

PyroGenesis Announces Factory Acceptance Test for Plasma Torches Scheduled with Client A, a Multi-Billion-Dollar International Producer of Iron Ore Pellets

MONTREAL, Jan. 27, 2022 -- PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (NASDAQ: PYR) (TSX: PYR) (FRA: 8PY), a high-tech Company (hereinafter referred to as the "Company" or "PyroGenesis"), that designs, develops, manufactures and commercializes advanced plasma processes and sustainable solutions to reduce greenhouse gases (GHGs), is pleased to announce today that, further to its [Q3 2021 financial results press release](#), a factory acceptance test ("FAT") for the use of its plasma torches in iron ore pelletization has now been scheduled to be completed with Client A. This FAT is scheduled to be conducted between Feb 2nd and Feb 14th, 2022.

As previously disclosed, Client A is a multi-billion-dollar international producer of iron ore pellets, one of the largest in the industry, whose name will remain confidential for competitive reasons. The Client, which has committed to reduce its GHG emissions, has over ten (10) plants, each possibly requiring up to 50 plasma torches. PyroGenesis has the only patented process in the iron ore pelletization industry designed to replace "dirty" fossil fuel burners with environmentally friendly plasma torches, thereby greatly reducing emissions.

"We are pleased to announce today that we are now entering the acceptance test phase with Client A; a client with a need for up to 500 torches," said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. "Once we have completed the testing, we will not only announce the outcome, but we expect to have sufficient data to provide further visibility on the expected timeline moving forward."

PyroGenesis' plasma torches greatly reduce emissions by replacing "dirty" fossil fuel burners with clean plasma torches. PyroGenesis estimates that worldwide pellet production of 400MMT¹ consumes between 8000-12000 MW of energy annually. The company estimates that the potential addressable market is over \$10B², assuming a one-to-one replacement of fossil fuel burners with an estimated ten thousand 1MW plasma torches, based on an assumed cost per plasma torch of approximately \$1.5M.

"Completing the FAT will be a significant milestone in our ultimate goal of providing PyroGenesis' plasma torches to iron ore pelletizers worldwide, in their quest to reduce GHGs", added Mr. Pascali. "We are proud that, despite the challenges facing companies these days (supply chain issues, labor constraints, and general covid related issues), both teams that are working on this project, ours and our Client's, have managed to keep the project on track and meeting all requirements to date. This progress speaks volumes with respect to our expertise in understanding the unique requirements of multi-billion-dollar clients, and the dedication we have to ensure ultimate success. I look forward to personally participating in the factory acceptance test. I believe this will prove to be a truly momentous occasion for the Company, and one which could potentially be a tipping point for PyroGenesis, as we position ourselves to be the go-to provider of plasma based GHG solutions."

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 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. 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 Company'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 Company with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Company'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 Company 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 M. Huerta, J. Bolen, M. Okrutny, I. Cameron and K. O'Leary, "Guidelines for Selecting Pellet Plant Technology", Iron Ore Conference 2015 Proceedings, Perth, WA, July 13-15, 2015

² Based on PyroGenesis' Internal Calculations