Loop Energy™

Presentation

August 3, 2022

The Engine Driving Zero Emissions

LOOP™ ENERGY

TSX:LPEN

Disclaimer

Cautionary Note Regarding Forward-Looking Information

This presentation 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 future growth prospects, business outlook, the expected demand for our products and the planned growth of our customer base; our ability to secure future firm order commitments or develop further market opportunities under existing and future customer and/or partner agreements, including without limitation, collaboration agreements, joint market development agreements, strategic cooperation agreements, memorandums of understanding and supply agreements; the timing of expected integration, testing and commissioning of our products in customer vehicles or other customer applications; our ability to assist customers with access to convenient and cost effective hydrogen solutions; 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; the potential for in-house manufacturing of certain components used in the production of our products; our belief that zero emission vehicles are one of the only viable options for a sustainable future and that fuel cell systems (combined with Lithium ion batteries) will meet the requirements of the majority of fuel cell operators; the expected growth in demand for hydrogen fuel cells; our belief that the Company has superior fuel cell systems when compared to those of our competitors and that we will become a market leader in the commercial vehicle sector over time; our view that our systems have leading fuel efficiency, higher durability, and increased power capabilities; our expectation that we will be granted all patents we have applied for and our ability to adequately protect our intellectual property now and in the future; our ability meet manufacturing cost reduction targets; the realization of electrification of transportation, elimination of diesel fuel and ongoing government support of such developments; our belief that zero emission vehicles are one of the only viable options for a sustainable future; and the extent of the disruption to and/or adverse impact on our business, operation results and financial condition as a result of unanticipated global events, including without limitation the COVID-19 pandemic or the war between Russia and the Ukraine.

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, expected future developments and other factors it believes are appropriate. Although the Company believes that the assumptions underlying these statements are reasonable, if any of the 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 AIF include future expectations and assumptions regarding:

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 ability to manufacture and deliver our products on time to meet customer requirements; 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; our ability to meet manufacturing cost reduction targets and potential synergies and economies of scale that will drive such reductions; our ability to build a diversified customer base and progress customers through our Customer Adoption Cycle (defined below) in a timely manner; the fuel efficiency, higher durability, and increased power capabilities of our products; our expectation that eFlow™-equipped fuel cells will continue to offer performance improvements over time; the sound basis for all of our current patent applications; 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 described under the heading "Risk Factors" in our Annual Information Form dated March 23, 2022 (which can be found on SEDAR), which factors should not be considered exhaustive and should be read together with other cautionary statements in this presentation. 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 presentation. 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 presentation, those results or developments may not be indicative of results or developments in subsequent periods. Any forward-looking statement that is made in this presentation 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.

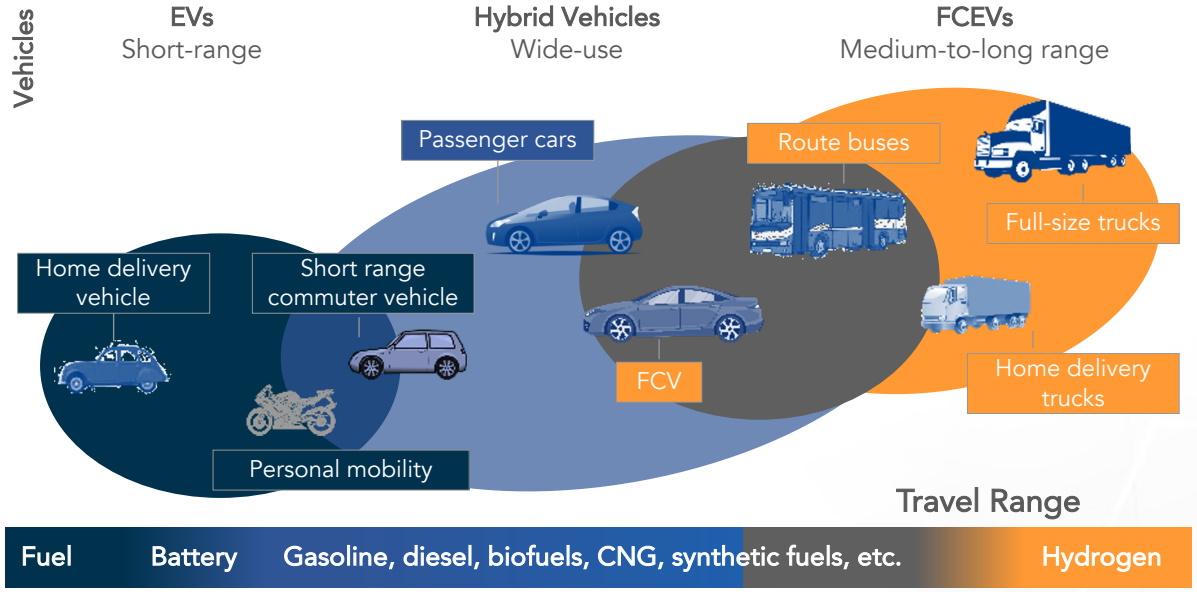
The Hydrogen Economy is Here Today and Growing Tomorrow

Global Agreement Around Decarbonization[1][2]

- 20% by 2025
- 55% by 2030
- Net zero by 2050

28 Major Economies with Hydrogen Strategies

Why Hydrogen Works[3]



Favorable Secular Tailwinds

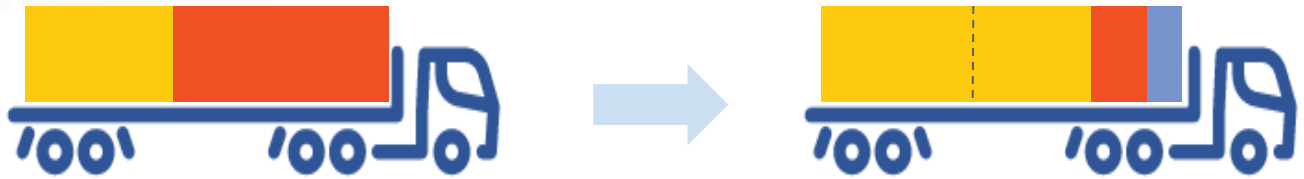
Large Addressable Market

1. Source: European Union, Climate Action 100+, UNFCC - Paris Agreement Status of Ratification, and publicly available information.
2. Source: United Nations Climate Change and publicly available information.
3. Source: Green Car Reports

BEV + H_2 is the Best Solution that Exists for Long Range

Battery Electric Vehicle

BEV with a Hydrogen Fuel Cell Range Extender



Payload Capacity Battery Weight FC Range Extender Weight

Battery Consumes Significant Payload

Benefits of BEVs Coupled with a Fuel Cell Range Extender

- Reduced curb weight
- Higher payload capacity
- Increases range by 2.5x – 3.0x[1]
- Faster refueling time vs. batteries

Source: Fueling the Future of Mobility, Hydrogen Council reports, Center for Transportation and Environment, and publicly available information.
Based on multiple test runs utilizing Loop's fuel cell modules as range extenders in battery electric trucks compared against fully battery electric trucks.

Loop has Next Mover Advantage

Industry-leading Fuel Cell Technology with Unique Combination of Fuel Efficiency, Power Density and Durability, Protected by Over 30 Patents.(1)

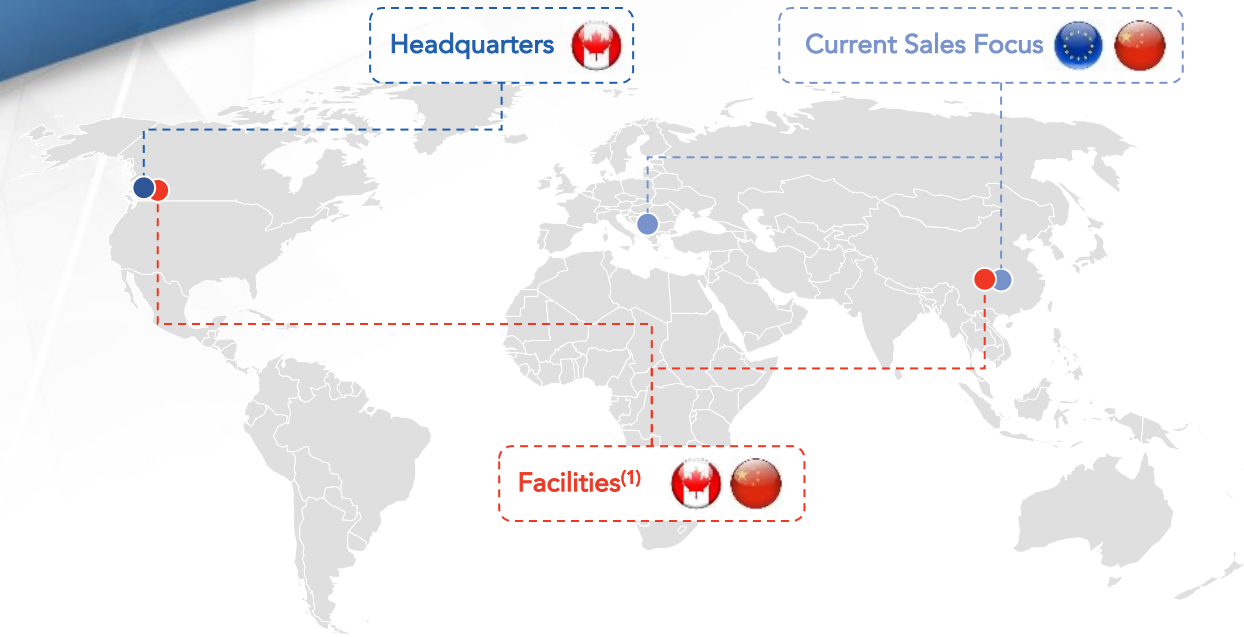
Well Defined Go to Market Strategy, Tight Focus on Fuel Cells for Return-to-base Commercial Vehicles.

Building a Customer Base that will Generate Enough Volume to Decrease Cost, Deliver Profits and Build Unassailable Momentum, Before Broadening Solution Set .

Delivered All 2021 Milestones Successfully.
Upward Revision in Q2 of 2022 and 2023 Purchase Order Guidance.

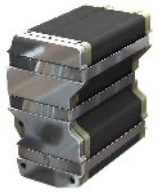
1. As of November 29, 2021. Inclusive of patents in different stages (issued, in examination, and pending).

Loop Energy™ at a Glance



- 16% less fuel consumption(2)
- 90% more peak power(2)
- TAM of over $70B by 2030(3)
- 10x better current density uniformity(2)

PEM Fuel Cell Stacks and Modules



Fuel Cell Stacks

Fuel Cell Modules

Wide Range of Targeted Segments

Transit buses

LCVs

MDTs

Material handling

HDTs

Coach buses

Competition

REFIRE BALLARD® NUVERA® 亿华通 SinoHytec SYMBIO

1. One facility in China is leased and operated by the InPower-Loop JV. The other facility is 100% owned by Loop Energy.
2. Based on Loop's internal testing and comparisons of published studies of the performance of fuel cells from other manufacturers and competitors. In order to quantify the benefit of eFlow™ technology directly, Loop purchased commercially available CCM materials from a top competitor, built them into Loop eFlow™ fuel cell stack, and then operated this stack at Loop's best estimate of the top competitor's operating conditions using publicly available information.
3. 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.

Industry Leading Products Provide Best-in-Class Results

eFlow™ Fuel Cell Plate

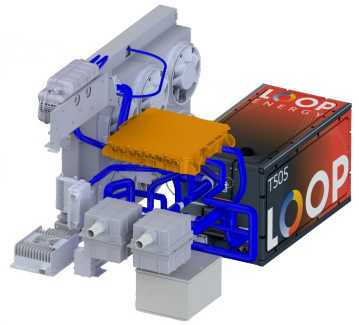
Loop's core technology is based on its proprietary eFlow™ fuel cell design

eFlow™ Fuel Cell Stack

Loop Fuel Cell Module

Includes balance of plant (BoP) components

Loop Fuel Cell System



- Less H_2 consumption(1)
- Higher power density(1)
- Better durability through uniform current density(1)

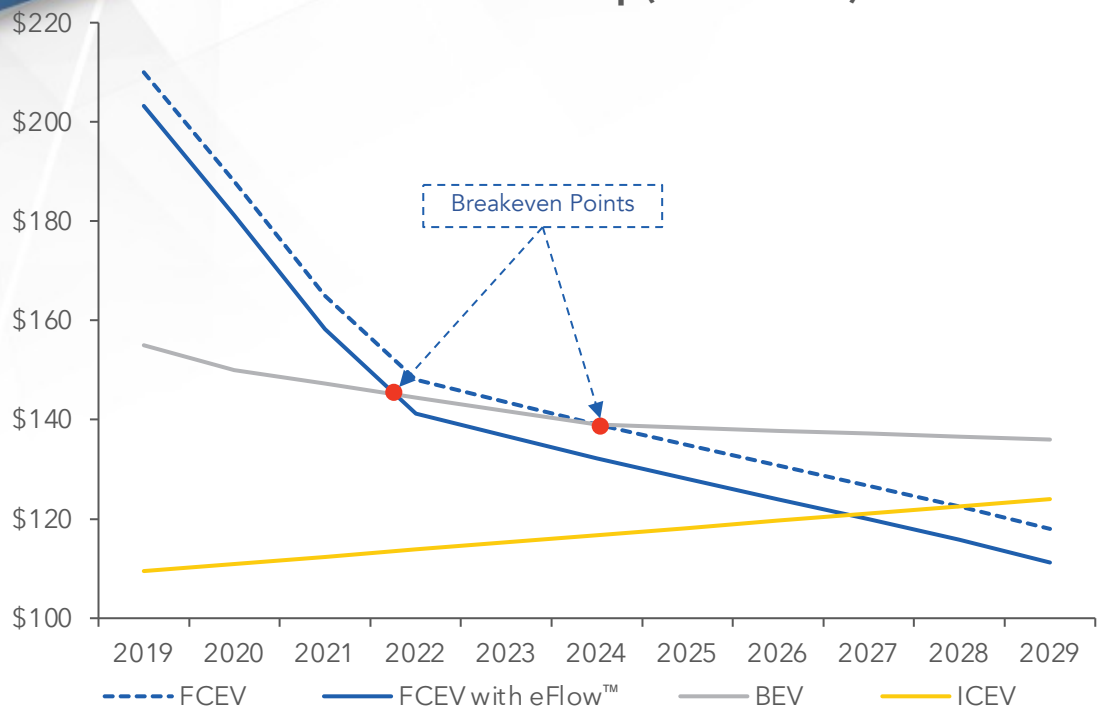
eFlow™, with it's patented modified geometry, was designed to enable commercial customers to achieve **performance maximization** and **cost minimization**

1. Based on Loop's internal testing and comparisons of published studies of the performance of fuel cells from other manufacturers and competitors. In order to quantify the benefit of eFlow™ technology directly, Loop purchased commercially available catalyst coated membrane materials from a top competitor, built them into Loop eFlow™ fuel cell stack, and then operated this stack at Loop's best estimate of the top competitor's operating conditions using publicly available information.

Industry Leading Products: Our 16-90-10 Advantage

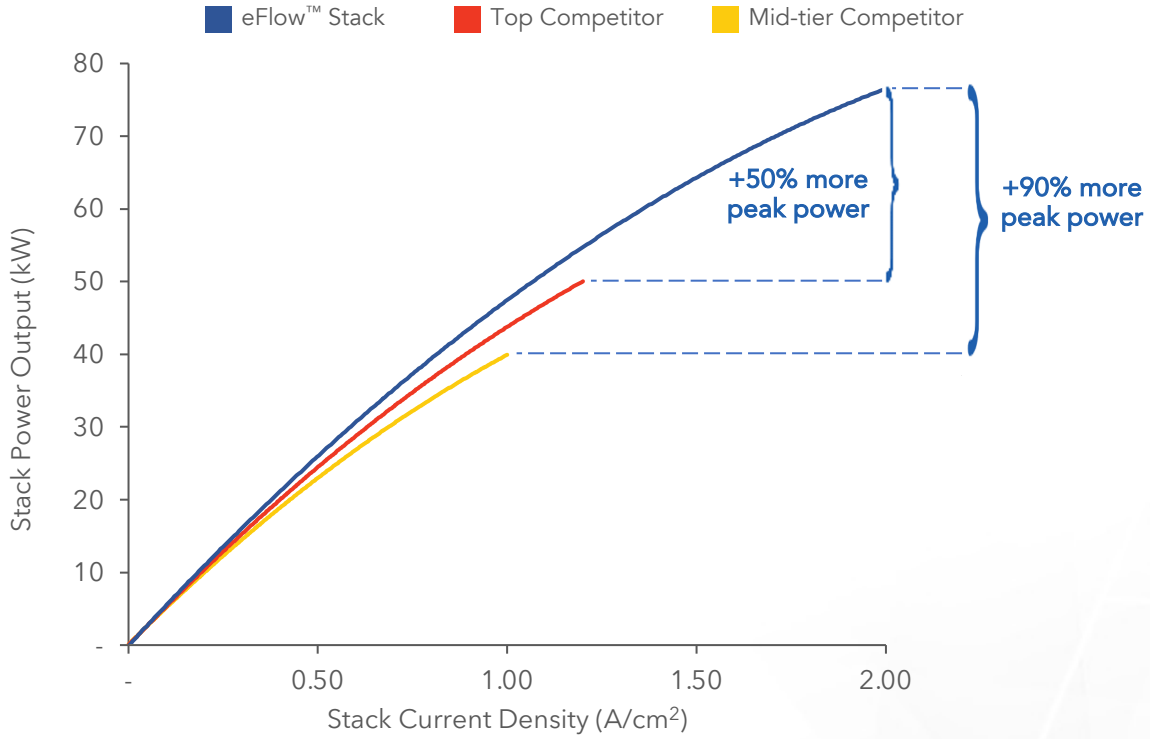
1. Up to 16% Better Fuel Efficiency

Total Cost of Ownership (USD/100km)(1)



- Up to 16% lower fuel consumption
- US$300,000 in fuel savings over lifetime(2)
- Accelerated breakeven point vs. BEV

2. Up to 90% Higher Peak Power



- Up to 90% more peak power vs. competitors(3)
- Higher payload capacity and range
- Wider range of operating parameters

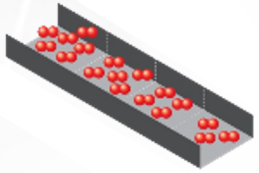
Source: Company estimates, Fueling the Future of Mobility, Hydrogen Council reports, and publicly available information.

1. Data is representative of drayage trucks.
2. Estimating ~7.7kg/100km for transit bus, hydrogen cost of US$5.5 per kg, 16% fuel savings vs. baseline FCEV TCO, and a 17-year lifespan.
3. Based on Loop's internal testing and comparisons of published studies of the performance of fuel cells from other manufacturers and competitors. In order to quantify the benefit of eFlow™ technology directly, Loop purchased commercially available catalyst coated membrane materials from a top competitor, built them into Loop eFlow™ fuel cell stack, and then operated this stack at Loop's best estimate of the top competitor's operating conditions using publicly available information.

Industry Leading Products: Our 16-90-10 Advantage

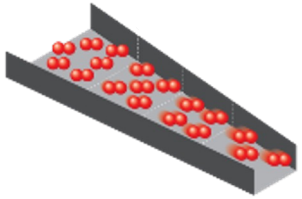
3. Up to 10x Better Current Density (Durability)

Typical Fuel Cell Channel



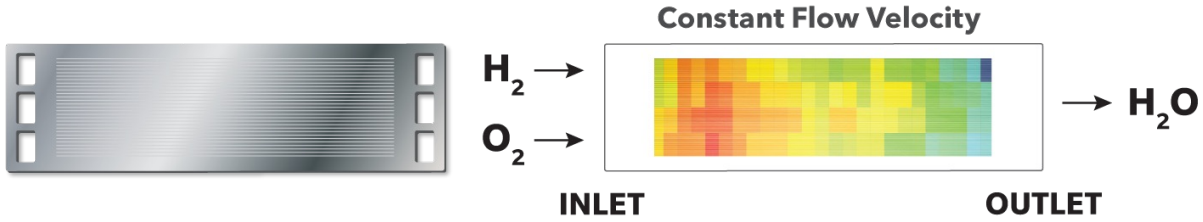
Constant Cross-Sectional Area
Constant Gas Velocity

eFlow™ Cell Channel



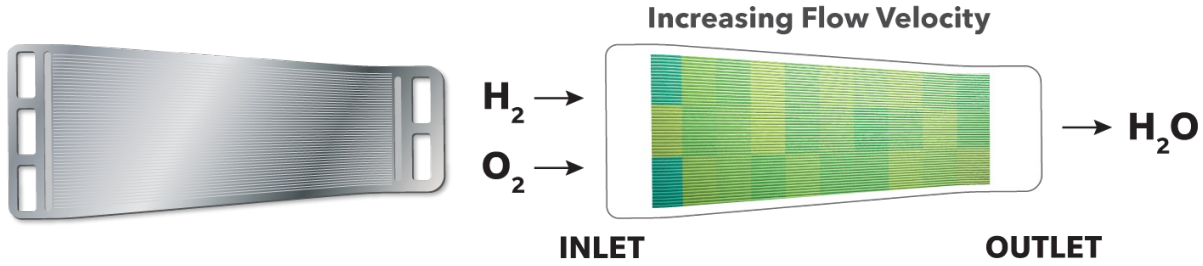
Decreasing Cross-Sectional Area Increasing Gas Velocity

Conventional Fuel Cell Bipolar Plate



Current density non-uniformities up to ±50%

eFlow™ Fuel Cell Bipolar Plate



Current density non-uniformities within ±5%

- Even heat distribution provides greater product durability
- Up to 10x better current density uniformity(1)
- Lower service and maintenance costs(1)

Source: Transport in PEMFC Stacks summary presentation for US DOE H2 Program.

1. Based on Loop's internal testing and comparisons of published studies of the performance of fuel cells from other manufacturers and competitors. In order to quantify the benefit of eFlow™ technology directly, Loop purchased commercially available CCM materials from a top competitor, built them into Loop eFlow™ fuel cell stack, and then operated this stack at Loop's best estimate of the top competitor's operating conditions using publicly available information. Loop expects the uniform heat distribution and lack of hotspots in our fuel cell bipolar plate, as depicted in the image below, to provide greater product durability and lower service and maintenance costs

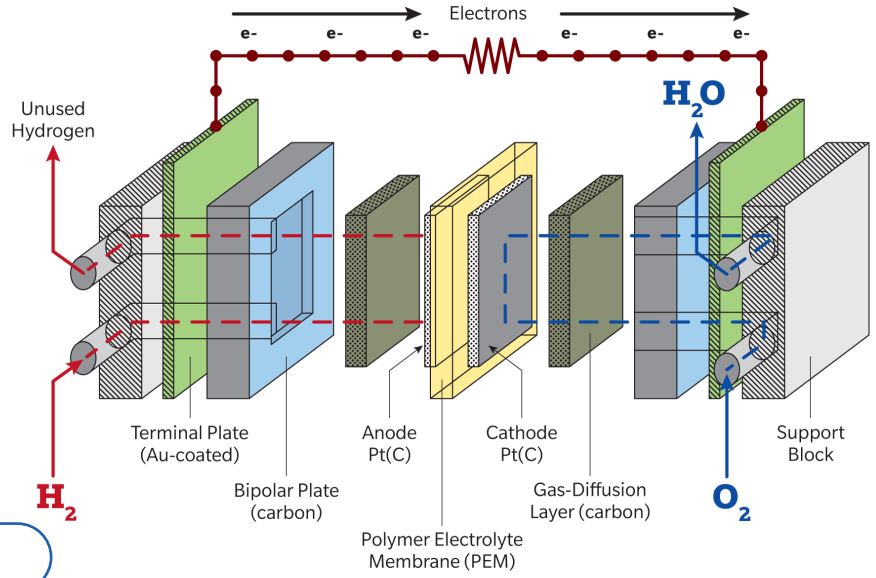
A Patented Future Through a Strong and Growing IP Portfolio

IP Portfolio Timeline

2000s

- Original patent for eFlow™ cathode flow channel: *Performance benefits*
- Introduction of eFlow™ to anode flow channel: *Durability benefits*
- Application of eFlow™ in all fluid streams (full unit cell): *Power density benefits*
- Optimization of integrated eFlow™ stack design: *Manufacturing benefits*
- Optimization of eFlow™ channel design: *Performance improvements*
- Improved active area utilization: *Power density gains*
- Balance of plant design and operation: *Durability enhancement*
- ***New innovations continuously identified as products / processes develop and scale***

2041



31 Patents[1] in IP Portfolio

Filed 3 New Fuel Cell Patents to Extends Runway of Critical eFlow™ IP Protections to 2041[2]

1. As of November 29, 2021. Inclusive of patents in different stages (issued, in examination, and pending).
2. Applications for these patents were filed in 2021 and patents are pending.

Customer Adoption Cycle (CAC): Current Progress

Customers in the pilot "1" phase include Innotest, Morello, NGVI, ECUBES, and ARCC

TEVVA

Skywell 开沃汽车

mobility & innovation a.s.

2021

- Achieved 2021 goal of adding 10 qualified OEMs
- 10 OEMs in the pilot "1" phase
- 1 OEM in the scale up "10" phase

2022

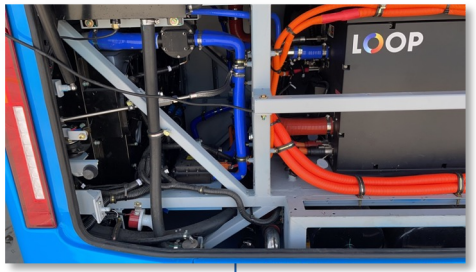
- 14 in the pilot "1" phase
- 2 OEM in the scale up "10" phase
- 1 OEM in the production "100" phase

Purchase Orders Received

	Q1	Q2	Q3	Q4	
2021	1	12	2	4	19
2022	24	28			52

1. Represents all customers who have placed at least one committed purchase order for at least one fuel cell stack or module with written intention of follow-on unit orders.

Pilot Bus Fleet – Project Timeline



10 Buses Assembled with Loop's Fuel Cell Modules
April 24, 2021

400,000+ km
in revenue service

Fleet Status
Feb 28, 2022

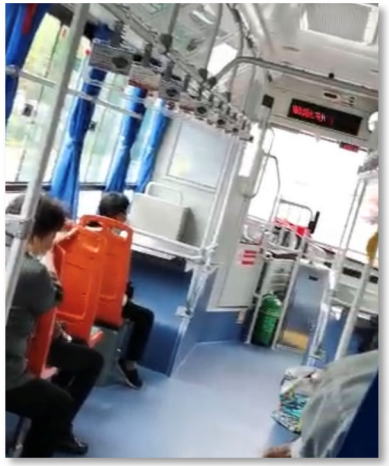
Potential to Fulfill 300 FCEV Bus Fleet
TBA

First Lot Shipped to China
April 13, 2021

Apr. 2021

First Bus Cooling System Tuning Proceeds
April 17, 2021

11 Buses in Service in Nanjing, China
May 15, 2021



10 Additional Orders Received
April 1, 2021

The project was completed within **6 weeks** from order receipt to the bus fleet operating in Nanjing, China

Industry Leading Products Focused on Key Markets

Product Offerings

Current Products

30 kW Module

50 kW Module

60 kW Module

Target Applications

Urban Delivery

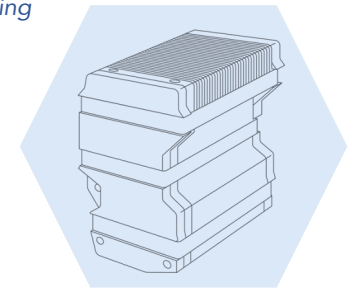
Buses

Material Handling

Stationary

Products in Development

Design complete. Prototype testing underway.



120 kW Stack

120 kW Module

Expected to be available for customers in FY2022 – Launch September 2022

Target Applications

*Loop is also currently researching **next generation MEA and bipolar plate technologies** for use in eFlow™*

Recent Highlights

Delivering & Executing Against Our Objectives

Mar. 2021

Skywell

Fulfills PO for 10 transit bus fleet, advancing Skywell to Scale up "10" phase of the CAC[1]

April 2021

Capacity Expansion

Selected and secured location and build out of Loop Energy Shanghai

June 2021

S300 Shipment

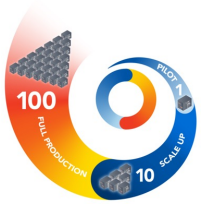
First commercial shipment of S300 in 2021 achieved

September 2021

CAC

Added 10 new OEMs to the pilot "1" phase of the CAC[1]

December 2021



Capacity Expansion

Loop Energy Shanghai received EPB[2] approval to manufacture stacks and modules

January 2022

Mobility & Innovation

Launched H2Bus - powered by Loop's S300 hydrogen fuel cell system and an electric motor

March 2022

Mar. 2022

Tevva Motors

Placed initial orders for multiple units and enters Scale-Up "10" Phase of the CAC[1]

April 2022

ARCC

Loop Energy's T600 (60 kW) fuel cell module to be integrated into ARCC's 12.5-metre city bus

June 2022

Tevva Motors

Supply Agreement signed enters Production "100" Phase of the CAC[1]

July 2022

Mobility & Innovation

Enters Scale-Up "10" Phase of the CAC[1]

July 2022

Shanghai Facility

First article inspection underway at ~35,250 ft² facility

July 2022

1. Customer Adoption Cycle.
2. Environment Protection Bureau.

Board of Directors & Management

Ben Nyland
President, CEO & Director
25+ yrs experience in corporate leadership & market expansion

Kent Thexton
Director & Board Chair
30+ yrs experience leading & growing technology companies

Dr. Andreas Truckenbrodt
Director
30+ yrs experience in the automotive industry

Allan Collings
Director
ACM Advisors Co-chair with over $3.5b in AUM

Sophia Langlois
Director
Former KPMG Audit Partner

Neil Murdoch
Director
CCL Founding member & CEO, raised over $2.5b

Christopher Clulow
Director
SVP Investor Relations at Cummins

Peter Johansson
Director
30+ yrs experience in aerospace, automotive & industrial sectors

Damian Towns
Chief Financial Officer & Corporate Secretary
25+ yrs in finance & 15+ yrs at the executive level

Dr. Daryl D. Musselman
Chief Operating Officer
30+ yrs experience in renewable energy & automotive manufacturing

George Rubin
Chief Commercial Officer
20+ yrs experience as a technology industry executive

Quan Hu
Loop Shanghai President
20+ yrs experience in the automotive & technology sectors globally

Andrea Charlton
HR Director
10+ yrs experience as a human resources specialist

Expansion of Product Offerings & Production Capacity

Current Capacity

Burnaby, British Columbia

- Self contained 14,000 ft^2 facility
- Current production capacity of over 100 fuel cell modules per year
- Production capacity to assemble 3,000 fuel cell stacks per year(1) and 1,000 fuel cell modules per year
- Serving customers in North America and Europe
- July 2022: added 8,500 ft^2

Plan to bring in-house the production of two key components for vertical integration

Capacity Expansion

Shanghai, China

- ~35,250 ft^2 of production space(2)
- Received EPB(3) approval to manufacture both fuel cell stacks and modules
- Production capacity to assemble 3,000 fuel cell stacks per year and 1,000 fuel cell modules per year
- Serving customers in China
- First article inspection underway

1. Based on three shifts per business day.
2. Loop has the option to expand the lease space to a total of 8,673 m^2 ~(93,355 ft^2).
3. Environment Protection Bureau

Attractive Valuation & Regulatory Support

Hydrogen Incentives and Policies

Significant Global Government Support[1]

- 28 countries have released national hydrogen strategies; another 21 currently in preparation
- US$100B government subsidies for low-carbon hydrogen projects through 2030
- This translates to US$16B annually across 17 countries

RePowerEU[2]

- Provide companies and households with affordable, secure and clean energy
- Diversification into biomethane and hydrogen production
- An increase of 4x on projected hydrogen production from 5 MT previously to 20 MT (domestic and imported)
- Strong push to reduce purchase of Russian gas by 2/3 before FY2022 and 100% by FY2030

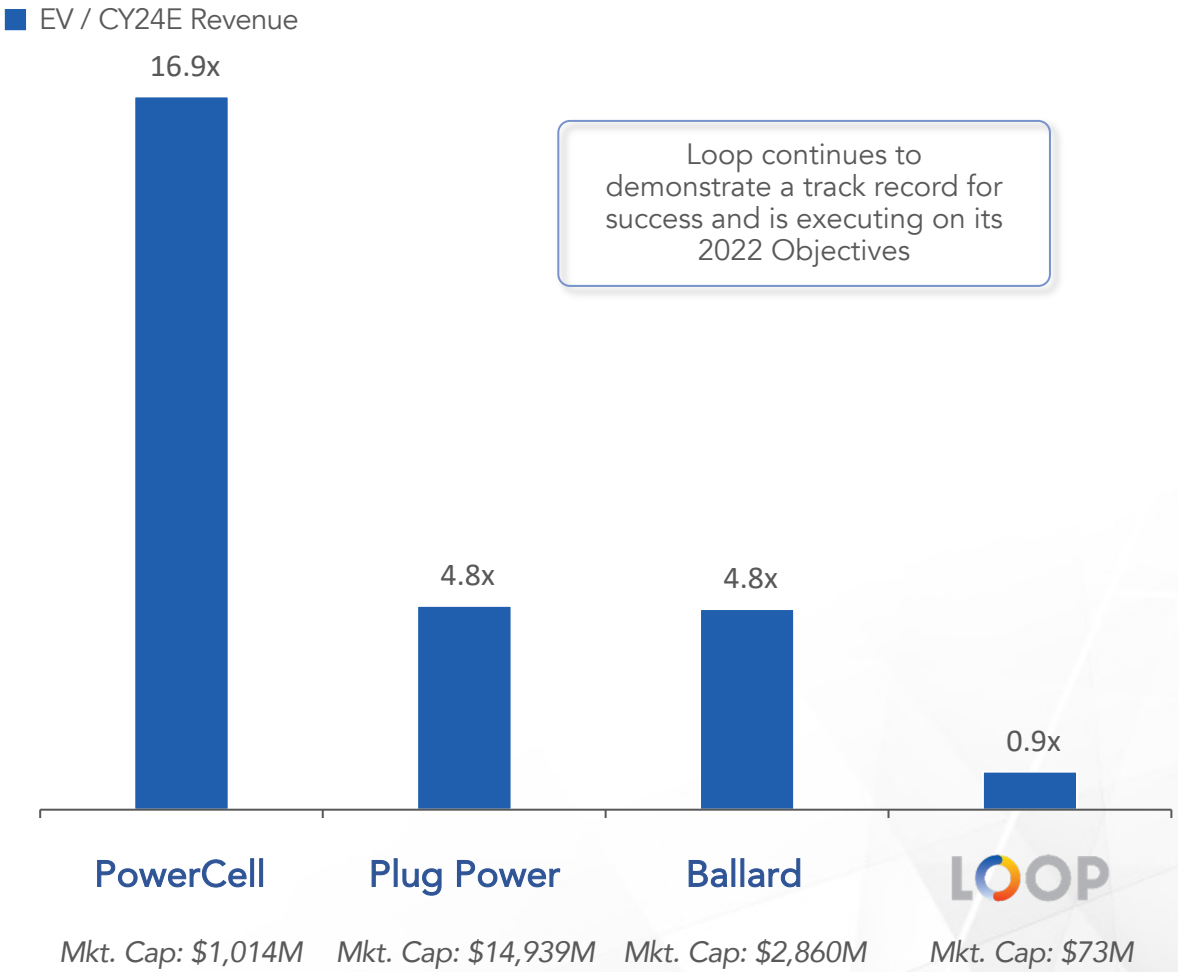
China's Hydrogen Strategy[3][4]

- Major hydrogen cities, including Beijing, Shanghai, Guangzhou, have set out ambitious hydrogen plans and investments in the sector
- Billions in RMB invested by both state-owned enterprises and private sector
- China has committed to become carbon-neutral by 2060, currently about 70% of its oil and gas are imported

Massive US Fed Support for Clean Hydrogen[5]

- US$1T Bipartisan Infrastructure Framework, US$9.5B allocated to the development of clean hydrogen infrastructure and electrolysis
- US$2T Build Back Better Bill expected to introduce a 10-year PTC for clean hydrogen production ($0.45/kg - $3.00/kg)

Fuel Cell Manufacturers



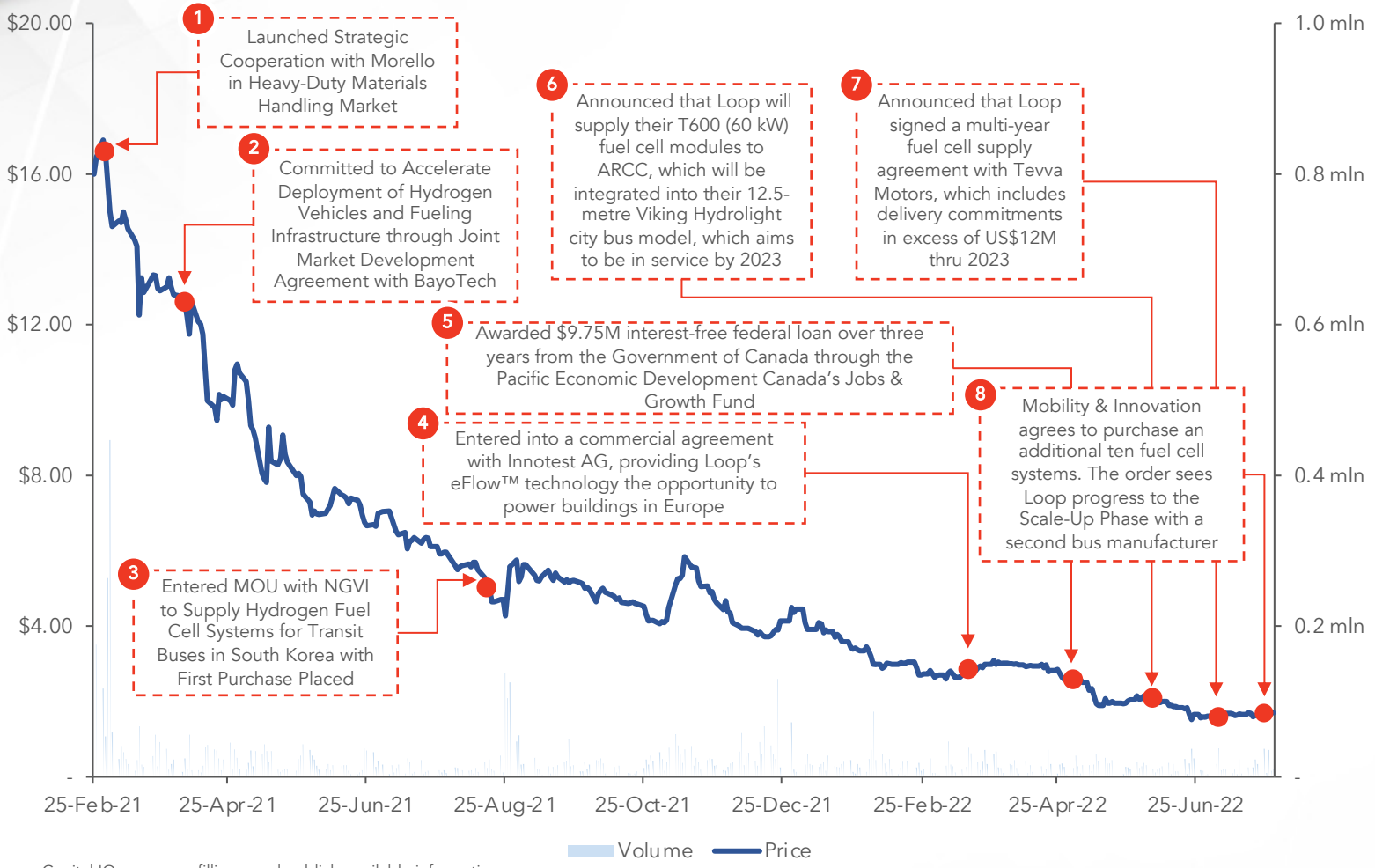
Loop continues to demonstrate a track record for success and is executing on its 2022 Objectives

Source: Capital IQ, company fillings, press releases and publicly available information.
Note: Information as at June 3, 2022. All figures in C$ millions, unless otherwise noted. USD / CAD rate of 1.30.

1. Source: BloombergNEF.
2. Source: European Commission.
3. Source: S&P Global: Sinopec aims Yuan 30 billion investment through 2025 to boost hydrogen strategy.
4. Source: China Macro Economy
5. Source: The White House.

Share Price Performance & Current Capitalization

Stock Performance



Capitalization

Share Structure (millions)	
Common Shares Outstanding	34.1
Fully Diluted Shares Outstanding[1]	36.5
Share Price, $ CAD (as of Jul 29th, 2022)	$1.70
Market Capitalization[2]	**$57.4**
Debt (as of Jun 30th, 2022)	3.3
Cash (as of Jun 30th, 2022)	43.3
Net Debt	**($40.0)**
Enterprise Value	**$17.4**

Analyst Coverage

Firm	Analyst
National Bank	Rupert Merer, PEng, CFA
Canaccord Genuity	John Bereznicki, CFA
Raymond James	Michael Glen, CFA
Cormark Securities Inc.	MacMurray Whale, PEng, Ph.D
CIBC	Hamir Patel

Source: Capital IQ, company fillings, and publicly available information.
Note: All figures in C$ millions, unless otherwise noted.
1. Includes dilutive impact from options, warrants and RSUs.
2. Market Capitalization and shares as of July 29, 2022.

In Summary

Market Growth

The fuel cell market is moving forward and well positioned for dramatic growth.

Winning

Successfully competing & winning against other larger fuel cell competitors.

Execution

Loop is successfully executing its business plan and is positioned to grow very rapidly over the coming years.

Value

Recent market conditions have made Loop an opportunity for investors who understand the space and see the opportunity.

Thank You

For more information:

investors@loopenergy.com
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