



Hydrogenics Corporation

2018 Consolidated Financial Statements

Management's Responsibility for Financial Reporting

Management's Discussion and Analysis of Financial Condition and Results of Operations and the consolidated financial statements have been prepared by management and approved by the Board of Directors of Hydrogenics Corporation (the "Company"). The consolidated financial statements were prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS") and where appropriate, reflect management's best estimates and judgments. Where alternative accounting methods exist, management has chosen those methods considered most appropriate in the circumstances. Management is responsible for the accuracy, integrity and objectivity of the consolidated financial statements within reasonable limits of materiality, and for maintaining a system of internal controls over financial reporting as described in "Management's Report on Internal Control Over Financial Reporting." Management is also responsible for the preparation and presentation of other financial information included in the Annual Report and its consistency with the consolidated financial statements.

The Audit Committee, which is appointed annually by the Board of Directors and comprised exclusively of independent directors, meets with management as well as with the independent auditors to satisfy itself that management is properly discharging its financial reporting responsibilities and to review the consolidated financial statements and the independent auditors' report.

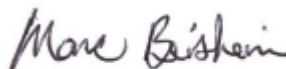
The Audit Committee reports its findings to the Board of Directors for consideration in approving the consolidated financial statements for presentation to the shareholders.

The Audit Committee considers, for review by the Board of Directors and approval by the shareholders, the engagement or reappointment of the independent auditors.

The shareholders' auditors have full access to the Audit Committee, with and without management being present, to discuss the consolidated financial statements and to report their findings from the audit process. The consolidated financial statements have been audited by the shareholders' independent auditors, PricewaterhouseCoopers LLP, Chartered Professional Accountants, and their report is provided herein.



Daryl C. F. Wilson
President and Chief Executive Officer



Marc Beisheim
Chief Financial Officer

March 15, 2019

Mississauga, Ontario

Management's Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the President and Chief Executive Officer and the Chief Financial Officer and is effected by the Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"). It includes those policies and procedures that:

- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the Company's consolidated financial statements;
- pertain to the maintenance of records that accurately and fairly reflect, in reasonable detail, the transactions related to and dispositions of the Company's assets; and
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with IFRS, and that the Company's receipts and expenditures are made only in accordance with authorizations of management and the Company's directors.

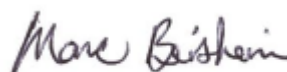
Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting at December 31, 2018, based on the criteria set forth in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission as published in 2013. Based on this assessment and those criteria, management concluded that as at December 31, 2018, the Company's internal control over financial reporting was effective.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report, which is included in the Company's audited financial statements.



Daryl C. F. Wilson
President and Chief Executive Officer



Marc Beisheim
Chief Financial Officer

March 15, 2019
Mississauga, Ontario



Report of Independent Registered Public Accounting Firm

To the Directors and Shareholders of Hydrogenics Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Hydrogenics Corporation and its subsidiaries (together, the Company) as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss, changes in equity and cash flows for the years then ended, including the related notes (collectively referred to as the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and their financial performance and their cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS). Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the COSO.

Change in accounting principles

As discussed in Note 5 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue in 2018.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and limitations of internal control over financial reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

PricewaterhouseCoopers LLP

Chartered Professional Accountants, Licensed Public Accountants

Oakville, Canada

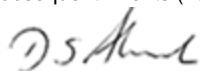
March 15, 2019

We have served as the Company's auditor since 1999.

Hydrogenics Corporation
Consolidated Balance Sheets
(in thousands of US dollars)

	Note	December 31, 2018	December 31, 2017	January 1, 2017
			Restated (Note 5)	Restated (Note 5)
Assets				
Current assets				
Cash and cash equivalents	7	\$ 7,561	\$ 21,511	\$ 10,338
Restricted cash	7	935	435	405
Trade and other receivables	8	6,728	8,736	5,144
Contract assets	9	4,534	6,578	5,572
Inventories	10	17,174	15,048	17,130
Prepaid expenses	11	1,960	1,374	1,198
		38,892	53,682	39,787
Non-current assets				
Restricted cash	7	241	468	535
Contract assets	9	1,689	645	–
Investment in joint ventures	12	1,644	2,797	1,750
Property, plant and equipment	13	2,867	3,874	4,095
Intangible assets	14	232	180	203
Goodwill	15	4,359	4,569	4,019
		11,032	12,533	10,602
Total assets		\$ 49,924	\$ 66,215	\$ 50,389
Liabilities				
Current liabilities				
Operating borrowings	19	\$ –	\$ 1,200	\$ 2,111
Trade and other payables	16	9,068	9,736	7,235
Contract liabilities	9	14,581	11,821	10,268
Financial liabilities	17	3,359	4,913	3,939
Provisions	18	2,041	1,744	2,045
Deferred funding		1,744	880	508
		30,793	30,294	26,106
Non-current liabilities				
Other liabilities	20	5,711	8,516	9,262
Contract liabilities	9	1,420	2,223	3,494
Provisions	18	810	976	841
Deferred funding		229	33	12
		8,170	11,748	13,609
Total liabilities		38,963	42,042	39,715
Share capital	21	387,911	387,746	365,923
Contributed surplus		20,717	19,885	19,255
Accumulated other comprehensive loss		(2,681)	(1,811)	(3,623)
Deficit		(394,986)	(381,647)	(370,881)
Total equity		10,961	24,173	10,674
Total equity and liabilities		\$ 49,924	\$ 66,215	\$ 50,389

Guarantees and Commitments and Contingencies (notes 19 and 31)
Subsequent Events (note 37)



Douglas S. Alexander
Chair



David C. Ferguson
Director

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

Hydrogenics Corporation**Consolidated Statements of Operations and Comprehensive Loss**

For the years ended December 31,

(in thousands of US dollars, except share and per share amounts)

	Note	2018	2017
			Restated (Note 5)
Revenues		\$ 33,896	\$ 48,115
Cost of sales		25,171	36,437
Gross profit		8,725	11,678
Operating expenses			
Selling, general and administrative expenses	23	11,613	13,626
Research and product development expenses	24	7,486	6,376
		19,099	20,002
Loss from operations		(10,374)	(8,324)
Loss from joint ventures	12	(1,637)	(334)
Finance income (loss)			
Interest expense, net on financial instruments measured at amortized cost		(1,469)	(1,812)
Foreign currency gains, net ⁽¹⁾		144	635
Other finance gains (losses), net	28	297	(931)
Finance loss, net		(1,028)	(2,108)
Loss before income taxes		(13,039)	(10,766)
Income tax expense	29	300	–
Net loss for the year		(13,339)	(10,766)
<i>Items that will not be reclassified subsequently to net loss:</i>			
Re-measurements of actuarial liability		70	98
<i>Items that may be reclassified subsequently to net loss:</i>			
Exchange differences on translating foreign operations		(940)	1,714
Comprehensive loss for the year		\$ (14,209)	\$ (8,954)
Net loss per share - basic and diluted	30	\$ (0.86)	\$ (0.77)
Weighted average number of common shares outstanding, basic and diluted	30	15,441,947	13,947,636

(1) Foreign currency gains (losses) include a gain of \$223 on borrowings for the year ended December 31, 2018 (2017 – loss of \$223).

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

Hydrogenics Corporation
Consolidated Statements of Changes in Equity
(in thousands of US dollars, except share and per share amounts)

		Common shares		Contributed		Accumulated	
	Note	Number	Amount	surplus	Deficit	other comprehensive loss ⁽¹⁾	Total equity
Balance at December 31, 2016		12,544,960	\$ 365,923	\$ 19,255	\$ (371,173)	\$ (3,623)	\$ 10,382
Change in accounting policy	5	–	–	–	292	–	292
Restated Balance at January 1, 2017		12,544,960	365,923	19,255	(370,881)	(3,623)	10,674
Net loss		–	–	–	(10,766)	–	(10,766)
Other comprehensive income		–	–	–	–	1,812	1,812
Total comprehensive income (loss)		–	–	–	(10,766)	1,812	(8,954)
Adjustment for partial shares on share consolidation		(1)	–	–	–	–	–
Issuance of common shares	21	2,682,742	19,725	–	–	–	19,725
Warrants exercised	17	200,575	1,966	–	–	–	1,966
Issuance of common shares on exercise of stock options	22	4,400	36	(16)	–	–	20
Issuance of common shares on vesting of performance share units	22	4,203	96	(96)	–	–	–
Stock-based compensation expense	22	–	–	742	–	–	742
Balance at December 31, 2017		15,436,879	\$ 387,746	\$ 19,885	\$ (381,647)	\$ (1,811)	\$ 24,173
Net loss		–	–	–	(13,339)	–	(13,339)
Other comprehensive loss		–	–	–	–	(870)	(870)
Total comprehensive loss		–	–	–	(13,339)	(870)	(14,209)
Issuance of common shares on vesting of performance share units	22	4,204	96	(96)	–	–	–
Issuance of common shares on exercise of stock options	22	6,400	69	(29)	–	–	40
Stock-based compensation expense	22	–	–	957	–	–	957
Balance at December 31, 2018		15,447,483	\$ 387,911	\$ 20,717	\$ (394,986)	\$ (2,681)	\$ 10,961

(1) Accumulated other comprehensive loss represents currency translation adjustments of (\$2,719) as of December 31, 2018 (2017 – \$1,779), and a gain on re-measurement of actuarial liability of \$27 as of December 31, 2018 (2017 – loss of \$43)

The authorized share capital of the Company consists of an unlimited number of common shares, with no par value, and an unlimited number of preferred shares in series, with no par value.

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

Hydrogenics Corporation
Consolidated Statements of Cash Flows
For the years ended December 31,
(in thousands of US dollars)

	Note	2018	2017
			Restated (Note 5)
Cash and cash equivalents provided by (used in):			
Operating activities			
Net loss for the year		\$ (13,339)	\$ (10,766)
Decrease (increase) in restricted cash		(304)	134
Items not affecting cash:			
Loss (gain) on disposal of property, plant and equipment		(11)	131
Amortization and depreciation	13,14	706	672
Loss (gain) from change in fair value of warrants	17	(398)	675
Unrealized foreign exchange (gain) loss		(353)	494
Unrealized loss from joint ventures	12	1,637	334
Accreted interest and fair value adjustment	20	1,650	2,075
Stock-based compensation	22	957	742
Stock-based compensation – DSUs	22	(676)	950
Net change in non-cash operating assets and liabilities	33	1,750	(223)
Cash used in operating activities		(8,381)	(4,782)
Investing activities			
Investment in joint venture	12	–	(93)
Purchase of property, plant and equipment	13	(1,001)	(3,920)
Receipt of government funding		974	1,792
Proceeds from disposals of property, plant and equipment	12	700	1,035
Purchase of intangible assets	14	(125)	(25)
Cash provided by (used in) investing activities		548	(1,211)
Financing activities			
Proceeds from common shares issued and stock options exercised, net of issuance costs	21, 22	40	19,745
Principal repayments of long-term debt	20	(3,120)	(1,639)
Exercise of warrants	17	–	1,374
Interest payments	20	(1,498)	(1,274)
Repayment of operating borrowings	19	(1,193)	(873)
Repayment of repayable government contributions		–	(171)
Cash provided by (used in) financing activities		(5,771)	17,162
Increase (decrease) in cash and cash equivalents during the year		(13,604)	11,169
Cash and cash equivalents – Beginning of year		21,511	10,338
Effect of exchange rate fluctuations on cash and cash equivalents held		(346)	4
Cash and cash equivalents – End of year		\$ 7,561	\$ 21,511

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

Note 1 – Description of Business

Hydrogenics Corporation and its subsidiaries (“Hydrogenics” or the “Corporation” or the “Company”) design, develop and manufacture hydrogen generation products using water electrolysis technology (based on alkaline and proton exchange membrane (“PEM”) electrolyzers), and fuel cell products which convert hydrogen into electricity using PEM technology. The Company has manufacturing plants in Canada and Belgium, satellite facilities in Germany and the United States, and branch offices in Russia and Indonesia. Its products are sold throughout the world.

Hydrogenics is incorporated and domiciled in Canada. The address of the Company’s registered head office is 220 Admiral Boulevard, Mississauga, Ontario, Canada. The Company’s shares trade under the symbol “HYG” on the Toronto Stock Exchange and under the symbol “HYGS” on NASDAQ.

Note 2 – Basis of Preparation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS”) applicable to the preparation of consolidated financial statements.

On March 14, 2019, the Board of Directors authorized the consolidated financial statements for issue.

Note 3 – Summary of Significant Accounting Policies

The consolidated financial statements of the Company include the accounts of Hydrogenics and its wholly-owned subsidiaries; Hydrogenics USA, Inc., Hydrogenics Europe N.V., and Hydrogenics Holding GmbH. All intercompany transactions, balances and unrealized gains or losses on transactions between group companies have been eliminated. Accounting policies of subsidiaries have been changed, where necessary, to ensure consistency with the policies adopted by the Company. Subsidiaries include all entities controlled by the Company. Control exists when the Company is exposed or has rights to variable returns from the Company’s involvement, and has the ability to affect those returns through the Company’s power over the subsidiary. The existence and potential voting rights presently exercisable or convertible are considered when assessing whether the Company controls another entity. Subsidiaries are fully consolidated from the date on which control was obtained by the Company and are deconsolidated from the date on which control ceased. The consolidated financial statements have been prepared under the historical cost convention, except for the revaluation of certain financial assets and financial liabilities to fair value.

Investments in joint ventures

Investments in joint ventures, over which the Company has joint control, are accounted for using the equity method. Under the equity method of accounting, investments are initially recorded at cost, and the carrying amount is increased or decreased to recognize the Company’s share of the investee’s net profit or loss, including net profit or loss recognized in other comprehensive income (“OCI”), subsequent to the date of acquisition.

Foreign currency translation

Items included in the financial statements of each consolidated entity in the Company’s consolidated financial statements are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). The consolidated financial statements are presented in US dollars, which is the functional currency of Hydrogenics Corporation (“the parent company”).

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the translation at period-end exchange rates of monetary assets and liabilities denominated in currencies other than an operation’s functional currency are recognized in the consolidated statements of operations and comprehensive loss.

The functional currency of the Company's subsidiaries located in Belgium and Germany is the euro, which is the currency of the primary economic environment in which these subsidiaries operate. The financial statements of these subsidiaries are translated into US dollars as follows: assets and liabilities, at the closing exchange rate at the dates of the consolidated balance sheets; and the income and expenses and other comprehensive income (loss), at the average exchange rate during the year as this is considered a reasonable approximation to the actual rates. All resulting foreign exchange changes are recognized in other comprehensive loss as cumulative translation adjustments.

Cash and cash equivalents and restricted cash

Cash equivalents are short-term, highly liquid investments that are readily convertible into known amounts of cash. Cash and cash equivalents, including restricted cash held as partial security for standby letters of credit and letters of guarantee, include cash on hand, deposits held with banks and other short-term, highly liquid investments with original maturities of three months or less.

Financial instruments (excluding hedging activities)

(i) Classification

The Company classifies its financial instruments in the following categories: at fair value through profit and loss ("FVPL"), at fair value through other comprehensive income (loss) ("FVOCI") or at amortized cost. The Company determines the classification of financial assets and liabilities at initial recognition. The classification of the Company's financial assets and liabilities is disclosed in note 35.

(ii) Measurement

Amortized cost

Financial assets and liabilities at amortized cost are initially recognized at fair value (except for trade receivables that do not contain a significant financing component which are measured at the transaction price) plus or minus transaction costs and subsequently carried at amortized cost less any impairment.

Fair value through profit and loss

Financial assets and liabilities carried at FVPL are initially recorded at fair value and transaction costs are expensed in the consolidated statements of operations and comprehensive loss. Derivatives are included in this category unless designated as hedges. Realized and unrealized gains and losses arising from changes in the fair value of the financial assets and liabilities held at FVPL are included in the consolidated statements of operations and comprehensive loss within other gains and losses in the period in which they arise.

Fair value through other comprehensive income

Financial assets carried at FVOCI are measured at fair value. Interest, dividends and impairment gains and losses are recognized in the consolidated statement of operations on the same basis as for amortized cost assets. Changes in fair value are recognized initially in other comprehensive income. When the assets are derecognized or reclassified the cumulative changes in fair value are reclassified to the consolidated statement of operations (except where they relate to investments in equity instruments). The Company has no financial instruments measured at fair value through other comprehensive loss.

(iii) Impairment of financial assets at amortized cost

For trade receivables and contract assets, the Company applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which requires the use of the lifetime expected loss provision for all trade receivables and contract assets based on the Company's historical default rates over the expected life of the trade receivables adjusted for forward-looking estimates (see note 35).

(iv) Derecognition

- i. Financial assets - The Company derecognizes financial assets only when the contractual rights to cash flows from the financial assets expire, or when it transfers the financial assets and substantially all of the associated risks and rewards of ownership to another entity. Gains and losses on derecognition are recognized in the consolidated statements of operations and comprehensive loss.
- ii. Financial liabilities - The Company derecognizes financial liabilities only when its obligations under the financial liabilities are discharged, cancelled or expired. Generally, the difference between the carrying amount of the financial liability derecognized and the consideration paid and payable, including any non-cash assets transferred or liabilities assumed, is recognized in the consolidated statements of operations and comprehensive loss.

Derivatives and hedging activities

The Company periodically holds derivative financial instruments to hedge its foreign currency risk exposures that are designated as the hedging instrument in a hedge relationship. On initial designation of the hedge, the Company formally documents the relationship between the hedging instrument and hedged item, including the risk management objectives and strategy in undertaking the hedge transaction, together with the methods that will be used to assess the effectiveness of the hedging relationship. The Company makes an assessment, both at the inception of the hedge relationship as well as on an ongoing basis, whether the hedging instruments are expected to be “highly effective” in offsetting the changes in the fair value or cash flows of the respective hedged items during the period for which the hedge is designated, and whether the actual results of each hedge are within a range of 80-125%.

For a cash flow hedge of a forecast transaction, the transaction should be highly probable to occur and should present an exposure to variations in cash flows that could ultimately affect reported net income. Derivatives are recognized initially at fair value; attributable transaction costs are recognized in profit or loss as incurred. Subsequent to initial recognition, derivatives are measured at fair value, and changes therein are recognized in other comprehensive income and presented in unrealized gains/losses on cash flow hedges in equity. The amount recognized in other comprehensive income is removed and included in profit or loss in the same period as the hedged cash flows affect profit or loss under the same line item in the consolidated statements of operations and comprehensive loss as the hedged item. Any ineffective portion of changes in the fair value of the derivative is recognized immediately in profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated, exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. The cumulative gain or loss previously recognized in other comprehensive income and presented in unrealized gains/losses on cash flow hedges in equity remains there until the forecast transaction affects profit or loss. If the forecast transaction is no longer expected to occur, then the balance in other comprehensive income is recognized immediately in profit or loss. In other cases the amount recognized in other comprehensive income is transferred to profit or loss in the same period that the hedged item affects profit or loss.

Inventories

Raw materials, work-in-progress and finished goods are valued at the lower of cost, determined on a first-in, first-out basis, and net realizable value. Inventory costs include the cost of material, labour, variable overhead and an allocation of fixed manufacturing overhead including amortization based on normal production volumes. Net realizable value is the estimated selling price less estimated costs of completion and applicable selling expenses. If the carrying value exceeds the net realizable amount, a write-down is recognized. The write-down may be reversed in a subsequent period if the circumstances causing it no longer exist.

Property, plant and equipment

Property, plant and equipment are stated at cost less government grants, accumulated depreciation and accumulated impairment losses. Cost includes expenditures that are directly attributable to the acquisition of the asset. Subsequent costs are included in the asset's carrying value or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Company and the cost can be measured reliably. The cost and accumulated depreciation of replaced assets are derecognized when replaced. Repairs and maintenance costs are charged to the consolidated statements of operations and comprehensive loss during the period in which they are incurred.

Depreciation is calculated on a diminishing balance method to depreciate the cost of the assets to their residual values over their estimated useful lives. The depreciation rates applicable to each category of property, plant and equipment are as follows:

Plant and Test equipment	30% per annum
Furniture and equipment	20% – 30% per annum
Computer hardware	30% per annum
Automobiles	30% per annum
Leasehold improvements	Straight-line over the term of the lease

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

Construction-in-progress assets are not depreciated until such time they are available for use. Depreciation ceases at the earlier of the date the asset is classified as held-for-sale and the date the asset is derecognized.

Gains and losses on disposals of property, plant and equipment are determined by comparing the proceeds with the carrying value of the asset and are included as part of other gains and losses in the consolidated statements of operations and comprehensive loss.

Intangible assets

The Company's intangible assets consist of computer software with finite useful lives. These assets are capitalized and amortized over their useful lives using the diminishing balance method of 30% per annum. Costs associated with maintaining computer software programs are recognized as an expense as incurred. The method of amortization and useful lives of the assets are reviewed at least annually and adjusted if appropriate.

Goodwill

Goodwill is recognized as the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree, less the fair value of the net identifiable assets acquired and liabilities assumed, as of the acquisition date. Subsequent to initial recognition, goodwill is measured at cost less accumulated impairment losses. Goodwill acquired in business combinations is allocated to groups of cash generating units ("CGU") that are expected to benefit from the synergies of the combination. The goodwill recorded in the Company's consolidated financial statements relates to the OnSite Generation CGU.

Impairment long-lived assets

Property, plant and equipment and definite life intangible assets are tested for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Intangible assets with an indefinite useful life or intangible assets not yet available-for-use are subject to an annual impairment test. When events or changes in circumstances indicate impairment, impairment test is performed earlier than annual. For the purpose of measuring recoverable values, assets are grouped at the lowest levels for which there are separately identifiable cash inflows being the CGU. Goodwill is not amortized but is reviewed for impairment annually or at any time an indicator of impairment exists. A goodwill CGU represents the lowest level within an entity at which goodwill is monitored for internal management purposes, which is not higher than an operating segment.

For the long-lived asset impairment test, the recoverable value is the higher of an asset or CGU's fair value less costs of disposal and value in use. An impairment loss is recognized for the value by which the asset or CGU's carrying value exceeds its recoverable value.

Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Chief Executive Officer. The Corporation has two segments which are OnSite Generation and Power Systems. OnSite Generation includes the design, development, manufacture and sale of hydrogen generation products. Power Systems includes the design, development, manufacture and sale of fuel cell products.

Provisions and product warranties

Provisions are recognized when the Company has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation, and the amount can be reliably estimated. Provisions are measured based on management's best estimate of the expenditure required to settle the obligation at the end of the reporting period, and are discounted to their present value where the effect is material.

Provisions for the estimated cost of installation, start up and commissioning services related to the sale of equipment are recognized at the time of sale where the costs are insignificant in the context of the total contract and where the customer believes they are buying a final installed working product rather than the individual collection of products and services. These costs are revised if circumstances change and any resulting increase or decrease in estimated costs is reflected in the consolidated statement of operations and comprehensive loss in the period in which the circumstances that give rise to the revision become known by management.

Additionally, the Company performs evaluations to identify onerous contracts and where applicable, records provisions for such contracts. Onerous contracts are those in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. The unavoidable costs under a contract reflect the least net cost of exiting from the contract, which is the lower of the cost of fulfilling it and any compensation or penalties arising from the failure to fulfill it.

The Company typically provides a warranty for parts and/or labour for up to two years or based on time or certain operating specifications, such as hours of operation. In establishing the warranty provision, the Company estimates the likelihood that products sold will experience warranty claims and the estimated cost to resolve claims received, taking into account the nature of the contract and past and projected experience with the products. Provisions are reviewed at each consolidated balance sheet date and adjusted to reflect the current best estimate. If it is no longer probable that a payment to settle the obligation will be incurred, the provision is reversed.

Warrants

The Company's warrants include anti-dilution provisions, and as a result have been classified as financial liabilities, and are recorded at their fair value with changes in fair value reflected in the consolidated statements of operations and comprehensive loss.

Leases

Leases are classified as finance leases when the lease arrangement transfers substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. The assets held under a finance lease are recognized as assets at the lower of the following two values: the present value of the minimum lease payments under the lease arrangement or their fair value determined at inception of the lease. The corresponding obligation to the lessor is accounted for as long-term debt. These assets are depreciated over the shorter of the useful life of the assets and the lease term when there is no reasonable certainty the Company will obtain ownership by the end of the lease term. Payments made under operating leases (net of any incentives received from the lessor) are charged to the consolidated statements of operations and comprehensive loss on a straight-line basis over the period of the lease.

Research and product development

The Company incurs costs associated with the design and development of new products. Expenditures during the research phase are expensed as incurred. Expenditures during the development phase are capitalized if the Company can demonstrate each of the following criteria: (i) the technical feasibility of completing the intangible asset so that it will be available-for-use or sale; (ii) its intention to complete the intangible asset and use or sell it; (iii) its ability to use or sell the intangible asset; (iv) how the intangible asset will generate probable future economic benefits; (v) the availability of adequate technical, financial, and other resources to complete the development and to use or sell the intangible asset; and (vi) its ability to measure reliably the expenditure attributable to the intangible asset during its development; otherwise, they are expensed as incurred. Capitalized costs are amortized over their estimated useful lives. No government grants have been capitalized to date.

Government assistance

Funding for research and product development includes government and non-government research and product development support. Government research and product development funding is recognized when there is reasonable assurance the Company has complied with the conditions attached to the funding arrangement and is recognized as the applicable costs are incurred. Non-governmental funding is recognized when the Company becomes party to the contractual provisions of the funding agreement and is recognized as the applicable costs are incurred. Research and product development funding is presented as a reduction in research and product development expenses unless it is for reimbursement of an asset, in which case, it is accounted for as a reduction in the carrying amount of the applicable asset. Where the Company receives government contributions that include fixed terms of repayment, a financial liability is recognized and measured as an amortized cost financial liability, as discussed above.

Revenue recognition

The Company's business is to develop and sell electrolyser and fuel cell products and provide related services. The equipment and services are sold both on their own and bundled together as a package of goods and/or services.

(a) Sale of equipment

Material promises within a contract to deliver distinct goods and services are accounted for as separate performance obligations and the contract price is allocated between each performance obligation based upon their relative stand-alone selling prices. Revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods and services to the customer. For contracts with customers in which the sale of equipment is generally expected to be the only performance obligation, the Company recognizes revenue at the point in time when control of the asset is transferred to the customer. Control normally passes upon shipment unless the company enters into a bill and hold arrangement, in which case revenue is recognized upon readiness for shipment. The Company's standard payment terms include a deposit upon order acceptance and payment in full prior to delivery. Startup and commissioning services, if applicable, are invoiced upon completion of the service.

(i) Variable consideration

Some contracts with customers provide trade discounts, exclusivity, license, sales-based royalties and/or volume rebates and discounts and give rise to variable consideration. Variable consideration is estimated at contract inception and updated prospectively for any changes to the estimates. Variable consideration is only included in the transaction price to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

(ii) Warranty obligations

The Company provides for warranties for general repairs but does not generally provide extended warranties in its contracts with customers. As such, most existing warranties are assurance-type warranties which will continue to be accounted for under IAS 37 Provisions, Contingent Liabilities and Contingent Assets. For non-standard contracts where the Company provides extended warranties, they are accounted for as separate performance obligations to which the Company allocates a portion of the transaction price.

(b) Long-term contracts

For long-term contracts, such as customer-specific product development contracts, control of the promised goods and services are generally transferred to the customers over time as performance obligations are satisfied. Revenue is recognized over time using input methods based on the measure of the progress towards complete satisfaction of that performance obligation. Under this method, the revenue recognized equals the latest estimate of the total transaction price of the contract multiplied by the actual completion rate, determined by reference to the costs incurred for the transaction and the estimated costs to complete the transaction.

The determination of the transaction price represents the contractually agreed amount, including change orders. A change order results from an official change to the scope of work to be performed compared to the original contract that was signed. The Company estimates costs separately for each customer specific development contract including the effects of change orders.

If circumstances arise that may change the estimated transaction price, the remaining costs or extent of progress toward completion, and estimates of revenues to be recorded are revised. These revisions may result in increases or decreased in estimated revenues or remaining costs to complete and are accounted for prospectively from the period in which the circumstances that give rise to the revision become known by management. If the outcome of a transaction cannot be estimated reliably, revenue is recognized only to the extent of the expenses recognized that are recoverable. When the outcome of a transaction cannot be estimated reliably, and it is not probable the costs incurred will be recovered, revenue is not recognized and the costs incurred are recognized as an expense. Once the uncertainty surrounding the outcome no longer exists, a cumulative catch up adjustment is recognized to record revenue related to prior performance that had not been recognized due to the inability to measure progress.

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the consolidated balance sheet. Amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals or upon achievement of contractual milestones. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets reported on the consolidated balance sheet at the end of each reporting period.

(c) Rendering of services

The Company provides start-up, commissioning, installation, scheduled or unscheduled maintenance, both with and without parts and other product development services. These services are sold either on their own or bundled together with the sale of equipment to a customer. Where these performance obligations are not considered distinct (i.e. where the customer believes they are buying a final installed working product and are not buying the individual collection of products and services bundle), these services are combined into a single performance obligation and recognized on the same basis as the sale of the related equipment. Revenue from services deemed to be a separate performance obligation are recognized by reference to the stage of completion based upon relative stand-alone selling prices.

d) Technology transfer, license and exclusivity arrangements

When a single performance obligation includes technology transfer, license of intellectual property or exclusivity arrangements and one or more other goods or services, the Company considers the nature of the combined good or service for which the customer has contracted in determining whether that combined good or service is satisfied over time or at a point in time, and if over time, in selecting an appropriate method for measuring progress.

Revenues from sales-based royalties promised in exchange for a license of intellectual property are recognized as revenue at the later of the date the product subject to the royalty is sold by the licensee, or when the performance obligation to which the sales-based royalty has been allocated is satisfied.

(e) Contract assets

The Company recognizes contract assets depending on the relationship between the Company's performance obligation and the contract payment terms. A trade receivable is separately recorded only when the Company has an unconditional right to the consideration. For long-term development contracts and OnSite Generation contracts in particular, customers usually retain a small portion of the contract price until completion of the service, installation and commissioning, which generally result in revenue in excess of billings which are presented as contract assets on the consolidated balance sheet. The associated provisions for future costs to complete this work are recorded in provisions.

(f) Contract liabilities

The Company may receive advances from customers upon contract execution for which revenue is expected to occur within 12 months. These are deferred within contract liabilities until recognition in revenue as or when the performance obligation is satisfied. In relation to licensing arrangements, upfront license fees considered to consist of a single performance obligation, including a license of intellectual property and one or more other goods or services, are deferred in contract liabilities until recognition in revenue as or when the combined performance obligation is satisfied. For contracts that require customers to pay long-term advances, the payment terms are structured primarily for reasons other than the provision of finance to the Company; notably, to meet working capital demands, to ensure the customers follow through with their purchase orders, to ensure an incentive to not terminate the contract for any reasons, including economic, or to mitigate a history of late payments. Other long-term customer advances are analyzed to determine whether there is a significant financing component in its contracts and are accounted for separately.

(g) Incremental costs

The Company incurs incremental costs like sales agent commissions for obtaining the contract or to fulfill a contract. These costs are deferred within prepaids for contracts expected to be delivered after more than one year and expensed as the contract is delivered. Where there is a retrospective step up in the sales agent commission on a sale as a result of the salesperson reaching a new cumulative sales threshold, the Company allocates the commission between the contract in question and the preceding contracts in the year that contributed to the agent reaching the threshold. The commission related to any contract that has already been recorded as revenue is expensed while the commission corresponding to contract revenue that has not yet been recorded is capitalized and expensed simultaneously with the related contract revenue.

Cost of sales

Cost of sales for products includes the cost of finished goods inventory and the costs related to shipping and handling. Cost of sales for service includes direct labour and additional direct and indirect expenses.

Share capital

Common shares are classified as equity. Incremental costs directly attributable to the issuance of shares are recognized as a deduction from equity.

Post-retirement benefit liabilities

The Company has a post-retirement benefit obligation with respect to the Belgium subsidiary related to a defined contribution plan. Under Belgian law, a guaranteed return on the contributions is required and as a result this is accounted for as a defined benefit plan. The Company has recorded a long-term liability associated with this plan for the present value of the obligation at the consolidated balance sheet dates. Changes in the fair value of this liability represent actuarial gains and losses arising from experience adjustments and are charged/credited to equity in other comprehensive loss.

Stock-based compensation

The Company's stock-based compensation plans are summarized below:

(i) Stock options

The Company grants stock options to certain employees. Stock options vest 25% one year from the date of grant and annually thereafter over three more years and expire after ten years. Each tranche in an award is considered a separate award with its own vesting period and grant date fair value. The fair value of each tranche is measured at the date of grant using the Black-Scholes option pricing model. Compensation expense is recognized (with a corresponding adjustment to contributed surplus) over the tranche's vesting period, and is based on the estimated number of instruments expected to vest, which are then reestimated at the reporting dates to the extent that subsequent information indicates the actual number of instruments expected to vest is likely to differ from previous estimates. When options are exercised the Company issues new shares and the proceeds received net of any directly attributable transaction costs are credited to share capital at exercise price and the difference is adjusted to contributed surplus.

(ii) Restricted share units ("RSU")

The Company grants RSUs to certain employees. The RSUs will be settled in the Company's shares. The cost of the Company's RSUs is charged to selling, general and administrative expenses using the cliff vesting method. RSUs vest three years from grant date. The fair value of each grant of RSUs is the fair value of the Company's share price on the date of grant. The resulting compensation expense, included in selling, general and administrative expenses, based on the fair value of the awards granted, is charged to income over the period the employees unconditionally become entitled to the award, with a corresponding increase to contributed surplus.

(iii) Deferred share units ("DSU")

The Company grants DSUs to directors as part of their compensation. The DSUs vest upon grant and are settled in cash. The vested DSUs are marked-to-market at the end of each reporting period based on the closing price of the Company's shares with the change in fair value recorded in selling, general and administrative expenses. The Company has set up a liability in the consolidated balance sheets, included within financial liabilities, for the fair value of the vested DSUs.

(iv) Performance share units ("PSU")

The Company has granted PSUs to certain employees. The PSUs will be settled in the Company's common shares. The cost of the Company's PSUs is charged to selling, general and administrative expenses using the graded vesting method. The fair value of the vested share units is the fair value of the Company's share price on the date of grant. The resulting compensation expense, based on the fair value of the awards granted, excluding the impact of any non-market service and performance vesting conditions, is charged to income over the period the employees unconditionally become entitled to the award, with a corresponding increase to contributed surplus. Non-market vesting conditions are considered in making assumptions about the number of awards that are expected to vest. At each reporting date, the Company reassesses its estimates of the number of awards that are expected to vest and recognizes the impact of any revision in the consolidated statements of operations and comprehensive loss with a corresponding adjustment to contributed surplus.

Income taxes

Income tax expense comprises current income tax expense and deferred income tax expense. Income tax expense is recognized in the consolidated statements of operations and comprehensive loss, except to the extent that it relates to items recognized directly in equity, in which case, income taxes are also recognized directly in equity. Current income taxes are the expected taxes payable on the taxable income for the year, using income tax rates enacted at the end of the reporting period, and any adjustment to income taxes payable in respect of previous years. Withholding taxes deducted from license fee revenues by foreign jurisdictions are accounted for and presented as income taxes in the consolidated statement of operations.

In general, deferred income taxes are the amount of income taxes expected to be paid or recoverable in future periods in respect of temporary differences, carry-forwards of unused non-capital tax losses and carry-forwards of unused tax credits. Deferred income taxes arise between the tax base and their carrying values in the consolidated financial statements as well as on unused tax losses and tax credits. Deferred income taxes are determined on a non-discounted basis using tax rates and laws that have been enacted or substantively enacted at the consolidated balance sheet dates and are expected to apply when the deferred income tax asset or liability is settled.

Deferred income taxes are provided on temporary differences arising on investments in subsidiaries and associates, except, in the case of subsidiaries, 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 reverse in the foreseeable future. Deferred income tax assets are recognized to the extent it is probable that taxable profits will be available against which the deductible temporary differences and unused tax losses and tax credits can be utilized. The carrying value of deferred income tax assets is reviewed at each consolidated balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred income tax asset to be recovered. Deferred income tax liabilities are not recognized on temporary differences that arise from goodwill, which is not deductible for tax purposes. Deferred income tax assets and liabilities are not recognized in respect of temporary differences that arise on initial recognition of certain assets and liabilities acquired other than in a business combination. Deferred income tax assets and liabilities are presented as non-current.

Net loss per share

Basic net loss per share is calculated based on the weighted average number of common shares outstanding for the year. Diluted net loss per share is calculated using the weighted average number of common shares outstanding for the year for basic net loss per share plus the weighted average number of potential dilutive shares that would have been outstanding during the year had all potential common shares been issued at the beginning of the year or when the underlying stock options or warrants were granted, if later, unless they were anti-dilutive. The treasury stock method is used to determine the incremental number of shares that would have been outstanding had the Company used proceeds from the exercise of stock options and warrants to acquire common shares.

Note 4 – Significant Accounting Judgments and Estimation Uncertainties

Critical accounting estimates and judgments

The preparation of consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and notes to the consolidated financial statements. These estimates are based on management's experience and other factors, including expectations about future events that are believed to be reasonable under the circumstances. Significant areas requiring the Company to make estimates include revenue recognition and contract accounting, warranty provisions, goodwill impairment and going concern.

These estimates and judgments are further discussed below:

(i) *Revenue recognition*

Significant areas requiring the Company to make estimates impacting revenue recognition related to:

- (a) Contracts with performance obligations satisfied over time.

Contracts with performance obligations satisfied over time include:

- i. Customer specific product development contracts - The Company estimates costs separately for each customer specific product development contract. The determination of estimated costs for completing fixed-price contracts is based on the Company's business practices, considering budgets as well as historical experience. Management regularly reviews these estimates, which can be affected by a variety of factors such as variances in scheduling, cost of materials, availability and cost of qualified labour and subcontractors, productivity, and possible claims from subcontractors.
- ii. Maintenance contracts - Revenue from providing maintenance services is recognized in the accounting period in which the services are rendered. For fixed-price contracts, revenue is recognized based on the actual service provided to the end of the reporting period as a proportion of the total services to be provided, because the customer receives and uses the benefits simultaneously. Some maintenance contracts also offer scheduled visits and discounts on future spare part purchases. Because these represent additional performance obligations, the transaction price must be allocated to each performance obligation on a stand-alone selling price basis where material in the context of the contract. Management estimates the stand-alone selling price at contract inception based on observable prices for services rendered in similar circumstances to similar customers.
- iii. Technology transfer, licensing and manufacturing support contracts – Technology transfer licensing and manufacturing support arrangements constitute a single performance obligation that includes both a license for intellectual property as well as associated manufacturing training and support services. The transaction price is recognized as revenue over time as the combined services are provided.

(b) Contracts with performance obligations satisfied at a point in time.

Installation, start up and commissioning services related to the sale of equipment are not distinct and are combined into a single performance obligation where the costs are insignificant in the context of the total contract and where the customer believes they are buying a final installed working product rather than the individual collection of products and services. Thus, as long as control has passed when the product is shipped, all the revenue is recorded and an estimate for remaining costs for this work is accrued. These costs will be revised if circumstances change and any resulting increase or decrease in estimated costs will be reflected in the consolidated statement of operations and comprehensive loss in the period in which the circumstances that give rise to the revision become known by management.

(ii) *Warranty provision*

The Company typically provides a warranty for parts and/or labour for up to two years from the date of shipment or commissioning or based on certain operating specifications, such as hours of operation. In establishing the warranty provision, management considers historical field data, projected claims experience, results of internal testing and in certain circumstances, application, in determining the value of this provision. Should these estimates prove to be incorrect, the Company may incur costs different from those provided for in the warranty provision. Management reviews warranty assumptions and makes adjustments to the provision at each reporting date based on the latest information available, including the expiry of contractual obligations. Adjustments to the warranty provision are recorded in cost of sales.

(iii) *Goodwill impairment testing*

The Company tests annually whether goodwill has suffered any impairment, in accordance with the accounting policy stated in note 3. The recoverable amount of the OnSite Generation CGU has been determined based on an estimation of fair value less cost to sell ("FVLCS"). In the absence of a binding sales agreement, FVLCS is estimated using an income approach by discounting future cash flows. The estimation of FVLCS requires the use of estimates which are explained in note 15.

Key estimates and assumptions, include management's expectations of future revenue growth, operating costs and profit margins as well as discount rates for the CGU and incremental costs for disposing of the assets. Growth rate assumptions used are based on the Company's historical growth, internal budget, expectations of future revenue growth as well as industry and expected market trends in the hydrogen refueling, Power-to-Gas and industrial

hydrogen market sectors. The Company uses a discount rate to calculate the present value of estimated future cash flows, which represents its weighted average cost of capital (WACC), plus a premium to take into account specific industry, size and company specific risks of the CGU, as the case may be. The income approach used by management is supplemented by a market based approach whereby the Company assesses the reasonableness of the resulting revenue multiples from the income approach valuation models based on available data from observable active market prices of broadly comparable businesses, data from recent transactions of similar assets within the same industry, when available and the Company's stock price.

(iv) *Going concern*

The assessment of events or conditions that may cast significant doubt on the Company's ability to continue as a going concern involves significant judgment. In making this determination management considers all relevant information. See note 35 for Liquidity risk disclosures. Management has determined that there is no going concern uncertainty at December 31, 2018.

Note 5 – IFRS 9 Financial Instruments & IFRS 15 Revenue from Contracts with Customers – Impact of Adoption

IFRS 9 Financial Instruments – Impact of adoption

The Company adopted all the requirements of IFRS 9 Financial Instruments ("IFRS 9") as of January 1, 2018. IFRS 9 replaces IAS 39 Financial Instruments: Recognition and Measurement ("IAS 39"). IFRS 9 utilizes a revised model for recognition and measurement of financial instruments and a single, forward-looking "expected loss" impairment model. Most of the requirements in IAS 39 for classification and measurement of financial liabilities were carried forward in IFRS 9, such that the Company's accounting policy with respect to financial liabilities is unchanged. Further, as a result of adoption of IFRS 9, management has not changed its accounting policy for financial assets except for the adoption of the simplified approach to determining expected credit losses for receivables and contract assets, which had no impact on the carrying value of any financial assets or financial liabilities on the January 1, 2018 transition date.

IFRS 15 Revenue from Contracts with Customers – Impact of adoption

The Company has adopted IFRS 15 from January 1, 2018 using the full retrospective method which resulted in changes in accounting policies and adjustments to the amounts recognized in the comparative financial statements.

The following table shows the effect of the adoption of IFRS 15 on the Company's balance sheets at January 1, 2017:

	IAS18 carrying amount	Note	Remeasure- ments	Reclass- ifications	IFRS 15 carrying amount
Assets					
Current assets					
Cash and cash equivalents	\$ 10,338		\$ -	- \$	10,338
Restricted cash	405		-	-	405
Trade and other receivables	9,802	5(c)	-	(4,658)	5,144
Contract assets	-	5(a)(c)	914	4,658	5,572
Inventories	17,208	5(a)	-	(78)	17,130
Prepaid expenses	918	5(b)	280	-	1,198
	38,671		1,194	(78)	39,787
Non-current assets					
Restricted cash	535		-	-	535
Investment in joint ventures	1,750		-	-	1,750
Property, plant and equipment	4,095		-	-	4,095
Intangible assets	203		-	-	203
Goodwill	4,019		-	-	4,019
	10,602		-	-	10,602
Total assets	\$ 49,273		\$ 1,194	(78)	\$ 50,389
Liabilities					
Current liabilities					
Operating borrowings	\$ 2,111		\$ -	- \$	2,111
Trade and other payables	7,235		-	-	7,235
Contract liabilities	-	5(c)	-	10,268	10,268
Financial liabilities	3,939		-	-	3,939
Provisions	1,221	5(a)	902	(78)	2,045
Deferred funding	-	5(c)	-	508	508
Deferred revenue	10,788	5(c)	-	(10,788)	-
	25,294		902	(90)	26,106
Non-current liabilities					
Other liabilities	9,262		-	-	9,262
Contract liabilities	-	5(c)	-	3,494	3,494
Provisions	841		-	-	841
Deferred funding	-	5(c)	-	12	12
Deferred revenue	3,494	5(c)	-	(3,494)	-
	13,597		-	12	13,609
Total liabilities	38,891		902	(78)	39,715
Share capital	365,923				365,923
Contributed surplus	19,255		-	-	19,255
Accumulated other comprehensive loss	(3,623)		-	-	(3,623)
Deficit	(371,173)	5(a)(b)	292	-	(370,881)
Total equity	10,382		292	-	10,674
Total equity and liabilities	\$ 49,273		\$ 1,194	(78)	\$ 50,389

The following adjustments were made to the amounts recognized in the consolidated balance sheets at December 31, 2017:

	IAS 18 carrying amount	Note	Remeasure- ments	Reclass- ifications	IFRS 15 carrying amount
Assets					
Current assets					
Cash and cash equivalents	\$ 21,511		\$ -	- \$	21,511
Restricted cash	435		-	-	435
Trade and other receivables	14,292	5(c)	-	(5,556)	8,736
Contract assets	-	5(a)(c)	1,022	5,556	6,578
Inventories	15,164	5(a)	-	(116)	15,048
Prepaid expenses	978	5(b)	396	-	1,374
	52,380		1,418	(116)	53,682
Non-current assets					
Restricted cash	468		-	-	468
Non-current receivables	645	5(c)	-	(645)	-
Contract assets	-	5(c)	-	645	645
Investment in joint ventures	2,797		-	-	2,797
Property, plant and equipment	3,874		-	-	3,874
Intangible assets	180		-	-	180
Goodwill	4,569		-	-	4,569
	12,533		-	-	12,533
Total assets	\$ 64,913		\$ 1,418	(116) \$	66,215
Liabilities					
Current liabilities					
Operating borrowings	\$ 1,200		\$ -	- \$	1,200
Trade and other payables	9,736	5(a)	-	-	9,736
Contract liabilities	-	5(c)	-	11,821	11,821
Financial liabilities	4,913		-	-	4,913
Provisions	1,174	5(a)	741	(171)	1,744
Deferred funding	-	5(c)	-	880	880
Deferred revenue	12,734	5(c)	-	(12,734)	-
	29,757		741	(204)	30,294
Non-current liabilities					
Other liabilities	8,516		-	-	8,516
Contract liabilities	-	5(c)	-	2,223	2,223
Provisions	921	5(a)	-	55	976
Deferred funding	-	5(c)	-	33	33
Deferred revenue	2,223	5(c)	-	(2,223)	-
	11,660		-	88	11,748
Total liabilities	41,417		741	(116)	42,042
Share capital	387,746				387,746
Contributed surplus	19,885		-	-	19,885
Accumulated other comprehensive loss	(1,822)	5(a)	11	-	(1,811)
Deficit	(382,313)	5(a)(b)	666	-	(381,647)
Total equity	23,496		677	-	24,173
Total equity and liabilities	\$ 64,913		\$ 1,418	(116) \$	66,215

The following table shows the effect of the adoption of IFRS 15 on the Company's consolidated statement of operations and comprehensive loss for the year ended December 31, 2017:

	For the year ended December 31, 2017					
	Based on IAS 18	Note	IFRS 15 Remeasurements	Based on IFRS 15		
Revenues	\$	48,052	5(a)	\$ 63	\$	48,115
Cost of sales		36,632	5(a)	(195)		36,437
Gross profit		11,420		258		11,678
Operating expenses						
Selling, general and administrative expenses		13,742	5(b)	(116)		13,626
Research and product development expenses		6,376		–		6,376
		20,118		(116)		20,002
						–
Loss from operations		(8,698)		374		(8,324)
Loss from joint ventures		(334)		–		(334)
Finance income (loss)						
Interest expense, net on financial instruments measured at amortized cost		(1,812)		–		(1,812)
Foreign currency gains, net ⁽¹⁾		635		–		635
Other finance losses, net		(931)		–		(931)
Finance loss, net		(2,108)		–		(2,108)
Loss before income taxes		(11,140)		374		(10,766)
Income tax expense		–		–		–
Net loss for the year		(11,140)		374		(10,766)
<i>Items that will not be reclassified subsequently to net loss:</i>						
Re-measurements of actuarial liability		98		–		98
<i>Items that may be reclassified subsequently to net loss</i>						
Exchange differences on translating foreign operations		1,703	5(a)	11		1,714
Comprehensive loss for the year	\$	(9,339)		\$ 385	\$	(8,954)
Net loss per share - basic and diluted	\$	(0.80)		\$ 0.03	\$	(0.77)

A summary of the impact of adoption of IFRS 15 is as follows:

(a) Installation, start-up and commissioning services

Under IAS 18, the Company applied the revenue recognition criteria to each separate identifiable component of a single transaction. The contracts containing installation and start-up and commissioning services were accounted for as a separate element from the product sale. Costs associated with these services were accumulated in inventory and a portion of the contract revenue was deferred until the associated work was completed.

Under IFRS 15, these performance obligations are not distinct and are combined into a single performance obligation with the associated product, where the costs are insignificant in the context of the total contract and

where the customer believes they are buying a final installed working product and are not buying the individual collection of products and services that when combined create the finished product. In these situations, revenue is now recorded inclusive of these immaterial performance obligations and the estimated costs to fulfill these obligations accrued for when control passes at the time of shipment of the related products. Accordingly, the Company accrued \$914 in contract assets, reduced inventory by \$78 and accrued \$824 in provisions for future costs expected to be incurred and reduced the deficit by \$12 at January 1, 2017. Similarly, the Company accrued \$1,022 in contract assets, reduced inventory by \$116 and accrued \$625 in provisions for future costs expected to be incurred and reduced the deficit by \$281 at December 31, 2017.

The restatement effect on the consolidated statements of operations and comprehensive loss for the year ended December 31, 2017 results in a \$63 increase in revenue and a \$195 reduction in cost of sales. The impact of these restatements on cumulative translation adjustments arising from the Company's subsidiaries was a gain of \$11.

(b) Sales agent commissions

The Company incurs sales agent commissions for obtaining contracts. Under IAS18, these costs were expensed when they were earned or incurred.

Under IFRS 15, these incremental costs incurred to obtain contracts with customers are deferred for contracts expected to be delivered after more than one year and expensed as the contract is delivered. The Company deferred \$280 of commissions in prepaid expenses and reduced the deficit by the same amount at January 1, 2017. Similarly, the Company deferred \$396 of commissions in prepaid expenses and reduced the deficit by the same amount at December 31, 2017. The impact of these restatements on cumulative translation adjustments arising from the Company's subsidiaries was immaterial.

The restatement effect on the consolidated statements of operations and comprehensive loss for the year ended December 31, 2017 results in a \$116 decrease in selling, general and administrative expenses for commissions previously expensed. The impact of these restatements on cumulative translation adjustments arising from the Company's subsidiaries was immaterial.

(c) Contract assets and liabilities

IFRS 15 distinguishes between contract assets and receivables based on whether receipt of the consideration is conditional on something other than the passage of time. At December 31, 2017, there was \$5,556 (January 1, 2017 - \$4,658) of trade and other receivables outstanding where the Company's right to consideration was not unconditional (primarily relating to revenue accrued on long term contracts). This amount has been reclassified as current and non-current contract assets under IFRS 15.

Under IFRS 15, amounts received from customers before the Company has transferred the good or service are to be presented as contract liabilities. As a result, the amounts previously presented as deferred revenue related to contracts with customers have been reclassified as contract liabilities and amounts not relating to contracts with customers have been reclassified as deferred funding.

(d) Practical expedients

The Company has elected to make use of the following practical expedients:

- Completed contracts under IAS 11 and IAS 18 before the date of transition have not been reassessed.
- Costs incurred to obtain contracts with an amortization period of less than one year have been expensed as incurred.
- For completed contract with variable consideration, the Company used the transaction price at the date of contract completion rather than estimating variable consideration amounts in the comparative reporting periods.
- Consideration previously recognized was not adjusted for the effects of a significant financing component if the Company expected, at contract inception, that the period between when the Company transfers a promised good or service to the customer and when the customer pays for the good or service was one year or less.

- For contracts that were modified before the date of initial application, the Company did not retrospectively restate the contract for those contract modifications. The Company reflected the aggregate effect of all of the modifications that occur before the beginning of the earliest period presented when: (i) identifying the satisfied and unsatisfied performance obligations; (ii) determining the transaction price; and (iii) allocating the transaction price to the satisfied and unsatisfied performance obligations.
- The Company also applied the practical expedient not to disclose the amount of the transaction price allocated to the remaining performance obligations and an explanation of when the Company expects to recognize that amount as revenue for the year ended December 31, 2017

Note 6 – Accounting Standards Issued But Not Yet Applied – IFRS 16

IFRS 16 Leases (“IFRS 16”) sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, the customer (“lessee”) and the supplier (“lessor”). This standard will replace IAS 17 Leases (“IAS 17”) and related Interpretations. IFRS 16 provides revised guidance on identifying a lease and for separating lease and non-lease components of a contract. IFRS 16 introduces a single accounting model for all lessees and requires a lessee to recognize right-of-use assets and lease liabilities for leases with terms of more than 12 months, unless the underlying asset is of low value, and depreciation of lease assets separately from interest on lease liabilities in the consolidated statement of operations and comprehensive loss. Under IFRS 16, lessor accounting for operating and finance leases will remain substantially unchanged. IFRS 16 is effective for annual periods beginning on or after January 1, 2019. The Company’s contractual obligations in the form of operating leases under IAS 17 will then be reflected on the balance sheet resulting in an increase to both assets and liabilities upon adoption of IFRS 16, and changes to the timing of recognition of expenses associated with the lease arrangements. The Company is assessing the new standard to determine the impact on its consolidated financial statements. An initial review has been completed to identify leases that will require recognition of a right-of-use asset and lease liability. The Company is currently quantifying these impacts and assessing its transition and implementation options.

Note 7 – Cash and Cash Equivalents and Restricted Cash

At December 31,	2018	2017
Cash and cash equivalents	\$ 7,561	\$ 21,511
Restricted cash	935	435
Restricted cash – non-current	241	468
Total	\$ 8,737	\$ 22,414

The restricted cash is held by financial institutions in Canada and Europe as partial security for standby letters of credit and letters of guarantee. At December 31, 2018, the Company had standby letters of credit and letters of guarantee issued by several financial institutions of \$2,890 (2017 – \$2,821), with expiry dates extending to December 2021. See Note 19 – Lines of Credit and Bank Guarantees for additional information.

Note 8 – Trade and Other Receivables

At December 31,	2018	2017
		Restated (Note 5)
Trade accounts receivable	\$ 3,313	\$ 6,466
Less: provision for impairment (note 35)	(30)	(18)
Net trade accounts receivable	3,283	6,448
Other receivables	3,445	2,288
Total trade and other receivables	\$ 6,728	\$ 8,736

Note 9 – Contract Assets and Contract Liabilities

The Company has recognized the following assets and liabilities related to contracts with customers:

At December 31,	2018	2017	\$ change
Contract assets	\$ 6,223	\$ 7,223	\$ (1,000)
Less: non-current portion	(1,689)	(645)	(1,044)
Current portion	4,534	6,578	(2,044)
Contract liabilities	16,001	14,044	1,957
Less: non-current portion	(1,420)	(2,223)	803
Current portion	14,581	11,821	2,760

(i) Significant changes in contract assets and liabilities

Contract assets at December 31, 2018 includes \$4,048 (2017 – \$4,764) relating to receivables which are to be billed according to progress based and specified payment schedules, typical with long-term contracts. The remainder relates to the final instalment of contract price on the sale of equipment for installation and commissioning, which is not invoiced to the customer until this work is complete. The change in the contract assets balance during the period reflects the change in the timeframe for a right to consideration to become unconditional (i.e. for the contract asset to be reclassified as a receivable).

Contract liabilities represent deposits and payments received in advance from customers for license fees, product development contracts and equipment sales. The change in the contract liabilities balance during the period reflects changes in the time frame for performance obligations to be satisfied and the timing of receipt of deposits.

(ii) Revenue recognized in relation to contract liabilities

Revenue recognized in the current year, included in opening contract liabilities, amounted to \$7,042 (2017 - \$895). There were no amounts recognized in the current year related to performance obligations that were satisfied in a prior year (2017 - \$nil).

(iii) Unsatisfied performance obligations

The following table shows unsatisfied performance obligations as at December 31, 2018:

At December 31,	2018	2017
OnSite Generation	\$ 20,600	\$ 19,900
Power Systems	112,100	124,700
Total	\$ 132,700	\$ 144,600

The Company expects \$49,000 of the balance to be recognized as revenues in 2019 and \$83,700 is to be recognized beyond 12 months.

Note 10 – Inventories

At December 31,	2018	2017
		Restated (Note 5)
Raw materials	\$ 9,954	\$ 9,708
Work-in-progress	6,349	4,750
Finished goods	871	590
Total inventories	\$ 17,174	\$ 15,048

Total inventory in the table above are recorded net of provisions to write them down to net realizable value. At December 31, 2018, the inventory provision was as follows:

	2018	2017
At January 1,	\$ 1,534	\$ 1,332
Net increase in the provision	834	873
Write-downs during the year	(779)	(691)
Foreign exchange revaluation	5	20
At December 31,	\$ 1,594	\$ 1,534

Note 11 – Prepaid Expenses

At December 31,	2018	2017
		Restated (Note 5)
Prepaid expenses	\$ 1,593	\$ 978
Costs incurred to obtain contracts with customers	367	396
Total prepaid expenses	\$ 1,960	\$ 1,374

The costs incurred to obtain contracts with customers relate to sales agent commissions, which are deferred until the related contract revenues with customers are recognized. The amount amortized to the consolidated statement of operations and comprehensive loss for the year ended December 31, 2018 was \$33 (2017 - \$167).

Note 12 – Investment in Joint Ventures

On March 30, 2017, the Company entered into an arrangement with Enbridge Gas Distribution (Enbridge) to form the joint venture 2562961 Ontario Ltd. to develop, construct, own and operate a 2.5 megawatts (“MW”) Power-to-Gas energy storage facility project. The Company holds a 49% equity investment in this joint venture. The Board of Directors of the joint venture has five directors consisting of three nominees from Enbridge and two nominees of Hydrogenics and all resolutions are adopted by a majority vote. The Company accounts for this joint venture using the equity method in accordance with IFRS 11, “Joint Arrangements” using the hypothetical liquidation at book value (HLBV) method due to preferential dividends and return rights of the other partner.

During 2017, the Company sold the joint venture related project assets developed as part of the 2.5MW energy storage facility project for \$2,030. Hydrogenics received cash consideration of \$1,035 and a 49% equity investment in the newly formed joint venture of \$995. A loss on disposal of the transferred assets arose of \$146, as the transfer to the joint venture was done at the historical Canadian dollar value. This loss on disposal is adjusted for in the Company’s 49% share of the loss relating to the equity interest received. It is eliminated against the investment in the joint venture and will be amortized over the life of the fixed assets. Of the loss of \$146, \$35 was capitalized as the cost of the equity investment. Legal costs of \$93 were capitalized as they were incurred in the creation of the joint venture.

During 2018, the Company sold the joint venture related project assets developed as part of the 2.5MW energy storage facility project for \$1,372. Hydrogenics received cash consideration of \$700 and a 49% equity investment in the newly formed joint venture of \$672. The Company recorded a \$30 gain on sale of assets as the transfer was done at historical Canadian dollar value. This gain on sale is adjusted for the Company’s 49% share of the loss relating to the equity interest received. It is eliminated against the investment in joint venture and will be amortized over the life of the project. Of the gain of \$30, \$8 was capitalized and netted against the cost of the equity investment.

During 2018, the energy storage facility project was commissioned and accepted by the Independent Energy Service Operator (“IESO”). The facility began in-service operations under an IESO Regulation Services contract effective May 2018.

	2018	2017
Balance January 1,	\$ 1,176	\$ –
Equity investment in joint venture	664	1,123
Loss from investment in joint venture using HLBV method	(76)	–
Amortization of deferred loss on disposal	(10)	(9)
Foreign currency translation (loss) gain	(110)	62
Investment in Enbridge joint venture at December 31,	\$ 1,644	\$ 1,176

Summarized financial information for the joint venture, as presented in the IFRS financial statements of 2562961 Ontario Ltd. is as follows:

At December 31,	2018	2017
Assets		
Current assets	\$ 439	\$ 1
Non-current assets	3,202	2,156
Total assets	\$ 3,641	\$ 2,157
Liabilities		
Current liabilities	\$ 293	\$ –
Total liabilities	293	–
Net assets	\$ 3,348	\$ 2,157

For the year ended December 31,	2018	2017
Revenue	\$ 627	\$ –
Earnings before income taxes	71	1
Joint venture earnings from continuing operations	\$ 52	\$ 1

At December 31,	2018	2017
Opening net assets of 2562961 Ontario Ltd. (Equity Investment)	\$ 2,157	\$ –
Investment in 2562961 Ontario Ltd.	1,372	2,030
Joint venture earnings during the year	52	1
Foreign currency translation	(233)	126
Closing net assets of 2562961 Ontario Ltd.	\$ 3,348	\$ 2,157
Unrealized (gains) losses on sales to 2562961 Ontario Ltd.	56	71
Adjusted net assets of 2562961 Ontario Ltd.	3,404	2,228
Company’s share of net assets using the HLBV method	\$ 1,570	\$ 1,092
Plus: capitalization of legal costs	93	93
Less: amortization of deferred loss on disposal	(19)	(9)
Investment in Enbridge joint venture at December 31	\$ 1,644	\$ 1,176

On May 28, 2014, the Company entered into a joint arrangement with Kolon Water & Energy Co. Ltd., whereby the parties formed the joint venture Kolon Hydrogenics to launch and market potential businesses based on products and technologies produced by Hydrogenics for the Korean market. The Company has a 49% equity position in Kolon Hydrogenics and shares joint control. The Board of Directors of the joint venture has four directors consisting of two nominees from each of Hydrogenics and Kolon Water and Energy and all resolutions are adopted by an affirmative vote of two thirds. The Company accounts for this joint venture using the equity method in accordance with IFRS 11, "Joint Arrangements".

In June 2018, Kolon Water & Energy Co. Ltd. and the Company commenced discussions with respect to dissolving the joint arrangement. The carrying value of the assets of Kolon Hydrogenics have been reduced to their estimated net recoverable amount based upon an assessment of fair values less costs of disposal. The share in loss of the joint venture for the year reflects the Company's proportionate share of this fair value adjustment. Discussions are ongoing to dissolve the joint venture in 2019.

	2018	2017
Balance January 1,	\$ 1,621	\$ 1,750
Share in loss of the joint venture	(1,561)	(334)
Foreign currency translation gain (loss)	(60)	205
Investment in Kolon Hydrogenics joint venture at December 31,	\$ -	\$ 1,621

Note 13 – Property, Plant and Equipment

	Plant and test equipment	Furniture and equipment	Computer hardware	Leasehold improvements	Construction in progress	Total
Net book value						
December 31, 2017	\$ 183	\$ 1,187	\$ 204	\$ 352	\$ 1,948	\$ 3,874
Additions	155	373	58	290	125	1,001
Disposals	-	-	(1)	-	(1,342)	(1,343)
Depreciation	(100)	(333)	(90)	(117)	-	(640)
Foreign exchange	(8)	(9)	(4)	(4)	-	(25)
Net book value						
December 31, 2018	\$ 230	\$ 1,218	\$ 167	\$ 521	\$ 731	\$ 2,867
Total cost	\$ 3,712	\$ 5,889	\$ 548	\$ 2,044	\$ 731	\$ 12,924
Total accumulated depreciation	(3,482)	(4,671)	(381)	(1,523)	-	(10,057)
Net book value						
December 31, 2018	\$ 230	\$ 1,218	\$ 167	\$ 521	\$ 731	\$ 2,867

Included in construction in progress is \$Nil (2017 - \$1,342) relating to capital costs to be transferred to the joint venture project with Enbridge (note 12). During the current and prior year, assets with a book value of \$1,342 and \$2,176 respectively were transferred to the Enbridge joint venture (notes 12 and 32).

Depreciation of \$454 (2017 – \$397) was included in selling, general and administrative expenses, \$104 (2017 - \$81) in research and product development expenses, and \$82 (2017 – \$137) in cost of sales in consolidated statement of operations and comprehensive loss.

	Plant and test equipment	Furniture and equipment	Computer hardware	Leasehold improvements	Construction in progress	Total
Net book value						
December 31, 2016	\$ 214	\$ 1,270	\$ 182	\$ 308	\$ 2,121	\$ 4,095
Additions	55	233	91	117	2,003	2,499
Disposals	(11)	–	(2)	–	(2,176)	(2,189)
Depreciation	(104)	(338)	(97)	(76)	–	(615)
Foreign exchange	29	22	30	3	–	84
Net book value						
December 31, 2017	\$ 183	\$ 1,187	\$ 204	\$ 352	\$ 1,948	\$ 3,874
Total cost	\$ 3,604	\$ 5,648	\$ 558	\$ 1,777	\$ 1,948	\$ 13,535
Total accumulated depreciation	(3,421)	(4,461)	(354)	(1,425)	–	(9,661)
Net book value						
December 31, 2017	\$ 183	\$ 1,187	\$ 204	\$ 352	\$ 1,948	\$ 3,874

Note 14 – Intangible Assets

	2018	2017
Computer software		
Net book value January 1,	\$ 180	\$ 203
Additions	125	25
Amortization	(66)	(57)
Foreign exchange	(7)	9
Net book value December 31,	\$ 232	\$ 180
Total cost	\$ 2,158	\$ 2,043
Total accumulated depreciation	(1,926)	(1,863)
Net book value December 31,	\$ 232	\$ 180

Amortization of \$66 (2017 – \$57) is included in the consolidated statements of operations and comprehensive loss in selling, general and administrative expenses.

Note 15 – Goodwill

The carrying amounts of goodwill at the beginning and end of the current and previous years are set out below.

	2018	2017
At January 1,	\$ 4,569	\$ 4,019
Foreign exchange revaluation	(210)	550
At December 31,	\$ 4,359	\$ 4,569

The goodwill relates to the Company's OnSite Generation business CGU. The Company performs its annual impairment test as of September 30.

In estimating the recoverable amount of this CGU, the Company first used an income approach, discounting its future estimated cash flows for Q4 2018 and a five-year forecast period, starting with the approved 2019 budget, and discounted those projected cash flows at a rate of return that reflects the relative risks of achieving those cash flows. To this amount, the Company added the present value of a terminal value, determined by applying a capitalization rate to the expected annual cash flows to be generated beyond the forecast period, and the present value of the tax shield from existing tax loss carryforwards to determine an estimated enterprise value. The resulting

enterprise value was then adjusted for redundant assets, interest bearing debt and debt equivalents and estimated costs to sell to determine an estimated fair value less cost to sell.

Discounted cash flows over the forecast period used a five-year revenue compound annual growth rate (CAGR) of approximately 30% (2017 – 20%) and a perpetual growth rate of 2% (2017 – 2%) thereafter. The five-year revenue CAGR used in the discounted cash flows calculations differs from past experience. Management has determined the five-year revenue CAGR based on expectations for future growth in demand for hydrogen generation products in our core markets; notably, multimegawatt Power-to-Gas and hydrogen refueling opportunities, the impact of recently launched and to be launched solutions, as well as its current backlog. Gross direct margins (excluding indirect overheads) are projected to decline from 29% to 24.5% (2017 – 29% fixed) throughout the forecast period reflecting management's expectation of competitive pressure on margins to achieve a 30% CAGR. Selling, general and administrative expenses and indirect manufacturing overheads are projected to increase at approximately 5% (2017 – 3%) per year after the 2018 period. Research and development costs (net of grants) are anticipated to increase in 2019 and 2020 and then return to historic levels of less than \$1.5 million per year thereafter. Working capital requirements were estimated to approximate 10% (2017 – 15%) of annual sales throughout the forecast period. Using a weighted cost of capital approach, the Company applied a discount rate of 11.6% (2017 – 15.5%) to determine the present value of the projected cash flows and then deducted 1.25% (2017 - 3%) for estimated costs to sell.

The Company supplemented the discounted cash flow analysis by considering transactions multiples over the past five years and current trading multiples for broadly comparable public company businesses with similar operations within the same industry to the resulting sales multiple of the OnSite CGU from the discounted cashflow approach (1.2 times (2017 – 2.2) trailing 12 months revenues) which was within the low end of the range due the significantly smaller size of the Company's operations relative to some of these public companies comparables.

The sales and operations of the OnSite Generation CGU constitutes approximately half of the Company's current sales and operations. Accordingly, the Company also compared the enterprise value of the OnSite Generation CGU against the Company's overall market capitalization and the implied valuation of its Power Systems CGU and the respective revenue multiples. The revenue multiple for the Company as a whole was 2.5 times (2017 - 3.1) trailing 12 months revenues, the implied revenue multiple for the Power Systems CGU was 4.5 times (2017 - 3.8) trailing 12 months revenue and the implied revenue multiple for the OnSite Generation CGU was 1.2 times (2017 - 2.2) trailing 12 months revenue. Management believes all of these multiples are within the low end of the range when compared to multiples of broadly comparable public companies in the hydrogen fuel cell industry.

As the valuation techniques used by the Company require the use of unobservable inputs, the recoverable amount of the Company's OnSite Generation CGU is classified within Level 3 of the fair value hierarchy.

No impairment charges arose as a result of the reviews in either 2018 or 2017. Reasonably possible changes in key assumptions in the discounted cash flow approach would not cause the recoverable amount of the OnSite Generation CGU to fall below its carrying value. The recoverable amount would equal its carrying value if a revenue multiple of 0.5 times (2017 - 0.3) revenue was used.

Note 16 – Trade and Other Payables

Accounts payable and accrued liabilities are as follows:

At December 31,	2018	2017
Trade accounts payable	\$ 3,952	\$ 4,612
Accrued payroll and related compensation	2,292	2,645
Supplier accruals	2,584	2,126
Accrued professional fees	206	224
Other	34	129
Total accounts payable and accrued liabilities	\$ 9,068	\$ 9,736

Note 17 – Financial Liabilities

Financial liabilities are as follows:

At December 31,	2018		2017	
Current portion of long-term debt – Export Development Canada (note 20)	\$	1,983	\$	2,470
Current portion of long-term debt – Province of Ontario (note 20)		628		622
Warrants		11		409
Deferred share unit liability (note 22)		730		1,406
Current portion of capital lease (note 20)		7		6
Total financial liabilities	\$	3,359	\$	4,913

Warrants

On November 4, 2016, concurrent with a new loan agreement with Export Development Canada (“EDC”), the Company issued 200,575 share purchase warrants. Each warrant was exercisable for one common share of the Company at an exercise price of US\$6.85 per common share. The warrants were transferrable and were scheduled to expire on November 4, 2021. The proceeds of the loan (net of transaction costs) were allocated between the fair value of the warrant liability and the debt. These warrants include anti-dilution provisions, and as a result were accounted for as a financial liability with changes in fair value reflected in the consolidated statements of operations and comprehensive loss. These warrants were exercised on December 1, 2017 for cash proceeds of \$1,374 which together with the associated warrant liability of \$592 are reflected in the statements of changes in equity.

On May 8, 2015, concurrent with a new loan agreement with a syndicate of lenders, the Company issued 250,000 share purchase warrants. Each warrant was exercisable for one common share of the Company at an exercise price of US\$15.00 per common share. The warrants are non-transferrable and expire on May 6, 2019. As a result of this issuance, the fair market value of these warrants of \$885 was included in other finance (losses) gains. These warrants include anti-dilution provisions, and as a result are accounted for as a financial liability with changes in fair value reflected in the consolidated statements of operations and comprehensive loss. On December 16, 2015, as a result of the public offering, the exercise price of the warrants was reduced to US\$10.85 per common share.

The fair value of the outstanding warrants was determined using the Black-Scholes option pricing model with the following weighted average assumptions:

At December 31,	2018		2017	
Risk-free interest rate (%)		1.86%		1.68%
Expected volatility (%)		60.1%		55.3%
Expected life in years		0.35		0.38
Expected dividend		Nil		Nil

Note 18 – Provisions

Changes in the Company's aggregate provisions are as follows:

	Warranty		Startup and commissioning		Total
At January 1,	\$	2,095	\$	625	\$ 2,720
Additional provisions		1,994		726	2,720
Utilized during the year		(906)		(784)	(1,690)
Unused amounts reversed		(781)		(12)	(793)
Foreign currency translation		(75)		(31)	(106)
Total provision at December 31, 2018		2,327		524	2,851
Less current portion		(1,636)		(405)	(2,041)
Long-term provision at December 31, 2018	\$	691	\$	119	\$ 810

	Warranty		Startup and commissioning		Total Restated (Note 5)
At January 1,	\$	2,062	\$	824	\$ 2,886
Additional provisions		1,192		1,087	2,279
Utilized during the year		(639)		(1,358)	(1,997)
Unused amounts reversed		(734)		–	(734)
Foreign currency translation		214		72	286
Total provision at December 31, 2017		2,095		625	2,720
Less current portion		(1,174)		(570)	(1,744)
Long-term provision at December 31, 2017	\$	921	\$	55	\$ 976

Note 19 – Lines of Credit and Bank Guarantees

At December 31, 2018, the Company's subsidiary in Belgium (the "Borrower") had a joint credit and operating line facility of €7,000 (the "Credit Facility"), which renews annually in April upon review. Under the Credit Facility, the Borrower may borrow up to a maximum of 75% of the value of awarded sales contracts, approved by the Belgian financial institution, to a maximum of €500; and may also borrow up to €1,500 for general business purposes, provided sufficient limit exists under the overall facility limit of €7,000. Of the €7,000 facility, €2,175 or approximately \$2,491 was drawn as standby letters of credit and bank guarantees and €Nil was drawn as an operating line. At December 31, 2018, the Company had availability of €6,321 or approximately \$7,234 (December 31, 2017 – \$4,377) under the Credit Facility totaling €4,321, or approximately \$4,945, for use as letters of credit and bank guarantees and totaling €2,000, or approximately \$2,289, as an operating line.

The Credit Facility bears interest at EURIBOR plus 1.45% per annum and is secured by a €1,000 secured first charge covering all assets of the Borrower. The credit facility contains a negative pledge precluding the Borrower from providing security over its assets. Additionally, the Borrower is required to maintain a solvency covenant, defined as equity plus current account (intercompany account with the parent company), divided by total liabilities of not less than 25% and ensure that its intercompany accounts with parent company do not fall below a defined level. At December 31, 2018, the Borrower was in compliance with these covenants.

At December 31, 2018, the Company also had a Canadian credit facility of \$2,199 with no expiration date for use only as letters of credit and bank guarantees. At December 31, 2018, \$399 was drawn as standby letters of credit and bank guarantees. At December 31, 2018, the Company had \$1,800 (December 31, 2017 – \$2,391) available under this facility.

These letters of credit and bank guarantees relate primarily to obligations in connection with the terms and conditions of the Company's sales contracts. The standby letters of credit and letters of guarantee may be drawn on by the customer if the Company fails to perform its obligations under the sales contracts.

Note 20 – Other Non-current Liabilities

Other non-current liabilities are as follows:

At December 31,		2018		2017
Long-term debt – Export Development Canada (i)	\$	5,958	\$	8,344
Long-term debt – Province of Ontario (ii)		2,091		2,896
Non-current post-retirement benefit liabilities (iii)		247		330
Capital lease		33		44
Total		8,329		11,614
Less current portion of long-term debt – EDC (note 17)		(1,983)		(2,470)
Less current portion of long-term debt – Province of Ontario (note 17)		(628)		(622)
Less current portion of capital lease (note 17)		(7)		(6)
Total other non-current liabilities	\$	5,711	\$	8,516

(i) Long-term debt – Export Development Canada (“EDC”)

In the fourth quarter of 2016, the Company entered into a loan agreement with EDC for a five-year facility of \$9,000. The loan is structured as a five-year term loan with quarterly interest payments calculated at an annual interest rate of U.S. prime plus 10%, declining to U.S. prime plus 5% to 7% if certain annual earnings before interest, taxes, depreciation and amortization thresholds are met. The loan is secured by a second charge over the assets located within Canada. Commencing March 31, 2017, the loan principal is subject to four quarterly repayments of \$250 followed by 16 quarterly repayments of \$500. There is an option to prepay a portion of, or the entire loan at any time, subsequent to March 31, 2017.

The amortized cost of this loan at December 31, 2018 was \$5,958 (December 31, 2017 – \$8,344). Total interest expense for the year ended December 31, 2018 was \$1,133 (December 31, 2017 – \$1,306). For the year ended December 31, 2018, accretion of deferred financing fees of \$57 has been included in interest expense (December 31, 2017 – \$102).

The change in carrying value of this liability was as follows:

		2018		2017
At January 1,	\$	8,344	\$	8,625
Principal repayments during the year		(2,250)		(750)
Interest payments during the year		(1,370)		(1,093)
Interest accretion during the year		1,133		1,306
Revaluation of variable rate long-term debt (note 28)		101		256
At December 31,	\$	5,958	\$	8,344

(ii) Long-term debt – Province of Ontario

In 2011, the Company entered into a loan agreement with the Province of Ontario’s Ministry of Economic Development and Trade, Strategic Jobs and Investment Fund for funding up to C\$6,000. Each draw on the loan is calculated based on 50% of eligible costs to a maximum of C\$1,500 per disbursement. Eligible costs had to be incurred between October 1, 2010 and September 30, 2015.

After this five-year period, the loan bears interest at a rate of 3.67% and will require repayment at a rate of 20% per year of the outstanding balance for the five years subsequent to the sixth anniversary of the first disbursement. There is no availability remaining under this facility at December 31, 2018.

The loan is collateralized by a general security agreement covering assets of Hydrogenics Corporation. Additionally, the Corporation is required to maintain a minimum balance of cash in Canadian dollars in a Canadian financial institution at all times. The Company was in compliance with this covenant at December 31, 2018.

The change in carrying value of this liability was as follows:

	2018	2017
At January 1,	\$ 2,896	\$ 3,239
Principal repayments during the year	(870)	(888)
Interest payments during the year	(128)	(181)
Interest accretion during the year	416	503
Foreign currency translation	(223)	223
At December 31,	\$ 2,091	\$ 2,896

(iii) Post-retirement benefit liabilities

The liability relates to defined contribution pension plans in Belgium and is payable in euros. Applicable law states that in the context of defined contribution plans, the employer must guarantee a minimum return of 3.75% on employee contributions and 3.25% on employer contributions. The minimum guaranteed return for defined contributions plans in Belgium results in the employer being exposed to financial risk for the legal obligation to pay further contributions if the fund does not hold sufficient assets to meet the minimum guaranteed return.

The change in carrying value of this liability was as follows:

	2018	2017
At January 1,	\$ 330	\$ 377
Current service and net interest cost	122	153
Employer contributions in the year	(122)	(153)
Re-measurement of actuarial liability	(70)	(99)
Foreign currency translation	(13)	52
At December 31,	\$ 247	\$ 330

	2018	2017
Plan assets	\$ 1,777	\$ 1,716
Accrued benefit obligation	(2,024)	(2,046)
Net defined benefit obligation	\$ (247)	\$ (330)

The Company has estimated the post-retirement benefit liabilities of \$247 at December 31, 2018, using an actuarial measurement.

Note 21 – Share Capital**Common shares**

The authorized share capital of the Company consists of an unlimited number of common shares, with no par value, and an unlimited number of preferred shares in series, with no par value.

	2018		2017	
	Number	Amount	Number	Amount
Balance at January 1,	15,436,879	\$ 387,746	12,544,960	\$ 365,923
Adjustment for partial shares on share consolidation	–	–	(1)	–
Issuance of common shares	–	–	2,682,742	19,725
Warrants exercised (note 17)	–	–	200,575	1,966
Issuance of common shares on vesting of performance share units (note 22)	4,204	96	4,203	96
Issuance of common shares on exercise of stock options (note 22)	6,400	69	4,400	36
At December 31,	15,447,483	\$ 387,911	15,436,879	\$ 387,746

Common share issuance

On April 28, 2017, the Company and Fuzhou Bonded Zone Hejili Equity Investment Limited Partnership (“Hejili”) entered into a subscription agreement to issue 2,682,742 common shares of Hydrogenics to Hejili on a private placement basis, for gross proceeds to Hydrogenics of \$21,000 or approximately \$7.83 per common share. The subscription price represented a 10% premium to the 20-day volume-weighted average trading price of the Company’s common shares on the NASDAQ for the period ending April 27, 2017.

The transaction closed on June 27, 2017 and the Company received net proceeds of \$19,725 after underwriting fees and expenses of \$1,275. Subsequent to closing of the private placement, Hejili’s interest in Hydrogenics was approximately 17.6% of total issued common shares.

The subscription agreement provides, among other things, that Hejili has participation rights on future offerings and the right to nominate one director to the board of directors of Hydrogenics, and that Hejili will be subject to certain restrictions, including lock-up, transfer and voting restrictions, subject, in each case, to certain ownership threshold requirements. The subscription agreement also provides that Hejili will cooperate with Hydrogenics to jointly develop the Chinese market for hydrogen, energy storage and fuel cell products.

Note 22 – Stock-Based Compensation

Under the Hydrogenics Omnibus Incentive Plan adopted in 2012, the Corporation may issue stock options, RSUs and PSUs to employees, directors and consultants as part of a long-term incentive plan. Stock options were previously granted under the Corporation’s Stock Option Plan.

Under the Company’s previous Stock Option Plan, 234,976 stock options were outstanding at December 31, 2018. No further stock options may be issued under the Corporation’s Stock Option Plan.

Effective May 11, 2018, the Company amended the Omnibus Incentive Plan to increase the number of shares available for issuance to 1,308,032 from 1,002,069. The shareholders’ resolution was passed on May 11, 2018.

Of the 1,308,032 shares available under the Omnibus Incentive Plan, to be issued as stock options, RSUs and PSUs, 618,113 have been granted as stock options, 202,707 have been granted as RSUs and were outstanding at December 31, 2018. In addition, 12,609 previously issued PSU’s had fully vested as of December 31, 2018. The Corporation has 474,603 of share units available for issue as stock options, RSUs and PSUs under the Omnibus Incentive Plan at December 31, 2018.

Stock options

A summary of the Company's stock option plan is as follows:

	2018		2017	
	Number of shares	Weighted average exercise price C\$	Number of shares	Weighted average exercise price C\$
Balance at January 1,	762,173	\$ 7.99	628,636	\$ 7.97
Granted	111,621	11.23	141,268	8.56
Exercised	(6,400)	8.05	(4,400)	6.22
Forfeited	(9,280)	13.25	–	–
Expired	(5,025)	10.44	(3,331)	29.25
At December 31,	853,089	\$ 8.37	762,173	\$ 7.99

During the year ended December 31, 2018, 6,400 (2017 – 4,400) stock options were exercised resulting in cash proceeds of \$40 (2017 – \$20), an increase in equity of \$69 (2017 – \$36) with an offset to contributed surplus of \$29 (2017 – \$16).

During the year ended December 31, 2018, 111,621 (2017 – 141,268) stock options were granted with an average fair value of C\$11.23 per option (2017 – \$8.56). All options are for a term of ten years from the date of grant and vest over four years unless otherwise determined by the Board of Directors. The fair value of the stock options was determined using the Black-Scholes option pricing model with the following weighted average assumptions:

	2018	2017
Risk-free interest rate	2.12 %	1.34 %
Expected volatility	64.3 %	64.6 %
Expected life in years	7	6
Expected dividend	Nil	Nil

Expected volatility was determined using the historical volatility for the Company's share price for the seven years prior to the date of grant, as this is the expected life of the stock options.

Stock-based compensation expense for the year ended December 31, 2018, related to stock options, was \$539 (2017 – \$444) and was included in selling, general and administrative expenses with an offsetting increase to contributed surplus.

The following table summarizes information about the Company's stock options as of December 31, 2018:

Grant date	Expiry date	Total number of options	Weighted average remaining contractual life (in years)	Exercise Price C\$	Number of vested options	Weighted average remaining contractual life (in years)	Exercise Price C\$
March 27, 2009	March 27, 2019	5,284	0.24	13.25	5,284	0.24	\$ 13.25
April 6, 2010	April 5, 2020	19,787	1.26	4.91	19,787	1.26	4.91
March 31, 2011	March 31, 2021	83,000	2.25	6.96	83,000	2.25	6.96
June 8, 2011	June 8, 2021	126,905	2.44	5.03	126,905	2.44	5.03
May 10, 2012	May 11, 2022	157,871	3.36	6.25	157,871	3.36	6.25
November 19, 2012	November 19, 2022	39,476	3.89	6.60	39,476	3.89	6.60
March 21, 2013	March 21, 2023	15,000	4.22	8.10	15,000	4.22	8.10
March 26, 2015	March 25, 2025	56,821	6.23	16.14	42,616	6.23	16.14
March 30, 2016	March 31, 2026	96,056	7.25	10.53	48,028	7.25	10.53
March 14, 2017	March 14, 2027	141,268	8.20	8.56	35,317	8.20	8.56
March 13, 2018	March 13, 2028	90,836	9.20	11.41	—	9.20	11.41
June 1, 2018	June 1, 2028	20,785	9.42	10.45	—	9.42	10.45
		853,089	5.29	\$ 8.37	573,284	5.29	\$ 8.37

Performance Share Units (“PSUs”)

Under the Hydrogenics Omnibus Incentive Plan adopted in 2012, the Company may issue performance based share units to employees, directors and consultants. Pursuant to the Hydrogenics Omnibus Incentive Plan, participants may be granted a portion of their long-term incentive plan in the form of PSUs instead of RSUs and stock options. A PSU is a unit, equivalent in value to a common share of the Company. Each PSU entitles the participant to receive a cash payment or common shares, at the option of the Company. The fair value of the PSUs is recognized as a compensation expense and is pro-rated over the expected vesting period with the offsetting increase to contributed surplus. Fair value is calculated as the market value of the common share at the date of grant. Each PSU is subject to vesting performance conditions. The Company estimates the length of the expected vesting period at the grant date, based on the most likely outcome of the performance conditions. The Company will revise its estimate of the length of the vesting period, if necessary, if subsequent information indicates that the length of the vesting period differs from previous estimates and any change to compensation cost will be recognized in the period in which the revised estimate is made. Forfeitures are estimated at the grant date and are revised to reflect a change in expected or actual forfeitures. The expiry date of PSUs granted is five years from the date of award.

A summary of the Company's PSU activity is as follows:

	2018	2017
Balance at January 1,	191,366	195,569
Expired	(187,162)	—
Vested – share issuance	(4,204)	(4,203)
At December 31,	—	191,366

Stock-based compensation expense for the year ended December 31, 2018, related to PSUs, was \$6 (2017 – \$31) and was included in selling, general and administrative expenses with an offsetting increase to contributed surplus.

Equity-settled Restricted Share Units (“RSUs”)

An RSU is a unit equivalent in value to a common share of the Company. The RSUs will be settled by issuance of shares in the Company. The cost of the Company’s RSUs is determined using the cliff vesting method and is charged to selling, general and administrative expenses. RSUs vest three years from grant date. The fair value of each grant of RSUs is the fair value of the Company’s share price on the date of grant. The resulting compensation expense, included in selling, general and administrative expenses, is based on the fair value of the awards granted is charged to income over the period the employees unconditionally become entitled to the award, with a corresponding increase to contributed surplus.

A summary of the Company’s RSU activity is as follows:

	2018	2017
Balance at January 1,	133,184	52,483
RSUs issued	69,523	80,701
At December 31,	202,707	133,184

Stock-based compensation expense for the year ended December 31, 2018, related to RSUs, was \$412 (2017 – \$267) and was included in selling, general and administrative expenses with an offsetting increase to contributed surplus.

Deferred Share Units (“DSUs”)

The Company has a deferred share unit plan for directors. Pursuant to the DSU Plan, non-employee directors are entitled to receive all or any portion of their annual cash retainer and meeting fees in the form of DSUs instead of cash. A DSU is a unit, equivalent in value to a common share of the Company. Each DSU entitles the participant to receive a cash payment upon termination of directorship, valued at the price of the Company’s common shares on the TSX on the date of termination. Compensation cost for DSUs granted under the DSU plan is recorded as an expense with a corresponding increase in accrued liabilities and is measured at fair value. The DSU liability is marked-to-market each reporting period with the offset recorded in selling, general and administrative expenses.

A summary of the Company’s DSU activity is as follows:

	2018		2017	
	Number	Amount	Number	Amount
Balance at January 1,	125,949	\$ 1,406	106,506	\$ 456
DSU compensation expense	21,222	145	20,277	174
DSU cancellation	–	–	(834)	(9)
DSU fair value adjustments	–	(821)	–	785
At December 31,	147,171	\$ 730	125,949	\$ 1,406

For the year ended December 31, 2018, the Company recognized \$145 (2017 – \$165) as expense for the issue of new DSUs (net of cancellations) and a recovery of \$821 (2017 – expense of \$785) for the mark-to-market adjustment on the liability.

The DSU liability at December 31, 2018 of \$730 (2017 – \$1,406) was included in financial liabilities. DSUs vest immediately on the date of issuance.

Summary of stock-based compensation expense (recovery)

Years ended December 31,	2018	2017
Stock-based compensation expense - stock options	\$ 539	\$ 444
Stock-based compensation expense - PSU	6	31
Stock-based compensation expense - RSU (equity-settled)	412	267
Subtotal stock based compensation expense	957	742
DSU - new issuance (net of cancellations)	145	165
DSU - mark-to-market adjustment	(821)	785
Subtotal stock-based compensation expense - DSU	(676)	950
Total	\$ 281	\$ 1,692

Note 23 – Selling, General and Administrative Expenses

Year ended December 31,	2018	2017
		Restated (Note 5)
Salaries and benefits, office administration and other expenses	\$ 10,812	\$ 11,480
Depreciation (note 13)	454	397
Amortization (note 14)	66	57
Stock-based compensation - stock options, PSU and RSU (note 22)	957	742
Stock-based compensation - DSU (note 22)	(676)	950
Total	\$ 11,613	\$ 13,626

Note 24 – Research and Product Development Expenses

Research and product development expenses are recorded net of non-repayable third-party program funding received or receivable. For the years ended December 31, 2018 and 2017, research and product development expenses and non-repayable program funding, which have been received or receivable, are as follows:

Year ended December 31,	2018	2017
Research and product development expenses	\$ 12,023	\$ 8,812
Government research and product development funding	(4,537)	(2,436)
Total	\$ 7,486	\$ 6,376

Note 25 – Key Management Compensation

Key management includes the Company's directors and key executive members.

Year ended December 31,	2018	2017
Salaries and short-term employee benefits	\$ 2,286	\$ 1,873
Stock-based compensation		
DSUs	145	165
Stock options	598	561
RSUs	601	533
PSUs	30	–
Total	\$ 3,660	\$ 3,132

Stock-based compensation represents fair value of amounts granted during the year.

Note 26 – Expenses by Nature

The following expenses are included in cost of sales; selling, general and administrative expenses; and gross research and product development expenses.

Year ended December 31,	2018	2017
		Restated (Note 5)
Raw materials and consumables used	\$ 23,162	\$ 32,818
Employee benefits (note 27)	17,857	18,497
Facilities	2,942	2,683
Professional services	1,311	1,220
Depreciation and amortization (note 13, 14)	706	672
Shareholder and other corporate communications	395	479
Insurance	502	504
Marketing	581	499
Other	1,351	1,503
Total	\$ 48,807	\$ 58,875

Note 27 – Employee Benefits Expense

The following employee benefits expenses are included in cost of sales; selling, general and administrative expenses and research and development expenses.

Year ended December 31,	2018	2017
		Restated (Note 5)
Salaries and wages	\$ 16,461	\$ 15,790
Stock-based compensation (including equity-settled RSUs & PSUs), (note 22)	957	742
Medical, dental and insurance	415	346
Pension costs	326	270
Stock-based compensation – DSUs (note 22)	(676)	950
Other	374	399
Total	\$ 17,857	\$ 18,497

Note 28 – Other Finance Gains and Losses, Net

Components of other finance gains and losses, net are as follows:

Year ended December 31,	2018	2017
Revaluation of variable rate long-term debt – EDC (note 20)	\$ (101)	\$ (256)
Gain (loss) from change in fair value of outstanding warrants (note 17)	398	(675)
Total	\$ 297	\$ (931)

Note 29 – Income Taxes

The Corporation had net losses for the periods ended December 31, 2018 and 2017 and income tax expense was \$300 and \$nil for each of these years, respectively.

The estimated income tax rate for the Company is based on substantively enacted corporate tax rates, expected timing of reversals, and expected taxable income allocation to various tax jurisdictions.

The Company's computation of income tax expense is as follows:

Years ended December 31,	2018	2017
		Restated (Note 5)
Loss before income taxes	\$ (13,039)	\$ (10,766)
Statutory income tax rate	25%	25%
Income tax recovery at statutory rates	(3,260)	(2,692)
Non-deductible expenses	302	94
Withholding tax	300	–
Tax losses and other temporary differences not recognized	3,244	2,622
Income taxes at different rates in foreign and other provincial jurisdictions	(233)	(256)
Other	(53)	231
Total	\$ 300	\$ –

At December 31, 2018, the Company has available income tax loss carry-forwards of \$109,953 that may be used to reduce taxable income in future years, in certain jurisdictions, expiring as follows:

For the years ended	2018	2017
2024	\$ 118	\$ 118
2025	244	244
2026	512	512
2027	14	14
2028	1	1
2029	517	517
2030	7,208	7,208
2031	6,243	6,432
2032	5,524	5,706
2033	–	–
2034	4,814	4,680
2035	5,798	6,238
2036	5,237	5,411
2037	4,789	4,853
2038	6,177	–
No expiry	62,757	61,518
Total	\$ 109,953	\$ 103,452

Components of the Company's tax benefit of deductible temporary differences and unused tax losses are:

Year ended December 31,	2018	2017
Non-capital losses	\$ 30,508	\$ 30,984
Investment tax credits	1,649	1,349
Scientific research and experimental development	745	745
Property, plant and equipment and intellectual property	1,592	1,406
Provisions	200	131
Other	850	669
Total	\$ 35,544	\$ 35,283

No deferred income tax asset has been recognized in respect of the \$35,544 of losses and other temporary differences, reflecting the Company's uncertainty associated with the realization of deferred income tax assets.

Note 30 – Net Loss Per Share

The loss per share for the years ended December 31, 2018 and 2017 was as follows:

Year ended December 31,	2018	2017
Net loss	\$ (13,339)	\$ (11,140)
Change in accounting policy (note 5)	–	374
Net loss, restated	(13,339)	(10,766)
Weighted average number of shares outstanding – basic	15,441,947	13,947,636
Dilutive effect of stock options	–	–
Dilutive effect of warrants	–	–
Weighted average number of shares outstanding – diluted	15,441,947	13,947,636
Net loss per share – basic and diluted	\$ (0.86)	\$ (0.77)

No effect has been given to the potential exercise of stock options and warrants in the calculation of diluted net loss per share, as their impact would be anti-dilutive.

Note 31 – Commitments and Contingencies**Forgivable loan facility**

In November 2014, Hydrogenics entered into an agreement with the IESO to provide a 2.5MW Power-to-Gas storage unit to the Province of Ontario. The target in-service period for the IESO Regulation Services contract was the second quarter of 2018. The contract was assigned to the joint venture 2562961 Ontario Ltd. in 2017. The joint venture will receive a total of C\$2,950, paid in equal monthly instalments, in return for IESO's use of the energy storage solution over the initial three-year period commencing with commissioning. The Power-to-Gas storage unit is estimated to have a potential 20-year life.

In order to partially fund the development of the unit, Hydrogenics and the Province of Ontario, through the Ministry of Research and Innovation ("MRI"), negotiated a C\$4,000 forgivable loan from the Innovation Demonstration Fund Program ("IDF"). The loan bears interest at 3.23%, is expected to mature on June 30, 2020 and the principal and interest are forgivable upon the satisfaction of certain criteria.

The forgiveness of the principal and interest on the loan is contingent on a final commercialization report satisfactory to MRI, indicating successful commissioning and verification of the operation of the multi-stack 2.5MW PEM electrolyzer and demonstrated performance capabilities that would be deemed acceptable for ancillary service as per the IESO specifications. The unit achieved acceptance by IESO in May 2018. The final commercialization report is expected to be delivered in 2019. The forgivable loan has been accounted for as a government grant as management estimates there is reasonable assurance that the terms of forgiveness will be met.

	December 31, 2018
Total cumulative cost of 2.5MW Power-To-Gas unit	\$ 8,792
Funding received from the IDF (C\$4,000)	(2,941)
Cumulative costs transferred to the joint venture (note 12)	(3,402)
Foreign exchange loss on disposal	(117)
Costs recorded as research and product development costs	(2,332)
Costs remaining to be transferred to the joint venture	\$ -

Rental expenses

The Company incurred rental expenses of \$1,221 under operating leases in 2018 (2017 – \$1,120). The Company has future minimum lease payments under operating leases relating to premises, office equipment and vehicles as follows:

For the years ended	
2019	\$ 1,088
2020	885
2021	724
2022	387
2023	290
Thereafter	560
Total	\$ 3,934

The Company leases various premises, office equipment and vehicles under non-cancellable operating lease agreements. The lease agreements are classified as non-cancellable, as penalties are charged if cancellation does occur. Certain leases contain purchase option clauses, which provide the Company with the ability to purchase the equipment or automobile at fair value at the time of exercise. The leases have varying terms, escalation clauses and renewal rights.

Indemnification agreements

The Company has entered into indemnification agreements with its current and former directors and officers to indemnify them, to the extent permitted by law, against any and all charges, costs, expenses, amounts paid in settlement, and damages incurred by the directors and officers as a result of any lawsuit or any other judicial, administrative or investigative proceeding in which the directors and officers are sued as a result of their service.

These indemnification claims will be subject to any statutory or other legal limitation period. The nature of the indemnification agreements prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to counterparties. The Company has purchased directors' and officers' liability insurance. No amount has been recorded in the consolidated financial statements with respect to these indemnification agreements, as the Company is not aware of any claims.

In the normal course of operations, the Company may provide indemnification agreements, other than those listed above, to counterparties that require the Company to compensate them for costs incurred as a result of changes in laws and regulations or as a result of litigation claims or statutory sanctions that may be suffered by the counterparty as a consequence of the transaction. The terms of these indemnification agreements will vary based on the contract. The nature of the indemnification agreements prevents the Company from making a reasonable estimate of the maximum potential amount it could be required to pay to counterparties. No amount has been recorded in the consolidated financial statements with respect to these indemnification agreements, as the Company is not aware of any claims.

Note 32 – Related Party Transactions

In the normal course of operations, the Company subcontracts certain manufacturing functions to a company owned by a family member of an executive officer and Director of the Company. During 2018, Hydrogenics made purchases of \$467 (2017 – \$646) from this related company. At December 31, 2018, the Company had an accounts payable balance due to this related party of \$21 (2017 – \$8).

The Company holds an equity investment in the joint venture 2562961 Ontario Ltd., related to the energy storage facility project with Enbridge Gas Distribution. During the year ended December 31, 2018 the Company transferred assets to the joint venture of \$1,372 (2017 – \$2,030) and at the end of December 31, 2018 the Company had a receivable of \$196 (2017 – \$nil) owing from the joint venture.

The Company holds an equity investment in the joint venture Kolon Hydrogenics. The Company had no transactions with the joint venture in either 2018 or 2017.

All related party transactions involve the parent company. There are no related party transactions to disclose for the Company's subsidiaries.

Note 33 – Consolidated Statements of Cash Flows

Components of the net change in non-cash operating assets and liabilities are as follows:

Year ended December 31,	2018	2017
		Restated (Note 5)
Decrease (increase) in current assets		
Trade and other receivables	\$ 1,834	\$ (4,013)
Contract assets	921	(1,006)
Inventories	(2,497)	3,343
Prepaid expenses	(603)	(152)
Increase (decrease) in current liabilities		
Trade and other payables, including provisions	(1,164)	1,616
Contract liabilities	2,260	(282)
Deferred funding	999	271
Total	\$ 1,750	\$ (223)

Note 34 – Segmented Financial Information

The Company's two reportable segments include OnSite Generation and Power Systems. Segmentation is based on the internal reporting and organizational structure, taking into account the different risk and income structures of the key products and production processes of the Company. Where applicable, corporate and other activities are reported separately as Corporate and Other. OnSite Generation includes the design, development, manufacture and sale of hydrogen generation products. Power Systems includes the design, development, manufacture and sale of fuel cell products

Financial information by reportable segment for the years ended December 31, 2018 and 2017 was as follows:

Year ended December 31, 2018	OnSite Generation	Power Systems	Corporate and Other	Total
Revenue transferred at a point in time	\$ 17,463	\$ 12,152	\$ –	\$ 29,615
Revenue transferred over time	845	3,436	–	4,281
Revenues from external customers	18,308	15,588	–	33,896
Gross profit	2,648	6,077	–	8,725
Selling, general and administrative expenses	2,959	4,276	4,378	11,613
Research and product development expenses	2,927	4,495	64	7,486
Segment loss	(3,238)	(2,694)	(4,442)	(10,374)
Loss in joint venture	–	–	(1,637)	(1,637)
Interest expense, net	–	–	(1,469)	(1,469)
Foreign currency gains, net	–	–	144	144
Other finance gains, net	–	–	297	297
Loss before income taxes	\$ (3,238)	\$ (2,694)	\$ (7,107)	(13,039)

Year ended December 31, 2017	OnSite Generation	Power Systems	Corporate and Other	Total
Revenue transferred at a point in time	\$ 24,385	\$ 19,393	\$ –	\$ 43,778
Revenue transferred over time	883	3,454		4,337
Revenues from external customers	25,268	22,847	–	48,115
Gross profit	3,663	8,015	–	11,678
Selling, general and administrative expenses	3,381	4,321	5,924	13,626
Research and product development expenses	1,275	4,996	105	6,376
Segment loss	(993)	(1,302)	(6,029)	(8,324)
Loss in joint venture	–	–	(334)	(334)
Interest expense, net	–	–	(1,812)	(1,812)
Foreign currency gains, net	–	–	635	635
Other finance losses, net	–	–	(931)	(931)
Loss before income taxes	\$ (993)	\$ (1,302)	\$ (8,471)	(10,766)

Revenue, cost of sales and selling, general and administrative expenses for the comparative year have been restated to reflect the retrospective application of IFRS 15 adopted effective January 1, 2018. See Note 5.

Balance sheet information by reportable segment at December 31, 2018 and 2017 was as follows:

At December 31, 2018	OnSite Generation	Power Systems	Corporate and Other	Total
Cash and cash equivalents and restricted cash	\$ 5,343	\$ 162	\$ 3,232	\$ 8,737
Trade and other receivables	1,949	4,779	–	6,728
Contract assets (current and non-current)	1,678	4,545	–	6,223
Inventories	6,324	10,850	–	17,174
Prepaid expenses	368	1,353	239	1,960
Investment in joint ventures	–	–	1,644	1,644
Property, plant and equipment	272	2,595	–	2,867
Goodwill and intangibles	4,427	10	154	4,591
Total Assets	\$ 20,361	\$ 24,294	\$ 5,269	\$ 49,924
Current liabilities	\$ 12,039	\$ 15,408	\$ 3,346	\$ 30,793
Non-current liabilities	1,180	3,575	3,415	8,170
Total Liabilities	\$ 13,219	\$ 18,983	\$ 6,761	\$ 38,963

At December 31, 2017	OnSite Generation	Power Systems	Corporate and Other	Total
Cash and cash equivalents and restricted cash	\$ 6,836	\$ 1,160	\$ 14,418	\$ 22,414
Trade and other receivables	4,936	3,800	–	8,736
Contract assets (current and non-current)	676	6,547	–	7,223
Inventories	8,045	7,003	–	15,048
Prepaid expenses	270	928	176	1,374
Investment in joint venture	–	–	2,797	2,797
Property, plant and equipment	329	3,545	–	3,874
Goodwill and intangibles	4,659	6	84	4,749
Total Assets	\$ 25,751	\$ 22,989	\$ 17,475	\$ 66,215
Current liabilities	\$ 11,400	\$ 14,538	\$ 4,356	\$ 30,294
Non-current liabilities	1,138	4,737	5,873	11,748
Total Liabilities	\$ 12,538	\$ 19,275	\$ 10,229	\$ 42,042

Assets and liabilities for the comparative year have been restated to reflect the retrospective application of IFRS 15 adopted effective January 1, 2018. See Note 5.

Property, plant and equipment are located in the following countries:

Year ended December 31,	2018		2017	
Canada	\$	2,497	\$	3,371
Belgium		272		329
Germany		98		174
Total	\$	2,867	\$	3,874

Revenue from external customers by region was as follows:

Year ended December 31,	2018		2017	
			Restated (Note 5)	
Asia	\$	12,514	\$	24,120
European Union		10,891		16,917
North America		3,400		1,514
Eastern Europe		2,896		2,697
South and Central America		2,698		350
Africa		616		1,145
Middle East		456		1,037
Oceania and Caribbean		425		335
Total	\$	33,896	\$	48,115

Revenue by product type was as follows:

Year ended December 31,	2018		2017	
			Restated (Note 5)	
Sale of equipment	\$	24,295	\$	40,601
Spare parts and maintenance		6,267		5,662
Product development services		2,063		581
Exclusivity fees		1,271		1,271
Total revenues by product type	\$	33,896	\$	48,115

Revenue by market application was as follows:

Year ended December 31,	2018		2017	
			Restated (Note 5)	
Heavy duty motive	\$	13,855	\$	21,955
Back-up power		1,082		–
Technology solutions		1,397		850
Power to gas energy storage		1,086		8,069
Industrial hydrogen		14,259		16,578
Fueling stations		2,217		663
Total revenues by market application	\$	33,896	\$	48,115

Revenue for the largest customers as a percentage of the total revenue was as follows:

Year ended December 31,	2018	2017
First largest (Power segment)	13 %	21 %
Second largest (Power segment)	9 %	10 %
Third largest (Power segment)	5 %	8 %
Fourth largest (OnSite Generation segment)	5 %	7 %
All other customers	68 %	54 %
Total	100 %	100 %

Note 35 – Risk Management Arising From Financial Instruments

Fair value

The carrying value of cash and cash equivalents, restricted cash, trade and other receivables, trade and other payables and contract assets, and contract liabilities approximates their fair value given their short-term nature. The carrying value of the non-current financial liabilities approximates their fair value given the difference between the discount rates used to recognize the liabilities in the consolidated balance sheets and the market rates of interest is insignificant.

Fair value measurements recognized in the consolidated balance sheets must be categorized in accordance with the following levels:

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

The fair value of the liabilities relating to the RSUs and DSUs is classified as Level 1. The fair value of the warrants are classified as Level 2.

The Company has not transferred any financial instruments between Levels 1, 2, or 3 of the fair value hierarchy during the year ended December 31, 2018.

Financial instruments are classified under IFRS 9 into one of the following measurement categories: financial assets at FVPL; financial liabilities at FVPL; financial assets at amortized cost, financial liabilities at amortized cost, and financial assets at FVOCI.

The following table summarizes information regarding the measurement category of the Company's financial instruments under IFRS 9 (and where different the previous measurement category under IAS 39) and their carrying amounts (which did not change as a result of the adoption of IFRS 9):

At December 31,	2018	2017
		Restated (Note 5)
Cash and cash equivalents	\$ 7,561	\$ 21,511
Restricted cash (current and non-current)	1,176	903
Trade and other receivables, including contract assets	12,951	15,959
Financial assets at amortized cost (IAS 39 - Loans and receivables)	\$ 21,688	\$ 38,373
Trade and other payables	\$ 9,068	\$ 9,736
Long-term debt and repayable government contribution (current and non-current)	8,049	11,240
Operating borrowings	-	1,200
Contract liabilities, current and non-current	16,001	14,044
Capital lease	33	44
Financial liabilities at amortized cost (IAS 39 - Other financial liabilities)	\$ 33,151	\$ 36,264
DSU liability	730	1,406
Warrants	11	409
Financial liabilities at fair value through profit or loss	\$ 741	\$ 1,815

Liquidity risk

The Company has sustained losses and negative cash flows from operations since its inception. At December 31, 2018, the Company had \$7,561 (2017 – \$21,511) of current unrestricted cash and cash equivalents. Liquidity risk is the risk the Company will encounter difficulty in meeting its financial obligations associated with financial liabilities that are settled by delivering cash or another financial asset. The Company is exposed to liquidity risk as it continues to have net cash outflows from its operations. The Company's objective for liquidity risk management is to maintain sufficient liquid financial resources to fund the consolidated balance sheets, pursue growth and development strategies, and to meet commitments and obligations in the most cost-effective manner possible. The Company achieves this by maintaining sufficient cash and cash equivalents and managing working capital. The Company monitors its financial position on a monthly basis at minimum, and updates its expected use of cash resources based on the latest available data. Such forecasting takes into consideration the Company's financing plans and compliance with internal targets. A significant portion of the Company's financial liabilities is classified as current liabilities, as settlement is expected within one year.

There are uncertainties related to the timing and use of the Company's cash resources and working capital requirements. These uncertainties include, among other things, the timing and volume of commercial sales and associated gross margin of our existing products and the development of markets for, and customer acceptance of, new products. The Company's operations may not generate sufficient cash flow to fund our obligations. As such, these obligations will be funded out of existing and forecasted cash resources. Hydrogenics may need to take additional measures to increase its liquidity and capital resources, including obtaining additional debt or equity financing, pursuing joint-venture arrangements, equipment financings or other receivables financing arrangements. Hydrogenics may experience difficulty in obtaining satisfactory financing terms. Failure to obtain adequate financing on satisfactory terms could have a material adverse effect on Hydrogenics' results of operations or financial condition. On December 21, 2018, the Company announced it had entered into a subscription agreement for gross proceeds of \$20,520 as described in note 37.

The following table details the Company's contractual maturity for its net financial liabilities. The information presented is based on the earliest date on which the Company can be required to pay and represents the undiscounted cash flow including principal and interest.

At December 31, 2018	Due in less than 1 year	Due in 1-3 years	Due in 4-5 years
Trade and other payables	\$ 9,068	\$ –	\$ –
DSU liability	730	–	–
Warrants	11	–	–
Long-term debt – Province of Ontario and EDC	3,760	6,493	7
Total	\$ 13,569	\$ 6,493	\$ 7

At December 31, 2017	Due in less than 1 year	Due in 1-3 years	Due in 4-5 years
Trade and other payables	\$ 9,736	\$ –	\$ –
DSU liability	1,406	–	–
Operating borrowings	1,200	–	–
Warrants	409	–	–
Long-term debt – Province of Ontario and EDC	4,653	7,243	3,123
Total	\$ 17,404	\$ 7,243	\$ 3,123

Credit risk

Credit risk arises from the risk one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Company is exposed to credit risk from customers. At December 31, 2018, the Company's two largest customers accounted for 22% of revenue (31% at December 31, 2017) and 14% of accounts receivable (2017 – 48%). In order to minimize the risk of loss for trade receivables, the Company's extension of credit to customers involves a review and approval by senior management as well as progress payments as contracts are executed and in some cases, irrevocable letters of credit. The majority of the Company's sales are invoiced with payment terms between 30 and 60 days. The Company's objective is to minimize its exposure to credit risk from customers in order to prevent losses on financial assets by performing regular monitoring of overdue balances and to provide an allowance for potentially uncollectible accounts receivable.

The Company's trade and other receivables have a carrying value of \$3,313 at December 31, 2018 (2017 – \$6,466), representing the maximum exposure to credit risk of those financial assets, exclusive of the loss allowance.

The aging of these receivables is as follows:

At December 31,	2018	2017
Not due	76 %	77 %
Less than 30 days past due	8	11
Less than 60 days past due, more than 30 days past due	1	1
More than 60 days past due	15	11
Total	100 %	100 %

The Company's gross exposure to credit risk for trade receivables by geographic area at December 31 was as follows:

At December 31,	2018	2017
Europe	62 %	64 %
North America	5	4
Asia	31	30
Rest of world	2	2
Total	100 %	100 %

The Company applies the simplified approach to providing for expected credit losses prescribed by IFRS 9, which permits the use of the lifetime expected loss provision for all trade receivables and contract assets. To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same type of contracts. The Company has therefore determined that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for the contract assets. The loss allowance at January 1, 2018 was determined on a combined company wide basis follows for both trade receivables and contract assets based upon the Company's historic default rates over the expected life of trade receivables and contract assets adjusted for forward looking estimates.

January 1, 2018:	Not yet due	Less than 31 days past due	31-60 days past due	More than 60 days past due	Total
Expected loss rate	0.01%	0.05%	0.21%	1.34%	
Gross carrying amount	\$ 9,849	\$ 2,482	\$ 166	\$ 1,192	\$ 13,689
Loss allowance	\$ 1	\$ 1	\$ 0	\$ 16	\$ 18

The loss allowance for trade receivables and contract assets as at December 31, 2017 reconciled to the opening loss allowances on January 1, 2018 is as follows:

	Contract Assets	Trade and other receivables	Total
At December 31, 2017 under IAS 39	\$ -	\$ 943	\$ 943
Write-off of amounts deemed uncollectible against gross receivables	-	(925)	(925)
Opening loss allowance as at January 1, 2018	\$ -	\$ 18	\$ 18

The loss allowance at December 31, 2018 was determined as follows for both trade receivables and contract assets:

December 31, 2018:	Not yet due	Less than 31 days past due	31-60 days past due	More than 60 days past due	Total
Expected loss rate	0.1%	2.6%	3.1%	0.9%	
Gross carrying amount	\$ 8,334	\$ 529	\$ 96	\$ 577	\$ 9,536
Loss allowance	\$ 8	\$ 14	\$ 3	\$ 5	\$ 30

Trade receivables and contract assets are written off when there is no reasonable expectation of recovery. During the year the Company made no write-offs of trade receivables and does not expect to receive future cash flow or recoveries from collection of cash flows previously written off.

The Company may also have credit risk relating to cash and cash equivalents and restricted cash, which it manages by dealing with chartered Canadian, Belgian and German banks. The credit risk is limited because the counterparties are chartered banks with high credit ratings assigned by international credit rating agencies. In addition, the Company minimizes exposure to credit risk by strategically managing cash balances at individual banks. As well, the Company may also fund working capital by leveraging credit facilities that are not 100% secured by cash, resulting in a mitigation of credit risk at the corresponding bank.

The Company's objective is to minimize its exposure to credit risk in order to prevent losses on financial assets by placing its investments in lower risk bank acceptances at these banks. The Company's cash and cash equivalents and restricted cash was \$8,737 at December 31, 2018 (2017 – \$22,414), representing the maximum exposure to credit risk of these financial assets. Approximately 99% (2017 – 98%) of the Company's cash and cash equivalents and restricted cash at December 31, 2018 was held by four financial institutions.

The Company's exposure to credit risk relating to cash and cash equivalents and restricted cash on deposit segmented by geographic area at December 31, 2018 and 2017 was as follows:

	2018	2017
Canada	37 %	65 %
Belgium	61	30
Germany	2	5
	100 %	100 %

Foreign currency risk

Foreign currency risk arises because of fluctuations in exchange rates. The Company conducts a significant portion of its business activities in currencies other than the Company's functional currency of US dollars and the functional currency of its Belgium and German subsidiaries (euro). This primarily includes Canadian dollar transactions at the parent company and US dollar transactions at the Company's subsidiaries in Belgium and Germany.

The Company's objective in managing its foreign currency risk is to minimize its net exposure to foreign currency cash flows by converting foreign denominated financial assets into the applicable currency of the subsidiary to the extent practicable to match the obligations of its financial liabilities. The Company also periodically enters into foreign exchange forward contracts to limit its exposure to foreign currency rate fluctuations. There were no foreign exchange forward contracts in place at December 31, 2018 or at December 31, 2017.

Financial assets and financial liabilities denominated in foreign currencies will be affected by changes in the exchange rate between the functional currency and these foreign currencies. This primarily includes cash and cash equivalents; trade and other receivables; contract assets; trade and other payables; contract liabilities and other long-term financial liabilities, which are denominated in foreign currencies.

The Company recognized a net foreign exchange gains of \$144 for the year ended December 31, 2018 (2017 – \$635).

At December 31, 2018, if the Canadian dollar had strengthened/weakened by 10% against the US dollar, with all other variables held constant, the net loss would have been lower/higher by approximately \$870 as a result of foreign exchange on the translation of Canadian dollar denominated balances.

At December 31, 2018, if the euro had strengthened/weakened by 10% against the US dollar, with all other variables held constant, the net loss would have been lower/higher by approximately \$445 as a result of foreign exchange on the translation of euro denominated balances.

Interest rate risk

Cash flow interest rate risk arises because of the fluctuation in market interest rates. The Company's objective in managing interest rate risk is to maximize the return on its cash and cash equivalents and restricted cash. The Company is subject to interest rate risk on its short-term borrowings offset by cash and cash equivalents. The Company's borrowings include both fixed and variable interest rates. Given the prevailing interest rates earned by the Company's short-term investments, a 100 basis point increase or decrease would have minimal impact on the Company's results.

Note 36 – Capital Management

The Company's objective in managing capital is to ensure sufficient liquidity to pursue its growth strategy, fund research and product development, while at the same time, taking a conservative approach toward financial leverage and management of financial risk.

The Company's primary uses of capital are to finance operations, increase non-cash working capital and capital expenditures. The Company currently funds these requirements from existing cash resources, cash raised through share issuances and long-term debt. The Company's objectives when managing capital are to ensure the Company will continue to have enough liquidity so it can provide its products and services to its customers and returns to its shareholders. The Company monitors its capital on the basis of the adequacy of its cash resources to fund its business plan. In order to maximize the capacity to finance the Company's ongoing growth, the Company does not currently pay a dividend to holders of its common shares.

The Company's capital is composed of debt and shareholders' equity as follows:

At December 31,	2018	2017
Total equity	\$ 10,961	\$ 24,173
Operating borrowings	–	1,200
Long-term debt and repayable government contributions, including current portion	8,082	11,284
Total	19,043	36,657
Less Cash and cash equivalents and restricted cash	8,737	22,414
Total capital employed	\$ 10,306	\$ 14,243

Note 37 – Subsequent Events

On December 21, 2018, the Company and The Hydrogen Company ("H2C") entered into a subscription agreement to issue 3,537,931 common shares of Hydrogenics to H2C on a private placement basis, for gross proceeds to Hydrogenics of \$20,520 or \$5.80 per common share. The subscription price represented approximately a 20% premium to the 20-day volume-weighted average trading price of the Company's common shares on the NASDAQ for the period ending December 20, 2018.

The transaction closed on January 24, 2019 and the Company received net proceeds of \$20,305 after fees and expenses of \$215. Subsequent to closing of the private placement, H2C's interest in Hydrogenics is approximately 18.6% of total issued common shares.

The subscription agreement provides, among other things, that H2C has participation rights on future offerings and the right to nominate one director to the board of directors of Hydrogenics, and that H2C will be subject to certain restrictions, including lock-up, transfer, standstill and voting restrictions, subject, in each case, to certain ownership threshold requirements or for a period of one year from the date of the subscription agreement.