



## GREEN ENGINEERING SILICA AND SILICON MATERIALS TECHNOLOGY



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THE BEST MARKET

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# — INVESTMENT HIGHLIGHTS

## HPQ - A TECHNOLOGY COMPANY ENGAGED IN DEVELOPING GREEN ENGINEERING PROCESSES

### HPQ 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 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 base process, no hazardous chemical, no HCl release, 86% reduction in energy and related **carbon footprint**
- ▶ Technology protected by HPQ-owned patent application

### HPQ HYDROGEN INITIATIVES

Developing, with Novacium SAS, a new autonomous process for making hydrogen via hydrolysis of silicon and 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



# — 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 **March 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 of the forward-looking statements contained 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 successfully raise the capital required 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 Silicon (patent granted in the United States & pending in other jurisdictions); 2) Aiming to become North America first producer of micron size High Purity Silicon Powders; 3) 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; 4) Developing the Fumed Silica Reactor (FSE), a new plasma process that will allow a direct Quartz to Fumed Silica transformation and 5) Working with NOVACIUM SAS developing a compact process for the production of hydrogen via hydrolysis of silicon and other materials.

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.

## — Transforming the global economy to achieve net-zero emissions by 2050 could require:

- ▶ US \$9.2 trillion in annual average spending on physical assets
- ▶ US \$3.5 trillion more than today

McKinsey & Company – The net zero transition  
January 2022

**HPQ IS DEVELOPING, WITH THE SUPPORT OF WORLD CLASS TECHNOLOGY PARTNERS, NEW GREEN PROCESSES CRUCIAL TO MAKE THE CRITICAL MATERIALS NEEDED TO REACH NET ZERO EMISSIONS**



### **Becoming a green low cost (Capex and Opex) producer of High Purity Silicon (2N+ to 4N):**

2N Silicon is the key feedstock to make materials needed for our modern lives and the clean energy revolution

- ▶ 2N Silicon anticipated demand to generate a 1 Millions Tonnes (MT) Silicon deficit over the next 10 years

### **Becoming North America first producer of micron size High Purity Silicon (3N & 4N Si) powders:**

Micron-size Si and SiO<sub>x</sub> powders are presently used in Li-ion Batteries and for other clean tech applications

- ▶ Material potential, already generated NDAs by batteries producer & a major players with request for material

### **Working to become the first producer of nano silicon materials from High Purity Silicon chunks**

Spherical Silicon Nanopowders and Nanowires will be critical for the next generations of Li-ion Batteries

- ▶ Received a firm order (on an "if as" and "when" basis) for Si Nanopowders from major car manufacturer

### **Becoming a green low cost (Capex and Opex) producer of Fumed Silica:**

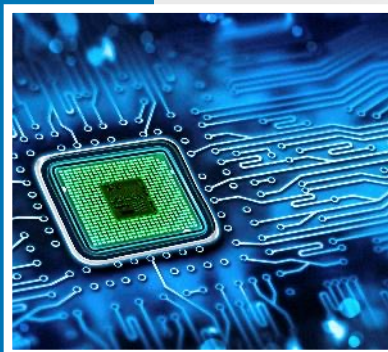
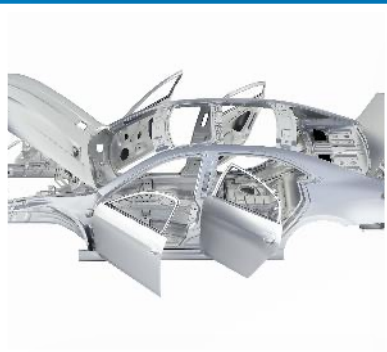
The new plasma process will allow a direct Quartz to Fumed Silica transformation

- ▶ No hazardous chemical process, no Hydrogen Chloride Gas (HCl) Release, 86% reduction in energy footprint

### **Developing a small and compact process for the on-demand production of hydrogen via hydrolysis of Silicon and other materials**







## — 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

### ESG aspect of its manufacturing and transformation is a key factor for end users

- ▶ To extract silicon commercially from Quartz ( $\text{SiO}_2$ ) 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

### SILICON (Si) DEMAND TO REACH 3.8 MILLION TONNES, WORTH US\$ 20 BILLION BY 2025 (Source CRU)

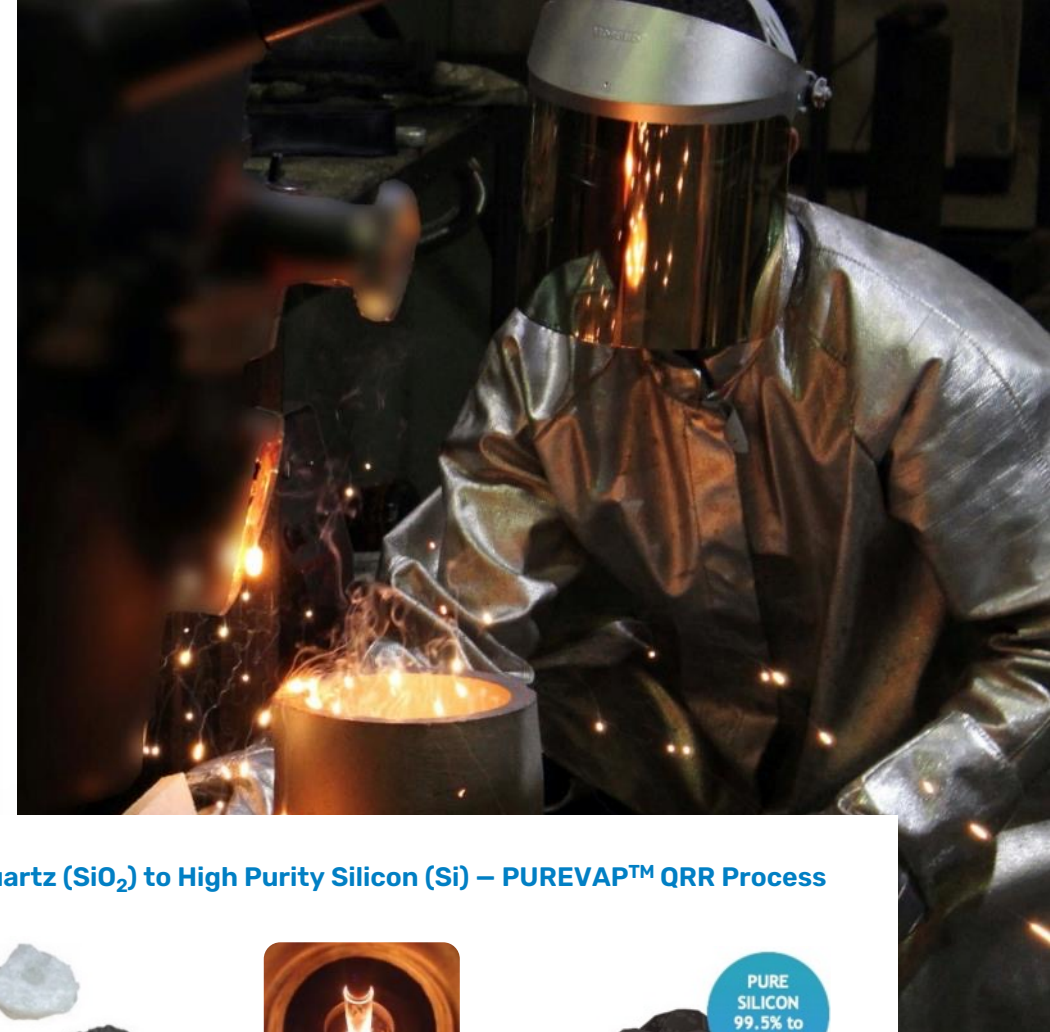
- ▶ The bulk of the growth will be driven by demand for chemical grade Silicon (99.5% Si)
- ▶ New plants will be needed to meet demand
- ▶ Traditional processes to make Silicon have a significant obstacle for new entrants: access to process know-how
- ▶ Most of the "low hanging fruit" have been picked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

# — SILICON CHALLENGES HPQ OPPORTUNITIES

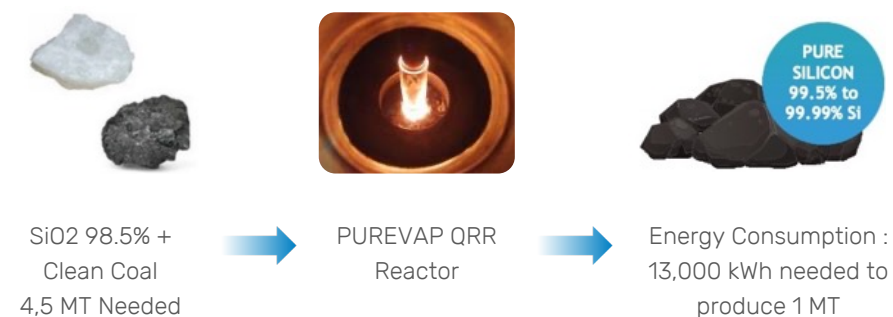
- 01 THE SILICON MARKET IS RIPE FOR THE DEVELOPMENT OF DISRUPTIVE TECHNOLOGIES
- 02 HPQ STRATEGIC SILICON SOLUTION INITIATIVES FOCUS ON DEVELOPING THESE DISRUPTIVE TECHNOLOGIES
- 03 HPQ FIRST DISRUPTIVE TECHNOLOGY :  
LOW-COST 3N (99.9%) to 4N+ (99.99%) SILICON

## THE PUREVAP™ QUARTZ REDUCTION REACTOR (QRR)

- ▶ A new low capex, opex and carbon footprint process to make up to 4N+ Si in one step
- ▶ This technology is a unique proprietary process protected by patent applications
- ▶ Developing this technology, HPQ is gaining unique Silicon process know-how
- ▶ Commercial validation of this new process started in Q2 2022
- ▶ 3N to 4N+ Silicon is HPQ's fundamental product that opens many high-value product lines



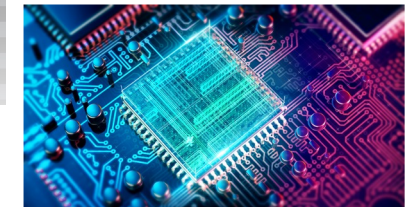
### Quartz ( $\text{SiO}_2$ ) to High Purity Silicon (Si) – PUREVAP™ QRR Process



# — HPQ SILICON MARKETS & APPLICATIONS

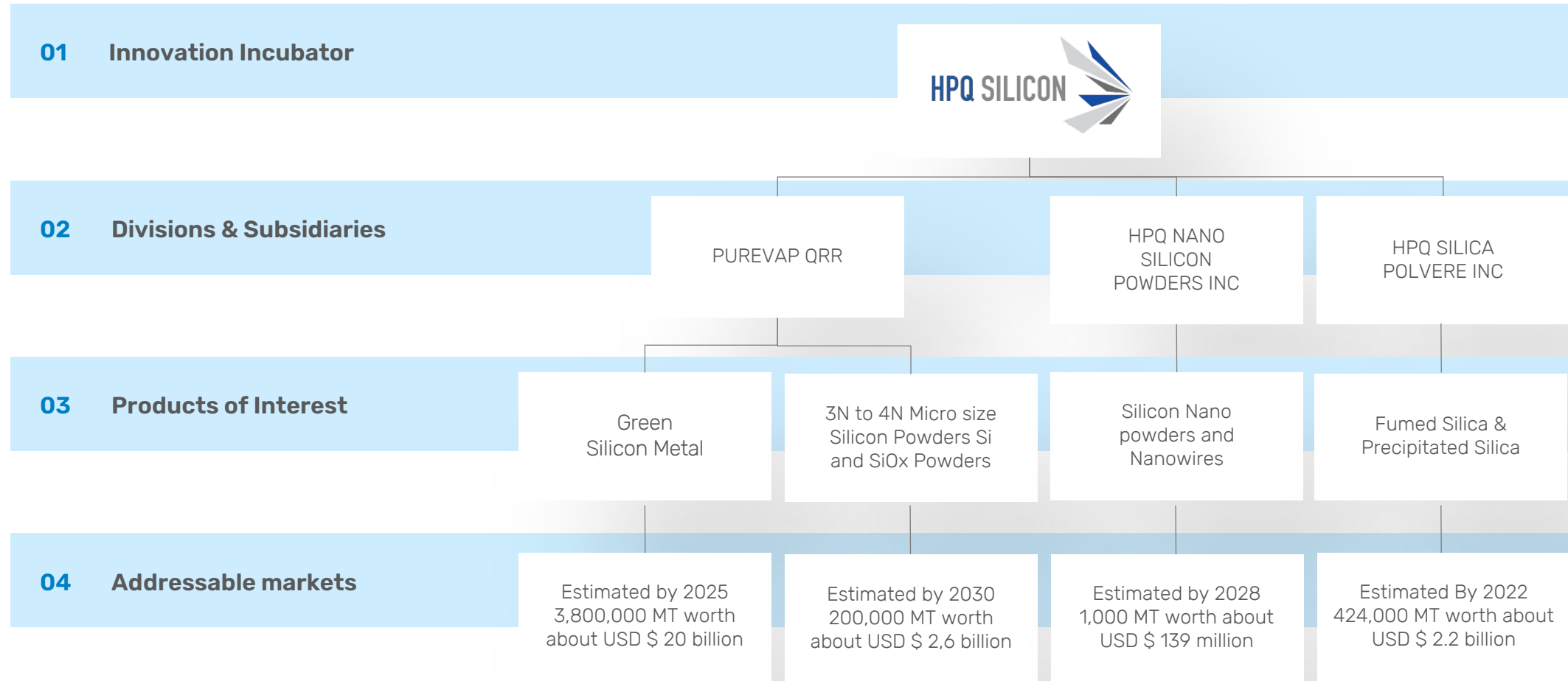
**Industrial demand for *PUREVAP™ QRR* Silicon is large and will be driven by the following factors:**

- ▶ Demand for High Purity Silicon (3N to 4N Si) as feedstock to make:
  - ▶ Micron-size silicon powders for today's Li-Ion battery applications and other high-value applications like Silicon Nitride
  - ▶ Nano silicon powder and Nanowires for next-generation Li-Ion battery applications
- ▶ Auto and EV manufacturers need Metallurgical Grade Silicon (98.5% Si) to make vehicles lighter & stronger
- ▶ 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 10.7% CAGR, expected to reach US\$ 23 B by 2025 (Source [marketsandmarkets.com](https://www.marketsandmarkets.com))
  - ▶ Polysilicon for solar & electronics, an end market growing at 20% CAGR expected to surpass US\$ 200 B By 2026 (Source [marketsandmarkets.com](https://www.marketsandmarkets.com))





# — VALUE PROPOSITION: DEVELOP & MONETIZE



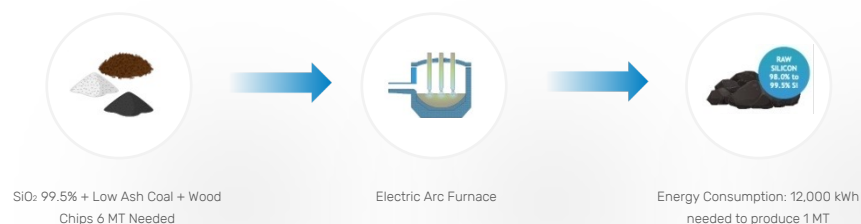
# — PUREVAP™ QRR OUR FIRST DISRUPTIVE TECHNOLOGY

## ▶ GAME CHANGING VERSATILITY VERSUS CONVENTIONAL PROCESS DATING FROM 1899

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

- Scalable by minimum increments of 30,000 MTY
- Minimum investment > US\$ 200 M
- 2N+ Si production limited at 40% of plant output
- Requires additional purification steps for Battery use
- Need 6 MT of Feedstock to produce 1 MT
- On average, it costs > US\$ 2,000/mt to make 98% Si (MG Si)

### Quartz (SiO<sub>2</sub>) to Raw Silicon (Si) - Conventional Carbothermic Process

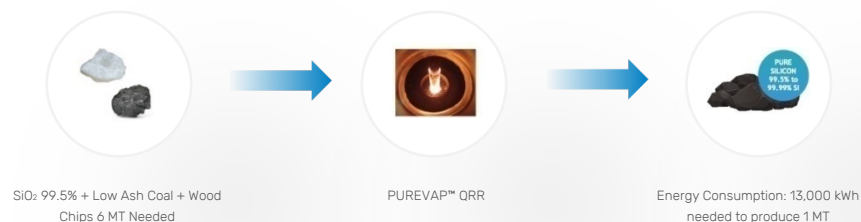


## ▶ PUREVAP™ QRR: THE BEST OPTION FOR NEW PLANTS NEEDED TO MEET SILICON DEMAND

**PUREVAP™ QRR process to produce 99.5 % to 99.99 % Silicon (Si):**

- Scalable by minimum increments of 2,500 MTY
  - Minimum investment 85% - 90% less than conventional plant
- 3N to 4N+ Si production in one step
  - Allow HPQ to make a material perfect for battery applications for less than any of our competitors
- Need 4.5 MT of Feedstock to 1 MT
- New process expected to make 3N to 4N Si for < US\$ 2,000/mt

### Quartz (SiO<sub>2</sub>) to High Purity Silicon (Si) - PUREVAP™ QRR Process

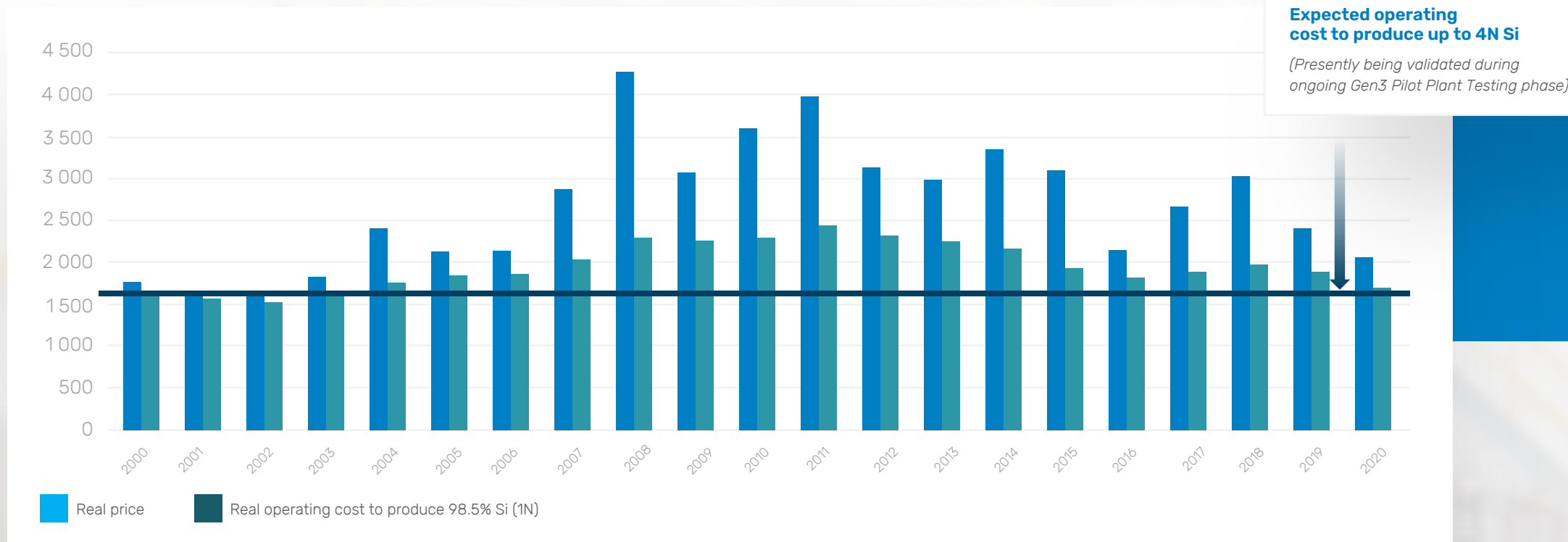


# — PUREVAP™ QRR LOW COST, HIGH PURITY

## PUREVAP™ QRR OPEX VERSUS COMPETING Si PRODUCERS USING TRADITIONAL PROCESS

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

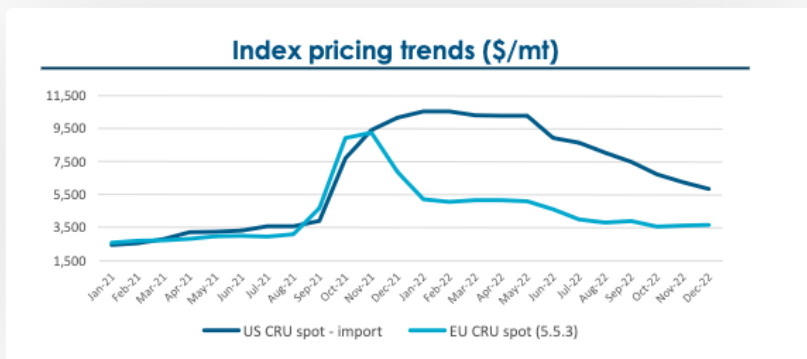
US spot price of 5.5.3 grade silicon (98.5% Si) vs. avg. operating cost at plants outside China and the CIS in real terms, \$/t



Silicon in the 2020s (Source: CRU)



# — **PUREVAP™ QRR PILOT PLANT FIRST Si MATERIAL PRODUCED DEC 2022**



**EU 2N + (99.5) SILICON SPOT PRICE 6,000 €**

► 67% premium over the price of 5.5.3 or 98.5% Si  
Source: NOVACIUM SAS

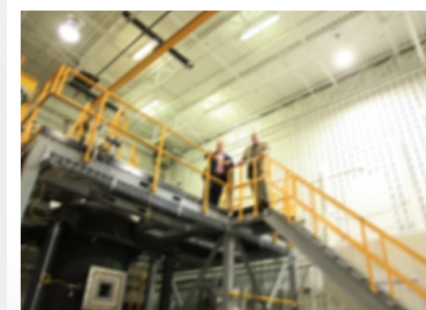
SILICON PRICES ARE SUPPORTIVE OF THE *PUREVAP™ QRR* INITIATIVE

**TRADITIONAL AND NEW EMERGING MARKETS REQUIRE NEW PLANTS TO MEET DEMAND**

## HPQ UNIQUE ADVANTAGES

*PUREVAP™ QRR* capability to produce:

- 2N Silicon for less (Opex and Capex)
- 3N to 4N Silicon in one step versus traditional process that require multi steps to do the same



# — 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 validation of technology,	Technical, Economic, and Operational Scaling Up Feasibility Studies Gen4, Engineering, Equipment Procurement and Financing	Gen4 PUREVAP™ QRR commercial plant (s) Construction – Commissioning	Start of commercial production

## 2022 QRR PILOT PLANT MILESTONES REACHED

- ✓ Pilot Plant assembly completed,
- ✓ Commissioning completed, Pilot Plant Functional
- ✓ Pilot Plant Powered up – Static Dynamic test successfully completed, Pilot Plant Operational
- ✓ Pilot plant started to process material and produced Silicon

## 2023 QRR UPCOMING CATALYSTS

- Completing test series #1 – batch testing the system until enough material is produced to complete a successful Silicon pour
- Completing test series #2 – Semi-continuous batch production until the system completes at least 6 continuous production cycle per day, with each cycle yielding 20 kg of Silicon per pour
- Completing test series #3 – producing battery-grade silicon (at least 3N+) in one step
- Producing materials for HPQ Battery Initiative
- Start of the Technical, Economic and Operation Scaling Up feasibility studies

# — HPQ SILICON FOR BATTERY INITIATIVE



**Following the onboarding of Novacium in Q3 2022, HPQ is working to become North America first producer of micron size Silicon powder and SiOx powders for batteries by 2024**

HPQ expects to use the 2,500 tonnes per year (TPY) of High Purity Silicon produced by its Gen4 PUREVAP™ Quartz Reduction Reactor (QRR) as feedstock for a battery material production line, among other applications.

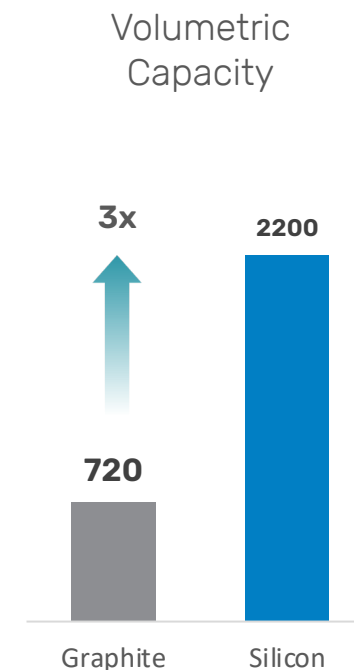
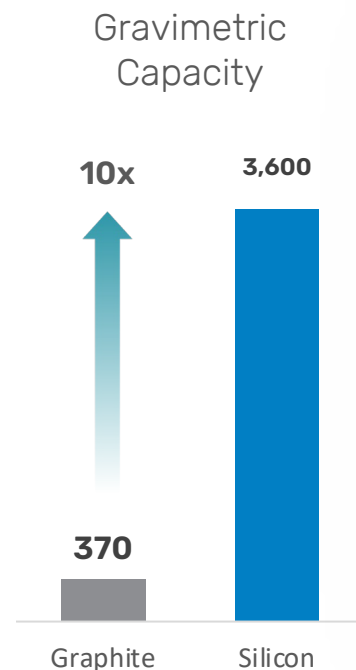
Between now and then, HPQ intends to build up its capacity gradually and gain the expertise and market presence (share) to accomplish that goal.

HPQ's first modular production line capacity will be set at 200 TPY capacity to produce less than 5 microns size Si powders or 300 TPY of less than 5 microns SiOx powders.



# — MICRON SIZE SILICON BATTERY 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 exceed supply for the first time in 2022
  - Deficit projected to grow to 8M tonnes by 2040  
(Source: <https://www.mining.com/>)
- ▶ Replacing a small percentage (5 to 10%) of graphite in the anode chemistry with micron-size Si or SiO<sub>x</sub> powders could:
- ▶ Address the ongoing graphite deficit
- ▶ Improve battery performance



**Silicon for batteries demand, principally in the form of micron size 3N + Si and SiO<sub>x</sub> powders, is projected to exceed 200K MT worth ≈ US\$ 2.6 B by 2030 (CAGR +50%),**

Source: CRU and Business Korea.co.kr

# — HPQ SILICON FOR BATTERY INITIATIVE

HPQ intends to become North America's first micron-size silicon and SiO<sub>x</sub> producer in 2024, 2 years before the first gen4 PUREVAP™ QRR is operational

PROJECTS	2023	2024	2025	2026
<b>BATTERY INITIATIVE</b>	<div>Testing industrial equipment's that can make micron size Si Powders</div> <div>Finalizing pathway to manufacture commercially 3N+ &lt;5-micron Si and SiO<sub>x</sub> powders</div>	<div>Set up &amp; start a complete North American production line that can produce 200 TPA of Micron size (&lt;5-micron) Si powders or 300 MT of micron size (&lt;5-micron) SiO<sub>x</sub> powders</div>	<div>Continually scale up and expanding our production capacity to make micron size (&lt;5-micron) SiO<sub>x</sub> powders by increments of 300 Mt up to a capacity capable of handling the 2,500 MT of feedstock coming from our first Gen4 PUREVAP™ QRR commercial plant in 2026</div>	

## 2023 BATTERY INITIATIVE UPCOMING CATALYSTS

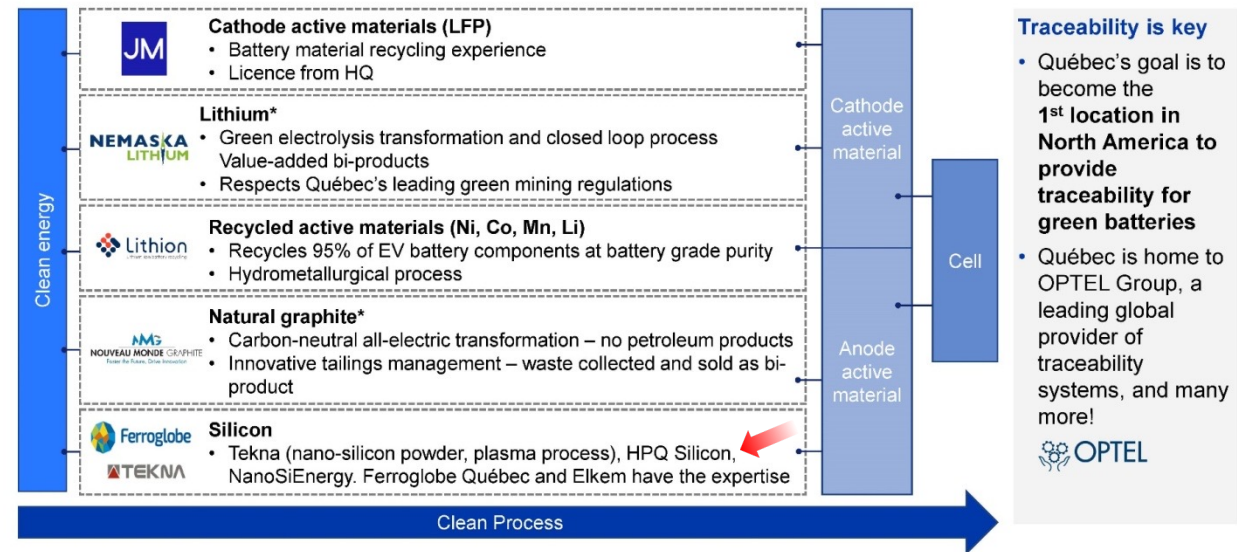
- ✓ Producing small quantity (15 kg) of 3N+ micron size (<5 micron) Si powder
- Producing larger quantity of 3N+ micron size (<5 micron) Si powder (≥ 800 Kg)
- Having the material tested at different high-level research centers
- Developing pathway to secure access to high purity silicon feedstock
- Finalizing pathway to manufacture commercially 200 TPA of Micron size Si powders or 300 MT of micron size SiO<sub>x</sub> powders
- Secure the services of a project manager and sales team
- Start marketing of material to prospective buyer / shipping samples to them
- Testing material to see if Novacium patented surface treatment process can improve battery performance
- Finalize site emplacement and start equipment procurement process

# — QUEBEC AN EMERGING KEY HUB FOR BATTERY SUPPLY CHAIN



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

## Developing a uniquely clean and traceable supply chain



\* In development.  
Source: Ministère de l'Énergie et des Ressources naturelles, "Québec Plan for the Development of Critical and Strategic Minerals 2020-2025 (QPDCSM)", 2021.

Investissement  
Québec  
International

Qu Québec

## — PUREVAP™ NSiR NEXT GENERATION LI-ION

Over the last few years HPQ signed at least seven (7) NDAs with EV manufacturers, battery makers and other high-value materials companies. From these HPQ can divulge the following:

- ▶ Most of the NDAs signed indicated a strong preference for micron size Silicon material
- ▶ Most of the one interested in the nano size material are working in next generation Li-ion batteries

**While the objective remains to develop the NSiR, in the near term, our focus will be centered on manufacturing high purity Micron size Silicon material for EV, battery makers and others**

### HPQ NANO NEW PROCESS TO PRODUCE NANO Si MATERIAL FOR NEXT GENERATION LI-ION BATTERIES

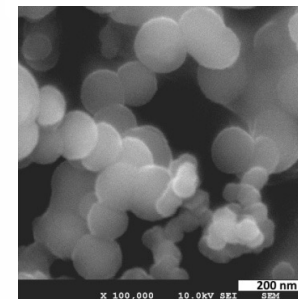
#### MAKING SILICON MATERIALS FOR BATTERIES

##### SILICON (Si) to NANOPOWDERS AND NANOWIRES - PUREVAP™ NSiR Process

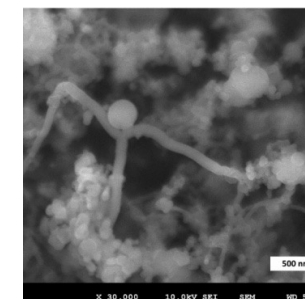


A new scalable, versatile, low-cost plasma process with a capability to produce tailor made spherical Si materials from < 100 nanometer (nm) up to 1 micrometers (μm)

Material produced by **PyroGenesis** during proof-of-concept test



SILICON NANOPOWDERS



SILICON NANOWIRES

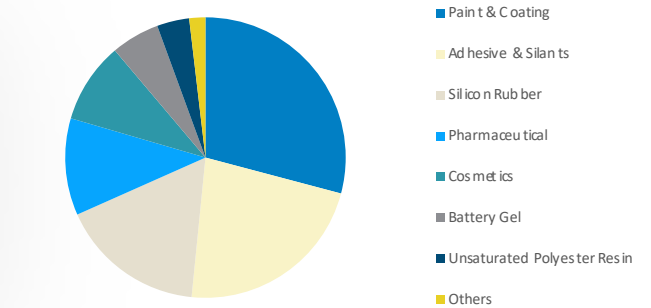


# — FUMED SILICA REACTOR: ANOTHER DISRUPTIVE TECHNOLOGY

- ▶ 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		PROJECTION	
	2016		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

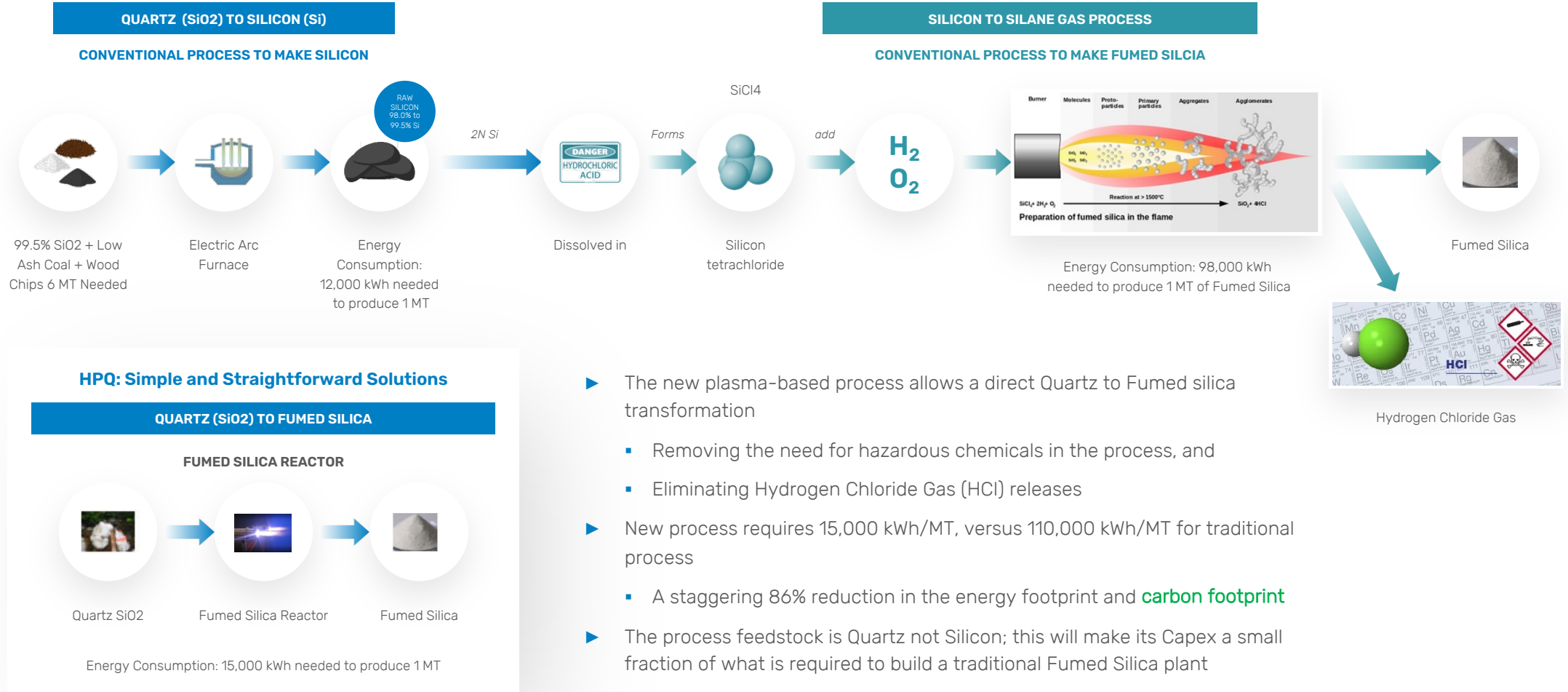
Fumed Silica Market (%) by Industry



Source: MRFR Analysis

- ▶ 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 mt 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

# — TRADITIONAL FUMED SILICA PROCESS VS NEW PROCESS

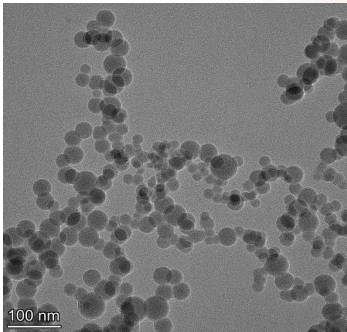


# — HPQ INNOVATIONS: FUMED SILICA INDICATIVE TIMELINE

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	Technical, Economic, and Operational Scaling Up Feasibility Studies	First commercial plant Engineering, Equipment Procurement and Financing	Fumed Silica commercial plant (s) Construction – commissioning		

## FUMED SILICA INITIATIVE UPCOMING CATALYSTS

- Finalize ongoing small-scale testing of different pilot plant design configuration
- Finalize design choice for the Fumed Silica Reactor pilot plant
- Finalize equipment decision and procurement process
- Building and commissioning test a pilot plant
- Start testing program to produce 170 kg/day continuous feed
- Start producing Fumed Silica
- Produce high-quality product (Fumed Silica with High surface area (100-200 m<sup>2</sup>/g), rheological properties (STMD196-18),
- Produce 5m<sup>3</sup> of quality fumed silica and send to customers for testing.

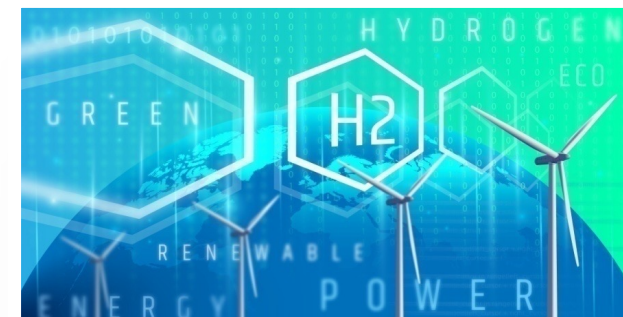


Scan microscope image of material produce during testing

## ONGOING COLLABORATION WITH HPQ

**Since Novacium onboarding in Q3 2022, the collaboration has been focused around 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 SiOx particles for battery 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) A new 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
<b>PUREVAP™ QRR</b>	Gen3 QRR Pilot plant validation of technology,	Technical, Economic, and Operational Scaling Up Feasibility Studies	Gen4, Engineering, Equipment Procurement and Financing	Gen4 PUREVAP™ QRR commercial plant (s) Construction – Commissioning	Start of commercial production
<b>BATTERY INITIATIVE</b>	Testing industrial equipment's that can make micron size Si Powders	Finalizing pathway to manufacture commercially 3N+ <5-micron Si and SiOx powders	Set up & start a complete North American production line that can produce 200 TPA of Micron size (<5-micron) Si powders or 300 MT of micron size (<5-micron) SiOx powders	Continually scale up and expanding our production capacity to make micron size (<5-micron) SiOx powders by increments of 300 Mt up to a capacity capable of handling the 2,500 MT of feedstock coming from our first Gen4 PUREVAP™ QRR commercial plant in 2026	
<b>FUMED SILICA</b>	Small scale testing of different Fumed Silica Pilot Plant configurations	Engineering – Construction – Commissioning of Fumed Silica Pilot Plant	Pilot plant validation of technology	Technical, Economic, and Operational Scaling Up Feasibility Studies First commercial plant Engineering, Equipment Procurement and Financing	Fumed Silica commercial plant (s) Construction – commissioning
<b>HYDROGEN TECHS</b>	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

# — UPCOMING CATALYSTS

## 01. PUREVAP™ QRR Project

- ☐ Completing test Series #1 – Silicon Pour
- ☐ Completing test Series #2 – Semi-continuous batch production
- ☐ Completing test Series #3 – Production of 3N Si
- ☐ Start of technical, Economic feasibility studies

## 02. BATTERY INITIATIVE

- ☒ Producing test size of < 5-micron Si Powders
- ☐ Producing ( $\geq$  800 Kg) of < 5-micron Si Powders
- ☐ Material test at High-Level research center
- ☐ Start of technical, Economic feasibility studies

## 03. 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)	9,6%	8,6%
PyroGenesis Canada Inc.	6,4%	9.8%
Management & Board	6.3%	10.4%
Strategic Investors	7,5%	9.0%

52 weeks			
	Price	Low	High
(As of March 15, 2023)	\$ 0,260	\$ 0,195	\$ 0,62

	Million
Basic Shares Outstanding	353.4
Options (Average Price \$0.61 / Duration 2,71 years)	16,4
Warrants (Average Price \$0.306)	21.9
Fully Diluted Shares Outstanding	391,9
Market Capitalization (Basic)	91.9
Market Capitalization (Fully Diluted)	101,9
Cash and Cash equivalent available for projects advancements	5,8

# — 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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