$	\$	\$	\$
Net book value as at December 31, 2017	18,450	34,253	1,976	1,928	56,607
Additions	676	7,480	1,291	70	9,517
Disposals	(615)	-	-	-	(615)
Depreciation	(1,026)	(6,130)	(495)	(311)	(7,962)
Effect of foreign exchange and others	(144)	(98)	(8)	-	(250)
Net book value as at December 31, 2018	17,341	35,505	2,764	1,687	57,297
Additions	535	8,765	690	-	9,990
Disposals	(32)	(9)	(7)	-	(48)
Depreciation	(1,055)	(6,585)	(649)	(360)	(8,649)
Effect of foreign exchange and others	891	(890)	(1)	-	-
Net book value as at December 31, 2019	17,680	36,786	2,797	1,327	58,590
As at December 31, 2018					
Cost	22,640	60,319	3,100	3,334	89,393
Accumulated depreciation	(5,299)	(24,814)	(336)	(1,647)	(32,096)
Net book value	17,341	35,505	2,764	1,687	57,297
As at December 31, 2019					
Cost	23,907	66,934	3,693	3,334	97,868
Accumulated depreciation	(6,227)	(30,148)	(896)	(2,007)	(39,278)
Net book value	17,680	36,786	2,797	1,327	58,590

As at December 31, 2019, property, plant and equipment that were not depreciated until ready for their intended use amounted to \$3,316 (2018 – \$5,042) (mainly production equipment).

Most of the property, plant and equipment are pledged as security for the revolving credit facility (Note 11).

7. Leases

Right-of-use assets

	Land and buildings	Production equipment	Office equipment and rolling stock	Total
	\$	\$	\$	\$
Net book value as at January 1, 2019 (Note 3)	6,342	454	356	7,152
Additions	-	187	185	372
Modification to lease contracts	-	(4)	-	(4)
Depreciation	(1,103)	(169)	(198)	(1,470)
Net book value as at December 31, 2019	5,239	468	343	6,050
As at December 31, 2019				
Cost	6,342	637	541	7,520
Accumulated depreciation	(1,103)	(169)	(198)	(1,470)
Net book value	5,239	468	343	6,050

Lease liabilities

	2019
	\$
Current portion	1,469
Non-current portion	4,767
Total lease liabilities as at December 31, 2019	6,236

Amounts recognised in profit or loss:

	2019
	\$
Interest on lease liabilities ⁽¹⁾	296
Expenses relating to short-term leases ⁽²⁾	114
Expenses relating to leases of low-value assets, excluding short-term leases of low-value assets ⁽²⁾	258

⁽¹⁾ Included in financial expenses.⁽²⁾ Included in cost of sales and selling, general and administrative expenses.**8. Intangible Assets**

	Technology	Software, intellectual property and development costs	Total
	\$	\$	\$
Net book value as at December 31, 2017	2,189	8,667	10,856
Additions	-	1,198	1,198
Disposals and others	-	(7)	(7)
Amortization	(219)	(629)	(848)
Net book value as at December 31, 2018	1,970	9,229	11,199
Additions	-	815	815
Disposals and others	-	(4)	(4)
Amortization	(219)	(801)	(1,020)
Net book value as at December 31, 2019	1,751	9,239	10,990
As at December 31, 2018			
Cost	2,189	12,103	14,292
Accumulated amortization	(219)	(2,874)	(3,093)
Net book value	1,970	9,229	11,199
As at December 31, 2019			
Cost	2,189	12,894	15,083
Accumulated amortization	(438)	(3,655)	(4,093)
Net book value	1,751	9,239	10,990

As at December 31, 2019, intangible assets that were not depreciated until ready for their intended use amounted to nil (2018 – \$5,814). The category of development costs which includes capitalized costs of \$10,625 (2018 - \$9,973), primarily consists of internally generated intangible assets.

5N PLUS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31

(in thousands of United States dollars, unless otherwise indicated)

9. Other Assets

	2019	2018
	\$	\$
Deferred costs	475	648
Other	699	756
Total other assets	1,174	1,404

10. Trade and Accrued Liabilities

	2019	2018
	\$	\$
Trade payables ⁽¹⁾	17,786	21,647
Accrued liabilities	14,280	17,602
Total trade and accrued liabilities	32,066	39,249

⁽¹⁾ In 2019, the Company proceeded with a reclassification of \$ 6,320 from other liabilities to trade payables following new agreement with a customer.

11. Bank Indebtedness and Long-Term Debt

a) Bank indebtedness

The Company has a Chinese renminbi (“RMB”) credit line with a financial institution in China. This credit line is guaranteed by certain assets of the Company in China. The credit line bears interest at RMB base rate plus 2%.

	2019		2018	
	Contractual Currency RMB	Reporting Currency US\$	Contractual Currency RMB	Reporting Currency US\$
Facility available	10,000	1,431	10,000	1,454
Amount drawn	-	-	-	-

b) Long-term debt

	2019	2018
	\$	\$
Senior secured revolving facility of \$79,000 with a syndicate of banks, maturing in April 2022 ⁽¹⁾	30,000	30,000
Unsecured subordinated term loan, maturing in March 2023 ⁽²⁾	25,000	-
Term loan, non-interest bearing, repayable under certain conditions, maturing in 2023. If the loan has not been repaid in full by the end of 2023, the balance will be forgiven ⁽³⁾	107	175
	55,107	30,175
Less current portion of long-term debt	107	175
	55,000	30,000

⁽¹⁾ In April 2018, the Company signed a senior secured multi-currency revolving credit facility of \$79,000 maturing in April 2022. At any time, the Company has the option to request that the credit facility be expanded through the exercise of an additional \$30,000 accordion feature, subject to review and approval by the lenders. This revolving credit facility can be drawn in US dollars, Canadian dollars or Hong Kong dollars (up to \$4,000). Drawings bear interest at either the Canadian prime rate, US base rate, Hong Kong base rate or LIBOR, plus a margin based on the Company's senior net debt to consolidated EBITDA ratio. Under the terms of its credit facility, the Company is required to satisfy certain restrictive covenants as to financial ratios. As at December 31, 2019, the Company has met all covenants.

⁽²⁾ In February 2019, the Company signed a five-year unsecured subordinated term loan with Investissement Québec. The loan was disbursed in two tranches: the first tranche of \$5,000 on February 6, 2019 and the second tranche of \$20,000 on March 22, 2019. The two tranches of the term loan bear interest equivalent to the 5-year US dollar swap rate plus a margin of 4.19%, which equals to 6.82% and 6.64% respectively. Under the terms of the loan, the Company is required to satisfy certain restrictive covenants as to financial ratios. As at December 31, 2019, the Company has met all covenants.

⁽³⁾ The term loan is classified as short-term debt since these amounts could become payable on demand.

12. Convertible Debentures

In June 2014, the Company issued convertible unsecured subordinated debentures for CA\$60,000 (US\$55,266) and an additional over-allotment option for CA\$6,000 (US\$5,580) for a total of CA\$66,000 (US\$60,846). The convertible unsecured subordinated debentures bore interest at a rate of 5.75% per annum, payable semi-annually on June 30 and December 31, commencing on December 31, 2014. The convertible debentures were convertible at the holder's option into the Company's common shares at a conversion price of CA\$6.75 per share, representing a conversion rate of 148.1 common shares per CA\$1,000 principal amount of convertible debentures. The convertible debentures matured on June 30, 2019 and could have been redeemed by the Company, in certain circumstances, after June 30, 2017.

The debenture conversion option was recorded as a derivative liability (Note 16). In accordance with IFRS, an obligation to issue shares for a price that is not fixed in the Company's functional currency must be classified as a derivative liability and measured at fair value, with changes recognized in change in fair value of debenture conversion option in the consolidated statement of earnings.

The fair value of the debenture conversion option, which consists of the holder's conversion option subject to the Company's early redemption options, was estimated based on a methodology for pricing convertible bonds using an approach based on partial differential equations or binomial lattices, with the following assumptions: average expected volatility of 40%; expected dividend per share of nil; entity-specific credit spread, and expected life of 5 years. As a result, the initial fair value of the liability representing the debenture conversion option for the two tranches of the issuance of the debenture was estimated at CA\$10,484 (US\$9,666). Assumptions were reviewed in the valuation as at December 31, 2018 and have not changed substantially. On December 7, 2015, the Company entered into a cross-currency swap to hedge the convertible debenture denominated in Canadian dollars to US dollars (Note 16).

Redemption on June 28, 2018

The Company partially redeemed its 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019 for an aggregate principal amount of CA\$40,000. On the same date, the Company completed a drawdown on its senior revolving credit facility of \$30,000 to partially redeem the debentures on favorable terms reducing the current cost of gross debt.

Consequently, the Company de-designated CA\$40,000 of the nominal amount of the associated cross-currency swap and reclassified the net gain of \$79, representing the accumulated net changes in cash flow hedges, from accumulated other comprehensive loss to realized gain on de-designation during 2018 as the related anticipated cash flows are no longer expected to occur.

Following the early redemption of the CA\$40,000 convertible debentures, an accelerated imputed interest of \$1,490 was recognized as an expense in 2018.

Redemption on March 28, 2019

The Company redeemed all its outstanding 5.75% convertible unsecured subordinated debentures maturing on June 30, 2019 for an aggregate principal amount of CA\$26,000. On March 22, 2019 the Company completed the withdrawal of the second tranche of its new term loan in the amount of \$20,000 to redeem the outstanding debentures. As at December 31, 2019, there were no outstanding convertible debentures.

Consequently, the Company de-designated the remaining nominal amount of the associated cross-currency swap of CA\$26,000 and reclassified the net loss of \$145, representing the accumulated net changes in cash flow hedges, from accumulated other comprehensive loss to realized loss on de-designation within the consolidated statement of earnings.

Following the redemption of the CA\$26,000 convertible debentures, an accelerated imputed interest of \$267 was recognized as an expense in 2019.

13. Employee Benefit Plan Obligation

The Company operates a defined pension plan in Germany based on employee pensionable earnings and length of service. Former general and senior managers had been provided with direct benefit commitments. Employees had been provided with indirect benefit commitments via the Unterstützungseinrichtung der HEK GmbH e.V. Such promises had been made for employees with entry date of December 31, 1993 or earlier.

	2019	2018
	\$	\$
Present value of unfunded obligations	15,398	14,619

Movement in the defined benefit obligation is as follows:

	2019	2018
	\$	\$
Beginning of year	14,619	15,396
Current service cost	86	88
Interest cost	265	282
Effect of foreign exchange	(277)	(687)
Benefits paid	(664)	(660)
Actuarial losses	1,369	200
End of year	15,398	14,619

The principal actuarial assumptions as at December 31 were as follows:

	2019	2018
Discount rate	1.2%	1.9%
Salary growth rate	2.0%	2.0%
Pension growth rate	1.8%	1.8%

Assumptions regarding mortality are based on mortality tables "Richttafeln 2018 G" by Prof. Dr. Klaus Heubeck as biometrical basis in accordance with age of earliest retirement by law *RV-Altersgrenzenanpassungsgesetz*, dated April 20, 2007.

The sensitivity of the defined benefit obligation to changes in assumptions is set out below. The effects on each plan of a change in an assumption are weighted proportionately to the total plan obligations to determine the total impact for each assumption presented.

	Impact on defined benefit obligation		
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.50%	(6.49%)	7.26%
Salary growth rate	0.50%	0.49%	(0.48%)
Pension growth rate	0.50%	6.02%	(5.51%)
		Increase by 1 year in assumption	Decrease by 1 year in assumption
Life expectancy		4.42%	(3.88%)

The weighted average duration of the defined benefit obligation is 13.67 years (2018 – 13.20 years).

Expected maturity analysis of undiscounted pension liability:

	2019	2018
	\$	\$
Less than a year	695	668
Between 1 and 5 years	2,795	2,772
Over 5 years	14,824	15,774
Total	18,314	19,214

Expected contributions to pension benefit plans for year ending December 31, 2020 are \$695.

14. Other Liabilities

	Deferred revenues	Other	Total
	\$	\$	\$
As at December 31, 2017	6,210	226	6,436
Additions	120	-	120
Utilized	-	(11)	(11)
As at December 31, 2018	6,330	215	6,545
Reclassification to trade and accrued liabilities (Note 10)	(6,320)	-	(6,320)
Utilized	(10)	(20)	(30)
As at December 31, 2019	-	195	195

15. Income Taxes

	2019	2018
	\$	\$
Current tax:		
Current tax for the year	2,571	3,723
Adjustment in respect of prior years' estimates	(384)	(2,875)
Total current tax	2,187	848
Deferred tax:		
Recognition and reversal of temporary differences	402	(125)
Recognition of previously unrecorded tax assets	(541)	(1,609)
Adjustment in respect of prior years' estimates	-	830
Total deferred tax	(139)	(904)
Income tax expense (recovery)	2,048	(56)

A reconciliation of income taxes at Canadian statutory rates with the reported income taxes is as follows:

	2019	2018
	\$	\$
Earnings before income tax	3,833	13,916
Canadian statutory income tax rates	26.6%	26.7%
Income tax on earnings at Canadian statutory rate	1,020	3,716
Increase (decrease) resulting from:		
Unrecorded losses carried forward	1,013	(258)
Recognition of previously unrecorded tax assets	(541)	(1,609)
Non-deductible expense (non-taxable gain) for tax purposes	428	217
Non-deductible (non-taxable) foreign exchange	451	(205)
Effect of difference of foreign tax rates compared to Canadian tax	81	135
Adjustment in respect of prior years' estimates	(384)	(2,045)
Other	(20)	(7)
Income tax expense (recovery)	2,048	(56)

The Company's applicable tax rate is the Canadian combined rates applicable in the jurisdiction in which the Company operates.

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The movement in deferred income tax assets and liabilities during the year, without taking into consideration the offsetting of balances within the same jurisdiction, is as follows:

Deferred tax assets	Property, plant and equipment	Inventories	Intangible assets	Loss carry forward	Retirement benefit obligation	Others	Total	Offset by jurisdiction	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$
As at December 31, 2017	2,004	1,957	620	1,469	3,041	2,311	11,402	(4,511)	6,891
(Charged) credited to consolidated statements of earnings	(883)	(755)	(313)	1,523	502	(534)	(460)		
Credited to comprehensive income	-	-	-	-	63	-	63		
As at December 31, 2018	1,121	1,202	307	2,992	3,606	1,777	11,005	(3,133)	7,872
(Charged) credited to consolidated statements of earnings	246	(415)	-	143	(180)	(745)	(951)		
Credited to comprehensive income	-	-	-	-	432	-	432		
As at December 31, 2019	1,367	787	307	3,135	3,858	1,032	10,486	(2,061)	8,425

Deferred tax liabilities	Property, plant and equipment	Inventories	Intangible assets	Convertible debentures	Others	Total	Offset by jurisdiction	Total
	\$	\$	\$	\$	\$	\$	\$	\$
As at December 31, 2017	1,031	75	873	2,717	66	4,762	(4,511)	251
Charged (credited) to consolidated statements of earnings	747	64	(295)	(1,956)	76	(1,364)		
Charged to comprehensive income	-	-	-	1	-	1		
As at December 31, 2018	1,778	139	578	762	142	3,399	(3,133)	266
Charged (credited) to consolidated statements of earnings	(285)	(47)	(12)	(783)	37	(1,090)		
Charged to comprehensive income	-	-	-	21	-	21		
As at December 31, 2019	1,493	92	566	-	179	2,330	(2,061)	269

Movement in the deferred income tax amounts is as follows:

	2019	2018
	\$	\$
Beginning of year	7,606	6,640
Tax charge relating to components of other comprehensive income	411	62
Credited to consolidated statement of earnings	139	904
End of year	8,156	7,606

Deferred tax assets of \$3,488 (2018 – \$2,927), included in the consolidated statements of financial position, are dependent on projection of future taxable profits for entities that have suffered a loss in the current period.

Deferred income tax liabilities have not been recognized for the withholding tax and taxes that would be payable on the unremitted earnings of certain subsidiaries. Such amounts are permanently reinvested. Unremitted earnings totalled \$25,793 as at December 31, 2019 (2018 - \$16,343).

As at December 31, 2019, the Company had the following operating tax losses available for carry forward for which no deferred tax benefit has been recorded in the accounts:

	\$	Expiry
United Kingdom	3,170	No limit
Belgium	41,765	No limit
United States	31,675	No limit
Hong Kong	14,144	No limit
China	3,976	2020-2024

As at December 31, 2019, the Company had other deductible temporary differences of \$329 for which no deferred tax benefit has been recorded (2018 – \$425).

16. Fair Value of Financial Instruments

The fair value of a financial instrument is determined by reference to the available market information at the reporting date. When no active market exists for a financial instrument, the Company determines the fair value of that instrument based on valuation methodologies as discussed below. In determining assumptions required under a valuation model, the Company primarily uses external, readily observable market data inputs. Assumptions or inputs that are not based on observable market data incorporate the Company's best estimates of market participant assumptions, and are used when external data is not available. Counterparty credit risk and the Company's own credit risk are taken into account in estimating the fair value of all financial assets and financial liabilities.

The following assumptions and valuation methodologies have been used to measure fair value of financial instruments:

- The fair value of its short-term financial assets and financial liabilities, including cash and cash equivalents, accounts receivable and trade and accrued liabilities approximates their carrying value due to the short-term maturities of these instruments;
- The fair value of derivative instruments, which include cross-currency swap and the equity swap agreement, is calculated as the present value of the estimated future cash flows using an appropriate interest rate yield curve, foreign exchange rate and the stock price. Assumptions are based on market conditions prevailing at each reporting date. Derivative instrument reflect the estimated amount that the Company would receive or pay to settle the contracts at the reporting date;
- The fair value of the debenture conversion option is described in Note 12;
- The fair value of long-term debt is estimated based on discounted cash flows using current interest rate for instruments with similar terms and remaining maturities; and
- The fair value of the convertible debentures is based on quoted prices observed in active markets.

The carrying values and fair values of financial instruments, by class, are as follows as at December 31, 2019 and 2018:

As at December 31, 2019					Carrying value	Fair value
	At fair value through profit or loss	At amortized cost	Financial liabilities at amortized cost	Derivative designated in a hedge relationship	Total	Total
	\$	\$	\$	\$	\$	\$
Financial assets						
Cash and cash equivalents	-	20,065	-	-	20,065	20,065
Accounts receivable	-	28,477	-	-	28,477	28,477
Other current assets	4,862	-	-	-	4,862	4,862
Total	4,862	48,542	-	-	53,404	53,404
Financial liabilities						
Trade and accrued liabilities	-	-	32,066	-	32,066	32,066
Current portion of long-term debt	-	-	107	-	107	107
Long-term debt	-	-	55,000	-	55,000	55,000
Total	-	-	87,173	-	87,173	87,173

As at December 31, 2018					Carrying value	Fair value
	At fair value through profit or loss	At amortized cost	Financial liabilities at amortized cost	Derivative designated in a hedge relationship	Total	Total
	\$	\$	\$	\$	\$	\$
Financial assets						
Cash and cash equivalents	-	26,724	-	-	26,724	26,724
Accounts receivable	-	22,984	-	-	22,984	22,984
Other current assets	5,835	-	-	-	5,835	5,835
Total	5,835	49,708	-	-	55,543	55,543
Financial liabilities						
Trade and accrued liabilities	-	-	39,249	-	39,249	39,249
Derivative financial liabilities	-	-	-	197	197	197
Current portion of long-term debt	-	-	175	-	175	175
Current portion of convertible debentures	-	-	18,571	-	18,571	19,062
Long-term debt	-	-	30,000	-	30,000	30,000
Total	-	-	87,995	197	88,192	88,683

Fair value hierarchy

The fair value hierarchy reflects the significance of the inputs used in making the measurements and has the following levels:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The following table presents the financial instruments, by level, which are recognized at fair value in the consolidated statements of financial position:

As at December 31, 2019	Level 1	Level 2	Level 3
	\$	\$	\$
Financial assets (liabilities)			
At fair value through profit or loss			
Equity swap agreement (Note 21) ⁽¹⁾	-	4,862	-
Total	-	4,862	-

As at December 31, 2018	Level 1	Level 2	Level 3
	\$	\$	\$
Financial assets (liabilities)			
At fair value through profit or loss			
Equity swap agreement (Note 21) ⁽¹⁾	-	5,835	-
Derivatives designated in a hedge relationship			
Cross-currency swap ⁽²⁾	-	(197)	-
Total	-	5,638	-

⁽¹⁾ In June 2017, the Company has entered into a swap agreement with a major Canadian financial institution to reduce its income exposure to fluctuations in its share price relating to the DSU, PSU, RSU and SAR programs. Pursuant to the agreement, the Company receives the economic benefit of share price appreciation while providing payments to the financial institution for the institution's cost of funds and any share price depreciation. The net effect of the equity swaps partly offset movements in the Company's share price impacting the cost of the DSU, PSU, RSU and SAR programs. As at December 31, 2019, the equity swap agreement covered 2,571,569 common shares of the Company. The fair value of this indexed deposit is recorded under other current assets.

⁽²⁾ On December 7, 2015, the Company entered into a cross-currency swap to hedge the convertible debenture denominated in Canadian dollars with a notional amount of CA\$66,000 and bearing interest at a rate of 5.75% per annum, payable semi-annually on June 30 and December 31. Under this cross-currency swap, the Company exchanged interest payments and principal redemption on the same terms and designated the cross-currency as a cash flow hedge of the variability of the \$US functional currency equivalent cash flows on the debt. The terms were such that on each interest payment date, the Company received 5.75% on a notional of CA\$66,000 and paid 6.485% based on a notional of US\$48,889.

On June 28, 2018, following the partial redemption of the convertible debentures, the Company de-designated and settled CA\$40,000 of the nominal amount of the associated cross-currency swap.

On March 28, 2019, following the complete redemption of the convertible debentures, the Company de-designated the remaining nominal amount of the associated cross-currency swap of CA\$26,000CA. (Note 12)

17. Operating Segments

The following tables summarize the information reviewed by the entity's chief operating decision maker when measuring performance:

	2019	2018
	\$	\$
Eco-Friendly Materials	114,690	136,981
Electronic Materials	81,281	81,014
Total revenue	195,971	217,995
Eco-Friendly Materials	10,993	12,517
Electronic Materials	19,581	29,226
Corporate and unallocated	(8,624)	(9,393)
Adjusted EBITDA⁽¹⁾	21,950	32,350
Interest on long-term debt, imputed interest and other interest expense	4,079	6,295
Share-based compensation expense	2,583	3,298
Litigation and restructuring costs (Note 26)	-	316
Foreign exchange and derivative loss	316	225
Gain on disposal of property, plant and equipment	-	(510)
Depreciation and amortizations	11,139	8,810
Earnings before income tax	3,833	13,916

⁽¹⁾ Earnings before income tax, depreciation and amortization, share-based compensation expense, gain on disposal of property, plant and equipment, litigation and restructuring costs (income) and financial expense (revenues).

	2019	2018
Capital expenditures	\$	\$
Eco-Friendly Materials	5,284	4,850
Electronic Materials	4,000	5,248
Corporate and unallocated	163	-
Total	9,447	10,098

	2019	2018
Assets excluding the deferred tax asset	\$	\$
Eco-Friendly Materials	90,771	96,856
Electronic Materials	112,023	113,995
Corporate and unallocated	18,723	18,334
Total	221,517	229,185

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The geographic distribution of the Company's revenues based on the location of the customers for the years ended December 31, 2019 and 2018, and the identifiable non-current assets as at December 31, 2019 and 2018 are summarized as follows:

Revenues	2019	2018
	\$	\$
Asia		
China	6,305	5,592
Japan	3,361	4,590
Other ⁽¹⁾	44,063	52,015
Americas		
United States	53,220	50,751
Other	13,446	19,083
Europe		
Germany	22,300	29,097
France	6,600	7,691
United Kingdom	3,955	4,805
Other ⁽¹⁾	35,871	37,110
Other	6,850	7,261
Total	195,971	217,995

Non-current assets (other than deferred tax assets)	2019	2018
	\$	\$
Asia ⁽¹⁾	15,447	15,942
United States	15,159	9,896
Canada	18,119	18,543
Europe		
Belgium	9,796	8,159
Germany	18,283	17,360
Total	76,804	69,900

⁽¹⁾ None exceeding 10%

For the year ended December 31, 2019, one customer represented approximately 24 % (2018 – 22%) of the revenues, and is included in the Electronic Materials revenues.

18. Supplemental Cash Flow Information

a) Net change in non-cash working capital balances related to operations consists of the following:

	2019	2018
	\$	\$
Decrease (increase) in assets:		
Accounts receivable	(5,516)	2,684
Inventories	13,522	(6,242)
Income tax receivable	(542)	1,254
Other current assets	(582)	796
(Decrease) increase in liabilities:		
Trade and accrued liabilities	(15,567)	(21,333)
Income tax payable	(4,358)	(3,607)
Net change	(13,043)	(26,448)

b) The reconciliation of assets/liabilities arising from financing activities consists of the following:

	December 31		Non-Cash changes				December 31
	2018	Cash flows	Imputed interest	Foreign exchange movement	Fair value changes	Non-cash working capital	
	\$	\$	\$	\$	\$	\$	\$
Long-term debt	30,175	24,925	-	7	-	-	55,107
Convertible debenture ⁽¹⁾	18,571	(19,259)	496	192	-	-	-
Cross-currency swap ⁽¹⁾	197	-	-	-	(197)	-	-
Lease liabilities	-	(1,605)	296	41	-	7,504 ⁽²⁾	6,236
Deferred revenues	6,330	-	-	-	-	(6,330)	-
Total net liabilities from financing liabilities	55,273	4,061	792	240	(197)	1,174	61,343

	December 31		Non-Cash changes				December 31
	2017	Cash flows	Imputed interest	Foreign exchange movement	Fair value changes	December 31	
	\$	\$	\$	\$	\$	\$	\$
Long-term debt	271	29,922	-	-	(18)	-	30,175
Convertible debenture ⁽¹⁾	48,768	(29,714)	3,146	(3,629)	-	-	18,571
Cross-currency swap ⁽¹⁾	(3,602)	-	-	-	-	3,799	197
Deferred revenues	6,210	120	-	-	-	-	6,330
Total net liabilities from financing liabilities	51,647	328	3,146	(3,647)	3,799	3,799	55,273

⁽¹⁾ Interest settlement were reflected as cash flows from operating activities in the consolidated statements of cash flows.

⁽²⁾ Included an amount of \$7,152 following the adoption of the new standard IFRS 16 as at January 1, 2019 (Note 3).

c) The consolidated statements of cash flows exclude or include the following transactions:

	2019	2018
	\$	\$
Excluded additions unpaid at end of the year: Additions to property, plant and equipment	1,012	469
Included additions unpaid at beginning of year: Additions to property, plant and equipment	469	1,050
Excluded a reclassification from other liabilities to trade and accrued liabilities following new agreement with a customer (Notes 10 and 14)	6,320	-
Excluded adjustment recognized on adoption of IFRS 16: Adjustment to right-of-use assets (Note 3)	7,152	-

19. Share Capital

Authorized:

- An unlimited number of common shares, participating, with no par value, entitling the holder to one vote per share; and
- An unlimited number of preferred shares, issuable in one or more series with specific terms, privileges and restrictions to be determined for each class by the Board of Directors. As at December 31, 2019 and 2018, no preferred shares were issued.

On February 11, 2019, the Company's shareholders approved a special resolution by which the stated capital of the common shares of the Company be reduced to \$5,000 and the amount of the reduction be added to the contributed surplus of the Company pursuant to Section 38(1) of the *Canada Business Corporation Act* (the "Stated Capital Reduction"). Therefore, the share capital was reduced, and the contributed surplus was increased by the amount of \$338,478. No change in shareholders' equity resulted by this transaction.

On February 27, 2019, the TSX has approved the Company's normal course issuer bid. Under this normal course issuer bid, the Company has the right to purchase for cancellation, from March 1, 2019 to February 29, 2020, a maximum of 3,515,926 common shares.

In 2019, the Company had repurchased and cancelled 1,696,733 common shares at an average price of \$2.35 for a total amount of \$3,990. An amount of \$101 has been applied against share capital, and an amount of \$3,889 has been applied against the deficit.

20. Earnings per Share

The following table reconciles the numerators and denominators used for the computation of basic and diluted earnings per share:

Numerators	2019	2018
	\$	\$
Net earnings attributable to equity holders of 5N Plus	1,785	13,972
Net earnings for the year	1,785	13,972
Denominators	2019	2018
Basic weighted average number of shares	83,777,410	84,243,976
Dilutive effect:		
Stock options	181,689	446,764
Diluted weighted average number of shares	83,959,099	84,690,740

As at December 31, 2019, a total number of 391,791 stock options was excluded from the diluted weighted average number of shares due to their anti-dilutive effect because of the Company's stock price.

As at December 31, 2018, a total number of 379,291 stock options was excluded from the diluted weighted average number of shares due to their anti-dilutive effect because of the Company's stock price. The same applies to the convertible debentures.

21. Share-Based Compensation

Restricted Share Unit Plan

On June 7, 2010, the Company adopted a Restricted Share Unit ("RSU") Plan (the "Old RSU Plan") to complement the stock option plan. Minor amendments to the Old RSU Plan were adopted by the Board of Directors in May 2013. However, on November 4, 2015, the Board of Directors terminated the Old RSU Plan and replaced it with the New RSU & PSU Plan (as defined hereinafter), thus no additional RSUs shall be credited to the accounts of participants under the Old RSU Plan. Only previously granted RSUs shall continue to vest and be settled as per the terms of the Old RSU Plan. The Old RSU Plan enabled the Company to award to eligible participants phantom share units that vest after a three-year period. The RSU is settled in cash and is recorded as a liability. The measurement of the compensation expense and corresponding liability for these awards is based on the fair value of the award, and is recorded as an expense over the vesting period of 3 years. At the end of each financial period, changes in the Company's payment obligation due to changes in the market value of the common shares on the TSX are recorded as an expense.

As at December 31, 2019, nil RSUs were outstanding (2018 – nil). For the year ended December 31, 2018, the Company granted nil RSUs, 215,167 of RSUs were paid and 833 RSUs were forfeited.

Restricted Share Unit and Performance Share Unit Plan

On November 4, 2015, the Company adopted a new Restricted Share Unit ("RSU") and Performance Share Unit ("PSU") Plan (the "New RSU & PSU Plan") to replace the Old RSU Plan, for the purpose of enhancing the Company's ability to attract and retain talented individuals to serve as employees, officers and executives of the Company and its affiliates and promoting a greater alignment of interests between such employees, officers and executives and the shareholders of the Company. The New RSU & PSU Plan enables the Company to award eligible participants: (i) phantom RSUs that vest no later than three years following the grant date; and (ii) phantom PSUs that vest after certain periods of time, not exceeding three years, and subject to the achievement of certain performance criteria as determined by the Board of Directors. Such plan provides for the settlement of RSUs and PSUs through either cash or the issuance of common shares of the Company from treasury, for an amount equivalent to the volume weighted average of the trading price of the common shares of the Company on the TSX for the five trading days immediately preceding the applicable RSU vesting determination date or PSU vesting determination date.

In the case of a participant's termination by the Company for cause or as a result of a voluntary resignation by the participant before the end of a performance cycle, all RSUs and PSUs will be forfeited immediately as of the date on which the participant is advised of his termination or resigns.

In the case of a participant's termination by the Company other than for cause, if such participant is deemed to be on long-term disability or if such participant retires before the end of a performance cycle, the number of RSUs which will vest at such event will be pro-rated based on the number of months worked at the end of the performance cycle and all PSUs will be forfeited immediately.

In the case of a participant's death before the end of a performance cycle, the number of RSUs which will vest will be pro-rated based on the number of months worked at the end of the fiscal year preceding the participant's death and all PSUs will be forfeited immediately.

The maximum number of common shares which may be issued under the New RSU & PSU Plan is 5,000,000. Common shares in respect of RSUs or PSUs to be settled through the issuance of common shares but that have been forfeited, cancelled or settled in cash shall be available for RSUs or PSUs to be granted thereafter pursuant to this plan. No RSUs or PSUs to be settled through the issuance of common shares may be granted to any participant unless the number of common shares: (a) issued to "Insiders" within any one-year period; and (b) issuable to "Insiders" at any time, under the plan, or when combined with all of the Company's other security-based compensation arrangements, could not exceed 10% of the total number of issued and outstanding common shares, respectively.

For the year ended December 31, 2019, the Company granted 248,543 New RSUs (2018 – 393,897), 1,157,099 New RSUs were paid (2018 – 28,361) and 81,042 New RSUs were forfeited (2018 – 67,370). As at December 31, 2019, 864,428 New RSUs were outstanding (2018 – 1,854,026).

For the year ended December 31, 2019, the Company granted 430,000 PSUs (2018 – nil) and 166,667 PSUs were paid (2018 – nil). As at December 31, 2019, 763,333 PSUs were outstanding (2018 – 500,000).

Stock Appreciation Rights Plan

On June 7, 2010, the Company adopted a Restricted Share Unit for Foreign Employees Plan (the “RSUFE Plan”) which was slightly amended on November 7, 2012 by the Company to become the Stock Appreciation Rights plan (the “SAR Plan”) which replaced the RSUFE Plan. The SAR Plan enables the Company to award eligible participants phantom stock options to foreign directors, officers and employees. SARs usually have a six-year term and vest equally over a four-year period at an annual rate of 25% per year beginning one year following the SARs grant date. The amount of cash payout is equal to the sum of the positive differences between the volume weighted average trading price of the common shares of the Company on the TSX in the last twenty (20) trading days immediately preceding the exercise date and the grant price of each SAR redeemed.

At the end of each financial period, changes in the Company’s payment obligations due to changes in the market value of the common shares on the TSX are recorded as an expense. For the year ended December 31, 2019, the Company granted 177,849 SARs (2018 – 223,762), 31,651 of SARs were paid (2018 – 46,500), 15,000 SARs were expired (2018 – 14,995) and 67,502 SARs were forfeited (2018 – 106,500). As at December 31, 2019, 842,158 SARs were outstanding (2018 – 778,462).

Deferred Share Unit Plan

On May 7, 2014, the Company adopted a Deferred Share Unit (“DSU”) Plan (the “DSU Plan”) which enables the Company to provide Board directors and key officers and employees designated by the Board with phantom share units to enhance the Company’s ability to attract and retain individuals with the right combination of skills and experience to serve on the Company’s Board or as Company’s executives. DSUs vest entirely at their date of grant (with the exception of the 400,000 DSUs granted to the Company’s CEO on March 2, 2016 which vested on March 2, 2019) and become payable in cash upon termination of services of a director, designated officer or employee with the Company. The amount of cash payout is equal to the volume weighted average trading price of the common shares of the Company on the TSX of the twenty (20) trading days immediately preceding the date of payment of the DSU. For the year ended December 31, 2019, the Company granted 529,985 DSUs (2018 – 199,823) and nil DSUs were paid (2018 – nil). As at December 31, 2019, 2,034,380 DSUs were outstanding (2018 – 1,504,395).

Stock Option Plan

On April 11, 2011, the Company adopted a new stock option plan replacing the previous plan (the “Old Plan”), in place since October 2007, with the same features as the Old Plan with the exception of a maximum number of options granted which cannot exceed 5,000,000. The aggregate number of shares which could be issued upon the exercise of options granted under the Old Plan could not exceed 10% of the issued shares of the Company at the time of granting the options. Options granted under the Stock Option Plan may be exercised during a period not exceeding ten years from the date of grant. The stock options outstanding as at December 31, 2019 may be exercised during a period not exceeding six years from their date of grant. Options vest at a rate of 25% (100% for directors) per year, beginning one year following the grant date of the options. Any unexercised options will expire one month after the date a beneficiary ceases to be an employee, director or officer and one year for retired directors.

The following table presents information concerning all outstanding stock options:

	2019		2018	
	Number of options	Weighted average exercise price	Number of options	Weighted average Exercise price
Outstanding, beginning of year	1,490,541	CA\$ 2.32	2,224,747	CA\$ 2.20
Granted	123,016	3.43	143,335	2.71
Exercised	(488,500)	1.98	(708,750)	1.92
Forfeited	(193,016)	2.61	(137,704)	2.54
Expired	-	-	(31,087)	3.61
Outstanding, end of year	932,041	2.58	1,490,541	2.32
Exercisable, end of year	632,360	2.65	726,750	2.75

The outstanding stock options as at December 31, 2019 are as follows:

	Exercise price		Number of options	
	Low	High	Exercisable	Outstanding
March to August 2020	CA\$ 3.33	CA\$ 4.29	212,000	212,000
March 2021	2.40	2.40	124,500	124,500
March 2022	1.65	1.65	202,500	258,750
February 2023	1.75	1.75	68,000	157,000
February 2024	2.71	2.71	25,360	95,271
March 2025	3.43	3.43	-	84,520
			632,360	932,041

The fair value of stock options at the grant date was measured using the Black-Scholes option pricing model. The historical share price of the Company's common shares is used to estimate expected volatility, and government bond rates are used to estimate the risk-free interest rate.

The following table illustrates the inputs used in the average measurement of the fair values of the stock options at the grant date granted during the years ended December 31, 2019 and 2018:

	2019	2018
Expected stock price volatility	48%	53%
Dividend	None	None
Risk-free interest rate	1.81%	2.03%
Expected option life	4 years	4 years
Fair value – weighted average of options issued	CA\$1.35	CA\$1.16

The following table shows the share-based compensation expense recorded in the consolidated statements of earnings for the years ended December 31, 2019 and 2018:

Expense	2019	2018
	\$	\$
RSUs	759	1,395
PSUs	495	575
SARs	(49)	241
DSUs	(23)	866
Stock options	152	345
Equity swap	1,249	(124)
Total	2,583	3,298

5N PLUS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31

(in thousands of United States dollars, unless otherwise indicated)

In June 2017, the Company entered into an equity swap agreement to reduce its earnings exposure on the fluctuation in the Company's share price since this has an effect on the evaluation of the DSU, PSU, RSU and SAR plans. The fair value of this indexed deposit is recorded under other current assets. Any further change in the fair value is recorded against the share-based compensation expense (Note 16).

The following amounts were recorded:

Liability	2019	2018
	\$	\$
RSUs	1,040	3,144
PSUs	1,109	995
SARs	560	585
DSUs	3,515	3,369
Total	6,224	8,093
Intrinsic value of vested units	4,599	4,064

22. Commitments and Contingencies**Commitments**

As at December 31, 2019, in the normal course of business, the Company contracted letters of credit for an amount of \$430 (2018 – \$422).

Contingencies

In the normal course of operations, the Company is exposed to events that could give rise to contingent liabilities or assets. As at the date of issue of the consolidated financial statements, the Company was not aware of any significant events that would have a material effect on its consolidated financial statements.

23. Related Party Transactions

The Company's related parties are its directors and executive members.

Unless otherwise stated, none of the transactions incorporated special terms and conditions and no guarantees were given or received. Outstanding balances are settled in cash.

Key management compensation

Key management includes directors (executive and non-executive) and certain senior management. The compensation expense paid or payable to key management for employee services is as follows:

	2019	2018
	\$	\$
Wages and salaries	2,121	3,148
Share-based compensation and others	1,153	3,503
Total	3,274	6,651

24. Financial Risk Management

In the normal course of operations, the Company is exposed to various financial risks. These risk factors include market risk (foreign currency risk, interest rate risk and other price risk), credit risk and liquidity risk.

Market risk

Market risk is the risk that changes in market price, such as foreign exchange rates, equity prices and interest rates, will affect the Company's net earnings or the value of financial instruments.

The objective of market risk management is to mitigate exposures within acceptable limits, while maximizing returns.

a) Foreign currency risk

Foreign currency risk is defined as the Company's exposure to a gain or a loss in the value of its financial instruments as a result of fluctuations in foreign exchange rates. The Company is exposed to foreign exchange rate variability primarily in relation to certain sale commitments, expected purchase transactions, certain local operating expenses and debt denominated in a foreign currency. In addition, these operations have exposure to foreign exchange rates primarily through cash and cash equivalents and other working capital accounts denominated in currencies other than their functional currencies.

The following table summarizes in US dollar equivalents the Company's major currency exposures as at December 31, 2019:

	2019					
	CA	EUR	GBP	RMB	MYR	Other
	\$	\$	\$	\$	\$	\$
Cash and cash equivalents	605	3,122	1,136	724	161	59
Accounts receivable	1,007	6,558	-	1,315	3	251
Other current assets	4,862	-	-	-	-	-
Trade and accrued liabilities	(9,202)	(7,496)	(65)	(62)	(242)	(411)
Long-term debt	(107)	-	-	-	-	-
Lease liabilities	(756)	(746)	-	-	(25)	(93)
Net financial assets (liabilities)	(3,591)	1,438	1,071	1,977	(103)	(194)

The following table shows the impact on earnings before income tax of a five-percentage point strengthening or weakening of foreign currencies against the US dollar as at December 31, 2019 for the Company's financial instruments denominated in non-functional currencies:

	CA	EUR	GBP	RMB	MYR	Other
	\$	\$	\$	\$	\$	\$
5% Strengthening	(180)	72	54	99	(5)	(10)
5% Weakening	180	(72)	(54)	(99)	5	10

The Company will occasionally enter into foreign exchange forward contracts to sell US dollars in exchange for Canadian dollars and Euros. These contracts would hedge a portion of ongoing foreign exchange risk on the Company's cash flows since much of its non-US dollar expenses are incurred in Canadian dollars and Euros. The Company may also enter into foreign exchange contracts to sell Euros for US dollars. As at December 31, 2019, the Company has no foreign exchange contracts outstanding.

b) Interest rate risk

Interest rate risk refers to the risk that future cash flows will fluctuate as a result of changes in market interest rates. The Company's policy is to limit its exposure to interest rate risk fluctuation by ensuring that a reasonable portion of its current portion and long-term debt, made of subordinated debts at fixed rate. The Company is exposed to interest rate fluctuations on its revolving credit facility, which bears a floating interest rate. A 1% increase/decrease in interest rates would have an impact of approximately \$300 on the Company's net earnings on a twelve-month horizon based on the balance outstanding on December 31, 2019.

c) Other price risk

Other price risk is the risk that fair value or future cash flows will fluctuate because of changes in market prices, other than those arising from interest rate risk or currency risk.

Credit risk

Credit risk refers to the possibility that a customer or counterparty will fail to fulfill its obligations under a contract and, as a result, create a financial loss for the Company. The Company has a credit policy that defines standard credit practice. This policy dictates that all new customer accounts be reviewed prior to approval and establishes the maximum amount of credit exposure per customer. The creditworthiness and financial well-being of the customer are monitored on an ongoing basis.

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

The expected loss rates are based on the Company's historical credit losses experienced over the three-year period prior to the period end. The historical loss rates are then adjusted for current and forward-looking information on macroeconomic factors affecting the Company's customers.

As at December 31, 2019, the lifetime expected loss allowance for trade receivables was determined as follows:

				2019
	Current	More than 30 days past due	More than 60 days past due	Total
Expected loss rate	-	1.9%	7.5%	
Gross carrying amount	20,475	3,679	683	24,837
Loss allowance	-	69	51	120

The following table summarizes the changes in the loss allowance for trade receivables:

	2019	2018
	\$	\$
Beginning of year	97	126
Increase during the year	26	26
Trade receivables written off during the year as uncollectible	(3)	-
Unused amounts reversed	-	(55)
End of year	120	97

The loss allowance is included in selling, general and administrative expenses in the consolidated statement of earnings, and is net of any recoveries that were provided for in prior periods.

Amounts charged to the loss allowance account are generally written off when there is no reasonable expectation of recovery.

Counterparties to financial instruments may also expose the Company to credit losses in the event of non-performance. Counterparties for derivative and cash transactions are limited to high credit quality financial institutions, which are monitored on an ongoing basis. Counterparty credit assessments are based on the financial health of the institutions and their credit ratings from external agencies, therefore no impairment loss was identified as at December 31, 2019.

Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The Company manages liquidity risk through the management of its capital structure. It also manages liquidity risk by continually monitoring actual and projected cash flows, taking into account the Company's sales and receipts and matching the maturity profile of financial assets and financial liabilities. The Board of Directors reviews and approves the Company's annual operating and capital budgets as well as any material transactions out of the ordinary course of business, including proposals on acquisitions and other major investments.

The following table reflects the contractual maturity of the Company's financial liabilities as at December 31, 2019:

							2019
	Carrying amount	1 year	2 years	3 years	4 years	Over 5 years	Total
	\$	\$	\$	\$	\$	\$	\$
Trade and accrued liabilities	32,066	32,066	-	-	-	-	32,066
Long-term debt	55,107	2,790	2,683	32,008	25,418	-	62,899
Lease liabilities	6,236	1,539	1,248	567	410	4,202	7,966
Total	93,409	36,395	3,931	32,575	25,828	4,202	102,931

25. Capital Management

The Company's objective when managing capital is to safeguard its ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Company requires the approval of its lenders on some of the capital transactions such as the payment of dividends and capital expenditures over a certain level.

The Company monitors capital on the basis of the debt-to-equity ratio. This ratio is calculated as net debt divided by total equity. Net debt is calculated as total borrowings (comprising long-term debt, convertible debentures and cross-currency swap in the consolidated statement of financial position) less cash and cash equivalents. Any newly introduced IFRS 16 reporting measures in reference to lease liabilities are excluded from the calculation. Total equity is the equity attributable to equity holders of 5N Plus Inc. in the consolidated statement of financial position.

Debt-to-equity ratios as at December 31, 2019 and 2018 are as follows:

	2019	2018
	\$	\$
Long-term debt including current portion	55,107	30,175
Convertible debentures	-	18,571
Cross-currency swap (Note 16)	-	197
Total debt	55,107	48,943
Less: Cash and cash equivalents	(20,065)	(26,724)
Net debt	35,042	22,219
Shareholders' equity	117,297	119,703
Debt-to-equity ratio	30%	19%

26. Expenses by Nature

Expenses by nature include the following:

	2019	2018
	\$	\$
Wages and salaries	35,610	38,018
Share-based compensation expense (Note 21)	2,583	3,298
Depreciation of property, plant and equipment and amortization of intangible assets (Notes 6 and 8)	9,669	8,810
Depreciation of right-of-use assets (Note 7)	1,470	-
Amortization of other assets	173	163
Gain on disposal of property, plant and equipment	(32)	(510)
Research and development, net of tax credit	1,822	1,328
Litigation and restructuring costs	-	316 ⁽¹⁾

- ⁽¹⁾ During 2018, the Company sold its participation in the joint venture, Zhuhai Gallium Industry Co. for an amount of \$417 and recognized a loss of \$360. In addition, following the liquidation of its other joint venture, Ingal Stade GmbH which had closed its manufacturing activities in 2016, the Company received an amount of \$238 in cash.

Also, included is a non-recurring income of \$588 relating to an amount receivable from an inactive legal entity for which no receivable had been recorded given the uncertainty attached to it, as well as severance costs of \$782 associated with workforce optimization initiatives implemented throughout the year in line with our strategic plan.