



**Next Hydrogen Solutions Inc.**

**Management's Discussion and Analysis**

For the years ended  
December 31, 2023 and 2022

Dated April 19, 2024

## CEO Letter

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In this letter, I will provide my perspective on our 2023 achievements, outlook for 2024 as well as the overall macro environment.

### **2023 achievements – Ensuring strong product market fit and compelling KPIs**

We had set three goals for 2023 which included significant improvement in product performance, demonstrating our second-generation system at a customer site and showing significant market traction.

#### **Significant improvement in product performance**

- We have accumulated over 18,000 hours of operational data using our test stands enabling fast paced and efficient product development iterations which paid significant dividends in 2023.
- We completed our second-generation electrolyzer module pilot scale testing. This module delivered a major part count reduction and over 30% cost reduction versus our first-generation product line. Secondly, we demonstrated an 18% improvement in cell efficiency which puts our product in the best commercially available category. Approximately 80% of the cost of hydrogen production is the cost of electricity. Hence, cell efficiency improvement is critical in driving down operating costs.
- Our second-generation product line is up to 2.25MW and is best suited for transportation application. In 2023, we also started working on our third-generation product line which is expected to result in approximately 8MW single stacks and is well suited for large scale industrial applications. After successful bench scale testing, this product line is now entering pilot scale testing with plans to secure initial field trials in 2025.

#### **Demonstrating our second-generation system at a customer site**

- Our second-generation full scale system was under construction by year end, however, due to delays in supply chain and engineering execution, the construction was not complete. Our focus is on ensuring the highest quality and system integrity and we remain committed to these high standards. The good news is that this system is expected to be delivered to a customer site shortly. This will represent a significant milestone for the company to help unlock its growing backlog.

#### **Demonstrating significant market traction**

We did very well on this goal. During 2023, we announced strong channel partners and grew our contracted backlog from \$3M to \$8M, with a potential additional follow-on order of \$2.7M.

- We announced our partnership with GE where we intend to bundle our electrolyzers with their power converters. We view GE's sales network and execution capabilities of strategic importance to drive wide-spread adoption of both of our product offerings.
- Approximately 40% of all hydrogen is consumed by the Ammonia sector. However, it is primarily derived from fossil fuels and hence there is a significant opportunity to displace it with green hydrogen using water electrolysis. We are working with Casale, which is a leading turn-key solution provider of ammonia and methanol plants. The objective is to integrate our electrolyzers within their ammonia plants and offer it as a bundled solution to the end-users. As such, each of these plants could represent 100MW+ opportunities for the company.

- In 2023, we secured a \$7.7M contract from a blue-chip customer on the back of a pilot project we did in the nuclear space. We are very proud that we are able to secure repeat contracts following pilot projects. Previously, we secured two repeat and 5x larger orders from Canadian Tire following our pilot project to produce hydrogen for their forklifts.

## **2024: Break-out year for Next Hydrogen**

Our focus for 2024 is Technology Leadership, Productization and Strategic Sales Pipeline.

### **Technology leadership**

- In terms of cell efficiency, we are targeting 1.7 V/cell at 1.2 amp/cm<sup>2</sup> which will allow us to exceed US DOE's 2026 targets and firmly plant us as a best-in-class water electrolysis company globally.
- We will pilot test our third-generation product line for delivery to the nuclear customer and are also planning a technology demonstration in early 2025. Along with leading cell efficiency, the economies of scale for this larger product line (up to 8MW per single stack) are expected to drive significant reductions in capital expenditures. This product line will competitively position us for large scale industrial projects such as ammonia, methanol and steel production applications. The order sizes can eventually exceed 100MW each for this product line.

### **Productization**

- We aim to validate the reliability of our second-generation production through operations at a customer site.
- We have set aggressive but achievable cost-performance targets for our third-generation product line. Our engineering team is well integrated with our technology development team to help deliver on these targets.

### **Strategic sales pipeline**

- In 2023, we grew our contracted backlog from \$3M to \$8M, with a potential additional follow-on order of \$2.7M. In 2024, we will be leveraging our existing channel partners and pre-selling our third-generation product line with a goal to double our backlog from 2023 while pursuing high-quality and strategic opportunities.
- In addition, we are actively pursuing strategic partnerships in high growth potential markets to materially accelerate our global growth prospects.

### **Macro outlook**

- The valuations of small cap and clean tech companies continued to decline in 2023 similar to 2022. We have seen valuations decline between 70% to 90% since 2021 for our peer group in the public markets. The valuations for private companies have been much more robust as seen by recent transactions.
- The industry growth rate was lower than early forecasts as project developers looked for more clarity on government support mechanisms before making their final investment decisions. That said, there is no doubt that the industry is growing rapidly even if it is below the lofty expectations. According to industry sources, the total installed capacity of electrolyzers is now at 3GW compared to just approximately 200MW at the beginning of this decade.

- We remain very bullish on the prospects for the hydrogen economy especially due to the commitment of 3x increase in renewables by 2030 at COP 28. This will help further lower renewable electricity prices (which represent approximately 80% of the cost of green hydrogen) and increase the mismatch between supply and demand availability caused by renewables which can be plugged using water electrolyzers.

### **Concluding remarks**

Our unique cell design architecture brings together the benefits of alkaline electrolyzers (proven supply chain, durability, scale-up and track record) with one of the key advantages of PEM electrolyzers (direct connection to renewables). Following 16,000 hours of operational data, there is no doubt in my mind that we have a very innovative and validated electrolyzer design which provides a compelling pathway to low-cost, low-risk and large-scale green hydrogen production. This year, we expect to show our full-scale system operating at a customer site, our third-generation electrolyzer ready for technology demonstration and further customer traction.

Finally, we are well capitalized to achieve our 2024 goals due to strong cost control and capital allocation decisions made in early 2022. Our preferred pathway to raise additional capital will be from strategic investments that (1) represent large end-users of our products, (2) can help support manufacturing scale-up, and (3) allow us to quickly access large potential markets through technology licensing opportunities.

Thank you to our employees and shareholders for their deep commitment and support. We continue to pursue our mission with zeal and high intentions. We look forward to deepening our contribution to decarbonizing our beautiful planet.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Raveel Afzaal', with a horizontal line underneath the signature.

Raveel Afzaal  
President & CEO

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

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### General Information

The following is Next Hydrogen Corporation's management discussion and analysis dated April 19, 2024 ("MD&A"), which provides a comparative overview of the Company's performance for the year ended December 31, 2023 with the corresponding year ended December 31, 2022, and it reviews the Company's financial position as at December 31, 2023. Throughout this MD&A, the term "Company" or "Next Hydrogen" shall mean Next Hydrogen Solutions Inc. and all of its wholly-owned subsidiaries. This discussion should be read in conjunction with the Company's audited consolidated financial statements and accompanying notes as at and for the years ended December 31, 2023 and 2022 ("consolidated financial statements").

The consolidated financial statements of the Company were prepared in accordance with IFRS Accounting Standards ("IFRS") reporting, as issued by the International Accounting Standards Board ("IASB"). The Company's presentation currency is the Canadian dollar. All financial information presented has been rounded to the nearest dollar, except per share amounts and where otherwise indicated. The Company's consolidated financial statements for the year ended December 31, 2023 were approved by its Board of Directors on April 19, 2024. Readers are cautioned that certain information included herein is forward-looking and based upon assumptions and anticipated results that are subject to uncertainties. Should one or more of these uncertainties materialize or should the underlying assumption prove incorrect, actual results may vary significantly from those expected. See "Forward Looking Statements" and "Risks and Uncertainties".

Unless otherwise indicated, the information in this report is dated as of April 19, 2024. Additional information relating to the Company is available on SEDAR at [www.sedarplus.ca](http://www.sedarplus.ca).

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

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### Operational Highlights

Management is proud to highlight a number of recent milestones that demonstrate significant progress over the past year:

- Next Hydrogen has appointed Mr. Rob Campbell as Chief Commercial Officer (CCO), who brings a distinguished career in senior leadership roles in the global clean technology sector with a focus on hydrogen, fuel cells and solar industries. Mr. Campbell will help Next Hydrogen execute the Company's go-to-market strategy introducing our products into strategic market applications.
- Next Hydrogen and General Electric Vernova ("GE Vernova") have signed a memorandum of understanding to integrate Next Hydrogen's electrolysis technology with GE Vernova's power systems offerings to produce green hydrogen. This collaborative effort will encompass installation, rigorous testing, and the seamless integration of a Next Hydrogen water electrolyzer with a power supply meticulously designed and fabricated by GE Vernova. This collaboration will further support Next Hydrogen's commitment to pioneering innovative green hydrogen technologies, addressing climate change, and promoting global energy sustainability.
- Next Hydrogen has met its energy efficiency targets cell performance of 1.90 V/cell at 1 A/cm<sup>2</sup> and 70°C for its new second-generation "GEN2" water electrolyzer technology which exceeded the recently reported US Department of Energy ("DOE") technical targets status for energy efficiency. The GEN2 performance achievement has positioned the Company to being the industry leader in electrolysis cell performance. Next Hydrogen has a progressive goal to achieve 1.70 V/cell at 1.2 A/cm<sup>2</sup> during 2024, which will allow us to exceed US DOE's 2026 targets and firmly plant us as best-in-class water electrolysis company globally.<sup>(1)</sup>
- Based on an existing relationship, the Company has received an order for a project involving a specialized nuclear application worth \$7.7M. Under the agreement, Next Hydrogen will conduct design engineering (Phase 1) and subsequently provide the electrolyzer needed (Phase 2) for the project. A \$5M purchase order has been received for Phase 1, with a potential follow-on order of \$2.7M planned for Phase 2 with electrolyzer delivery expected to occur in 2025. Cash of \$2M was received during 2023; an additional \$1M was received subsequent to year end 2023, with an additional \$2M expected to be received in 2024.
- Next Hydrogen and Casale SA ("Casale") have signed a memorandum of understanding to develop green ammonia and methanol systems that integrate Next Hydrogen's electrolysis technology and products. Under this agreement, the companies will bring together their collective experience and capabilities to accelerate and scale-up green ammonia and methanol plants connected to renewable energy sources. This collaboration provides a compelling pathway to producing clean, zero-emission ammonia and methanol from green renewable energy power sources. During 2023, Next Hydrogen received the first purchase order under this development agreement from Casale.
- Next Hydrogen will be receiving advisory services and up to \$0.8M in research and development funding from the National Research Council of Canada Industrial Research Assistance Program ("NRCC IRAP") toward the development and demonstration of the Company's next generation products. This will further help the Company accelerate its product roadmap and its mission of driving large scale adoption of green hydrogen solutions to decarbonize the global economy.

<sup>(1)</sup> Please refer to the US DOE's targets:

[https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/review23/p196h\\_pivovar\\_2023\\_p-pdf.pdf](https://www.hydrogen.energy.gov/docs/hydrogenprogramlibraries/pdfs/review23/p196h_pivovar_2023_p-pdf.pdf)

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

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- The Company has been awarded \$5.1M from Sustainable Development Technology Canada ("SDTC") towards the development and demonstration of the Company's next generation electrolysis technology. Further, Next Hydrogen is working with four blue-chip industry partners who are contributing a total of \$1.2M as a combination of cash and in-kind contributions towards its product development roadmap. These partners include end-users, suppliers and channel partners to ensure strong product-market fit and positions the company for high quality revenue generation opportunities. This project, with a budget of over \$12M will run to early 2025, resulting in the launch of a GEN2 product line with cost and performance improvements and a third-generation larger-scale product line with further cost and performance improvements. With the launch of these products, Next Hydrogen will be well positioned to support the needs of its customers for both near-term market demonstrations and commercial large-scale green hydrogen systems. The payment for the first milestone was received from SDTC in 2023, while the payment for the second milestone was received in early 2024.
- Next Hydrogen has cash and cash equivalents of \$10.9M as of December 31, 2023. We have sufficient capital to achieve our 2024 objectives.

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

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### **Business Overview**

Founded in 2007, Next Hydrogen's innovative water electrolysis technology, with patented cell architecture, is designed to efficiently convert intermittent renewable electric power sources into clean hydrogen on an infrastructure scale. The Company was co-founded by Dr. Jim Hinatsu (CPO) and Dr. Michael Stemp (CTO) who are experts in water electrolysis. They previously led Research & Development and Intellectual Property development for Stuart Energy (acquired by Hydrogenics in 2004) and Hydrogenics (acquired by Cummins in 2019).

While some of the world's brightest minds with strong capital resources have been focused on improving cell materials and components, improvements to the cell design architecture have garnered very little attention and as a consequence the design has not changed in decades. Next Hydrogen's team, with a combined experience of over 60 years in water electrolysis, has dedicated more than a decade to revolutionizing the design architecture of the electrolyzer to optimize it for renewable energy integration. To date, it has been awarded 40 patents across multiple jurisdictions. The break-through innovation in cell design architecture enables unprecedented operational flexibility to capture the entire output of intermittent renewable energy using significantly smaller or fewer units than a traditional electrolyzer solution. Next Hydrogen believes its unique design enables high current density operations, a superior dynamic response and inherent scalability, representing a strong technological advantage to reduce the cost of green hydrogen generation and decarbonize industrial processes, the transportation industry, and energy markets at scale.

The advanced electrolyzer module design uses a new and fundamentally different approach to fluid flows in water electrolyzers. Fluid flows are maintained separately in each half-cell chamber or "slice" of the electrolyzer module, whereas conventional designs collect all the fluid flows in internal manifolds of the electrolyzer module, which are separated from the gas in external gas-liquid separators. Next Hydrogen's design can therefore handle much higher fluid flow rates, and much higher gas generation rates, which in turn enables our products to make more hydrogen economically, whenever low-cost electricity is available. The key enabling design features are incorporation of gas-liquid separators inside the electrolyzer module, and fluid flow passages that connect each gas production half-cell chamber directly to the gas-liquid separators.

Next Hydrogen's product is a large-scale hydrogen generator, which makes hydrogen at the user's site from common plant utilities - water and electricity. The hydrogen generator system uses water electrolysis to generate high-purity hydrogen on demand. The key component in the system is an innovative, patented electrolyzer module, which is combined with balance of plant equipment including power, controls, gas purification, closed-loop cooling and water treatment. The process typically works by first converting AC electricity to DC electricity, which powers the electrolyzer module. Inside the electrolyzer module, water is converted by the DC electricity to hydrogen and oxygen gases. Hydrogen typically is the product gas, and it is cleaned and sent to the user's process and/or hydrogen storage. The system is automatically controlled and operates with minimal oversight. It is packaged in sea containers for ease of shipping and installation and outdoor installation frees up valuable indoor floor space.



## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

Next Hydrogen is at the early commercialization stage and has demonstrated that the development of the final product with expected functionality is possible. The Company initially demonstrated its prototype with Atomic Energy Canada Limited ("AECL") in 2012. At the time, AECL publicly stated "the team successfully demonstrated the continuous operation of the cell with the required quality of hydrogen stream from the electrolyzer in a liquid phase catalytic exchange system." Following this, the Company sold a NH-60 test and evaluation electrolyzer system to Canadian Tire in 2014. Subsequently, Next Hydrogen entered into two additional sales agreements with Canadian Tire for an NH-300 electrolyzer system and an electrolyzer module. These systems will produce hydrogen to power fuel cell forklifts at Canadian Tire's distribution centres.

Next Hydrogen has dedicated a significant portion of its capital raise to product development and commercialization. As such, its current product line has undergone new performance upgrades from first to second-generation to factor in latest innovations. These iterations and refinements are a normal course of a product development journey and will be necessary to comprehensively prove out the five-times scale-up from NH-60, unique design features, lifetime performance, and to ensure a competitive and robust product offering for mass volume production. This second-generation product line is expected to be in market demonstrations shortly. Looking further ahead and as part of the product development roadmap, management intends to pursue further scale-up of this design from the current size range for large scale green hydrogen production.

### Results of Operations

#### Financial Highlights

	3 months ended Dec 31 2023	3 months ended Dec 31 2022	12 months ended Dec 31 2023	12 months ended Dec 31 2022
<b>Revenue</b>	<b>\$ 808,813</b>	<b>\$ 561,510</b>	<b>\$ 951,908</b>	<b>\$ 721,588</b>
<b>Expenses</b>				
Cost of sales	566,447	964,004	1,240,702	1,433,651
Research and development	2,351,617	1,996,745	7,065,384	7,705,005
General and administrative	1,191,407	1,030,240	4,672,865	5,204,051
Marketing and sales	143,297	(123,483)	466,379	969,606
<b>Loss before the following</b>	<b>(3,443,955)</b>	<b>(3,305,996)</b>	<b>(12,493,422)</b>	<b>(14,590,725)</b>
Finance (income) costs, net	(100,278)	(147,741)	(479,533)	(312,357)
<b>Net loss and comprehensive loss</b>	<b>\$ (3,343,677)</b>	<b>\$ (3,158,255)</b>	<b>\$ (12,013,889)</b>	<b>\$ (14,278,368)</b>
Loss per share - basic	\$ (0.15)	\$ (0.14)	\$ (0.52)	\$ (0.62)
Loss per share - diluted	\$ (0.15)	\$ (0.14)	\$ (0.52)	\$ (0.62)

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

### Revenue

	12 months ended Dec 31 2023	12 months ended Dec 31 2022	\$ Change	% Change
<b>Revenue</b>	<b>\$ 951,908</b>	<b>\$ 721,588</b>	<b>\$ 230,320</b>	<b>32%</b>

As Next Hydrogen is in the early stage of commercialization, revenues are generated through service, consulting, and through development agreements. The Company recorded \$951,908 (2022 - \$721,588) in revenue during the year ended December 31, 2023, 76% (2022 - 71%) of which was provided by one customer as part of a development agreement (2022 - sale of electrolyzers). The 32% increase in revenue from the prior year predominantly relates to the development agreement in 2023.

As of December 31, 2023, the Company had \$5,079,535 (2022 - \$2,771,641) in deferred revenue, \$2,307,894 (2022 - \$45,000) of which is expected to be earned over the next twelve months.

### Expenses

	12 months ended Dec 31 2023	12 months ended Dec 31 2022	\$ Change	% Change
Cost of sales	<b>\$ 1,240,702</b>	<b>\$ 1,433,651</b>	<b>\$ (192,949)</b>	<b>(13%)</b>
Research and development	<b>7,065,384</b>	<b>7,705,005</b>	<b>(639,621)</b>	<b>(8%)</b>
General and administrative	<b>4,672,865</b>	<b>5,204,051</b>	<b>(531,186)</b>	<b>(10%)</b>
Marketing and sales	<b>466,379</b>	<b>969,606</b>	<b>(503,227)</b>	<b>(52%)</b>
	<b>\$ 13,445,330</b>	<b>\$ 15,312,313</b>	<b>\$ (1,866,983)</b>	<b>(12%)</b>

Cost of sales decreased by \$192,949 or 13% for the year ended December 31, 2023, compared to the same period in 2022, predominantly due to a lower inventory impairment recorded in 2023.

Research and development expenses decreased by \$639,621 or 8% for the year ended December 31, 2023, compared to the same period in 2022 due to the offset of expenses against the SDTC grant.

General and administrative expenses decreased by \$531,186 or 10% for the year ended December 31, 2023, compared to the same period in 2022. The decrease in general and administration costs in 2023 relates to the Company's management strategy to effectively monitor spend and focus on cash flow management and cash conservation for fiscal year 2023. General and administrative expenses were also higher in 2022 due to the one-time implementation of a new ERP system, which did not occur in 2023.

Marketing and sales expenses decreased by \$503,227 or 52% for the year ended December 31, 2023, compared to the same period in 2022, as the Company was focused on cash flow management and cash conservation for fiscal year 2023. The Company added a Chief Commercial Officer (CCO) as part of our efforts to ramp up our commercial opportunities; therefore, marketing and sales expenses are expected to increase in 2024.

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

### Summary of Quarterly Results

The following table sets out quarterly financial information for the Company's eight most recently completed quarters:

(in thousands)	Q4'23	Q3'23	Q2'23	Q1'23	Q4'22	Q3'22	Q2'22	Q1'22
Revenue	809	53	46	44	562	74	45	41
Loss from operations	(3,444)	(2,423)	(3,083)	(3,543)	(3,306)	(4,106)	(3,551)	(3,627)
Net loss and comprehensive loss	(3,344)	(2,335)	(2,940)	(3,395)	(3,158)	(3,961)	(3,514)	(3,645)
Loss per share - Basic	(0.15)	(0.10)	(0.13)	(0.15)	(0.14)	(0.17)	(0.15)	(0.16)
Loss per share - Diluted	(0.15)	(0.10)	(0.13)	(0.15)	(0.14)	(0.17)	(0.15)	(0.16)

During Q4 2023, the Company's revenues grew significantly due to a development agreement. The loss from operations and net loss and comprehensive loss are predominantly consistent with the prior quarters, as is expected in the Company's pre-commercialization stage.

Given the nascent nature of the industry and the value of individual unit sales, the sale of Next Hydrogen's electrolyzers could result in significant fluctuations in revenues over the first few years of operations, until the Company builds a robust sales pipeline.

### Liquidity and Capital Resources

	December 31 2023	December 31 2022
Cash	\$ 10,909,061	\$ 22,084,721
Working capital <sup>(1)</sup>	11,641,150	24,628,360
Total assets	25,443,318	33,727,778
Debt <sup>(2)</sup>	85,389	286,575
Shareholders' equity (deficit)	12,605,913	23,905,742

<sup>(1)</sup> Working capital is defined as current assets minus current liabilities.

<sup>(2)</sup> Debt includes both current and long-term portions of long-term debt. Finance lease liability has been excluded as it pertains to the Company's head office and assembly facility lease.

Cash, working capital, total assets, and shareholders' equity decreased during the year ended December 31, 2023 in order to fund operating activities, product development and purchases, and to pay down debt.

Positive cashflows are not expected over the next few years as the Company continues to focus on product development and commercializing new product lines while building out the necessary infrastructure to commercialize its business. The Company believes that it has sufficient available liquidity to meet its minimum obligations as they come due to continue as a going concern for a period of at least the next twelve months.

## Management's Discussion and Analysis for the years ended December 31, 2023 and 2022

The following table sets out the Company's contractual obligations with respect to debt:

(in thousands)	Total	1 Year	2 Years	3 Years	4 Years	5 Years	After 5 Years
Trade and other payables	\$ 1,714	\$ 1,714	\$ -	\$ -	\$ -	\$ -	\$ -
Finance lease liability	1,748	91	114	172	208	249	914
Long-term debt	85	63	22	-	-	-	-

As of April 19, 2024, the Company had 22,903,468 common shares, 3,171,626 stock options and 120,256 deferred share units outstanding.

### Selected Annual Information

	2023	2022	2021 <i>Restated<sup>(1)</sup></i>
Revenue	\$ 951,908	\$ 721,588	\$ 177,589
Net loss and comprehensive loss	(12,013,889)	(14,278,368)	(26,612,651)
Loss per share - basic	(0.52)	(0.62)	(1.36)
Loss per share - diluted	(0.52)	(0.62)	(1.36)
Total assets	25,443,318	33,727,778	47,685,849
Total long-term financial liabilities	8,231,519	8,366,076	7,059,151

<sup>(1)</sup>See annual consolidated financial statements and MD&A for the years ended December 31, 2022 and 2021 available on SEDAR for further details on the restatements.

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### **Forward-Looking Statements**

Certain sections of this MD&A, including the CEO letter may contain “forward-looking statements” within the meaning of applicable securities legislation. All statements, other than statements of historical fact, made by the Company that address activities, events or developments that the Company expects or anticipates will or may occur in the future are forward-looking statements, including, but not limited to, statements preceded by, followed by or that include words such as “may”, “will”, “would”, “could”, “should”, “believes”, “estimates”, “projects”, “potential”, “expects”, “plans”, “intends”, “anticipates”, “targeted”, “continues”, “forecasts”, “designed”, “goal”, or the negative of those words or other similar or comparable words. Forward-looking statements may relate to the Company's future financial conditions, results of operations, plans, objectives, performance or business developments. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Known and unknown factors could cause actual results to differ materially from those projected in the forward-looking statements.

There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Forward-looking statements are provided for the purpose of providing information about management's expectations and plans relating to the future. All of the forward-looking statements made in this MD&A are qualified by these cautionary statements and those made in our other filings with applicable securities regulators in Canada. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, or to explain any material difference between subsequent actual events and such forward-looking statements, except to the extent required by applicable law.

### **Critical Accounting Estimates**

The preparation of consolidated financial statements in accordance with IFRS requires management to make judgments that affect the application of accounting policies and the interpretation of accounting standards, and to make estimates and assumptions which affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the reported amounts of revenues and expenses. Management makes estimates based on specific facts or circumstances as well as past experiences. Management periodically reviews its estimates and underlying assumptions and as adjustments become necessary, they are reported in profit and loss in the period in which they become known. Due to the inherent uncertainty involved with making such estimates, actual results could differ from those reported.

A detailed description of the Company's critical accounting estimates can be found in the consolidated financial statements.

### **Changes in Accounting Standards**

*Please refer to the audited consolidated financial statements*

### **Future Accounting Pronouncements**

*Please refer to the audited consolidated financial statements*

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### Risks and Uncertainties

Any investment in the securities of the Company is speculative due to the nature of its business and stage of development. There are a number of risk factors that could materially affect the Company's future operating results and could cause actual events to differ materially from those described in the forward-looking statements related to the Company. In addition to the usual risks associated with an investment in a business, investors should carefully consider the following risk factors and the risk factors set out in the Company's Filing Statement. If any of the noted risks actually occur, the business may be harmed and the financial condition and results of operations may suffer significantly. In that event, the trading price of the common shares could decline, and shareholders may lose all or part of their investment. Additional risks and uncertainties not presently known to us or that we currently consider immaterial also may impair our business and operations.

#### *Capital Requirements*

Next Hydrogen plans to focus on research and development while building out the necessary infrastructure to commercialize its business and will use its working capital to carry out such initiatives. The Company believes that it has sufficient available liquidity to meet its minimum obligations as they come due to continue as a going concern for a period of at least the next twelve months. In making this significant judgment, the Company has prepared a cash flow forecast, with the most significant assumptions in the preparation of such forecast being the: (1) ability to meet the relevant criteria of government grants and revenue contracts for additional funds to be received; and (2) judgment to curtail certain discretionary expenditures, if required, in fiscal 2024. The development of new hydrogen technologies may require substantial additional financing through equity or debt, and there can be no assurance that it will be able to obtain adequate financing in the future or available under terms acceptable to the Company.

#### *Operations*

Next Hydrogen is subject to risks relating to the industry in which it operates, which include risks relating to the continuing development of the industry and risks relating to regulations. With respect to the continuing development of the renewable energy industry, Next Hydrogen is subject to the risk that their technology is relatively new and as a result, assumptions and estimates regarding the performance of their technology will be made without the benefit of a meaningful operating history and any operating history that does exist may not be maintained in the future. The projects undertaken by Next Hydrogen are generally capital intensive, require significant time to develop, are technically complex and are physically large. As a result, Next Hydrogen is subject to risks relating to completion of the projects, cost overruns, the availability of financing for such projects, and the ability to complete projects in geographically challenging locations. With respect to regulation, the industries in which Next Hydrogen operates are heavily regulated. As a result, Next Hydrogen is subject to risks relating to compliance with comprehensive regulations in multiple jurisdictions, and the risk that laws and regulatory requirements can change in a manner adverse to Next Hydrogen.

#### *Development of the Clean Power Industry*

Next Hydrogen operates in a new and rapidly evolving industry and accordingly is subject to risks relating to the development of that industry generally, and the technology underlying that industry. Accordingly, the business and future prospects of Next Hydrogen may be difficult to evaluate. Next Hydrogen cannot accurately predict the extent to which demand for products and services developed by Next Hydrogen will develop and/or increase, if at all. The success of Next Hydrogen also will depend on traditional business factors such as the ability to develop or market new products and the ability to properly execute corporate strategies. In addition, the regulation of issuers using such technologies or operating in such markets may undergo substantial change and the ultimate regulatory treatment of such technologies and markets is uncertain, which could affect the viability and expansion of such technologies and markets. In addition, because such technologies and

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markets may operate across many national boundaries, it is possible that they will be subject to widespread and inconsistent regulation. Any adverse developments that affect any of such technologies or markets could impact Next Hydrogen, thereby negatively impacting the value of Next Hydrogen's investments and/or the ability of Next Hydrogen to pay dividends or distributions.

### *Commercialization*

Next Hydrogen cannot guarantee that it will be able to develop commercially viable electrolyzer products on the timetable Next Hydrogen anticipates, or at all. Selling its electrolyzer products on a commercially viable basis requires technological advances to improve the durability, reliability and performance of these products, and to develop commercial volume manufacturing processes for these products. It also depends upon Next Hydrogen's ability to reduce the costs of these products, since they are currently more expensive than products based on existing technologies and/or powered by fossil fuels, such as steam methane reformation. Next Hydrogen may not be able to sufficiently reduce the cost of these products without reducing their performance, reliability and durability, which would adversely affect the willingness of consumers to buy its products. Next Hydrogen cannot guarantee that it will be able to internally develop the technology necessary to sell its electrolyzer products on a commercially viable basis or that Next Hydrogen will be able to acquire or license the required technology from third parties.

In addition, before Next Hydrogen releases any products to market, Next Hydrogen subjects its products to numerous field tests. These field tests may encounter problems and delays for a number of reasons, many of which are beyond Next Hydrogen's control. If these field tests reveal technical defects or reveal that its products do not meet performance goals, Next Hydrogen's anticipated timeline for selling its products on a commercially viable basis could be delayed, and potential purchasers may decline to purchase its products.

### *Market Demand*

Next Hydrogen's products represent emerging markets, and Next Hydrogen does not know whether end-users will want to use them in commercial volumes. In such emerging markets, demand and market acceptance for recently introduced products and services are subject to a high level of uncertainty and risk. The development of a mass market for Next Hydrogen's electrolyzers may be affected by many factors, some of which are beyond Next Hydrogen's control, including the emergence of newer, more competitive technologies and products, the cost of fuels used by Next Hydrogen's products, regulatory requirements, consumer perceptions of the safety of its products and related fuels, and end-user reluctance to buy a new product.

If a mass market fails to develop, or develops more slowly than Next Hydrogen anticipates, Next Hydrogen may never achieve profitability. In addition, Next Hydrogen cannot guarantee that Next Hydrogen will continue to develop, manufacture or market its products if sales levels do not support the continuation of the product.

### *Warranty Claims and Product Performance*

There is a risk that Next Hydrogen's warranty accrual estimates are not sufficient and Next Hydrogen may recognize additional expenses, including those related to litigation, as a result of warranty claims in excess of its current expectations. Such warranty claims may necessitate changes to its products or manufacturing processes up to and including a product recall, all of which could hurt the reputation of Next Hydrogen and its products, and may have an adverse impact on its financial performance and/or on future sales. While Next Hydrogen attempts to mitigate these risks through product development, quality assurance and customer support and service processes, there can be no assurance that these processes are adequate. Even in the absence of any warranty claims, a product deficiency such as a design or manufacturing defect could be identified, necessitating a product recall or other corrective measures, which could hurt Next Hydrogen's

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reputation and the reputation of its products and may have an adverse impact on its financial performance and/or future sales.

New products may have different performance characteristics from previous products. In addition, Next Hydrogen has limited field experience with existing commercial products from which to make its warranty accrual estimates.

### *Intellectual property*

Failure to protect Next Hydrogen's existing intellectual property rights may result in the loss of its exclusivity regarding, or right to use, its technologies. If Next Hydrogen does not adequately ensure its freedom to use certain technology, Next Hydrogen may have to pay others for rights to use their intellectual property, pay damages for infringement or misappropriation, or be enjoined from using such intellectual property. Next Hydrogen relies on patent, trade secret, trademark and copyright laws to protect its intellectual property. Some of its intellectual property is not covered by any patent or patent application, and the patents to which Next Hydrogen currently has rights expire between July 2028 and October 2034. Next Hydrogen's present or future-issued patents may not protect its technological leadership, and its patent portfolio may not continue to grow at the same rate as it has in the past. Moreover, Next Hydrogen's patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope and enforceability of a particular patent. Accordingly, there is no assurance that: (i) any of the patents owned by Next Hydrogen will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others; or (ii) any of its pending or future patent applications will be issued with the breadth of claim coverage sought by Next Hydrogen, if issued at all. In addition, effective patent, trade secret, trademark and copyright protection may be unavailable, limited or not applied for in certain countries.

Next Hydrogen also seeks to protect its proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with its strategic partners and employees. Next Hydrogen can provide no assurance that these agreements will not be breached, that Next Hydrogen will have adequate remedies for any breach, or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

Next Hydrogen may become subject to lawsuits in which it is alleged that Next Hydrogen has infringed the intellectual property rights of others or commence lawsuits against others who Next Hydrogen believes are infringing upon its rights. Next Hydrogen's involvement in intellectual property litigation could result in significant expense to Next Hydrogen, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of its technical and management personnel, whether or not such litigation is resolved in its favour.

### *Competitive Industry Environment*

The renewable energy industry is highly competitive in all of its phases, both domestically and internationally. The Company's ability to develop hydrogen technology is based on its ability to secure talented personnel and secure supply of goods necessary to build electrolyzers, of which there is a limited supply. The Company may also encounter competition from other renewable energy companies in its efforts to hire experienced engineering and development professionals. Competition could adversely affect the Company's ability to attract necessary funding or acquire prospects for strategic partnerships in the future. Competition for services and equipment could result in delays if such services or equipment cannot be obtained in a timely manner due to inadequate availability, and could also cause scheduling difficulties and cost increases due to the need to coordinate the availability of services or equipment, any of which could materially increase project development or construction costs and result in project delays.



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### *Product Safety Risk*

Safety is the top priority as the Company. Management and all employees are strongly committed to delivering fail-safe products to our customers. The product safety risks include the risk from major accidents and/or malfunctions in our products and/or insufficient service during operations and maintenance. The product safety risk is further increased due to Next Hydrogen's new and unique product line.

### *Technology and Competition Risk*

The green-energy sector, and hydrogen production in particular, is witnessing significant development. This not only results in increased competition, but also increased activity in research and development across the hydrogen industry. There is inherent risk that some of the technology developed by Next Hydrogen becomes obsolete. As the world seeks to transition into renewable energy sources, there is a degree of uncertainty that green hydrogen emerges as the preferred technology, which poses a direct risk to Next Hydrogen's technology and how the Company seeks to outperform competition.

### *Expansion Risk*

The pressures faced by Next Hydrogen to expand its facilities, staff and operations may place high demands on the Company's overhead, technical, financial, and other resources. The Company is currently relatively lean and there is a degree of risk associated with the Company's ability to build a capable organization at a speed that is required to meet the demand by its customers or potential customers. Next Hydrogen's failure to manage its growth effectively or to manage its expansion strategy in a timely manner may significantly harm its ability to achieve profitability.

### *Third Party Dependence Risk*

The Company is involved in electrolyzer and hydrogen fueling manufacturing, and therefore relies on external subcontractors and suppliers for goods and services. This operating model poses a risk to Next Hydrogen's goodwill and branding, as suppliers may fail to meet environmental, human rights, labor, and product quality standards. Next Hydrogen aims to limit risk through dual sourcing of critical components and prefers suppliers with local legislation compliance. However, if Next Hydrogen fails to maintain relationships with its suppliers or faces supply disruptions, it may experience delays in manufacturing, higher costs, order cancellations, customer claims, and loss of market share. Next Hydrogen is working on strategies such as dual supply chains and facilitating increasing volumes from key sub-suppliers to reduce sourcing risk and make its supply chain more robust.

### *Project Risk*

Next Hydrogen's participation in large commercial projects exposes them to risks such as delays and cost overruns due to various factors including delivery delays or shortages of key equipment, design problems, labor disputes, safety hazards, disputes with suppliers, changes in customer specifications, adverse weather conditions, and regulatory approvals or permits delays. Failure to complete a commercial project on time may result in contract delays, renegotiation, or cancellation, and can negatively impact Next Hydrogen's reputation and customer relationships. Next Hydrogen may also face contractual penalties for not completing the project on time, which could adversely affect their business, financial condition, and results of operations.

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### *Key Personnel Risk*

Next Hydrogen's development will depend on the efforts of key management and other key personnel. Loss of any of these people, particularly to competitors, could have a material adverse effect on Next Hydrogen's business. Further, with respect to future development of Next Hydrogen's projects, it may become necessary to attract both international and local personnel for such development. The marketplace for key skilled personnel is becoming more competitive, which means the cost of hiring, training and retaining such personnel may increase. Factors outside Next Hydrogen's control, including competition for human capital and the high level of technical expertise and experience required to execute this development, will affect Next Hydrogen's ability to employ the specific personnel required. Due to the relatively small size of Next Hydrogen, the failure to retain or attract a sufficient number of key skilled personnel could have a material adverse effect on Next Hydrogen's business, results of future operations and financial condition.

### *Customer Risk*

Next Hydrogen's growth and revenue generation depend heavily on their ability to acquire new customers and maintain relationships with existing customers. However, there is no guarantee that Next Hydrogen will be successful in securing new customers or maintaining existing customer relationships in the future. Additionally, some of Next Hydrogen's existing and potential customers are also planning significant growth, and if these customers fail to succeed in their business plans or fulfill contracts with Next Hydrogen, it may adversely impact Next Hydrogen's sales and revenues.

### *Adverse Publicity and Product Liability Risk*

Next Hydrogen's products could potentially result in product liability claims due to malfunctions, defects, improper installation or other causes, which could result in adverse publicity and significant monetary damages. The successful assertion of such claims could have a significant negative impact on Next Hydrogen's business, prospects, financial results, and operations. As of the date of this MD&A, Next Hydrogen is not aware of any current or pending product liability claims against the Company.

### *Market Development Risk*

Next Hydrogen's revenues may be significantly harmed if significant markets for fueling products, other hydrogen energy products, or renewable energy as a major source for hydrogen production do not develop or develop more slowly than anticipated. This could result in Next Hydrogen being unable to recover the expenditures it has incurred and expects to incur in the development of its products.

### *Regulatory Risk*

Next Hydrogen's operations are subject to numerous environmental requirements, including laws and regulations related to air pollution emissions, wastewater discharges, waste management, and hazardous materials handling. Compliance with these requirements can be costly and may increase over time. Breaches of allowed emission limits granted by various authorities could result in temporary production halts, fines, and corrective measures, which may have a significant effect on Next Hydrogen's operations.

Next Hydrogen's fuel cell and hydrogen industry is currently not subject to industry-specific government regulations in certain jurisdictions, but the company expects to encounter such regulations in the future, which may impact its development and growth. Changes in environmental policies or government subsidies could also adversely affect Next Hydrogen's business, as it depends substantially on government subsidies in its research and development phase. Political developments or judicial review of government financial support

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could result in the discontinuation or reduction of subsidies, leading to lower profitability and adverse effects on Next Hydrogen's business, financial condition, and results of operations.

### *Climate Related Risks*

Next Hydrogen recognizes that while climate change is a major trend, the anticipated role of green hydrogen in mitigating climate change could change due to geopolitical factors shaping climate policies. Next Hydrogen does not expect to be significantly impacted by potential carbon taxes or restrictions on carbon-intensive assets, as it does not consume products from conflict areas and has limited consumption of rare materials.

### *Reputation Risk*

Next Hydrogen acknowledges the significance of maintaining a strong brand in the growing green hydrogen industry. Reputational risk for Next Hydrogen includes potential damage to brand value resulting in lost opportunities, challenges in talent recruitment and retention leading to technology development disruptions and customer experience issues, and difficulties in attracting investors due to a damaged reputation that could impact the Company's ongoing operations.

### *Physical Risk*

Next Hydrogen's manufacturing facilities are not situated in environments that are excessively exposed to physical risks, including sustained long-term shifts in climate patterns. However, Next Hydrogen's delivered solutions depend on uninterrupted access to water and electricity, and shortages of these resources could potentially impact the performance of their products.