



PyroGenesis Signs Joint-Venture Agreement to Build and Operate Plants to Convert Aluminum Dross Residues into High Value Chemical Products

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Complements Existing Portfolio of Green Solutions Catering to the Aluminum Industry

MONTREAL, Sept. 27, 2021 (GLOBE NEWSWIRE) -- 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, is pleased to announce today that, further to its Q2 2021 financial results press release (section Outlook) dated August 16th, it has signed joint venture and license agreements (both agreements collectively the "JV") with a leading residue processor (the "Partner") to transform dross residues into high value chemical products.

"This is a very interesting addition to PyroGenesis' offerings as it fits perfectly into PyroGenesis' existing portfolio of waste management services offered to the aluminum industry, at a time when aluminum prices are making our core technology even more valuable. This JV not only solidifies our Drosrite™ offering, but it is also able to address a downstream problem that is increasingly plaguing the industry; namely, how to handle dross residues which are becoming more and more regulated and banned from landfills," said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. "This is the ultimate coffee & donut strategy where, with very little additional effort, we are able to sell, alongside Drosrite™, a separate compelling green solution, which also further secures Drosrite™'s commercial competitiveness."

This 50:50 JV will be geared towards building, installing and operating dross residue valorization facilities worldwide. To this effect, PyroGenesis secured, through the JV, an exclusive license to a patented and novel technology which is expected to convert dross residues into high value chemical products. Under the terms of the JV, the exclusive access to the technology initially applies to projects in North America and in the Gulf Cooperation Council nations. Upon successful completion of the first project, the exclusive access to the technology will expand to include, for all sense and purposes, the majority of the world. These dross residues are currently either being (i) landfilled (which is increasingly becoming banned by regulators) or (ii) sold as cheap flux to the cement industry.

"We are increasingly finding that these residues are being stored pending a viable solution or are being treated with a very expensive technology to make them landfill acceptable," said Mr. Alex Pascali, Senior Business Development Manager of PyroGenesis. "We find there is a significant opportunity to be able to offer, through the JV, an economically and environmentally sound solution to a serious problem facing the industry. Today's announcement effectively secures PyroGenesis' existing market position by building upon the Drosrite™ advantage and tapping into unseen value in the waste stream."

The first plant, which will be built after securing a contract to process dross residues, has already been identified within the Gulf Region and discussions to secure and process those residues have already taken place. This facility is expected to be designed to process approximately 25,000 tonnes of aluminum dross residues per year and convert these aluminum dross residues into high margin products with an expected selling price of between USD\$200 to \$450 per tonne.

Aluminum dross is typically comprised of two elements: (i) aluminum metal (60%), and (ii) aluminum oxides (40%). PyroGenesis' DROSRITE™ system can recover up to 98% of the aluminum metal fraction. It is this remaining 40% aluminum oxide (dross residues) material that is often landfilled or sold as a cheap additive. Following today's announcement, it is expected that these residues could now be processed by the JV, and converted into high margin products, such as aluminum sulfate and ammonium sulfate, thereby transforming a waste stream and unlocking a potentially significant new revenue stream for the Company.

"We believe that this announcement is a game-changer for the aluminum industry, as it allows PyroGenesis to offer a complete on-site dross processing service delivering zero-landfill/reduced carbon solutions while at the same time increasing clients' profitability. We believe that this has never been done before," said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. "By working closely with our clients, we have been able to witness firsthand the challenges facing their industry, and more importantly speak to operators and plant managers with respect to these issues. This provides us with invaluable insight upon which we can pitch engineering solutions as we have today. With this unique partnership, the JV enables PyroGenesis to include, amongst its offerings, another game changing environmentally friendly solution that converts residues destined for landfill. PyroGenesis is increasingly becoming a green solution to the aluminum industry. We expect to expand on this advantage both within the aluminum industry and, within other industries which are being faced with similar challenges."

PyroGenesis' DROSRITE™ system is a salt-free, cost-effective, sustainable process for maximizing metal recovery from dross, a waste generated in the metallurgical industry. PyroGenesis' patented process avoids costly loss of metal while reducing a smelter's carbon footprint and energy consumption, providing an impressive return on investment. The system has been designed to process and recover valuable metal such as aluminum, zinc and copper from dross.

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 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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