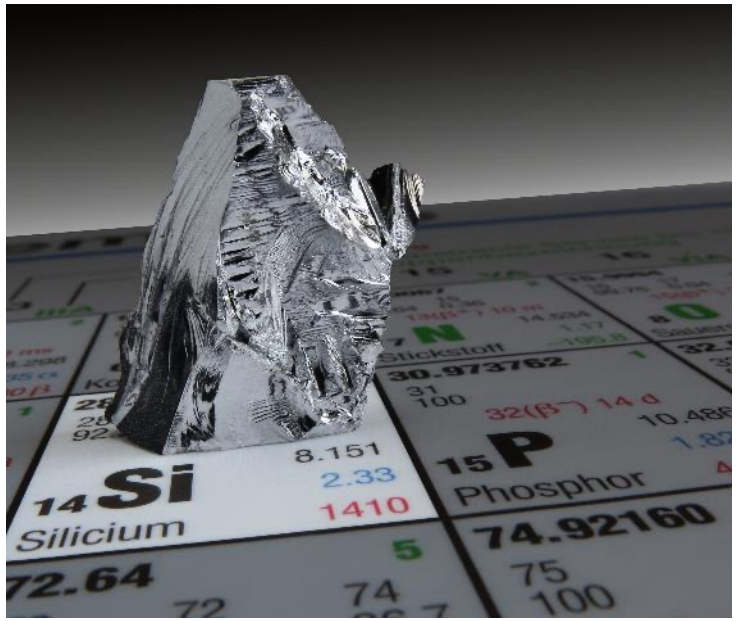
HPQ SILICON



GREEN ENGINEERING SILICA AND SILICON MATERIALS TECHNOLOGY

HPQ LISTED TSXV

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HPQ - A TECHNOLOGY COMPANY FOCUSED ON DEVELOPING GREEN ENGINEERING PROCESSES

TRANSFORMING THE GLOBAL ECONOMY TO ACHIEVE NET-ZERO EMISSIONS BY 2050

- Will require US $9.2 trillion in annual average spending on physical assets
- Representing an increase of US$ 3.5 trillion compared to current spending levels

McKinsey & Company – The net zero transition January 2022

HPQ DEVELOPING NEW GREEN PROCESSES CRUCIAL FOR REACHING THAT GOAL:

- Focuses on environmentally friendly processes
- Leverages advanced technologies and expertise
- Aims to make critical materials needed for net-zero emissions
- Contributes to the global effort of achieving net-zero emissions
- Involves collaboration with world-class technology partners

DISCLAIMERS

This presentation includes certain

"FORWARD-LOOKING STATEMENTS"

All statements, (other than statements of historical fact included herein), including, without limitation, statements regarding future plans and objectives of the company, are forward-looking statements that involve various risks, assumptions, estimates and uncertainties, and any or all of these future plans and objectives may not be achieved.

These statements reflect the current expectations or beliefs of HPQ Silicon Inc. ("the Company") and are based on information currently available to the Company as of July 27, 2023. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. All forward-looking statements in this presentation are qualified by these cautionary statements and the risk factors described above. Furthermore, all such statements are made as of the date this presentation is given.

An investment in the Company is speculative due to the nature of the its business. The ability of the Company to carry out its plans as described in this presentation depends on obtaining the required capital. There is no assurance that the Company will be able to raise the capital required successfully or to complete each of the growth initiatives described. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of the management and Board of the Company.

The Corporation is a technology company engaged in green engineering processes that is: 1) Developing the PUREVAP™ Quartz Reduction Reactor (QRR), a new carbothermic process to transform Quartz into green Silicon (patent granted in the United States & pending in other jurisdictions); 2) Aiming to become a manufacture of green micron size High Purity Silicon Powders; 3) Working with NOVACIUM SAS developing a compact process for the production of green hydrogen via hydrolysis of silicon and other materials; 4) Developing the Fumed Silica Reactor (FSE), a new plasma process that will allow a direct Quartz to Fumed Silica transformation and 5). Developing the PUREVAP™ Nano Silicon (Si) Reactor (NSiR), (Patent Pending) a new process to transform Silicon (Si) chunks into Spherical Nano powders and Nano wires for the next generation of Lithium-ion batteries.

The terms Silicon, Silicon Metal and Si are used interchangeably. Metallurgical Grade Silicon or MG Si refers to Silicon Metal of a purity between 98.0% Si and 99.5% Si. High Purity (HP Si) or Upgraded Metallurgical Grade Silicon (UMG Si) refers to Silicon Metal of a purity between 99.9% Si and 99.99% Si.

— INVESTMENT HIGHLIGHTS

HPQ - GREEN ENGINEERING VERTICALS

HPQ GREEN SILICON INITIATIVES

Developing Strategic Silicon solutions with proprietary low-cost transformation technologies

- Transforming Silica into Silicon in a greener and more efficient manner
- Producing, in one step, Silicon material perfectly suited for high values applications (Battery sector, Silicon Nitride, and more)
- Technologies protected by multiple HPQ-owned patent applications

HPQ GREEN FUMED SILICA INITIATIVES

Developing proprietary new low-cost green transformation technologies to make Fumed Silica

- Material produced has applications in a wide range of industries (pharmaceuticals, agriculture, renewables and more)
- Plasma based process, no hazardous chemical, no HCl release, 86% reduction in energy and related carbon footprint
- Technology protected by HPQ-owned patent application

HPQ GREEN HYDROGEN - A NEW APPROACH TO DE-RISK HYDROGEN PRODUCTION & TRANSPORT

Developing, with Novacium SAS, a new autonomous process to make hydrogen via hydrolysis of Silicon & other materials

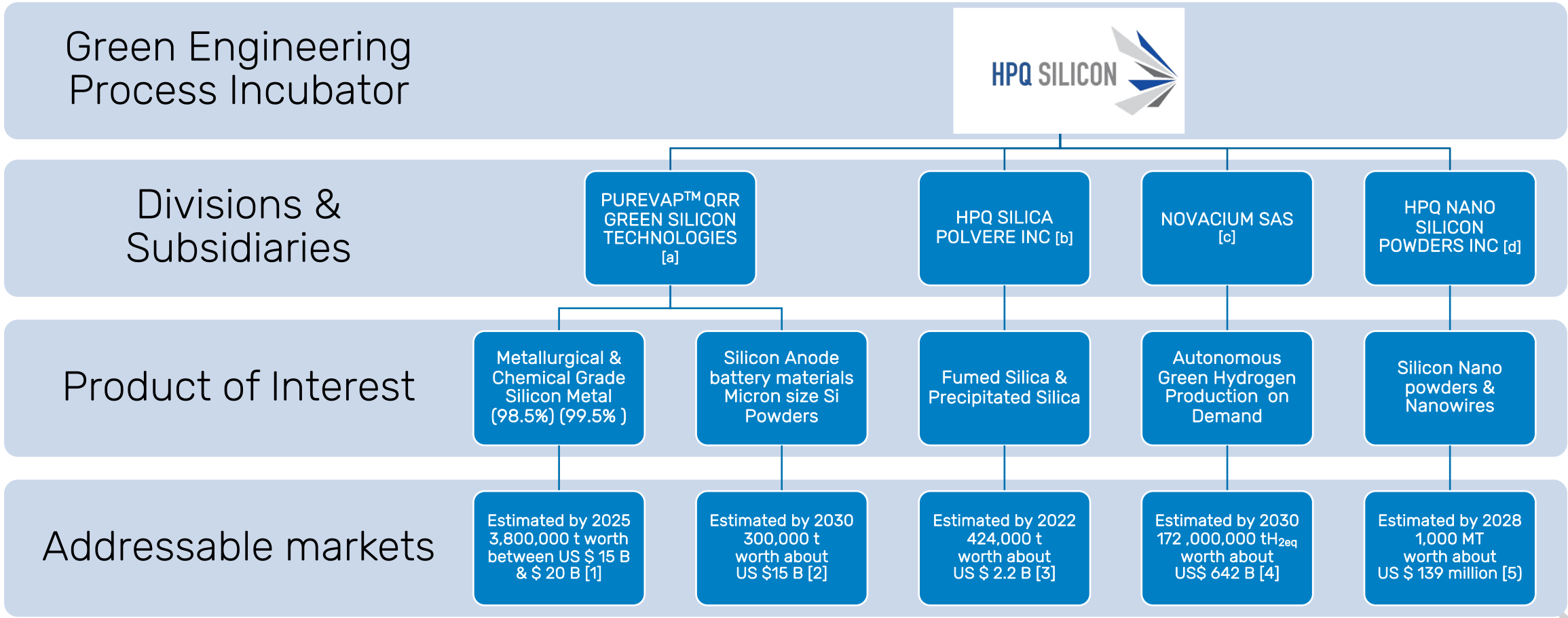
MEASURED AND ACHIEVABLE 3-YEAR GROWTH PLANS TO START COMMERCIALIZING OUR TECHNOLOGIES

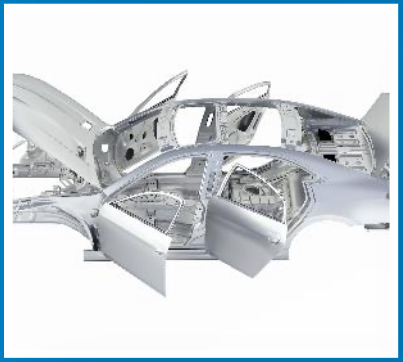
EXPERIENCED MANAGEMENT TEAM & BOARD SUPPORTED BY TECH PARTNER PYROGENESIS CANADA INC

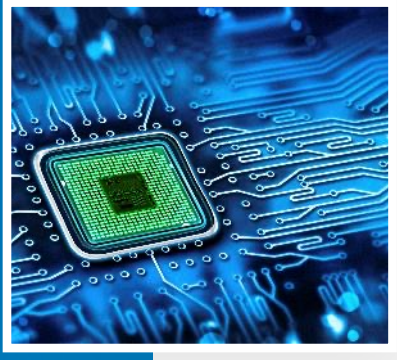
STRONG INSTITUTIONAL SUPPORT FROM MAJOR SHAREHOLDER IQ INVESTISSEMENT QUEBEC

HPQ SILICON

— VALUE PROPOSITION: DEVELOP & MONETIZE







— SILICON AND ITS MARKETS

Silicon (Si) or Silicon Metal, is a semi-conductor material and the second most abundant element in earth's crust. Like all other energy metals (lithium, graphite, cobalt, nickel, etc.) it does not exist in its pure state and is expensive to extract!

EU declared Silicon a critical raw material as a wide range of modern technologies depend on it to make various numbers of industrial and consumer products

Environmental issues related to present Silicon manufacturing processes are becoming key factor for end users

- To extract silicon commercially from Quartz (SiO2) an expensive & energy intensive carbothermic process, first invented in 1899, is still used
- Depending on final application, (Solar, Electronics, Batteries) Chemical grade Silicon (99.5% Si) must either be purified or engineered

Metallurgical and Chemical grade Silicon (Si) demand estimated to reach 3.8 M tonnes, worth between US$ 15 B and US$ 20 B, by 2025 [1]

- The bulk of the growth will be driven by demand for chemical-grade Silicon (99.5% Si)
- New plants will be needed to meet demand
- Traditional processes to make Silicon have a significant obstacle for new entrants: access to process know-how
- Most of the "low-hanging fruit" has been picked, and near-term alternatives to Chinese supply are limited

— SILICON CHALLENGES HPQ OPPORTUNITIES

01 THE SILICON MARKET IS RIPE FOR THE DEVELOPMENT OF NEW TECHNOLOGIES

02 HPQ GREEN ENGINEERING IS FOCUSED ON DEVELOPING NEW GREEN PROCESS TO MAKE SILICON

03 HPQ FIRST GREEN TECHNOLOGY GOAL : LOW-COST MANUFACTURING OF HIGH PURITY SILICON

THE PUREVAP™ QUARTZ REDUCTION REACTOR (QRR)

- A low capex, opex & carbon footprint process to make up to 4N+ Si in one step
- Multiple patent applications protect this technology's proprietary process
- HPQ is gaining unique Silicon process know-how
- Significant strides are being made toward commercial validation
- HPQ Green 3N to 4N+ Silicon opens many unique high-value product lines

Quartz (SiO_2) to High Purity Silicon (Si) – PUREVAP™ QRR Process

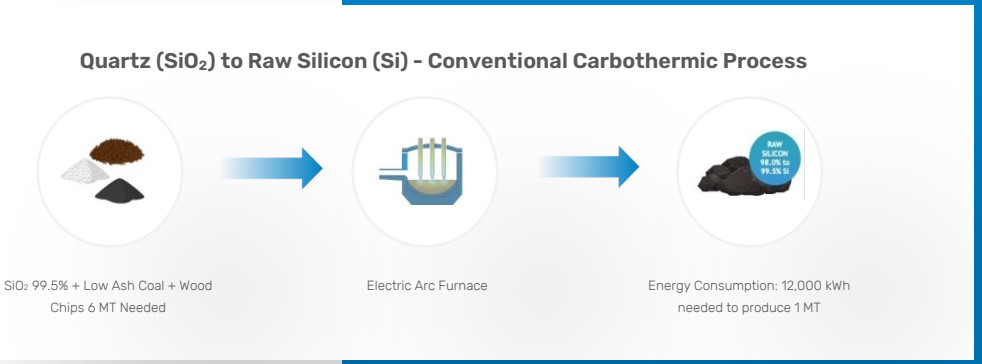
SiO_2 98.5% + Clean Coal 4,5 MT Needed → PUREVAP QRR Reactor → Energy Consumption : 13,000 kWh needed to produce 1 MT

— PUREVAP™ QRR - A UNIQUE SCALABLE PROCESS

A NEW AND INCREDIBLY VERSATILE PROCESS VERSUS CONVENTIONAL PROCESS DATING FROM 1899

Conventional plants produce 98 % to 99.5 % Purity Silicon (Si):

- Scalable by minimum increments of about 30,000 tonnes per year (TPY)
  - Minimum investment needed to build a new plant around US$ 300 M [1]
- Need 6 tonnes (t) of Feedstock to produce 1 t of Silicon (Si) [2]
- On average, it costs about US$ 2,000/t to make 98% Si (MG Si) [3]
- 2N+ (99.5%) Si production requires oxidative refining increasing opex cost
- 3N+ (99.9%) Si requires additional purification further increasing its costs



PUREVAP™ QRR process can produce 99.9+ % Silicon (Si) in one step:

- Scalable by minimum increments of 2,500 TPY
  - Minimum investment 85% - 90% less than conventional plant [4]
- Only need 4.5 t of feedstock to produce 1 t of Si
  - Will produce in one step 3N to 4N+ Si using 25% less feedstock [5]
- QRR process expected to make 3N to 4N Si for < US$ 2,000/t [6]
- HPQ QRR will make silicon-based materials perfectly suited for battery and other high-value applications for less than any competitors

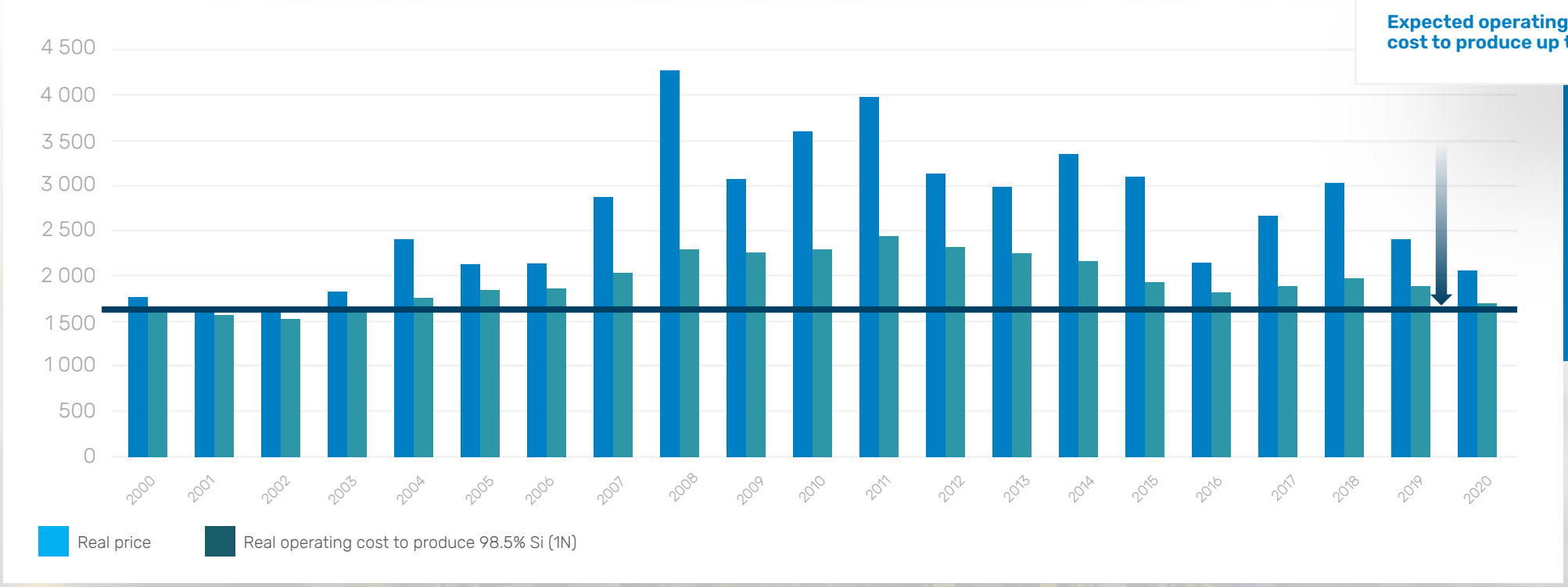
HPQ SILICON

— PUREVAP™ QRR – LOWEST OPEX COST

PUREVAP™ QRR OPEX VERSUS COMPETING Si PRODUCERS USING TRADITIONAL PROCESS

Inflation-adjusted prices are higher than they were in the early 2000s

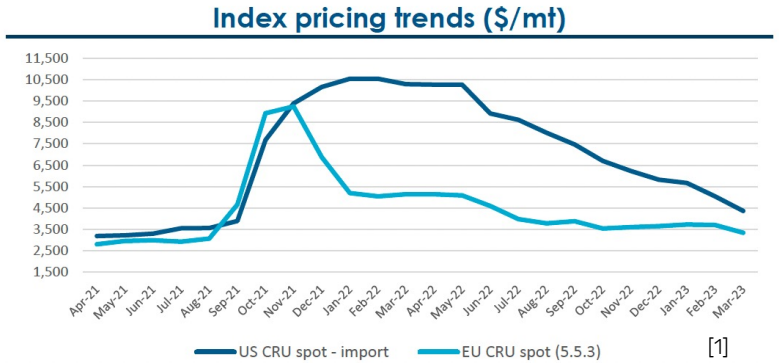
US spot price of 5.5.3 grade silicon (98.5% Si) vs. avg. operating cost at plants outside China and the CIS in real terms, $/t [1]



HPQ SILICON

— PUREVAP™ QRR – AN EXCITING FUTURE

Metallurgical grade silicon price trends validate the need for a scalable & modular process



[1]

1N + (5.5.3 or 98.5%) SILICON - SPOT PRICE 3,500 € [2]

2N + (2.2.0.2 or 99.5%) SILICON SPOT PRICE 6,000 € [3]

- A 70% premium over the price of 5.5.3 or 98.5% Si

TRADITIONAL & NEW EMERGING MARKETS REQUIRE NEW PLANTS TO MEET DEMAND [4]

HPQ PUREVAP™ QRR FOLLOWING UNIQUE ADVANTAGES GIVES IT A MARKET EDGE

QRR scalability by 2,500 tonne per year (TPY)

- Will allow HPQ to focus on high value-added products
- Will allow HPQ to build dedicated white label plants for end buyers because of its Lower CapEx
- Will allow HPQ be adapt faster to market conditions than traditional producers

QRR ability to use 25% less feedstock and

- Produce 2N Silicon in one step for less than traditional process
- Produce 3N to 4N Silicon in one step versus traditional process that require multi steps to do the same

— PUREVAP™ QRR - THE GREENEST PROCESS !

USHERING ZERO CO_2 SILICON METAL MANUFACTURING

Conventional Silicon production emits 105 million tonnes CO_2 per year worldwide [1]

- Silica (SiO_2) reduction requires a carbon reductant (Coal, Coke, or Charcoal)
- Conventional processes are done in Open Electric Arc Furnaces (OEAF) at high temperatures > 1,800 C
- The carbothermic process alone results in 5 tonnes (t) of CO2 emissions per tonne (t) of silicon produced [2]
- Only one option to reduce the carbothermic carbon footprint it's replacing fossil-based carbon with an organic carbon source [3]
- While mitigating a part of their overall carbon footprint, it will never allow conventional silicon producers to produce zero CO_2 emissions silicon metal

PUREVAP™ QRR ZERO CO_2 SILICON METAL MANUFACTURING

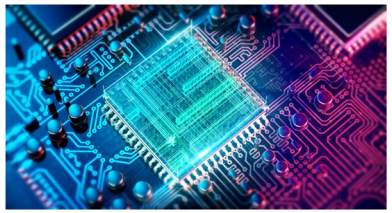
- The QRR, by design, is a Closed Electric Arc Furnace (CEAF) with the ability to operate under controlled atmospheric condition
- The CO(g) generated during the carbothermic reaction remains unoxidized by oxygen and can be readily captured for further utilization
- By using an organic carbon source, the QRR will produce Zero CO_2 Silicon Metal and could even generate Carbon Credits

HPQ intends to commercialize its Zero+ CO_2 Silicon Metal under the brand name *SILICIUM$_X$*

— HPQ SILICON MARKETS & APPLICATIONS

The market opportunities for HPQ Green Silicon or *SILICIUM$_X$* are vast and will be propelled by the following key factors:

- Demand for GREEN High Purity Silicon (3N to 4N Si) as feedstock to make:
  - Micron-size silicon powders for:
    - Making low carbon Silicon base anode material for today's Li-Ion battery
    - Other high-value applications like Silicon Nitride
  - Nano silicon powder and Nanowires for next-generation Li-Ion battery applications
- Auto and EV manufacturers will most likely want to use HPQ Metallurgical Grade Silicon (98.5% Si) ***SILICIUM$_X$*** to make their vehicles lighter, stronger and greener
- Demand for Chemical Grade Silicon (99.5% Si) is driving the need for new plants because of its usage as feedstock to make:
  - Silicones, an end market growing at a 7.4% CAGR, expected to reach US$ 30.9 B by 2030 [1]
  - Polysilicon for solar & electronics, an end market growing at 13.2 % CAGR expected to surpass US$ 27 B By 2030 [2]



HPQ PUREVAP™ QRR: THE ONLY ZERO CO_2 EMISSION OPTION FOR THE NEW PLANTS NEEDED TO MEET SILICON DEMAND

— PUREVAP™ QRR INDICATIVE TIMELINE

STARTED IN 2015, HPQ HAS IMPLEMENTED AN INNOVATION DRIVEN TECHNOLOGY DEVELOPMENT STRATEGY

PROJECTS	2023	2024	2025	2026
PUREVAP™ QRR	*Gen3 QRR* Pilot plant technology validation	Gen3 QRR testing and 3N+ Silicon Manufacturing Gen4 Conceptual engineering Studies	*Gen4 Preliminary* Engineering Studies *Gen4* Equipment Procurement & Financing	*Gen4 PUREVAP™ QRR* commercial plant (s) Construction – Commissioning	Start of commercial production

QRR PILOT PLANT MILESTONES REACHED TO DATE

- The pilot plant started and produced 2N+ Silicon in one step from the start
- Validated the 2,500-time scale-up from the *GEN2 PUREVAP™ QRR*
- Validated semi-continuous batch production capability of the reactor
- Produced 3N+ Silicon (battery-grade silicon) in one step

QRR UPCOMING CATALYSTS

- Completing a successful Silicon pour
- Operating the system commercially (6 continuous production cycles per day, with each cycle yielding 20 kg of Silicon per pour)
- Producing Silicon materials for HPQ Silicon anodes initiative
- Starting Gen4 Conceptual Engineering studies
- Securing grant financing for the proof-of-concept studies related to HPQ Green Silicon capability
- Starting the proof-of-concept studies related to HPQ Green Silicon initiative

— HPQ SILICON FOR BATTERY INITIATIVE

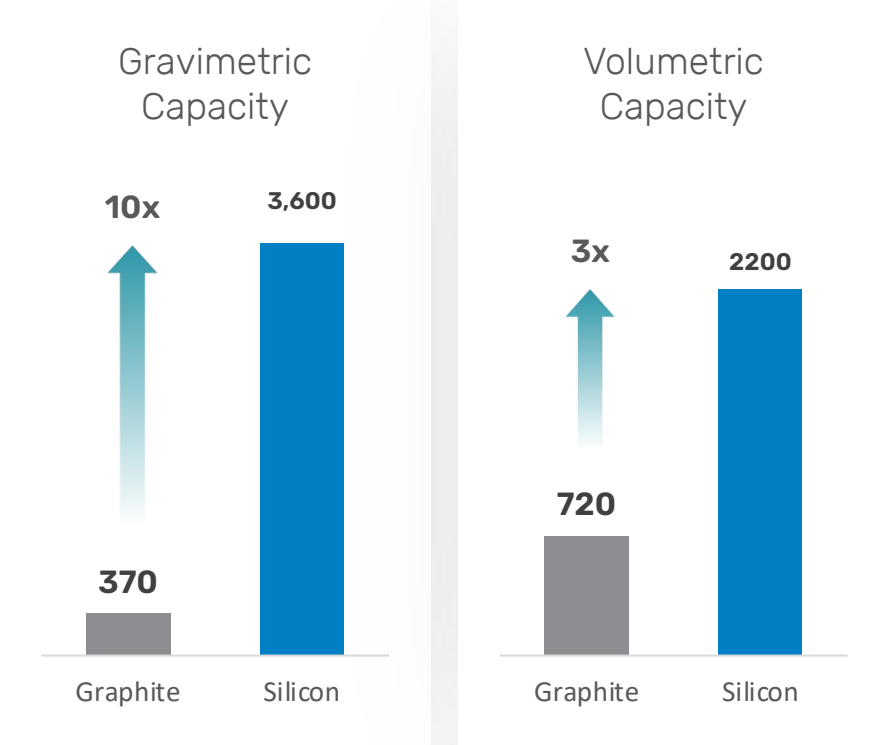
HPQ's ongoing battery initiatives aim to provide industry buyers with a silicon-based (Si) material for anodes that meets their needs by the end of 2023

Simultaneously, HPQ plans to commission its first production line, capable of manufacturing 200 tonnes per year of silicon-based (Si) materials for anodes, by the end of 2024

Once the first production line is operational, HPQ's next medium-term objective is to align our silicon (Si) materials for anodes production capacity with the PUREVAP™ Gen4 Quartz Reduction Reactor (QRR) raw material production capacity, which is 2,500 tonnes per year (TPY) of high-purity silicon

— SILICON-BASED (SI) ANODES MATERIAL OPPORTUNITY

- Electric Vehicle Demand is growing exponentially
- Resulting battery raw material demand to stress supplies
- Graphite:
  - Is the largest (by %) key mineral in an EV battery
  - Demand exceeds supply for the first time in 2022 [1]
  - Deficit projected to grow to 8M tonnes by 2040 [2]
- Replacing a small percentage (5 to 10%) [3] of graphite in the anode chemistry with silicon-based (Si) anodes material could::
  1. Improve battery performance
  2. Address the ongoing graphite deficit

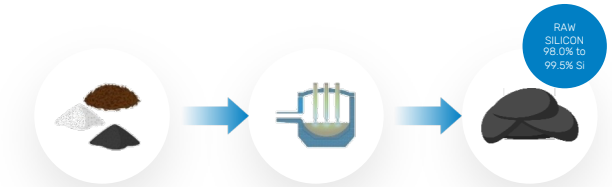


Silicon-based (Si) anode material for batteries demand is projected to exceed 300K Tonnes (t) by 2030, worth about US$ 15 B [4]

— HPQ SILICON BATTERY INITIATIVE VS COMPETITION

CONVENTIONAL CARBOTHERMIC PROCESS

QUARTZ TO SILICON



99.5% SiO_2 + Low Ash Coal + Wood Chips (6 MT Needed)

Electric Arc Furnace

Energy Consumption: 12,000 kWh needed to produce 1 MT

2N Si

Dissolved in

Forms

SiCl4

Silicon tetrachloride

add

H_2

To Get

SILICON TO SILANE GAS PROCESS

HSiCl3

Trichlorosilane

Refined 3 times

SiH4

Silane Gas

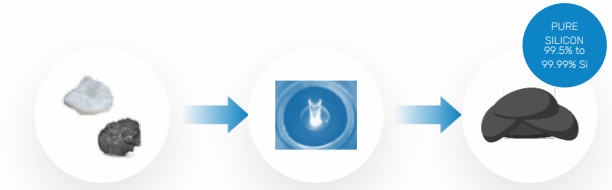
Si Anode Materials

CVD Process
(Sila Nanotechnologies, Group14 Technologies, Amprius)

HPQ Approach : Simple and straightforward

PUREVAP™ QRR PROCESS

QUARTZ TO SILICON



98.5% SiO_2 + Clean Coal (4,5 MT Needed)

PUREVAP QRR Reactor

Energy Consumption: 13,000 kWh needed to produce 1 MT

Battery Grade Si (3N+ Si)

HPQ Battery

SI TO SiOx Anode Material

Crusher

Micronisation

SiOx Anode material

Cell / Battery manufacturing

Silicon Anode materials

HPQ SILICON

HPQ SILICON FOR BATTERY INITIATIVE

HPQ intends to become a manufacturer of Silicon Based Anode material by the end 2024, 2 years before the first gen4 PUREVAP™ QRR is operational

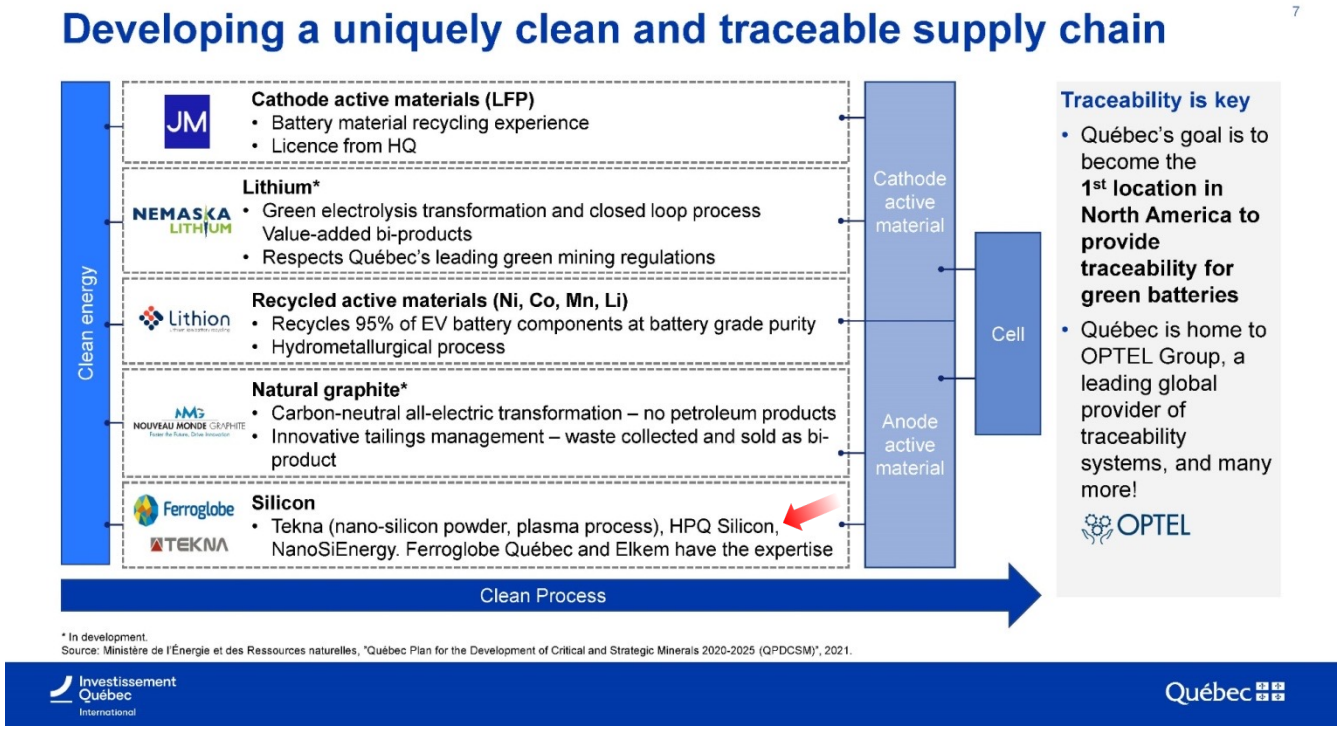
PROJECTS	2023		2024	2025	2026
BATTERY INITIATIVE	Testing industrial equipment that can make micron size Si Powders	Design pathway to manufacture commercially Silicon Based Anode material	Finalize Silicon Based Anode material production pathway Set up & start a production line that can produce up to 200 Tonnes Per Year (TPY)	Continually scale up and expanding our production capacity to make Silicon Based Anode material up to a capacity capable of handling the 2,500 MT of feedstock coming from our first *Gen4 PUREVAP™ QRR* commercial plant in 2026	

BATTERY INITIATIVE UPCOMING CATALYSTS

- Producing small quantity (15 kg) of 3N+ micron size (<5 microns) Si powder
- Producing larger quantity of 3N+ micron size (<5 micron) Si powder (≥ 800 Kg)
- Samples delivered to world-leading high-performance material company
- Developing a pathway to secure access to high-purity silicon feedstock
- Secure the services of an experienced senior-level executive to oversee the project
- Having the material tested at different high-level research centers
- Finalizing pathway to manufacture commercially 200 TPA of Silicon Base anode material
- Testing material to see if Novacium patented surface treatment process can improve battery performance
- Start marketing of material to prospective buyers/shipping samples to them
- Finalize site emplacement and start an equipment procurement process

— QUEBEC AN EMERGING KEY HUB FOR BATTERY SUPPLY CHAIN

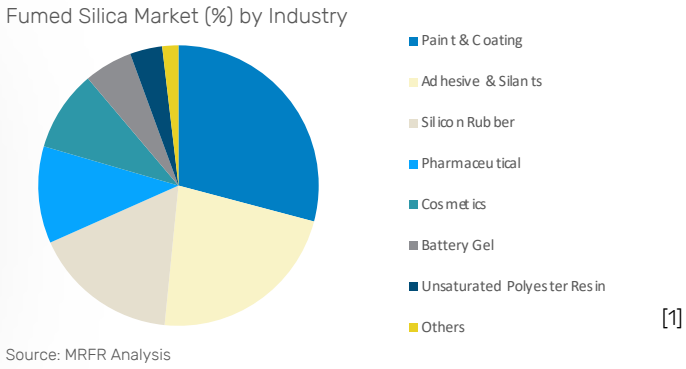
HPQ is a Quebec - based company and stands to benefits from these initiatives



— FUMED SILICA REACTOR: ANOTHER GREEN TECHNOLOGY

- Fumed Silica (Pyrogenic Silica) is a versatile value-added white microscopic powder with high surface area & low bulk density
- Due to its unique properties commercial applications encompass various industries including personal care, pharmaceuticals, agriculture (food & feed), adhesives, sealants, construction, batteries and automotive to name a few

	REAL 2016		PROJECTION 2022	
Fumed Silica Market	Quantity MTY	Value (USD)	Quantity MTY	Value (USD)
Global	300,000	1,500 million	425,000	2,263 million
North American	59,100	416 million	76,000	575 million
Canadian	19,300	136 million	24,400	185 million



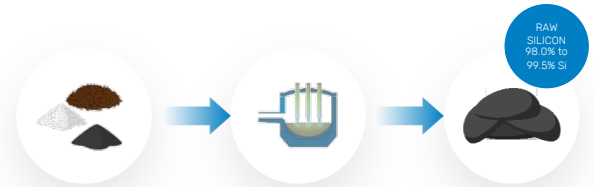
Source: MRFR Analysis [1]

- In 2021, HPQ signed an agreement with PyroGenesis covering the development of a new Fumed Silica Reactor development program and the future commercialization of fumed silica materials produced by the process
- Included in the agreement, the $2 million stated cost of construction and operation of a 50 tonne per year commercial pilot plant will be covered by the following parties:
  - The Federal Government of Canada (SDTC) will pay ≈ 33% of the cost,
  - The Quebec Government (TED) will pay ≈ 30% of the cost,
  - HPQ Silica Polvere Inc (an HPQ subsidiary) will pay ≈ 29% of the cost, and
  - PyroGenesis Canada Inc will cover the remaining ≈ 8% and act as operator

— TRADITONAL FUMED SILICA PROCESS VS NEW PROCESS

QUARTZ (SiO2) TO SILICON (Si)

CONVENTIONAL PROCESS TO MAKE SILICON



99.5% SiO2 + Low Ash Coal + Wood Chips 6 MT Needed

Electric Arc Furnace

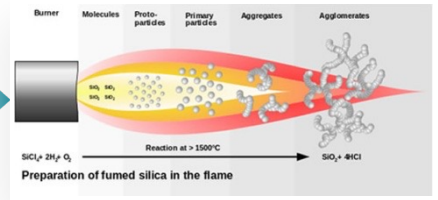
Energy Consumption: 12,000 kWh needed to produce 1 MT

Dissolved in

Silicon tetrachloride

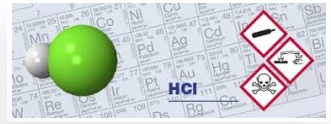
SILICON TO SILANE GAS PROCESS

CONVENTIONAL PROCESS TO MAKE FUMED SILCIA



Energy Consumption: 98,000 kWh needed to produce 1 MT of Fumed Silica

Fumed Silica



Hydrogen Chloride Gas

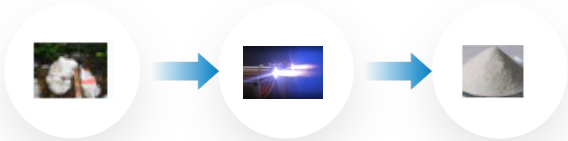
A NEW GREEN PROCESS TO MAKE FUMED SILICA

- The plasma-based process allows a direct Quartz to Fumed silica transformation
- Eliminate the Quartz to Silicon phase
  - Reduce direct CO_2 emission by over 60% [1]
  - Remove the need for hazardous chemicals in the process, and
  - Eliminate Hydrogen Chloride Gas (HCl) releases
- Process only requires 15,000 kWh/MT, vs 110,000 kWh/MT for traditional process
  - An 86% reduction in the energy footprint, reducing even more indirect CO_2 emissions
- Process feedstock being Quartz, not Silicon; make its Capex a small fraction of what is required to build a traditional Fumed Silica plant

HPQ: Simple and Straightforward Solutions

QUARTZ (SiO2) TO FUMED SILICA

FUMED SILICA REACTOR



Quartz SiO2

Fumed Silica Reactor

Fumed Silica

Energy Consumption: 15,000 kWh needed to produce 1 MT

HPQ SILICON

— *HPQ INNOVATIONS:*
FUMED SILICA INDICATIVE TIMELINE

PROJECTS	2023		2024		2025		2026
FUMED SILICA	Small scale testing of different Fumed Silica Pilot Plant configurations	Engineering – Construction – Commissioning of Fumed Silica Pilot Plant	Pilot plant validation of technology	Producing Fumed Silica conceptual engineering studies	Preliminary engineering studies	Equipment Procurement and Financing	Fumed Silica commercial plant (s) Construction – commissioning

FUMED SILICA INITIATIVE UPCOMING CATALYSTS

- Finalize design choice for the Fumed Silica Reactor pilot plant
- Finalize equipment decision and procurement process
- Finalize ongoing small-scale testing
- Send Samples to world-leading Fumed Silica Company
- Building and commissioning test a pilot plant
- Start testing program to produce 170 kg/day continuous feed
- Start producing Fumed Silica
- Produce high-quality products (Fumed Silica with High surface area (100-200 m2/g), rheological properties (STMD196-18),
- Produce 5m3 of quality fumed silica and send it to customers for testing.

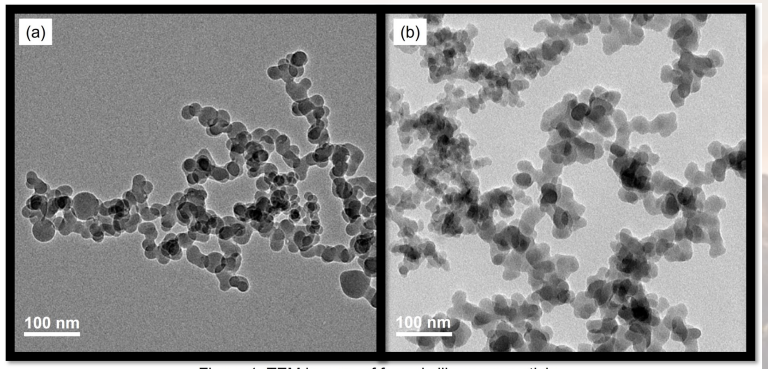


Figure 1. TEM images of fumed silica nanoparticles, (a) from HPQ Silica Polvere, (b) commercially available material

NOVACIUM
MATERIA FUTURA

ONGOING COLLABORATION WITH HPQ

Since Novacium onboarding in Q3 2022, the collaboration has been focused on the following three areas:

1. R&D assistance and collaboration on HPQ's processes (PUREVAP™ RRQ):
   a) Supporting, optimizing and sharing knowledge and know-how, etc.

   (Two new QRR patents already filed)

2. Collaborating on complementary R&D to develop innovative processes in the following niche sectors:
   a) Manufacturing silicon or SiO_x particles for battery and other high-value applications

   (Work crucial to HPQ Battery Initiative)

   a) Manufacturing carbon particles or super-capacitor applications

3. Capitalizing on their knowledge and know-how in the hydrogen sector, the technical team is developing:
   a) An autonomous process for making hydrogen via hydrolysis of silicon and other materials

— *HPQ INNOVATIONS:* INDICATIVE TIMELINE

STARTED IN 2015, HPQ HAS IMPLEMENTED AN INNOVATION DRIVEN TECHNOLOGY DEVELOPMENT STRATEGY

PROJECTS	2023	2024	2025	2026
PUREVAP™ QRR	*Gen3 QRR* Pilot plant technology validation Gen3 QRR 3N+ Silicon manufacturing Gen4 Conceptual engineering Studies	*Gen4 Preliminary* Engineering Studies	*Gen4* Equipment Procurement & Financing *Gen4 PUREVAP™ QRR* commercial plant (s) Construction – Commissioning	Start of commercial production
BATTERY INITIATIVE	Testing industrial equipment that can make micron size Si Powders Design pathway to manufacture commercially Silicon Based Anode material	Finalize Silicon Based Anode material production pathway Set up & start a production line that can produce up to 200 Tonnes Per Year (TPY)	Continually scale up and expanding our production capacity to make Silicon Based Anode material up to a capacity capable of handling the 2,500 MT of feedstock coming from our first *Gen4 PUREVAP™ QRR* commercial plant in 2026	
FUMED SILICA	Small scale testing of different Fumed Silica Pilot Plant configurations Engineering – Construction – Commissioning of Fumed Silica Pilot Plant	Pilot plant validation of technology Producing Fumed Silica conceptual engineering studies Preliminary engineering studies	Equipment Procurement and Financing Fumed Silica commercial plant (s) Construction – commissioning	
HYDROGEN TECHS	Developing, a new autonomous process for making hydrogen via hydrolysis of silicon and other materials	Building lab scale prototype for proof of concept of the new autonomous process for making hydrogen via hydrolysis of silicon and other materials	Building large scale prototype for commercial validation of the new autonomous process for making hydrogen via hydrolysis of silicon and other materials	Technical, Economic, and Operational Scaling Up Feasibility Studies

HPQ SILICON

— UPCOMING CATALYSTS

01. PUREVAP™ QRR Project

- Completing a successful Silicon Pour
- Operating the system commercially
- Starting Gen4 conceptual engineering studies

02. BATTERY INITIATIVE

- Secure the services of an experienced senior-level executive to oversee the project
- Material test at High-Level research center
- Finalizing pathway to manufacture commercially 200 TPA of Silicon base anode materials

03. FUMED SILICA PROJECT

- Finalize ongoing small-scale testing
- Send Samples to world leading Fumed Silica company

04. Hydrogen Project

- Finish design of a new autonomous process for making hydrogen via hydrolysis

HPQ CAPITAL STRUCTURE

Major Investors	Basic	Fully Diluted
IQ (Investissement Québec)	8,7%	8,0%
PyroGenesis Canada Inc.	5,6%	8.0%
Management & Board	6.3%	10.4%
Strategic Investors	7,0%	6.0%

52 weeks

	Price	Low	High
(As of July 27, 2023)	$ 0,215	$ 0,195	$ 0,35

	Million
Basic Shares Outstanding	365.0
Options (Average Price $0.61 / Duration 2,71 years)	16,4
Warrants (Average Price $0..605)	10.8
Fully Diluted Shares Outstanding	392,3
Market Capitalization (Basic)	78.8.
Market Capitalization (Fully Diluted)	84,3
Cash and Cash equivalent available for projects advancements	2.6

MANAGEMENT, BOARD & OTHERS

Management

- **Bernard J. Tourillon, BAA, MBA**
  Chairman, President, CEO and Director
- **Noelle Drapeau, LLL, MBA, PMP**
  Corporate Secretary and Director
- **Francois Rivard**
  VP, CFO
- **Derick A. Lila, MSc, MA**
  Director Marketing Communications

Independent Directors

- **Richard Mimeau, B.Sc.**
  Director
- **Peter Smith, PhD, P. Eng.**
  Director
- **Robert Robitaille, M.B.A., L. Ph.**
  Director
- **Daryl Hodges H. BSc, M.Sc.**
  Director
- **Patrick Levasseur**
  Director

Consultants/ Technical Advisors

- **Marcel Drapeau, BA, BSC. Comm, LLL**
- **PyroGenesis Canada Inc**

Transfer Agent

- **Computershare**

Auditors

- **KPMG S.E.C.N.R.L.**

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— PRESENTATION REFERENCES AND SOURCES

In the following pages, you will find supplementary information, references and/or the sources of key points made in the presentation

Page 5

a) PUREVAP™ QRR Green Silicon Technologies are 100% owned by HPQ. HPQ acquired the QRR Intellectual properties from PyroGenesis Canada Inc ("PCI"), subcontracted to them the R&D associated with developing the technologies, agreed to an exclusive equipment procurement deal and granted PCI a Royalty payment equal of 10% of HPQ PUREVAP™ QRR Silicon metal sales, with set minimums. HPQ is therefore financing 100% of the development cost of this technology and will collect 90% of the Silicon metal sales made with the QRR

b) HPQ Silica Polvere Inc ("Polvere") is a 100% owned HPQ subsidiary. HPQ acquired the Fumed Silica Reactor intellectual properties from PyroGenesis Canada Inc ("PCI"), subcontracted to them the R&D associated with developing the technologies, agreed to an exclusive equipment procurement deal and granted PCI a royalty payment equal of 10% of Polvere Fumed Silica sales, with set minimums. PCI does have the option to sale its Royalty in exchange for 50% of HPQ equity stake in Polvere.

c) Novacium SAS. In 2022, HPQ partnered with three leading French research engineers to create Novacium, a "jeune entreprise innovante (J.E.I)" based in Lyon, France, working in high-added-value material fields connected to renewable energy. While presently HPQ only owns 20% of the equity of Novacium, the covenants regarding the operations of Novacium are such that accounting rules require that we consolidate Novacium operations in our financial statement, making Novacium a de-facto subsidiary of HPQ Silicon Inc.

d) HPQ Nano Silicon Powders Inc ("Nano") is a 100% owned HPQ subsidiary. HPQ acquired the PUREVAP™ NSiR intellectual properties from PyroGenesis Canada Inc ("PCI"), subcontracted to them the R&D associated with developing the technologies, agreed to an exclusive equipment procurement deal and granted PCI a royalty payment equal of 10% of Nano Nano silicon powder sales, with set minimums. PCI does have the option to sale its Royalty in exchange for 50% of HPQ equity stake in Nano.

I. Data compiled from information found in the presentations made by CRU International Limited ("CRU"), a world-leading metal market research firm, during their Silicon Market Outlook conferences of November 2018, November 2020, and October 2022. Information further validated by Straits Research Silicon Metal Market: Information by Product Type (Metallurgical and Chemical), Application (Aluminium Alloys, Silicone, and Semiconductors), and Region — Forecast till 2030, report that indicated that the global silicon metal market size was valued at USD 12.4 billion in 2021, and is expected to reach USD 20.60 billion by 2030, growing at a CAGR of 5.8% during the forecast period (2022–2030).

II. QY Research, SNE Research, Shinhan Securities / NBM June 2023 Deck page 11

III. Market data per from MarketsandMarkets 2017 "fumed silica market – global forecast to 2022". The information further validated by Fact. MR 2022 report indicated that the global was expected to reach USD 2.10 billion by 2032, growing at a CAGR of 5.0 % during the forecast period (2022–2033)

IV. Deloitte's 2023 global green hydrogen outlook, page 13

V. Global Nano Silicon Powder Market 2023 New Updated Research Report. The global Nano Silicon Powder market size is estimated to be worth USD 112.8 million in 2022. It is forecast to a readjusted size of USD 139.6 million by 2028 with a CAGR of 3.6 Percent during the forecast period 2022-2028.

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Page 6

[1] Data compiled from information found in the presentations made by CRU International Limited ("CRU"), a world-leading metal market research firm, during their Silicon Market Outlook conferences of November 2018, November 2020, and October 2022. Information further validated by Straits Research Silicon Metal Market: Information by Product Type (Metallurgical and Chemical), Application (Aluminium Alloys, Silicone, and Semiconductors), and Region — Forecast till 2030, report that indicated that the global silicon metal market size was valued at USD 12.4 billion in 2021, and is expected to reach USD 20.60 billion by 2030, growing at a CAGR of 5.8% during the forecast period (2022–2030).

Page 8

[1] Information from PPC SE website indicated that the 2015 cost to build their 32,000 metric tons PCC Bakki Silicon Project located on the outskirts of Húsavík in the north of Iceland was around US$ 300 M.

[2] From Ferroglobe PLC investor presentation dated October 17, 2017 (Page 11).

[3] Data compiled from information found on page 28 of a presentation made by CRU International Limited ("CRU") at its CRU Silicon Market Virtual Forum 2020.

[4] Management refers to public information found in PyroGenesis February 2, 2023 release that indicated that the cost to build one 2,500 tonnes per year (TPY) PUREVAP™ QRR reactor was around $20 M, and the cost to build two 2,500 TPY reactors would be around $40M. Therefore as noted on page 7 point 1 above, the cost to build a traditional plant is US$ 300M; therefore 40/300 = .13 which represents a minimum investment 86% less than conventional process. These numbers will be further validated and refine after the completion of the GEN4 Conceptual and Preliminary engineering studies.

[5] From Ferroglobe PLC investor presentation dated October 17, 2017 (Page 11) we know that traditional process need 6 tonnes to make one tonne, so if we only need 4.5, that equal to 25% less feedstock

[6] Management refers to public information from Ferroglobe PLC investor presentation dated January, 2017 (Page 6). According to this information, approximately 45% of the total cost of producing Metallurgical grade Silicon (98.5% - 99.5% Si) is attributed to feedstock expenses, primarily quartz and reductant. Reaching a conversion efficiency exceeding 75% would result in a reduction of about one-third of the required amount of feedstock needed to make silicon metal. Therefore, this reduction in feedstock usage could result in an HPQ cost advantage of over 14% (45% * 33%) compared to traditional methods.

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[1] Data was compiled from information found on page 28 of a presentation by CRU International Limited ("CRU") at its CRU Silicon Market Virtual Forum 2020.

[2] These numbers will be further validated and refined after the completion of the GEN4 Conceptual and Preliminary engineering studies.

— PRESENTATION REFERENCES AND SOURCES

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Page 10

[1] Ferroglobe Q1 2023 Financial results

[2] Ferroglobe Q1 2023 Financial results

[3] Price paid by HPQ Silicon Inc for 2N silicon for its battery initiatives during Q1 2023.

[4] From information found in the presentations made by CRU International Limited ("CRU"), a world leading metal market research firm, during their Silicon Market Outlook conferences of November 2018, November 2020, and October 2022.

Page 11

[1] From Green14 web site.

[2] Gudrun Saevarsdottir, Thordur Magnusson & Halvor Kvande. (2021) Reducing the Carbon Footprint: Primary Production of Aluminum and Silicon with Changing Energy Systems. Journal of Sustainable Metallurgy, 7, 846-857.

[3] FerroQuébec Inc. Empreinte carbone du silicium métal, Usine de Port-Cartier, Rapport d'empreinte carbone, 25 mars 2015, Ernst & Young, Groupe – Changements climatique et développement durable.

Page 12

[1] The Global Silicone Market Size is expected to grow from USD 16.3 billion in 2021 to USD 30.9 billion by 2030, at a CAGR of 7.4% during the forecast period 2021-2030. as per the latest research report by Spherical Insights & Consulting.

[2] The global polysilicon market size was valued at USD 8.87 billion in 2021 and is projected to reach USD 27.07 billion by 2030 at a CAGR of 13.2% from 2022 to 2030 as per the latest research report by Strait Research Spherical Insights & Consulting

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Page 15

[1] July 2022 article by Rick Mills in .mining.com intitled Graphite deficit starting this year as demand for ev battery anode ingredient exceeds supply

[2] July 2022 article by Rick Mills in .mining.com intitled Graphite deficit starting this year as demand for ev battery anode ingredient exceeds supply

[3] The Royal Society of Chemistry 2020 Sustainable Energy Fuels, 2020, 4, 5387–5416

[4] QY Research, SNE Research, Shinhan Securities / NBM June 2023 Deck page 11.

Page 19

[1] Market data per from MarketsandMarkets 2017 "fumed silica market – global forecast to 2022"

Page 20

[1] 2012 – Executive summary: "SILICON-CHEMISTRY CARBON BALANCE, AN ASSESSMENT OF GREENHOUSE GAS EMISSIONS AND REDUCTIONS", Covering the Production, Use and End-of-Life of Silicones, Siloxanes and Silane Products in Europe, North America, and Japan. [Pages 20 to 21] (Commissioned by Global Silicones Council, Centre Européen des Silicones, Silicones Environmental, Health and Safety Council of North America Silicone Industry Association of Japan).