

PyroGenesis Announces Debt-to-Equity Conversion of Client Receivable

PyroGenesis to receive 17,968,873 units comprised of one common share plus one common share purchase warrant from HPQ Silicon Inc.

MONTREAL, Dec. 19, 2024 -- PyroGenesis Inc. ("PyroGenesis") (<http://pyrogenesis.com>) (TSX: PYR) (OTCQX: PYRGF) (FRA: 8PY), a high-tech company that designs, develops, manufactures and commercializes advanced plasma processes and sustainable solutions, which are geared to reduce greenhouse gases (GHG) and address environmental pollutants, announced today an agreement with HPQ Silicon Inc. ("HPQ") to resolve an outstanding liability of \$4,941,440 owed to PyroGenesis, using a debt-to-equity conversion.

Under the agreement, the outstanding liability will be converted into 17,968,873 units at a price of \$0.275 per unit. Each unit will be comprised of one common share of HPQ and one common share price warrant. Each warrant will entitle PyroGenesis to acquire one common share of HPQ at a price of \$0.285 until the date that is two years following the effective date of this transaction.

Upon issuance of the units to PyroGenesis, the outstanding liability shall be deemed fully satisfied.

The shares and warrants are subject to a hold period of four (4) months and one (1) day from the date of the issuance, as required under National Instrument 45-102 – Resales of Securities and applicable TSX Venture Exchange policies.

This agreement is subject to standard regulatory approvals including the approval of the TSX Venture Exchange.

PyroGenesis engages with HPQ on a variety of initiatives, and [previously announced](#) an intent to exercise its option to purchase 50% of HPQ's ownership stake in HPQ Silica Polvere Inc., a wholly-owned subsidiary of HPQ. HPQ Polvere's primary initiative is the Fumed Silica Reactor (FSR) project, for which PyroGenesis has been designing, engineering, and constructing a proprietary technology to convert quartz (SiO₂) into fumed silica (also known as *pyrogenic silica*) in a single and eco-friendly step while eliminating the use of harmful chemicals generated by conventional methods. The FSR, if successful, could provide a groundbreaking contribution to the repatriation of fumed silica production to North America.

"PyroGenesis and HPQ continue to work together on important projects including the fumed silica reactor initiative," said P. Peter Pascali, President and CEO of PyroGenesis. "With the first series of process material tests commencing in January 2025, we are excited by what the future holds for the FSR technology and for what we believe will transform fumed silica manufacturing for the better."

PyroGenesis' involvement in developing fumed silica from quartz is part of its [three-tiered solution ecosystem](#) that aligns with economic drivers that are key to global heavy industry. Fumed silica production is part of PyroGenesis' **Commodity Security & Optimization** tier, where the recovery of viable metals and the optimization of production to increase output helps to maximize raw materials and improve the availability of critical minerals. The other tiers are **Energy Transition and Emission Reduction**, and **Waste Remediation**.

About PyroGenesis Inc.

PyroGenesis, a high-tech company, is a proud leader in the design, development, manufacture and commercialization of advanced plasma processes and sustainable solutions which reduce greenhouse gases (GHG) and are economically attractive alternatives to conventional "dirty" processes. PyroGenesis has created proprietary, patented and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in four massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. With a team of experienced engineers, scientists and technicians working out of its Montreal office, and its 3,800 m² and 2,940 m² manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. PyroGenesis' shares are publicly traded on the TSX in Canada (TSX: PYR), the OTCQX in the US (OTCQX: PYRGF), and the Frankfurt Stock Exchange in Germany (FRA: 8PY).

About HPQ Silicon

[HPQ Silicon Inc.](#) (TSX-V: HPQ) is a Quebec-based TSX Venture Exchange Tier 1 Industrial Issuer.

HPQ is developing, with the support of world-class technology partners [PyroGenesis Inc.](#) and [NOVACIUM SAS](#), new green processes crucial to make the critical materials needed to reach net zero emissions.

HPQ activities are centred around the following four (4) pillars:

1. Becoming a green low-cost (Capex and Opex) manufacturer of Fumed Silica using the **FUMED SILICA REACTOR**, a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.
2. Becoming a zero CO₂ low-cost (Capex and Opex) producer of High Purity Silicon (2N+ to 4N) using our **PUREVAP™**

“Quartz Reduction Reactors” (QRR), a proprietary technology owned by HPQ being developed for HPQ by PyroGenesis.

3. Becoming a producer of silicon-based anode materials for battery applications with the assistance of NOVACIUM SAS.
4. HPQ SILICON affiliate NOVACIUM SAS is developing a low carbon, chemical base on demand and high-pressure autonomous hydrogen production system.

For more information, please visit [HPQ Silicon web site](#).

Cautionary and Forward-Looking Statements

This press release contains “forward-looking information” and “forward-looking statements” (collectively, “forward-looking statements”) within the meaning of applicable securities laws. In some cases, but not necessarily in all cases, forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “targets”, “expects” or “does not expect”, “is expected”, “an opportunity exists”, “is positioned”, “estimates”, “intends”, “assumes”, “anticipates” or “does not anticipate” or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might”, “will” or “will be taken”, “occur” or “be achieved”. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances contain forward-looking statements. Forward-looking statements are not historical facts, nor guarantees or assurances of future performance but instead represent management’s current beliefs, expectations, estimates and projections regarding future events and operating performance.

Forward-looking statements are necessarily based on a number of opinions, assumptions and estimates that, while considered reasonable by PyroGenesis as of the date of this release, are subject to inherent uncertainties, risks and changes in circumstances that may differ materially from those contemplated by the forward-looking statements. Important factors that could cause actual results to differ, possibly materially, from those indicated by the forward-looking statements include, but are not limited to, the risk factors identified under “Risk Factors” in PyroGenesis’ latest annual information form, and in other periodic filings that it has made and may make in the future with the securities commissions or similar regulatory authorities, all of which are available under PyroGenesis’ profile on SEDAR+ at www.sedarplus.ca. These factors are not intended to represent a complete list of the factors that could affect PyroGenesis. However, such risk factors should be considered carefully. There can be no assurance that such estimates and assumptions will prove to be correct. You should not place undue reliance on forward-looking statements, which speak only as of the date of this release. PyroGenesis undertakes no obligation to publicly update or revise any forward-looking statement, except as required by applicable securities laws.

Neither the Toronto Stock Exchange, its Regulation Services Provider (as that term is defined in the policies of the Toronto Stock Exchange) nor the OTCQX Best Market accepts responsibility for the adequacy or accuracy of this press release.

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