



PyroGenesis Announces \$4.6 MM Increase in Funding to Transform Quartz into Fumed Silica; Signs \$4MM Contract with HPQ Polvere

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Includes Additional Government Funding Increases its GHG reduction offerings

MONTREAL, July 06, 2021 (GLOBE NEWSWIRE) -- PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX: PYR) (NASDAQ: PYR) (FRA: 8PY), a high-tech company (hereinafter referred to as the "Company" or "PyroGenesis"), that designs, develops, manufactures and commercializes plasma atomized metal powders, environmentally friendly plasma waste-to-energy systems and clean plasma torch products, is pleased to announce today that, further to its press release dated May 27th, 2021, wherein it had announced a \$700,000 grant from Sustainable Development Technology Canada to develop a novel production process to transform quartz into fumed silica, PyroGenesis has now signed a contract for approx. \$4MM (the "Contract") with HPQ Silica Polvere Inc. ("HPQ Polvere" or the "Client"), a wholly owned subsidiary of HPQ Silicon Resources Inc ("HPQ"). This Contract is part of a project, valued for a total of approx. \$5.3 MM. The difference is expected to be funded by an additional government agency for \$630,000 as well as a contribution by PyroGenesis of \$175,000. It is expected that all these amounts will be paid directly to PyroGenesis.

PyroGenesis has been tasked, over the next 24 months, to design, develop and manufacture downstream business opportunities by converting quartz to fumed silica, using a novel one-step plasma-based reactor (the "Reactor"). Fumed Silica is a thickening agent used in a wide range of applications, such as paints, cosmetics, coatings, inks and resins. If successful, PyroGenesis' innovative green solution would not only be economical in and of itself, but would also (i) eliminate the toxic by-products of conventional processes, and (ii) reduce greenhouse gas ("GHG") emissions by approximately 90%¹. This would be a significant improvement over the current environmentally damaging fumed silica production processes, and could become a game changing process for the industry.

Fumed silica is a white microscopic powder with high surface area and low bulk density. Its commercial applications encompass various industries including personal care, pharmaceuticals, agriculture (food & feed), adhesives, sealants, construction, batteries and automotive to name a few. Research² indicates that the demand for fumed silica is growing at 6% CAGR, with a global addressable market of US\$ 1.5 billion in 2016 which is expected to grow to US\$ 2.2 billion in 2022. *(Please refer to HPQ press release dated May 4th, 2021 for further details).*

The Contract with HPQ Polvere includes the sale of a provisional patent application (hereafter the "IP") relating to the Reactor, for 3.3MM\$ and the exclusive use, by HPQ Polvere, of the IP in the field of fumed silica manufacturing (the "Field"), together with a 10% royalty on the Client's future sales ("Royalty") (with set minimums never to exceed 100% of revenues). PyroGenesis retains a royalty-free, exclusive, irrevocable, worldwide license to use the IP for all activities outside of the Field. This royalty stream can, at any time, be converted by PyroGenesis into a 50% ownership in HPQ Polvere.

"This Contract represents another significant milestone in our relationship with HPQ and, once again, underscores the many hidden opportunities within this partnership," said M. P Peter Pascali, President and CEO of PyroGenesis. "This Contract is another testament to PyroGenesis' solid position as an emerging leader in GHG emissions reduction. In fact, this opportunity is a natural extension of what is being targeted by the Company, and is well aligned with environmental initiatives currently taking place worldwide."

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a leader in the design, development, manufacture and commercialization of advanced plasma processes and products. The Company provides its engineering and manufacturing expertise and its turnkey process equipment packages to customers in the defense, metallurgical, mining, advanced materials (including 3D printing), and environmental industries. 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 Company's core competencies allow PyroGenesis to provide innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. PyroGenesis' operations are ISO 9001:2015 and AS9100D certified. For more information, please visit www.pyrogenesis.com.

This press release contains certain forward-looking statements, including, without limitation, statements containing the words "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "in the process" and other similar expressions which constitute "forward-looking information" within the meaning of applicable securities laws. Forward-looking statements reflect the Corporation's current expectation and assumptions and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties including, but not limited to, our expectations regarding the acceptance of our products by the market, our strategy to develop new products and enhance the capabilities of existing products, our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Corporation with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Corporation's ongoing filings with the securities regulatory authorities, which filings can be found at www.sedar.com, or at www.sec.gov. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Corporation undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new information, future events or otherwise, 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 NASDAQ Stock Market, LLC accepts responsibility for the adequacy or accuracy of this press release.

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¹ Based on Internal Calculations (Reviewed by Government Agency)

² Source Marketandmakers.com