The Engine Driving Zero-Emissions

LOOP ENERGY INC.

Management's Discussion and Analysis

FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2022
(in Canadian dollars, amounts expressed in thousands unless stated otherwise)

DATED AUGUST 3, 2022

Loop Energy Inc. ("Loop", "Company", "we", "us" or "our") has prepared the following management's discussion and analysis ("MD&A") for the three and six months ended June 30, 2022 as of August 3, 2022. This MD&A has been prepared in accordance with National Instrument 51-102F1 and should be read in conjunction with the unaudited condensed consolidated interim financial statements of the Company and the notes thereto for the three and six months ended June 30, 2022, and the consolidated financial statements and accompanying notes for the years ended December 31, 2021 and 2020, which have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS") and have been filed with the securities regulatory authorities on SEDAR at www.sedar.com. All references to "$" are references to Canadian dollars, unless otherwise stated. The functional currency of certain of the Company's subsidiaries is the Renminbi and all balances have been translated to the presentation currency of the Company, the Canadian dollar.

Additional information relating to the Company, including our Annual Information Form for the year ended December 31, 2021, is available on SEDAR at www.sedar.com and is also available on our website at www.loopenergy.com. The Company's common shares trade on the Toronto Stock Exchange ("TSX") under the symbol "LPEN".

TABLE OF CONTENTS

1. OVERVIEW AND HIGHLIGHTS

1.1 Loop Energy

Loop designs, manufactures, installs, and maintains hydrogen fuel cells and the systems which integrate them into the applications accelerating humanity towards a mature hydrogen economy. With our current focus on medium to heavy-duty commercial vehicles, we are contributing to global decarbonization by extending the range, power, and efficiency of fleets of return-to-base electric buses, trucks and coaches. Once we have demonstrated our competitive advantage within this segment, which we believe has a C$1.2 billion total assessable market (TAM) today, our goal is to become a leader across the entire fuel cell market, moving to adjacent market applications such as other transport segments - including marine, rail and mining - and beyond into stationary power. We believe these can provide the Company with an estimated TAM of C$70 billion[1] by 2030.

The Company was incorporated under the laws of British Columbia, Canada on June 21, 2000 where we are still based - with our head office and a manufacturing facility in Burnaby, British Columbia. We also have a commenced first article inspection and assembly at our wholly owned manufacturing facility in Shanghai, China.

1.1.1 Our eFlow™ Technology

A fuel cell is an environmentally clean electrochemical device that combines hydrogen fuel with oxygen to produce electricity. There are approximately 20 manufacturers of fuel cells in the market today. However, only Loop's products feature its eFlow™[2] technology which is based on a patented modified geometry. Using a tapered, rather than rectangular, channel we can better control the flows of hydrogen, oxygen and coolant in the fuel stack. We believe this maintains optimal performance temperatures and increases the unit's efficiency, peak power and operational longevity. Our testing indicates our proprietary eFlow™ technology offers 10x density uniformity of current, increased flow velocity and robust water removal[3].

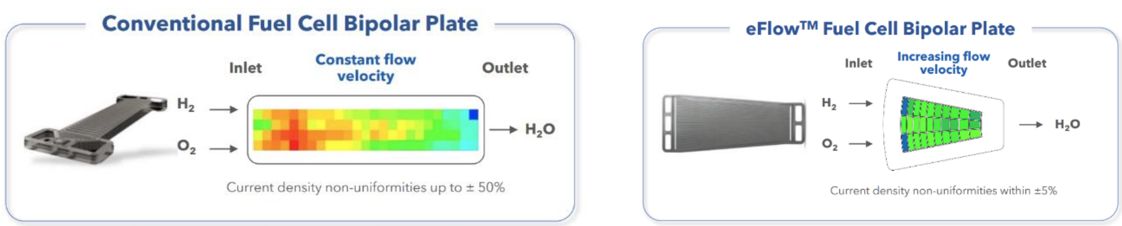

Figure 1: Conventional vs. eFlow™ Fuel Cell Bipolar Plate

Our initial focus with eFlow™'s patented modified geometry, has been on fuel cells. We have successfully commercialized fuel cells it into our product and are seeing strong customer demand for its industry leading performance. We have also been investigating the potential positive impact that eFlow™ can have on Polymer Electrolyte Membrane (PEM) Electrolyzers. Our most recent findings are discussed later in this MD&A.

1.1.2 Commercial Strategy

Given our technology advantage we believe Loop's rate of market penetration will be driven by the total cost of ownership ("TCO") we deliver for customers. Both in absolute terms and relative to competitors.

[1] Source: Company estimates, Bloomberg NEF, MarketsandMarkets Hybrid Train Market, The North American Locomotive Review 2021, H2FC SUPERGEN, Global Market Insights, Fueling the Future of Mobility, Hydrogen Council Reports, and publicly available information.

[2] This trademark is protected under applicable intellectual property laws and is the Company's property. The Company's trademark may appear without the ™ symbol in this MD&A, but such absence is not intended to indicate, in any way, that the Company will not assert, to the fullest extent under applicable law, the Company's rights to this trademark. All other trademarks and trade names used in this MD&A are the property of their respective owners.

[3] Source: Transport in PEMFC Stacks summary presentation for US Department of Energy, H2 Program. Based on Loop's internal testing and comparisons of published studies of the performance of fuel cells from other manufactures and competitors. In order to quantify the benefit of eFlow™ technology directly, Loop purchased commercially available materials from a top competitor, built them into a Loop eFlow™ fuel cell stack, and then operated this stack at Loop's best estimate of the competitor's operating conditions using publicly available information.

We expect the combination of decreasing TCO and accelerating demand will create an ongoing positive feedback loop, allowing us to leverage Wright's Law - a reliable framework for cost reduction as a function of cumulative production. As we continue to scale operations, we expect average unit cost to decrease ratcheting-up greater demand, production scale and lower costs until market saturation is reached.

Our proven eFlow™ technology' is expected to deliver lower TCO, due to the improvement in fuel efficiency, which makes up a significant portion of the TCO, and its uniform current distribution that prevents hotspots making our products inherently more durable, thereby extending lifecycles and reducing service and maintenance costs.

Our fuel cell products are now far easier to install in electric vehicles - times are measured in days not weeks, even for new vehicle platforms. We also anticipate that the high-quality components used in our production will pay back for customers - via the cumulative uptime, efficiency, power uniformity and longevity that we expect our stacks will deliver over years of constant use.

Our desire to be local in the key geographical markets in which we operate will enable us to provide on-the-ground support for our customers. We believe that this will not only lower TCO while enhancing customer experience and retention, it will also increase our market visibility.

In reaction to a strong market pull from Asia and Europe, we have opened a facility in Shanghai, China, and are exploring options to open a service center in the United Kingdom for integration support, fleet maintenance and service.

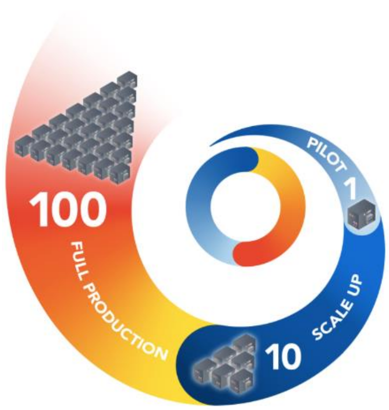

Figure 2: Customer Adoption Cycle (CAC)

To ensure the full benefits of these initiatives are realized, Loop manages sales, account development and retention via a tight customer adoption cycle (see figure 2). To qualify for our CAC, every customer must place at least one purchase order and have an articulated plan to scale to full production ("Pilot Phase").

Every customer that enters the CAC starts with a single unit for technical evaluation. Once the technical evaluation is complete, they enter into the scale up phase, which often means testing a number of units in a fleet ("Scale-Up Phase"). The final step is full production at commercial levels.

Having met our 2021 targets, we believe that our continued performance in 2022 will prove our competitive advantage to the market and drive significant demand for our products in the medium to heavy vehicle market.

Material handling vehicles such as forklifts and yard trucks present a tertiary application for our fuel cell systems whilst stationary power applications also offer multiple commercial opportunities in the medium to long term. Some of the most promising applications include diesel generator replacement in market verticals such as construction sites, back-up power and off-grid power applications.

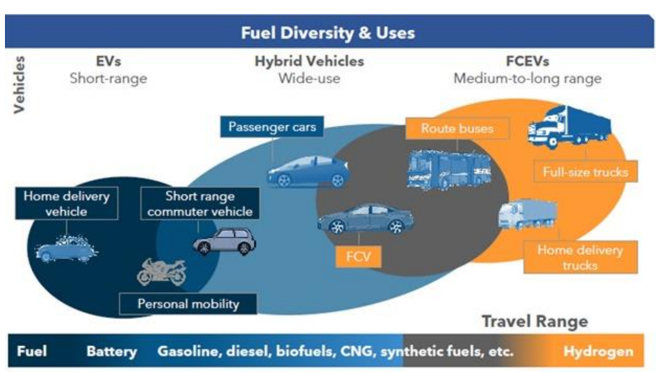

Figure 3: Fuel Diversity & Uses

1.1.3 Underlying Market Drivers

The decarbonization of transportation via electrification and fuel switching has the potential to greatly impact emissions. The movement towards electrification has grown as countries take action to achieve commitments made in the Paris Agreement. These actions include the banning of diesel vehicles in major city centers and the progressive phasing out of internal combustion engine vehicles ("ICEVs"). Energy security concerns highlighted by the recent and ongoing conflict in the Ukraine have provided further emphasis on the push away from the world's dependency on fossil fuels.

This movement is apparent in the recent growth in the number of electric vehicles ("EVs"), most commonly battery-powered ("BEVs"). Several governments around the world are combining regulatory changes with financial support for the transition to zero emission vehicle technologies. With expanding e-commerce freight demands, we believe that zero emission vehicles are one of the only viable options for a sustainable future. Commercial vehicles powered solely by lithium-ion batteries are a part of the solution.

However, fully battery-powered commercial vehicles are unable to economically meet many of the critical functional characteristics required for mass-market adoption. In commercial EVs, medium and heavy-duty BEVs currently suffer from reduced operating performance as the substantial weight and dimensions of battery packs limit range, reduce payload capacity and necessitate long re-charging times - all increasing TCO.

We believe hydrogen fuel cells combined with lithium-ion batteries ("FCEV") are the optimal solution. In this hybrid, hydrogen fuel cells act as on-board chargers and address these BEVs shortcomings. While smaller deployments of FCEVs and hydrogen refueling infrastructure are costlier, benefits are compounded when fleets are deployed at scale. We believe that when FCEV fleet sizes increase, hydrogen infrastructure becomes less costly per vehicle than BEV recharging infrastructure.

Given our level of enquiries, we believe that major fleet operators of commercial vehicles are beginning to recognize this.

Figure 4: BEV Increase payload capacity with FC Range Extender

1.2 Recent Developments

The following highlights the significant corporate, financial events and announcements of the Company since December 31, 2022:

- 2022 Purchase Order (PO) Guidance increased to 100 from 60 (a 67% increase) and 2023 PO Guidance increased to 500 from 180 (a 178% increase) (Aug 2022)
- 52 Purchase Orders (POs) 2022 YTD exceeds 2021 full year POs of 19 by over 170% (Aug 2022)
- Record first half year revenues of $1.2 million (2021: $1.1 million) (Aug 2022)
- Mobility and Innovation (M&I) entered our Scale-Up Phase of our CAC with additional purchase orders for 10 units (July 2022)
- Signed Supply Agreement with Tevva Motors Ltd's (Tevva) with commitments in excess of US$12 Million thru 2023 (July 2022)
- Appointed Kent Thexton as Director and Chair of the Board (June 2022)
- Partners with ARCC to expand into promising Australian hydrogen bus market (June 2022)
- Partners with Aliant Battery to provide Hydrogen technology for Netherlands' Green Residential Hub (Apr 2022)
- Selected as Tevva Motor Ltd's (Tevva) fuel cell supplier for Tevva's 7.5 tonne electric truck platform (April 2022)
- Appointed Quan Hu as President and board member of Loop Shanghai (April 2022)
- Entered into and agreement with Innotest AG to integrate fuel cell system into Home Power Energy System (Mar 2022)
- Launch of Loop Powered M&I H2Bus in Slovakia (Mar 2022)

1.3 Outlook

A Strong Start to 2022

Only six months in, 2022 is already a record-breaking year for Loop Energy in terms of revenue, order in-take, and strategic customer engagements. Although these six months have not been without its challenges with lock-downs in China impacting world-wide supply chains and energy security becoming a more prominent issue with Russia's invasion of Ukraine, we have made significant progress against our 2022 objectives and are seeing our business develop well ahead of our expectations and pushing our upside estimates as our business continues to accelerate as we leverage our next mover advantage.

As a result, we are significantly raising our market guidance for both the remainder of 2022 and 2023 as set out below.

Growth and Go to Market Strategy ("GTMS")

We believe our GTMS is best measured by the number of purchase orders (POs) we have received. In 2021 we focused on building our foundation through our Customer Adoption Cycle ("CAC"), adding ten customers in the Pilot Phase and one customer in the Scale-Up Phase, resulting in the Company receiving 19 POs.

In 2022 we announced a goal of tripling annual POs to 60, and tripling again in 2023 to 180. As of June 30, 2022 we had already achieved 52 POs and now have one customer in the Production Phase, two in the Scale-Up Phase and fourteen in the Pilot Phase of our CAC, with 65% of those customers in the EMEA region. Our order book remains heavily weighted towards the EMEA region, representing 78% of POs received in 2022. However, with North America and APAC markets contributing to 22% of POs, a measure of healthy diversification has begun.

We were named fuel cell supplier to Tevva, a British electric and hydrogen truck manufacturer. The supply agreement calls for minimum purchase commitments in excess of US$12 million through to end of 2023 with 2024 to be confirmed at a later date. This marks the start of the Production Phase of the CAC for Tevva. We were also able to enter the Scale-up stage of our CAC in the transit bus market vertical with Mobility and Innovation.

As a result of the acceleration of our stated business plan, we are revising our 2022 and 2023 guidance for POs as er below:

Purchase Orders (POs) Guidance	Current	Revised	Change	%
2022	60	**100**	40	**67**
2023	180	**500**	320	**178**

We believe these revisions better reflect the market growth we are seeing and our ability to capture this growth

Due to build times and logistics, not all purchase orders will necessarily be converted into revenue during the same period in which the purchase orders are received. Our revenue is only recognized once the product is in the hands of customers. We continue to increase our capacity and enhance our supply chain to reduce the time between purchase and receipt by the end customer but remain on a build to order basis.

The Company had previously used product back-log[1] as a measure of GTMS success. In Q1 2022 we referenced that we believed this to be a subjective metric and that the receipt of physical purchase orders is a better measure. We intend to discontinue the use of this metric going forward but are pleased to report with the success of our GTMS this measure has grown to in excess of $200m from $54 million as at March 31, 2022. (See 5.7 Non-IFRS Financial Measures)

Although sales drive our bottom-line, our customer-centric approach drives the Company, and we are striving to increase the number of our fuel cell units successfully deployed in the field. By the end of June 2022, we had approximately 400,000 experience kilometers with an uptime efficiency of over 97%. The accumulation has stopped with the end user in China as it is experiencing delays in the upgrading of the refuelling station.

Our CAC remains a key element to ensure that we are working with customers that have a trajectory and desire to scale to full production. Since the adoption of our CAC, we have already seen Loop progress from Pilot to the Scale-up Phase

[1] Refer to section 5.7 "Non-IFRS Financial Measures" for more information on risks related to the use of product back-log.

with three customers. We were further able to reach full Product Phase with Tevva. The Pilot Phase of our CAC starts with the first purchase order and a documented path to full production and future orders, including things such as conditional purchase orders. We believe that our success is measured by the number of fuel cells ordered from our customers. As of the date of this MD&A, the number of purchase orders received for 2022 are already over 2.5 times all of 2021.

Product Solutions and Cost Out

We remain very focused on our core applications of commercial mobility but understand our products offer compelling solutions for adjacent markets - including heavy materials handling, generators, charging stations and specialty vehicles. Our current solutions portfolio consists of our 30kW, 50kW and 60kW modules and we had previously announced that our larger 120kW module would be available in the second half of 2022.

We are now pleased to confirm that we will be looking to launch this product in September 2022. The 120kW module will be built off our new larger eFlow™ plate, which we believe will result in significant cost reductions across the majority of our product range. We expect that the larger offering will also increase our TAM while reducing our average cost per kW produced.

We had previously referenced Wright's Law and the ability to drive costs out with increased volumes, our upward revision to our volume guidance will help accelerate our ability to capture some of those benefits. We are also working on integrating certain of our upstream activities to drive further cost out.

Capacity

In Q1 2022 we announced that we had received our license to manufacture stacks and modules at our Shanghai facility. We had expected it to open in the second quarter but with China's "dynamic zero" policy there were lockdowns in place for just under 100 days. Notwithstanding we opened our Shanghai facility in late July. Our product first article testing and assembly has commenced and is expected to complete in September. Our lease agreement provides an option to triple our production space, should we require it.

Meanwhile, we continue to grow both our engineering capability and production capacity in Burnaby, British Columbia - with a stated objective of being able to demonstrate production of 200 fuel cell units per annum on a single-shift basis by the end of 2022. In July we secured an additional 8,710 square feet of factory space to expand our manufacturing areas and house our growing global technical services group at the location.

As part of our customer centric approach, we also plan to establish a services and integration support site in the UK in 2022 and are delighted to report that this is well advanced with a site secured. Our updated PO guidance has shown the importance of us building capacity ahead of demand and we remain well placed to deliver into this demand.

Further exploiting our technology advantage

Our initial commercial success is built of our ability to deliver greater performance, efficiency and durability via our patented modified geometry. While we have been focused on commercializing this technological advantage in the fuel cell market, we are now investigating how we can exploit our technological advance in adjacent markets. One such market is the Electrolyzer market. Our initial external studies have indicated eFlow™, with its modified geometry increases fluid velocity, when used in PEM electrolyzers by removing oxygen bubbles and excess heat. Oxygen bubbles and excess heat is a common challenge that reduces efficiency and limits hydrogen production.

Capital Requirements

Concurrently or shortly after the filing of this MD&A and associated financial statements we intend to file a Base Shelf Prospectus (BSP) for $100 million. At the time of our IPO (February 2021) we indicated that the proceeds from an IPO would be for 24 months based on our business plans at that time. Having now delivered on these objectives and seeing our growth projections lean towards the upside of our projections, we need to ensure we can fund the market opportunities presenting themselves. With $43 million in cash and cash equivalents as of June 30, 2022, we remain well funded to continue to deliver against our promise and potential. Notwithstanding, we need to be prepared to access the capital markets when the opportunity arises and the filing of the BSP is one tool that will help enable us to do so. We also continue to pursue non-dilutive financing opportunities such as the $9.75 million financial contribution from the Jobs and Growth Fund, from the Federal Government of Canada and remain appreciative of the support they continue to provide in the common goal of reducing carbon emissions. We continue to be able to capitalize on our leading technology position and next mover advantage by leveraging off the experiences of others to help minimize our capital requirements.

We believe we have the focus and discipline to make 2022 another strong year for Loop, the ability to be able revise our guidance and growth projects after only six months is indicative of this.

2. JUNE 2022 FINANCIAL PERFORMANCE OVERVIEW

The following table highlights key financial information for the three and six months ended June 30, 2022 as compared to the prior comparative periods.

Table 1: Selected Interim Financial information (in thousands of CAD dollars, except per share amounts)	**Three months ended June 30, 2022**	**2021**	**Variance $**	**%**
Revenues	$ 1,065	$ 1,090	(25)	(2)
Cost of Sales				
Cost of goods sold	3,685	3,041	644	21
Change in allowance for inventory write-down	(159)	(931)	772	(83)
Gross margin	(2,461)	(1,020)	(1,441)	141
Expenses:	7,659	5,045	2,614	52
Cost (recoveries) expenses:	53	(39)	92	(236)
Net expenses	7,712	5,006	2,706	54
Loss before the undernoted	(10,173)	(6,026)	(4,147)	69
Other income (expenses):	250	(126)	376	(298)
Net loss for the period	(9,923)	(6,152)	(3,771)	61
Other comprehensive income	(141)	-	(141)	100
Total comprehensive loss for the period	(10,064)	(6,152)	(3,912)	64
Loss per common share – basic and diluted	(0.29)	(0.18)	(0.11)	61

	Six months ended June 30, 2022	**2021**	**Variance $**	**%**
Revenues	$ 1,243	$ 1,090	153	14
Cost of Sales				
Cost of goods sold	4,478	3,041	1,437	47
Change in allowance for inventory write-down	1,047	(98)	1,145	(1,168)
Gross margin	(4,282)	(1,853)	(2,429)	131
Expenses:	13,829	10,812	3,017	28
Cost (recoveries) expenses:	10	(1,877)	1,887	(101)
Net expenses	13,839	8,935	4,904	55
Loss before the undernoted	(18,121)	(10,788)	(7,333)	68
Other income (expenses):	151	(236)	387	(164)
Net loss for the period	(17,970)	(11,024)	(6,946)	63
Other comprehensive income	(158)	-	(158)	100
Total comprehensive loss for the period	(18,128)	(11,024)	(7,104)	64
Loss per common share – basic and diluted	(0.53)	(0.38)	(0.15)	39

2.1 Revenues and Cost of Sales

Table 2: Revenues and Cost of Sales (in thousands of CAD dollars, except units sold)	**Three months ended June 30,**		**Variance**	
	2022	**2021**	**$**	**%**
Revenues	$ 1,065	$ 1,090	(25)	(2)
Units sold	16	11	5	45
Cost of sales				
Cost of goods sold	3,685	3,041	644	21
Change in inventory write-down allowance	(159)	(931)	772	(83)
Gross margin	(2,461)	(1,020)	(1,441)	141
	Six months ended June 30,		**Variance**	
	2022	**2021**	**$**	**%**
Revenues	$ 1,243	$ 1,090	153	14
Units sold	18	11	7	64
Cost of sales				
Cost of goods sold	4,478	3,041	1,437	47
Change in inventory write-down allowance	1,047	(98)	1,145	(1,168)
Gross margin	(4,282)	(1853)	(2,429)	131

The Company's primary source of revenues is the sale of its fuel cell systems. As the Company is commercializing its fuel cell units, it is expected that revenue will vary from period to period.

Revenues was $1.1 million and $1.2 million for the three and six months ended June 30, 2022 (2021- $1.1 million and $nil respectively) due to the sale of 16 (Q221: 11) and 18 (H121: 11) fuel cell units respectively. The average price per unit decreased in 2022 due to the customer mix.

Cost of sales includes the cost of materials, direct and indirect labour and overheads incurred in the manufacturing of our products, in addition to a warranty provision for products sold, inventory write-downs as required, and the cost of parts and components sold as part of the integration process as follows:

Table 3: Cost of sales (in thousands of CAD dollars)	**Three months ended June 30,**		**Variance**	
	2022	**2021**	**$**	**%**
Cost of goods sold	$ 3,685	$ 3,041	644	21
Change in inventory write-down allowance	(159)	(931)	772	(83)
Cost of sales	3,526	2,110	1,416	67
	Six months ended June 30,		**Variance**	
	2022	**2021**	**$**	**%**
Cost of goods sold	$ 4,478	$ 3,041	1,437	47
Change in inventory write-down allowance	1,047	(98)	1,145	(1,168)
Cost of sales	5,525	2,943	2,582	88

Cost of sales increased to $3.5 million and $5.5 million for the three and six months ended June 30, 2022 respectively (2021- $2.1 million and $2.9 million respectively) primarily due to increases in the cost of good sold and inventory write-down allowance. The increase in cost of goods sold is consistent with the increase in the number of units sold with the average cost per unit trending downwards as we start to benefit from Wright's law and economics of scale. The increase in the inventory allowance is consistent with us building our capacity to fulfil the increased year on year sales.

A warranty provision, dependant upon the warranty period, is recorded for each applicable fuel cell unit sold. As the Company has just begun commercializing its fuel cell units and does not have a detailed warranty history, the warranty provision is a significant accounting estimate.

Due to the Company's current scale of production, and the start-up nature of our manufacturing operations, our cost per unit currently exceeds our selling price and we have a negative gross margin. We record our finished goods at the lower of costs and their net realizable value (estimated selling price less the estimated cost of completion and selling costs) recording a write down allowance when required, and also record a provision against our raw materials on hand. The inventory write-down allowance increased by $0.8 million and $1.0 million during the three and six months ended June 30, 2022 respectively, and at June 30, 2022 included $1.8 million for raw materials, $0.2 million for work in process and $0.9 million for finished goods. As this is based on the amount of inventory on hand at period end, this amount can significantly vary period over period. We expect that as we increase our scale of production and can approach a breakeven point, the write-down of inventory will decrease or will no longer be required.

2.2 Operating Expenses

Table 4: Operating expenses (in thousands of CAD dollars)	**Three months ended June 30,**		**Variance**	
	2022	**2021**	**$**	**%**
General and administrative	$ 2,633	$ 1,977	656	33
Engineering	3,168	2,238	930	42
Business development	1,643	616	1,027	167
Technology development	215	214	1	-
Cost recoveries	53	(39)	92	(236)
Operating expenses	7,712	5,006	2,706	54

	Six months ended June 30,		**Variance**	
	2022	**2021**	**$**	**%**
General and administrative	$ 5,031	$ 5,464	(433)	(8)
Engineering	5,761	4,000	1,761	44
Business development	2,395	1,000	1,395	140
Technology development	642	348	294	84
Cost recoveries	10	(1,877)	1,887	(101)
Operating expenses	13,839	8,935	4,904	55

Operating expenses have increased across the majority of functions as the Company is currently in a growth phase and building its foundation to deliver against its expected growth profile.

G&A expenses were $2.6 million (Q221: $2.0 million) and $5.0 million (H121: $5.5 million) for the three and six months ended June 30, 2022. H121 included a non-cash share-based compensation expense of $1.7 million for special advisor warrants which was partially offset by an increase of $0.5 million (Q222) and $0.9 million (H222) in employee costs primarily due to increased headcount.

Engineering expenses were $3.2 million (Q221: $2.2 million) and $5.8 million (H121: $4.0 million) in the three and six months ended June 30, 2022, respectively. The increase was primarily related to product development (PD) supporting the Company's growth strategy including expanding the Company's product lines and the evolution of the Company's fuel stack technology with a new 120kw product that we expect to launch in September 2022. Specifically, employee costs increased by $0.2 million and $0.8 million for the three and six months ended June 30, 2022, respectively, primarily due to an increase in headcount together with an increase in consultants by $0.1 million and $0.3 million, respectively, to facilitate our increased PD activities, and an increase of $0.5 million and $0.8 million, respectively, in supplies expense.

During the period ended June 30, 2022, the Company invested in various Business Development (BD) initiatives mainly related to market development activities in Europe. BD costs increased to $1.6 million (Q221: $0.6 million) and $2.4 million (H121: $1.0 million) in the three and six months ended June 30, 2022, respectively primarily due to increased headcount, tradeshow participation, and communications and consultancy fees to support these initiatives. We are seeing the benefits of this increased expenditure in the success of our GTMS and the additional companies that are entering our CAC.

The Company has continued to engage in new initiatives related to technology research and new material development, and in particular how the benefits of eFlow™'s patented modified geometry may apply to Electrolyzers.

No significant cost recoveries were recognized in the first six months ended June 30, 2022 (H121: $1.9 million), H121 included funding for the second milestone of its Sustainable Development Technology Canada ("SDTC") project. As at June 30, 2022, the Company has recorded deferred recoveries of $2.3 million relating to SDTC credits, which it expects to realize in future periods. The Company is working towards completing the third milestone and anticipates its completion during 2022.

Net loss increased by $3.8 million (Q221: $6.2 million net loss) and $6.9 million (H121: $11.0 million net loss) in the three and six months ended June 30, 2022 respectively, driven by the aforementioned increases in cost of sales and operating expenses.

3. REVIEW OF QUARTERLY PERFORMANCE

The following tables highlights key financial performance for the last eight quarters and year-to-date for the past three years. Certain comparative figures have been reclassified to conform to current presentation:

3.1 Revenues and Cost of Sales

Table 5: Quarterly and YTD Revenue and Cost of Sales (in thousands of CAD dollars)

	Quarter								YTD		
	Q222	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**	**2022**	**2021**	**2020**
Revenues	$ 1,065	$ 178	$ 128	$ 206	$ 1090	$ -	$ 193	$ 353	$ 1,243	$ 1,090	$ -
Units sold	16	2	1	2	11	-	2	3	18	11	-
Cost of sales											
Cost of goods sold	3,685	793	789	620	3,041	-	-	-	4,478	3,041	-
Inventory write-down allowance	(159)	1,206	988	910	(931)	833	-	-	1,047	(98)	-
Cost of sales	3,526	1,999	1,777	1,530	2,110	833	-	-	5,525	2,943	-
Gross margin	(2,461)	(1,821)	(1,649)	(1,324)	(1,020)	(833)	193	353	(4,282)	(1,853)	-

Revenues

The Company's primary source of revenues is the sale of its fuel cell systems. As the Company is commercializing its fuel cell units, it is expected that revenue will vary from period to period. The increase in Q222 has been driven by the receipt of 24 POs in the first quarter of 2022 and in particular Tevva transitioning to the Production Phase of the CAC. Q221 revenue was driven by the sale of 11 units for our first Pilot bus.

Prior to Q221, the Company had only recognized insignificant revenues as the Company was primarily engaged in product development and testing. Sales during this period were associated with pilot projects arising from engineering and product development activities and, as such, no separate cost of sales was presented.

Cost of sales

Our cost of goods sold varies with the number of units sold with Q222 and Q221 being significantly higher than other periods due to the aforementioned higher units sales. Our average cost of goods sold per unit will also vary based on the volumes being sold but we are seeing a downward trend as our volumes increase over time. We expect to see average costs further decrease as we leverage off Wright's law and economics of scale.

Due to the Company's current low production volumes and building of our manufacturing capacity, our cost per unit exceeds our selling price, and as a result we have a negative gross margin. As a result, at the end of each accounting period we are required to not only write down our finished goods to their net realizable value (estimated selling price less the estimated cost of completion and selling costs), but also record a provision against our raw materials on hand.

The inventory write-down allowance above represents the movement in the write-down of raw materials and finished goods on hand during the period. As this is based on the amount of inventory on hand at period end, this amount can vary significantly period over period. We expect that as we increase our scale of production and can approach a breakeven point, the write-down of inventory will decrease or will no longer be required. The credit recorded in Q222 and Q221 reflects that the previously written down inventory was sold during the period and presented as cost of goods sold, to reflect the actual cost of inventory used.

Since Q221, the Company has been building its manufacturing capacity and as a result has had an increasing allowance on its raw materials. During Q122, the Company commenced building units to meet its recent purchase orders which resulted in an increase in work-in-progress and finished goods balance and will result in a further increase in its inventory write-down allowance.

3.2 Operating Expenses

Table 6: Quarterly and YTD Operating Expenses (in thousands of CAD dollars)

	Quarter								YTD		
	Q222	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**	**2022**	**2021**	**2020**
G&A	$ 2,633	$ 2,398	$ 2,600	$ 2,015	$ 1,976	$ 3,487	$ 1,447	$ 735	$ 5,031	$ 5,463	$ 1,487
Engineering	3,168	2,593	2,194	1,891	2,238	1,762	1,224	2,208	5,761	4,000	2,625
BD	1,643	752	688	912	616	384	180	159	2,395	1,000	22
Tech Dev	215	427	295	412	214	135	65	44	642	349	19
Cost recoveries	53	(43)	(33)	(33)	(38)	(1,839)	(130)	(545)	10	(1,877)	(786)
Operating expenses	7,712	6,127	5,744	5,197	5,006	3,929	2,786	2,601	13,839	8,935	3,367

G&A (General & Administration)

In February 2021 (Q121), the Company completed its IPO which resulted in additional costs associated with becoming and being a public company, Q121 also includes a one-off non-cash share-based compensation expense for warrants of $1.7 million. The increase in Q222 compared to Q122, is mainly due to costs associated with additional headcount.

Engineering Costs

Engineering expenses are associated with the expansion of the Company's product lines and the evolution of the Company's fuel stack technology. Work on our new 120kw product based on the larger plate design has intensified through the first two quarters of 2022 and we are expecting to be able to launch this new product in September 2022. The increase in Q221 is attributable to bonus payments to its employees which had not been previously accrued.

BD (Business development)

Prior to Q121 our sales and marketing initiatives were relatively limited as we were focused on product development. Q321 saw a significant increase as the Company attended its first tradeshows to market our products. In 2022 we have increased our European sales team. Q222 saw an increased focus on tradeshows as we continue to highlight the benefits that eFlow™ brings to them market, and we would expect this to drop off slightly for the remainder of the year. We are also experiencing a growth in our global technical services team as we look to support our customers integration of our fuel cell modules and expect to be able to open our UK service location by the end of the year to support the growth we are seeing in Europe.

Tech Dev (Technical Development) expenses are comprised of the Company's advanced development research. The Company has continued to engage in new initiatives related to early-stage technology research and new material development, and in particular how the benefits of eFlow™'s patented modified geometry apply to Electrolyzers and the potential to produce more hydrogen in a more cost efficient manner.

Cost recoveries primarily relates to SR&ED tax credits offered by the Canadian government to support Canadian business and SDTC credits, which are recognized when there is reasonable certainty as to their collectability. The SR&ED tax credits only relate to the periods prior to the Company becoming a public company. During Q121, the Company also recognized $1.6 million of cost recoveries related to SDTC credits due to the Company achieving the second milestone of its SDTC project.

3.3 Net Loss

Table 7: Quarterly and YTD Net Loss in thousands of CAD dollars except per share amount)

	Quarter								YTD		
	Q222	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**	**2022**	**2021**	**2020**
Net loss	$(9,923)	$(8,047)	$ (7,457)	$(6,540)	$(6,152)	$(4,872)	$ (2,785)	$ (2,438)	$(17,970)	$(11,024)	$(3,697)
Loss per common share - basic and diluted	(0.29)	(0.24)	(0.22)	(0.19)	(0.18)	(0.20)	(0.15)	(0.14)	(0.54)	(0.38)	(0.21)

Net loss has been increasing as a result of the aforementioned increases in cost of sales and operating expenses.

4. FINANCIAL POSITION

The following tables summarize the financial position for the Company for the last eight quarters.

4.1 Assets

Table 8: Total Assets (in thousands of CAD dollars)	**Q222**	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**
Cash and cash equivalents	$ 43,325	$ 55,730	$ 67,030	$ 77,810	$ 84,439	$ 91,486	$ 3,201	$ 6,337
Accounts receivable	2,914	2,533	2,066	1,671	1,356	566	543	566
Tax credit receivable	1,329	1,416	1,416	1,416	1,416	1,416	1,207	1,110
Inventory	1,591	1,637	1,280	1,195	828	1,463	1,142	-
Prepaid expenses and advances	7,748	6,575	6,564	3,256	2,322	2,997	831	998
Total current assets	56,907	67,891	78,356	85,348	90,361	97,928	6,924	9,011
Accounts receivable	345	412	477	529	-	-	-	-
Equity-accounted investment	-	-	-	-	141	186	231	245
Property, plant and equipment	10,301	8,589	5,260	5,179	4,110	3,511	2,597	2,458
Deferred financing costs	-	-	-	-	-	-	500	-
Total non-current assets	10,646	9,001	5,737	5,708	4,251	3,697	3,328	2,703
Total assets	67,553	76,892	84,093	91,056	94,612	101,625	10,252	11,714

The increase in cash and cash equivalents in Q121was primarily due to the completion of the Company's IPO. The following table summarises the net cash flow from operating, investing, and financing activities:

Table 8.1: Cash Flow (in thousands of CAD dollars)	**Q222**	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**
Net operating cash flow	$ (10,654)	$ (7,839)	$ (6,113)	$ (5,883)	$ (4,789)	$ (3,556)	$ (2,613)
Net investing cash flow	(1,541)	(3,274)	(3,993)	(628)	(714)	(1,327)	(390)
Net financing cash flow	(99)	(187)	(677)	(97)	(1,562)	93,168	(133)
Foreign exchange	(111)	-	3	(21)	18	-	-
Net change in cash and cash equivalents	(12,405)	(11,300)	(10,780)	(6,629)	(7,047)	88,285	(3,136)

The change in the net operating cash outflow is generally consistent with the change in the net loss (refer section 3.3). Q121 net operating cash outflow was lower than the net loss primarily due one-time non-cash share-based compensation expense of $1.7 million. Q421 and Q321 net operating cash outflow was higher than the net loss primary due to the timing of inventory purchases with Q421 also impacted due to the timing of payments.

Cash used in investing activities relates entirely to investments in equipment and leasehold improvements. The expenditures subsequent to the IPO in February 2021 were primarily related to the purchase of additional equipment to expand the Company's testing and manufacturing capabilities.

The Company is purchasing capital assets to continue growing its manufacturing capability and its product development, testing and prototyping capabilities, through the addition of testing equipment and personnel. As at June 30, 2022, outstanding commitments were $6.6 million (Q122: $4.3 million) related to purchases of property, plant, and equipment.

Cash provided by financing activities in Q121 was primarily a result of the issuance of 6,250,000 common shares for gross proceeds of $100 million (refer to section 4.4). The net financing cash outflow for Q221 and Q421 primarily relates to the payment of share issuance costs related to the Company's IPO.

Accounts receivable increased in Q222 primarily due to the sale of sixteen fuel cell modules and timing of collection of GST receivables, and in Q221, primarily due to the sale of ten fuel cell modules, for which extended repayment terms were subsequently offered and for which partial payments have been received in Q222. Subsequent increases during Q321, Q421, and Q122 are primarily due to the timing of collection of GST receivable.

The tax credit receivable relates to the Company's estimated SR&ED tax credits up to the date of the Company's IPO in February 2021, which amounts are payable in cash. As a public company, the Company's SR&ED tax credits are not refunded in cash. The Company is in the process of completing and submitting these filings.

Inventory increased in Q121 to support the forecasted sale for ten fuel cell modules and decreased in Q221 when the fuel cell modules were received by the customer. The following quarters have increased as the Company continued to build its inventory balance to meet the growing demand of its customers. The amounts recorded in the Company's statement of financial position are the estimated net realizable value of inventory. The increase in Q122 is consistent with the build up of raw materials, work in process and finished goods to meet production requirements associated with the fulfillment of purchase orders.

Prepaid expenses and advances are comprised of deposits for property, plant and equipment, inventory, software and corporate G&A expenses. The increase in prepaid expenses and advances in Q121 primarily relates to prepaid insurance and property, plant and equipment deposits following the Company's IPO. Subsequent increases in Q321, Q421, Q122 and Q222 are due to increases in refundable deposits made for inventory and property, plant, and equipment, as the Company continues to expand its manufacturing capabilities to continue to meet customer demands.

Non-current accounts receivable relates to the amounts reimbursable by a government entity to the Company relating to the lease entered into by Loop Shanghai.

Property, plant and equipment has increased following the IPO, to expand the Company's testing and manufacturing capabilities, as well as during Q121 the Company entering into a new office lease in Canada and during Q321 entering into a new facility lease by Loop Shanghai.

4.2 Liabilities

Table 9: Liabilities

(in thousands of CAD dollars)	Q222	Q122	Q421	Q321	Q221	Q121	Q420	Q320
Accounts payable and accrued liabilities	$ 2,416	$ 3,037	$ 2,846	$ 2,886	$ 1,555	$ 2,731	$ 2,521	$ 1,258
Current portion of lease liabilities	708	713	715	659	492	499	160	191
Current portion of long-term debt	175	175	175	175	165	515	515	515
Deferred revenue and recoveries	2,453	2,836	2,479	2,358	2,577	2,664	2,214	2,204
Convertible debentures	-	-	-	-	-	-	3,577	3,564
Warranty provision	310	138	112	103	60	-	-	-

Total current liabilities	6,062	6,889	6,327	6,181	4,849	6,409	8,987	7,732
Lease liabilities	2,190	1,202	1,350	1,476	753	838	290	295
Long-term debt	170	195	219	242	275	296	317	316
Deferred revenues and recoveries	757	807	849	873	-	-	-	-
Warranty provision	185	189	193	181	188	-	-	-
Total non-current liabilities	3,302	2,393	2,611	2,772	1,216	1,134	607	611
Total liabilities	9,364	9,292	8,938	8,953	6,065	7,543	9,594	8,343

Lease liabilities increased in Q222 due to an extension of a facility lease in Canada, in Q321 due to a new facility lease entered into by Loop Shanghai and in Q121 due to a new office lease entered into in Canada.

Long-term debt decreased in Q221 primarily due to a $0.4 million repayment of unsecured promissory notes.

Deferred revenues and recoveries include SDTC credits received for which milestones to recognize the cost recoveries are still yet to be achieved, deposits received from customers and a deferred government grant recovery associated with a new facility lease entered into by Loop Shanghai in Q321. In Q121, SDTC provided additional funding of $2.0 million, of which $0.3 million was recognized as a cost recovery during the same period, and we recognized a further $1.4 million cost recovery relating to the completion of the second milestone of the SDTC project. The increase in the non-current portion of deferred revenues and recoveries during Q321 is primarily due to a government grant associated with the new facility lease entered into by Loop Shanghai and all other movements are due to the timing of customer deposits and the recognition of revenues. The increase in Q122 is consistent with deposits associated with the increase in purchase orders received.

During Q121, the outstanding convertible debentures were converted to 2,399,999 common shares of the Company.

Commencing in Q221, the Company recorded a warranty provision for the estimated costs of replacement and associated services costs that will be incurred by the Company with respect to the products sold.

On March 31, 2022 the Company entered into an agreement with Pacific Economic Development Canada for funding of up to $9.75 million in cash to assist with project costs associated with increases in the Company's manufacturing capacity. Under the terms of the agreement the funding is repayable over 60 consecutive months commencing on April 1, 2025 and is non-interest bearing. The funds are to be received as certain milestones are accomplished over a period up to March 31, 2024. While no amounts have been advanced under the agreement at June 30, 2022, the Company expects to request and receive funds in Q322.

4.3 Liquidity and Working Capital

Table 10: Liquidity and Working Capital

(in thousands of CAD dollars)	**Q222**	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**
Cash and cash equivalents	$43,325	$55,730	$67,030	$77,810	$84,439	$91,486	$ 3,201	$ 6,337
Working capital (deficiency)	50,845	60,992	72,029	79,167	85,512	91,519	(2,063)	566

The Company's working capital position, being its current assets less its current liabilities, improved with the Company's successful IPO in Q121.

We consider our capital to consist of shareholders' equity and total debt, net of cash. The Company's objective when managing capital is to maintain adequate levels of funding to support the development of its business and maintain the necessary corporate and administrative functions to facilitate these activities. This is done primarily through debt and equity financing and is supplemented by applying for government grant programs, where available. Future financings are dependent on market conditions and the ability to identify sources of investment. There can be no assurance the Company will be able to raise funds in the future.

4.4 Shareholders' Equity

Table 11: Shareholders' equity (in thousands of CAD dollars)	**Q222**	**Q122**	**Q421**	**Q321**	**Q221**	**Q121**	**Q420**	**Q320**
Common shares	$ 126,517	$ 126,402	$ 126,310	$ 126,306	$ 126,677	$ 126,708	$ 15,675	$ 15,675
Preferred shares	-	-	-	-	-	-	14,990	14,990
Share-based payments reserve	7,511	6,973	6,556	6,119	5,671	5,023	2,770	2,698
Accumulated deficit	(75,767)	(65,844)	(57,797)	(50,341)	(43,801)	(37,649)	(32,777)	(29,992)
Foreign currency reserve	(72)	69	86	19	-	-	-	-
Total shareholders' equity	58,189	67,600	75,155	82,103	88,547	94,082	658	3,371

In Q121, the Company completed its IPO of 6,250,000 common shares at a price of $16.00 per share for aggregate gross proceeds of $100 million. In connection with the Offering, the Company paid a cash commission of $6.0 million and incurred additional share issuance costs of $2.2 million during 2021.

During Q122, 323,334 stock options with an exercise price of $0.99 were exercised by a former employee and shareholder via a short-term loan payable by September 30, 2022 and secured by 290,000 common shares which were issued and are being held by the Company. For accounting purposes, the 290,000 common shares held by the Company are being treated as treasury shares until the loan is paid by September 30, 2022 and will be accounted for as an exercise of the option upon payment of the loan.

As of June 30, 2022 and at the date of this MD&A the following equity instruments were outstanding:

Table 12: Equity Instruments	**August 3, 2022**	**June 30, 2022**
Common shares[4]	34,077,648	34,077,648
Stock options	2,343,688	2,347,334
Warrants	66,667	66,667
Restricted Share Units	673,476	674,920

The Company intends to use the net proceeds from the IPO for product and technology development, sales, general and administration expenses and capital assets. The Company's product and technology development, sales and general and administration expenses are working capital in nature. The use of net proceeds were as follows:

Table 13: Use of proceeds	**Shares**	**Price (per share)**	**Net Proceeds**	**Intended use**	**Actual use**
`	6,250,000	$16.00	$91,801	Product and technology development, sales, general and administration expenses and capital assets	$48,476(1)

(1) As June 30, 2022, the Company had spent $11.2 million of the proceeds from the IPO on capital assets and the remainder on product and technology development, sales, general and administration expenses. Based on our internal projects we expect to use a greater portion of the proceeds on product and technology development rather than capital assets.

[4] As of the date of this MD&A 290,000 common shares are held by the Company as treasury shares.

4.5 Related Party Transactions

The Company has related party relationships, as defined by IFRS, with its key management personnel, which includes the members of the Board of Directors and the officers of the Company. In addition to their salaries, key management personnel also participate in the Company's share-based compensation plan. Related party transactions with key management personnel were as follows:

Table 14: Related Party Transactions

(in thousands of CAD dollars)	Q222	Q122	Q421	Q321	Q221	Q121	Q420	Q320	Q220
Salaries and benefits	$ 400	$ 531	$ 737	$ 542	$ 352	$ 376	$ 375	$ 243	$ 221
Share-based payments	341	267	278	301	410	555	-	78	13
Director fees	38	38	38	31	31	31	-	-	-
	779	836	1,053	874	793	962	375	321	234

The increase during 2021 of related party expenses with key management personnel is primarily due to stock-based compensation issued at the time of the Company's IPO and costs associated with the departure of the Company's previous Chief Financial Officer in Q421.

As at June 30, 2022, the Company had $0.1 million (December 31, 2021 - $0.5 million) in accounts receivable and an insignificant amount in accounts payable and accrued liabilities and for the year ended December 31, 2021, from transactions with a joint venture. The transactions were carried out in the normal course of operations and have been measured at their exchange value, being the amount agreed between the parties.

Related party transactions and balances are disclosed in notes 13 and 16 of the unaudited interim condensed consolidated financial statements for the three and six months ended June 30 2022.

4.6 Off Balance Sheet Arrangements

As of the date of this MD&A, the Company does not have any off-balance sheet arrangements.

4.7 Selected Annual Financial Information

Not applicable

5. CRITICAL ACCOUNTING ESTIMATES, POLICIES AND RISK MATTERS

The Company's management uses its judgement when applying the Company's accounting policies in the preparation of its audited consolidated financial statements. The preparation of financial information requires management to make assumptions and estimates of the effects of uncertain future events on the carrying amounts of the Company's assets and liabilities at the end of the reporting period and on the reported amounts of revenue and expenses during the reporting period. Actual results may differ from those estimates as the estimation process is inherently uncertain. Estimates are reviewed on an ongoing basis based on historical experience and other factors that are considered to be relevant in the circumstances. Revisions to estimates and the resulting effects on the carrying amounts of the Company's assets and liabilities are accounted for prospectively.

5.1 Key Sources of Estimation Uncertainty

The following are key assumptions concerning the future and other key sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to the reported amount of assets, liabilities, revenues and expenses within the next financial year.

Warranty provision

A provision for warranty costs is recognized when the underlying products are sold. 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, and applying a weighting of possible outcomes against the associated probabilities that the product will experience warranty claims. In making such determinations, the Company uses estimates based on the nature of the contract and past and projected experience with the products. Should these estimates prove to be incorrect, the Company may incur costs different from those provided for in the warranty provision, which would impact cost of sales in the Company's consolidated statements of loss and comprehensive loss. The Company reviews the warranty assumptions and adjusts the provision at each reporting date based on the latest information available, including the expiry of contractual obligations.

Determination of the carrying value of inventory:

In determining the lower of cost and net realizable value of inventory, the Company estimates the likelihood that inventory carrying values will be affected by changes in market pricing or demand for the products and by changes in technology or design which could make inventory on hand recoverable at less than the recorded value. The Company performs regular reviews to assess the impact of changes in technology and design, sales pricing and other changes on the carrying value of inventory. Where it is determined that such changes have occurred and will have a negative impact on the value of inventory on hand, an appropriate write-down is made.

If there is a subsequent increase in the value of inventory on hand, reversals of previous write-downs to net realizable value are made. Unforeseen changes in these factors could result in additional inventory write-downs, or reversals of previous write-downs being required. During the three and six months ended June 30, 2022, the Company recorded a $1.5 million (Q221 $0.6 million) and a $2.9 million (H121 $1.5 million) write down of its inventory to its net realizable value respectively.

Impairment of financial assets

In determining the expected credit loss on the Company's trade receivables, the Company has elected to measure loss allowances for trade receivables using a provision matrix which specifies fixed provision rates depending on the number of days that a trade receivable is past due, using reference to past default experience of the debtor and an analysis of the debtor's current financial position, which also forms a basis for the Company's future expectations for potential defaults of the debtor. This includes both quantitative and qualitative information and analysis, based on the Company's historical experience and informed credit assessment and including forward-looking information.

As at June 30, 2022 the Company has recorded an allowance for an expected credit loss of $0.2 million (December 31, 2021 - $0.1 million).

Share-based payments:

The Company uses the Black-Scholes option pricing model. This inherently requires management to make various estimates and assumptions in relation to the expected life of the award, expected volatility, risk-free rate and forfeiture rates. Changes in any of these inputs could cause a significant change in the share-based compensation expense charged in the statements of loss and comprehensive loss and to share-based payment reserves in a given period.

The Company recognized share-based payments expense net of recoveries on cancellations of unvested options, during the three and six months ended June 30, 2022 and 2021 with allocations to functional expense as follows:

Table 15: Share-Based Payments (in thousands of CAD dollars)	**Three months ended June 30,**		**Six months ended June 30,**	
	2022 $	**2021 $**	**2022 $**	**2021 $**
Engineering	114	184	191	351
General and administrative	340	325	634	738
Business development	119	143	202	244
Technology development	8	-	9	-
	581	652	**1,036**	**1,333**

The following weighted average assumptions were used for the Black-Scholes option pricing model valuation of stock options granted during 2021:

Table 16: Black-Scholes assumptions	2021
Risk-free interest rate	1.25%
Expected life of options	7.9 years
Expected annualized volatility	74%
Dividend	0%
Forfeiture rate	0%

The valuation of the warrants issued during 2021 was calculated using the Black-Scholes method of valuation using the following assumptions:

Table 17: Black-Scholes assumptions	
Risk-free interest rate	0.32%
Expected life of options	1 year
Expected annualized volatility	85%
Dividend	0%

Expected annualized volatility was determined through the comparison of historical share price volatilities used by similar publicly listed companies in similar industries.

5.2 Changes in Accounting Policies and Recent Accounting Pronouncements

The Company's material accounting policies are detailed in Note 3 to the Company's annual financial statements for the year ended December 31, 2021. The Company did not adopt any new accounting policies in the current period. There are no significant accounting pronouncements which are anticipated to impact the Company's financial reporting.

5.3 Financial Instruments

As at June 30, 2022, the Company's financial instruments consists of cash and cash equivalents, accounts receivable, accounts payable, lease liabilities and long-term debt. The fair values of cash and cash equivalents, accounts receivable and accounts payable approximates their carrying values because of the short-term nature or the discount rates used in assessing the fair value of the instrument. The fair value of lease liabilities and long-term debt approximates their carrying value given the discount rates used to recognize the liabilities and the market rates of interest.

5.4 Risks and Uncertainties

Risk is inherent in all business activities and cannot be entirely eliminated. As a global company, we are subject to the risks arising from adverse changes in global economic and political conditions. Political conditions such as government commitments and policies towards environmental protection and renewable energy may change over time. Economic conditions in leading and emerging economies have been, and remain, unpredictable. The impact of COVID 19 on supply chains and global economic activity also continues to be unpredictable. These macroeconomic and geopolitical changes could result in decreased or delayed revenue recognition, increased costs and other potential material impacts to our business.

For full details on the risks and uncertainties affecting the Company, please refer to the Company's AIF (see section entitled "Risk Factors") for the year ended December 31, 2021, a copy of which is available on SEDAR at www.sedar.com. The risks and uncertainties described in our AIF are not the only ones that we face. Additional risks and uncertainties, including those that we do not currently know of or that we deem immaterial, could materially and adversely affect the Company's investments, prospects, cash flows, results of operations or financial condition.

5.5 Management's Report on Internal Controls

We have designed disclosure controls and procedures, as defined in National Instrument 52-109 - Certification of Disclosure in Issuers' Annual and Interim Filings ("NI 52-109"), to provide reasonable assurance that material information is identified and communicated to management, including the Chief Executive Officer and Chief Financial Officer, in a timely manner to allow decisions regarding required disclosures.

We have also designed internal controls over financial reporting ("ICFR"), as defined in NI 52 109, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Any system of ICFR, no matter how well designed, has inherent limitations and cannot provide absolute assurance that all misstatements and instances of fraud, if any, within the Company have been prevented or detected. The Company uses the 2013 Internal Control – Integrated Framework published by The Committee of Sponsoring Organizations of the Treadway Commission ("**2013 COSO framework**") as the basis for assessing its ICFR.

During the six months ended June 30, 2022, there were no changes in internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internals control over financial reporting.

5.6 Cautionary Statement Regarding Forward-Looking Information

This MD&A contains certain "forward-looking statements" within the meaning of Canadian securities legislation that involve risks, uncertainties and assumptions and relate to the Company's current expectations and views of future events.

In certain cases, these forward-looking statements can be identified by words or phrases such as "forecast", "target", "goal", "may", "might", "will", "expect", "anticipate", "estimate", "intend", "plan", "indicate", "seek", "believe", "project", "predict", or "likely", or the negative of these terms, or other similar expressions intended to identify forward-looking statements. The Company has based these forward-looking statements on its current expectations and projections about future events and financial trends that it believes might affect its financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, among other things, statements relating to the Company's financial position, business strategy, growth strategies, addressable markets, budgets, operations, financial results, taxes, plans and objectives. Particularly, statements regarding the Company's expectations of future results, performance, achievements, prospects or opportunities or the markets in which we operate is forward-looking information, including:

- our liquidity needs and our estimation that we will have sufficient liquidity to execute our operating plans for at least the next twelve months;
- our goal to become a leader across the entire fuel cell market;
- the estimated future TAM for hydrogen fuel cells and for our current target market;
- the expected performance, durability and total cost of operation of our fuels cell systems;
- our future growth prospects and business outlook including without limitation the expected demand for our products, the planned growth of our customer base and the expected growth of our operations globally
- our ability to secure future firm order commitments or develop further market opportunities under existing and future customer and/or partner agreements;
- our plans for establishing a physical presence in Europe;
- the timing of expected integration, testing and commissioning of our products in customer vehicles or other customer applications;
- our expected manufacturing capacity and production capability;
- the timing of the completion, commissioning and start-up of our new production facility in Shanghai, China;
- the expected rollout and timing of our planned field deployment of our next generation 120 kW to 240 kW fuel cell stacks and the belief that the larger e-flow plate will result in significant cost reductions;
- our plans to integrate certain of our upstream activities to drive further cost out;
- our anticipated completion of milestones with Sustainable Development Technology Canada, SR&ED and Pacific Economic Development Canada and receipt of associated funds or tax credits as applicable;
- our belief that zero emission vehicles are one of the only viable options for a sustainable future and that hydrogen fuel cell systems (combined with Lithium-ion batteries) are the optimal solution for the commercial mobility market;
- our expectation that our patents will adequately protect our intellectual property now and in the future;

- our ability to meet manufacturing cost reduction targets;
- the realization of electrification of transportation, elimination of diesel fuel and ongoing government support of such developments; and
- the extent of the disruption to and/or adverse impact on our business, operation results and financial condition as a result of the COVID-19 pandemic, including without limitation the current COVID related lockdowns in China.

Forward-looking statements are based on certain assumptions and analyses made by the Company based upon management's experience and perception of historical trends, current conditions and expected future developments, and other factors it believes are appropriate. Although the Company believes that the assumptions underlying these statements are reasonable, if any assumptions underlying the forward-looking statements prove incorrect, actual results may vary materially from those anticipated in those forward-looking statements and there can be no assurance that actual results will be consistent with these forward-looking statements. Material assumptions underlying forward-looking statements in this MD&A include future expectations and assumptions regarding:

- our belief of the value of the total assessable market today and by 2030;
- our intention to become the market leader and moving to adjacent market applications;
- our expectation that eFlow™-equipped fuel cells will continue to offer performance improvements over time and the increased offerings for uniformity of current, increased flow velocity and water removal;
- our expectation that total cost of ownership will decrease and demand for our products will increase;
- our expectation that we will continue to scale production and decrease average unit cost;
- our belief that our market visibility will increase;
- the demand for, and supply of, hydrogen fuel cells for the commercial mobility and stationary power markets;
- the realization of electrification of transportation, elimination of diesel fuel and ongoing government support of such developments;
- our belief that hydrogen fuel cells combined with lithium-ion batteries are the optimal solution for the commercial mobility market;
- our target of 60 fuel cell units ordered for 2022 and our ability to increase capacity, enhance our supply chain and reduce delivery time;
- our ability to reduce costs through scale purchasing;
- our expectation that the write-down of inventory will decrease or will no longer be required in the future;
- our expectation that revenue will vary period to period;
- the timely availability of key equipment and components required in the manufacture of our products;
- the availability of sufficient skilled human resources and financial capital required to meet our sales, product development and production growth aspirations; and
- the extent of the disruption to and/or adverse impact on our business, operation results and financial condition as a result of existing and unforeseen future global events, including without limitation the COVID-19 pandemic and the current war between Russia and the Ukraine.

In addition, forward-looking-statements, by their nature, involve risks and uncertainties. Certain of these risks are included in "*Risks and Uncertainties*" in this MD&A and "Risk Factors" in the Company's Annual Information Form dated March 23, 2022 ("AIF"), which factors should not be considered exhaustive and should be read together with the other cautionary statements in this MD&A. Given these risks, uncertainties and assumptions, readers should not place undue reliance on forward-looking statements and the Company cautions readers that forward-looking statements are not guarantees of future performance and that its actual results of operations, financial condition and liquidity and the development of the industry in which it operates may differ materially from those made in or suggested by forward-looking statements contained in this MD&A. In addition, even if the Company's results of operations, financial condition and liquidity and the development of the industry in which it operates are consistent with the forward-looking statements contained in this MD&A, those results or developments may not be indicative of results or developments in subsequent periods. Any forward-looking statement that is made in this AIF speaks only as of the date of such statement, and the Company undertakes no obligation to update any forward-looking statements or to publicly announce the results of any revisions to any of those statements to reflect future events or developments, except as required by applicable securities laws. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data.

5.7 Non-IFRS Financial Measures

Product back-log is a non-IFRS financial measure intended to provide additional information and should not be considered a substitute for measures of performance prepared in accordance with IFRS. In addition, this measure does not have a standardized meaning under IFRS and therefore may not be comparable to a similar measure presented by other companies. This non-IFRS measure is used by management, and we believe that it assists investors and other users of our financial reports in assessing our financial performance and monitoring our ongoing financial position. Our product back-log represents the estimated aggregate value of all future conditional orders, binding and non-binding commitments and memorandums of understanding from customers who have placed at least one committed purchase order with us for at least one fuel cell stack or module with written intention (including binding and non-binding commitments) of follow-on unit orders. Our product back-log is currently comprised of a relatively limited number of contracts and a relatively limited number of customers and there can be no assurance that any such conditions will be fulfilled, or that our product back-log will be equal to our future revenues. Given the relative immaturity of our industry and customer deployment programs, our product back-log is potentially vulnerable to risk of cancellation, deferral or non-performance by our customers for a variety of reasons, including: risks related to continued customer commitment to a fuel cell program; risks related to customer liquidity; credit risks; risks related to changes, reductions or eliminations in government policies, subsidies and incentives; risks related to macro-economic conditions including trade, public health (including the ongoing impact of the COVID-19 pandemic), and other geopolitical risks; risks related to slower market adoption; risks related to vehicle integration challenges; risks related to the development of effective hydrogen refueling infrastructure; risks related to the ability of our products to meet evolving market requirements; and supplier-related risks.