



Management's Discussion and Analysis

For the years ended
December 31, 2020 and 2019

Dated June 25, 2021

General Information

The following is Next Hydrogen Corporation's management discussion and analysis dated June 25, 2021 ("MD&A"), which provides a comparative overview of the Company's performance for the year ended December 31, 2020 with the corresponding year ended December 31, 2019, and it reviews the Company's financial position as at December 31, 2020. Throughout this MD&A, the term "Company" or "Next Hydrogen" shall mean Next Hydrogen Corporation. This discussion should be read in conjunction with the Company's audited financial statements and accompanying notes as at and for the years ended December 31, 2020 and 2019 ("financial statements").

The financial statements of the Company and extracts from these financial statements contained in this MD&A were prepared in accordance with International Financial Reporting 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 financial statements for the year ended December 31, 2020 were approved by its Board of Directors on June 25, 2021. 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 June 25, 2021. Additional information relating to the Company will be available on SEDAR in connection with the RTO.

Proposed Transaction

Effective February 28, 2021, the Company entered into an agreement with BioHEP Technologies Ltd. ("BioHEP"), which contemplates the reverse takeover ("RTO") of BioHEP by Next Hydrogen by way of a "three-cornered" amalgamation under the provisions of the Business Corporations Act (Ontario) (the "Definitive Agreement"). Once completed, the RTO would result in the Company amalgamating with a wholly-owned subsidiary of BioHEP, and the resulting amalgamated entity will continue as wholly-owned subsidiary of BioHEP. Prior to the RTO, BioHEP will consolidate its common shares on the basis of one post-consolidation share for every 13.3 pre-consolidation shares. In connection with the RTO, the Company has applied to list the common shares of BioHEP on the TSX Venture Exchange (the "TSXV"). Conditional approval of the TSXV for the listing is a condition precedent to the completion of the RTO.

In addition, Next Hydrogen completed a non-brokered private placement of subscription receipts for gross proceeds of \$27,000,000 and a brokered private placement of subscription receipts for gross proceeds of \$28,545,000. Each subscription receipt was sold at a price of \$10 and shall be exchanged, for no additional consideration, for one common share of the Company upon completion of the RTO.

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 (COO) 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 Transportation and Air Liquide in 2019).

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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 60+ years in water electrolysis, has dedicated the last 12 years to revolutionizing the design architecture of the electrolyzer to optimize it for renewable energy integration. To date, it has been awarded 38 patents (more pending) 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 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 their 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.

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. On the back of this project, Canadian Tire purchased two NH-300 electrolyzer systems (First Article).

These systems will produce hydrogen to power fuel cell forklifts at Canadian Tire's distribution centres. Next Hydrogen intends to dedicate a significant portion of its recent capital raise to product development. As such, this product line is undergoing new performance upgrades to factor in latest innovations which is to be followed by commissioning these units and further improvements as needed. 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 competitive and robust product offering for mass volume production. 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

	2020	2019
Revenue	\$ 1,775	\$ 58,442
Direct Costs	-	29,545
Gross margin	1,775	28,897
Expenses		
Research and development	1,914,983	1,290,537
General and administrative	1,629,131	908,835
Marketing and sales	139,833	66,511
Provisions	1,249,195	154,923
Loss before the following	(4,931,367)	(2,391,909)
Finance costs, net	762,608	207,921
Depreciation and amortization	40,513	51,582
Change in fair value of deferred share units	1,116,128	-
Net loss and comprehensive loss	\$ (6,850,616)	\$ (2,651,412)
Loss per share - basic	\$ (0.77)	\$ (0.62)
Loss per share - diluted	\$ (0.77)	\$ (0.62)
Loss from operations	\$ (4,931,367)	\$ (2,391,909)
Share-based compensation	71,196	-
Provisions	1,249,195	154,923
EBITDA⁽¹⁾	(3,610,976)	\$ (2,236,986)

(1) Refer to "Non-IFRS Financial Measures".

Change in fair value of deferred share units ("DSUs") pertains to the revaluation of DSUs that were issued in exchange for cash compensation to various employees and consultants during 2020. DSUs were issued at \$0.29-\$0.60 and revalued at year-end at \$2, which reflects the fair value of these units as at December 31, 2020.

Revenue

As Next Hydrogen is in the early commercialization stage, historical revenues pertain to service revenue and part sales, which are ancillary to its core operations. Revenue for the year ended December 31, 2020 pertained to one month of maintenance and warranty revenue on the NH-60, before the unit was decommissioned. Comparatively, this revenue was \$21,304 in the prior, which reflected a full year of recognized revenue. In addition, the Company recognized \$37,138 in parts revenue in the prior year.

As of December 31, 2020, the Company had \$2,771,641 in deferred revenue, of which \$1,611,807 is expected to be earned in 2021.

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Operating Expenses

	<u>2020</u>	<u>2019</u>
Research and development	1,914,983	1,290,537
General and administrative	1,629,131	908,835
Marketing and sales	139,833	66,511
Provisions	1,249,195	154,923
	\$ 4,933,142	2,420,806

Research and development increased by \$624,446 or 48.4% in 2020 compared to 2019 as the Company had access to additional capital and could accelerate development work on its NH-300.

General and administrative expenses increased by \$720,296 or 79.3% in 2020 compared to 2019 due to the Company increasing its management team during 2020.

Marketing and sales expenses increased by \$73,322 or 110.2% in 2020 compared to 2019 as the Company hired a marketing consultant to support the management team.

Provisions increased by \$1,094,272 or 706.3% in 2020 compared to 2019. Provisions pertain to amounts set aside to cover probable future expenses, relating to contracts already in place. The amount in 2020 pertained to a change in estimate of the expected onerous contract provision for the NH-300 that was under development during 2020, a new warranty provision provided to an existing customer and a change in estimate in the warranty provision for the NH-60. The prior year provision pertained to the original onerous contract provision estimate for the second NH-300, which remained unchanged in 2020. Onerous contract provisions exist when the expected cost of the contract exceeds the associated revenue and are typical in early stage companies that are still in the development phase and have low manufacturing volumes.

Overall costs increased in 2020, as the Company had improved access to capital and could accelerate on its development strategy. Cost increases are expected to continue into 2021 at an accelerated rate.

Liquidity and Capital Resources

	<u>2020</u>	<u>2019</u>	<u>2018</u>
Cash	\$ 1,092,067	254,783	\$ 34,634
Working capital ⁽¹⁾	2,611,473	1,201,114	1,569,679
Total assets	3,822,520	2,586,299	2,492,217
Debt ⁽²⁾	5,259,891	2,511,875	423,412
Shareholders' deficit	\$ (6,710,671)	(2,717,992)	\$ (66,580)

(1) Working capital is defined as current assets minus current liabilities, excluding deferred revenue, provisions, deferred share unit liability and loan payable

(2) Debt includes both current and long-term portions of bank indebtedness, long-term debt and loan payable

Cash, working capital and total assets increased over the last three years as the Company was able to secure new financing and accelerate on its development strategy. During 2019, the Company secured \$2 million in debt financing. During 2020, the Company secured \$2 million from debt and \$3 million from equity. On January 21, 2021, the Company secured \$6 million from equity and on April 19, 2021 secured a further \$55.5 million as part of its RTO financing, further improving its cash and working capital position.

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Positive cashflows are not expected over the next few years as the Company continues to focus on product development while building out the necessary infrastructure to commercialize its business. Management believes there is sufficient working capital to fund its operations over the next twelve months.

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
Bank indebtedness	\$ 40	-	40	-	-	-	\$ -
Long-term debt	334	34	137	78	63	22	-
Loan payable	\$ 4,885	4,885	-	-	-	-	\$ -

As of June 25, 2021, the Company had 16,580,608 common shares and 2,150,000 stock options outstanding. The Company does not have any off-balance sheet financing in place.

Transactions with Related Parties

During the year, the Company paid \$1,855,792 (2019 - \$905,793) for production and product development work to Carlsun Energy Solutions Inc., which is owned by a director of the Company. These transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

Non-IFRS Financial Measures

This MD&A includes the following financial measure that does not have any standardized meaning under IFRS and may not be comparable to similar measures employed by other companies:

"Earnings before interest, income taxes, depreciation and amortization" ("EBITDA") is calculated as net income before depreciation and amortization, share-based compensation, net finance costs, provisions, and change in fair value of deferred share units.

Management believes that this financial measure is useful for investors and other readers, when used in conjunction with other IFRS financial measures, as it is a measure used internally by management to evaluate performance. However, this financial measure is intended to provide additional information and should not be considered in isolation or as a substitute for measures of financial performance prepared in accordance with IFRS.

Changes in Accounting Policies

The Company adopted IFRS on January 1, 2019 and applied IFRS 1 - First-time Adoption of IFRS in preparing the statement of financial position as of that date. The full description of this accounting change can be found in the Company's financial statements.

Forward-Looking Statements

Certain sections of this MD&A 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 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 financial statements.

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. However, the development of new hydrogen technologies may require substantial additional financing. Further expansion of Next Hydrogen's business may be dependent upon its ability to obtain financing through equity or debt, and there can be no assurance that it will be able to obtain adequate financing in the future or that the terms of such financing will be favourable. Failure to obtain such additional financing could result in the delay or indefinite postponement of further development of the Company's planned initiatives.

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 regulation. 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 that 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 physically large. As a result, Next Hydrogen is subject to risks relating to completion of these 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

Next Hydrogen operates in new and rapidly evolving industries and accordingly are subject to risks relating to the development of those industries generally, and the technology underlying those industries. 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 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.

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Commercialization

Next Hydrogen cannot guarantee that Next Hydrogen 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 Next Hydrogen will be able to internally develop the technology necessary to sell its water electrolysis 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 it to numerous field tests. These field tests may encounter problems and delays for a number of reasons, many of which are beyond its 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 water electrolysis products 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 and/or a product recall, all of which could hurt its reputation and the reputation of Next Hydrogen's 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 reputation and the reputation of its products and may have an adverse impact on its financial performance and/or on 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 the 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 or other patents that third parties license to 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, trade mark 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.

Certain of Next Hydrogen's intellectual property have been licensed to Next Hydrogen on a non-exclusive basis from third parties who may also license such intellectual property to others, including Next Hydrogen's competitors. If necessary or desirable, Next Hydrogen may seek further licences under the patents or other intellectual property rights of others. However, Next Hydrogen may not be able to obtain such licences or the terms of any offered licences may not be acceptable to Next Hydrogen. The failure to obtain a licence from a third party for intellectual property Next Hydrogen use could cause Next Hydrogen to incur substantial liabilities and to suspend the manufacture or shipment of products or Next Hydrogen's use of processes requiring the use of such intellectual property.

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.