PyroGenesis Signs Contract Toward the Use of Plasma in the Treatment of Low-Level Radioactive Waste

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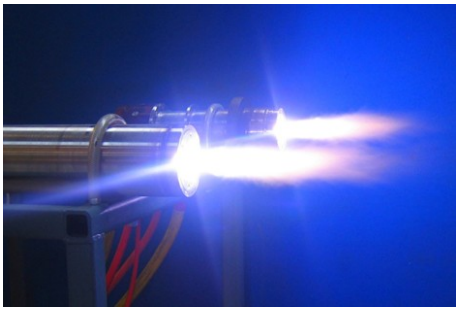
Design phase contract is with a European specialist in radioactive waste processing and nuclear decommissioning

MONTREAL, Dec. 17, 2025 (GLOBE NEWSWIRE) -- PyroGenesis Inc. (“PyroGenesis”) (TSX: PYR) (OTCQX: PYRGF) (FRA: 8PY1), the leader in ultra-high temperature processes and engineering innovation, and a plasma-based technology provider to heavy industry & defense, announces today the recent signing of an initial design phase contract with a European organization specializing in radioactive waste processing and nuclear decommissioning.

As previously reported in the Outlook section of PyroGenesis’ 2 nd quarter earnings report, PyroGenesis was in negotiations with a major European entity for the use of plasma in the destruction of low-level radioactive waste. The contract announced today is for a design phase contract toward the development of a plasma furnace that can be utilized in the customer’s radioactive material treatment process.

The customer has decades of experience in the decommissioning of nuclear facilities and the safe treatment and storage of radioactive materials. The customer’s name is being withheld for competitive and confidentiality reasons.

Image: PyroGenesis’ proprietary plasma torch technology.



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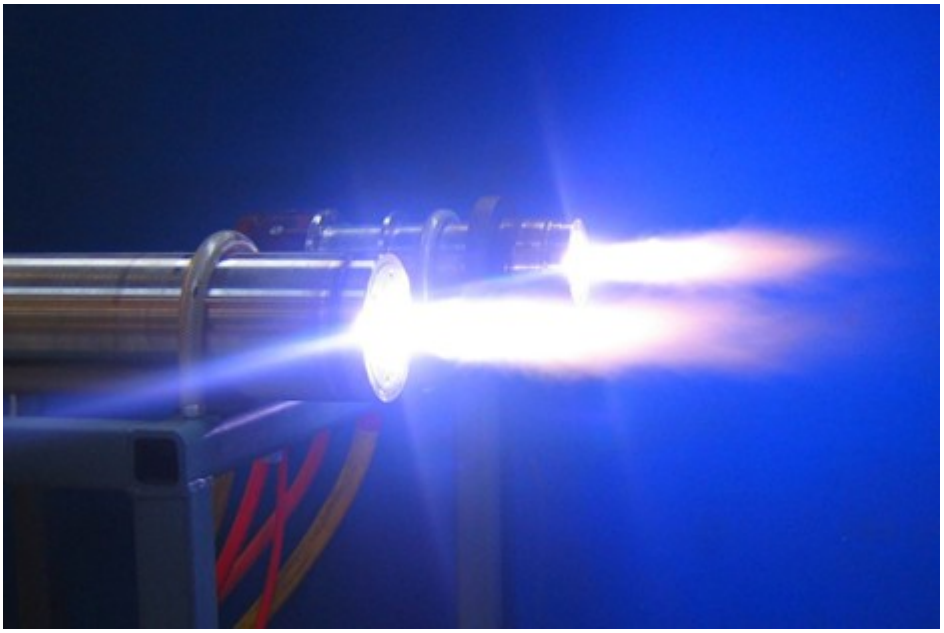

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PROJECT HIGHLIGHTS

Purpose: to define the technical specifications, sizing, and design parameters, for a subsequent engineering and build phase, for a plasma-equipped furnace and the related peripheral components required as part of the potential construction of a radioactive waste vitrification and treatment plant in Europe.

Scope: engineering study, simulations, and design, for evaluation of a plasma torch furnace in comparison to an electric arc furnace.

Timeline: approximately 4 months.

Strategic Impact: with nuclear capacity in the European Union expected to grow, the amount of low- and very-low level radioactive waste (which combined represent approximately 90% of all stored radioactive waste in the EU) is expected to increase, mandating the development of additional safe and effective treatment processes such as plasma-powered furnace systems.

“With the renewed emphasis on nuclear power around the world, the need for systems that can safely process and treat low-level radioactive waste should continue to grow,” said Mr. P. Peter Pascali, President and CEO of PyroGenesis. “All-electric plasma furnaces designed and built by PyroGenesis represent a potential opportunity for low carbon, incineration-free solutions that can reduce the burden on landfills and other types of radioactive handling options.”

Low-level radioactive waste (LLW) includes items that are contaminated by contact with radioactive products, systems, or processes, but that are not radioactive themselves. These can include common items such as tools, gloves, paper, and rags, as well as some parts and components used within nuclear facilities. [1] Very low-level waste (VLLW) also includes concrete, plaster, rubble, soil, and scrap metal such as pipes, and larger components such as steam generators, that have been in contact with radioactive products. [2]

INDUSTRY AND MARKET CONTEXT

- The European Union (EU) depends on nuclear power for approximately 24% of its electricity. [3]
- The EU has ~100 nuclear reactors in 12 countries. [4]
- Nuclear installed capacity across the EU is projected to grow from 98 GWe (*gigawatt electric*, the measurable net output of electrical power delivered to the grid) in 2025 to ~109 GWe by 2050. [5]
- Data for the entire EU shows that Low-Level Waste (LLW) makes up ~61 % of the stored volume of radioactive waste, while Very Low-Level Waste (VLLW) makes up ~30 %. [6]

About PyroGenesis Inc.

PyroGenesis leverages 34 years of plasma technology leadership to deliver advanced engineering solutions to energy, propulsion, destruction, process heating, emissions, and materials development challenges across heavy industry and defense. Its customers include global leaders in aluminum, aerospace, steel, iron ore, utilities, environmental services, military, and government. From its Montreal headquarters and local manufacturing facilities, PyroGenesis' engineers, scientists, and technicians drive innovation and commercialization of energy transition and ultra-high temperature technology. PyroGenesis' operations are ISO 9001:2015 and AS9100D certified, with ISO certification maintained since 1997. PyroGenesis' shares trade on the TSX (PYR), OTCQX (PYRGF), and Frankfurt (8PY1) stock exchanges.

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.

For further information contact ir@pyrogenesis.com or visit http://www.pyrogenesis.com

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[1] https://radioactivity.eu.com/articles/radioactive_waste/lilw_sl_waste

[2] https://radioactivity.eu.com/articles/radioactive_waste/vllw_waste

[3] https://world-nuclear.org/information-library/country-profiles/others/european-union

[4] https://www.euronews.com/my-europe/2025/05/27/why-nuclear-energy-is-making-a-comeback-across-europe

[5] https://energy.ec.europa.eu/topics/nuclear-energy/nuclear-investment-needs_en

[6] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024SC0127

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/41ac01da-6e83-4837-b030-dda626cade56