



PyroGenesis Announces First Quarter 2025 Results

May 13, 2025

MONTRÉAL, May 13, 2025 (GLOBE NEWSWIRE) -- PyroGenesis Inc. ("PyroGenesis") (<http://pyrogenesis.com>) (TSX:PYP) (OTCQX:PYRGF) (FRA:8PY1), a high-tech company that designs, develops, manufactures and commercializes all-electric plasma processes and sustainable solutions to support heavy industry in their energy transition, emission reduction, commodity security, and waste remediation efforts, today announces its financial and operating results for the first quarter ended March 31, 2025.

"With a very strong project backlog, the beginning of major long-term energy transition customer collaborations underway, and some important project/contract milestones on the near-term horizon across several business lines including titanium metal and silica powder production, aluminum dross processing, and plasma burners in high temperature furnaces, we believe we are well-positioned for continued improvements in the upcoming fiscal quarters and do not see any emerging challenges across the various segments of our business," said P. Peter Pascali, President and CEO of PyroGenesis.

"We continue to make strides in our cost savings and efficiency measures. As we maintain focus on the cost optimization program which in 2024 resulted in over \$3 million in recurring savings, we expect the type of weaker quarter that was experienced this Q1 to occur less frequently over time. We have already targeted an additional \$3 to \$5 million cost optimization for 2025, which are recurring cost savings on top of the 2024 amount, that will also benefit the company on a recurring annual basis. We have often stated that the very nature of our percent-of-project-completion revenue model can at times lead to irregular and unpredictable earnings numbers quarter-to-quarter, and with first quarter revenues historically representing many of the Company's weakest results in any given year, my confidence is in no way dimmed with these Q1 results, which are a matter of course based on historical patterns."

KEY Q1 2025 FINANCIAL HIGHLIGHTS

- **Revenue of \$3 million**, down 14% vs. Q1 2024
- **Gross margin of 27%**, a 5.3-point (24%) improvement vs. Q1 2024's 21.7% margin
- **Net loss of \$4.26 million** compared to a loss of \$4.4 million in the same period a year ago
- **Revenue (Order) Backlog of \$52 million** of signed and/or awarded contracts as at May 13th, 2025, of which 88% is in U.S. dollars
- **Modified EBITDA loss of \$2.96 million** vs. a loss of \$3.17 million during the same period a year ago

SUBSEQUENT EVENTS

- **Post quarter end, in May 2025** [news release dated May 5, 2025], the Company announced the closing of a non-brokered private placement of up to \$5,750,000. The placement consists of a loan with P. Peter Pascali who as the President and CEO of PyroGenesis is a related party, and which may be advanced in up to three tranches at such times and in such amounts as shall be mutually agreed upon by PyroGenesis and Mr. Pascali, provided that the final tranche shall be advanced no later than June 16, 2025.

Q1 2025 PRODUCTION AND SALES HIGHLIGHTS

The Company operates primarily within three business verticals that align with economic drivers that are key to global heavy industry:

1. Energy Transition & Emission Reduction:

- where fuel switching to PyroGenesis' electric-powered plasma torches helps heavy industry reduce energy costs, fossil fuel use, and emissions,

2. Commodity Security & Optimization:

- where the development of advanced material production techniques, and the use of technology such as plasma to recover viable metals, chemicals, and minerals from industrial waste, helps to maximize raw materials and improve the availability of critical minerals,

3. Waste Remediation:

- safe destruction of hazardous materials, and the recovery and valorization of underlying substances such as chemicals and minerals.

The information below represents highlights from the past quarter for each of the Company's main business verticals.

Energy Transition & Emission Reduction

- **In January** [news release dated January 27, 2025], the Company announced that its subsidiary Pyro Green-Gas had

signed a contract valued at \$2.5 million with one of the world's largest integrated environmental services companies as part of a large urban waste-to-energy project. The multi-national, multi-billion-dollar revenue client provides services to public utilities in dozens of countries worldwide. The contract is for the engineering, design, and delivery of components related to gas "flaring", that provides for the safe and environmentally friendly removal of peripheral emissions considered unworthy of processing during the production of renewable natural gas ("RNG"). The technology will be installed at a large US-based organic waste-to-RNG facility, which was built to produce pipeline-quality natural gas that can be added to the natural gas supply for a major U.S. metropolitan area.

A second contract with this same client was announced in February [news release dated February 18, 2025], for engineering, design, fabrication, and delivery of a large array of components related to biogas cleaning and purification at the same project location. For this project, Pyro Green-Gas will be supplying components known as condensate pots that will be strategically placed within the biogas production infrastructure to collect and separate water from the biogas.

- **In February** [news release dated February 24, 2025], the Company announced it was the winner of a tendered bid process (previously noted in an earlier Outlook) and was awarded a contract for approximately \$2,400,000 with Norsk Hydro ASA ("Hydro"), a Norway-based aluminum and renewable energy company founded in 1905 that is often considered one of the most respected and influential leaders in heavy industry. Since entering the aluminum business in the 1960s, Hydro has become one of the largest aluminum producers in the world, with 32,000 employees across operations in 42 countries. The company posted 2024 revenues of US\$18.3 billion. Hydro intends to replace fossil fuel burners with PyroGenesis' plasma torches to test melt aluminum in Hydro's R&D casthouse at Sunndal Norway (the largest and most modern primary aluminum plant in Europe). Hydro's stated eventual goal is to eliminate the use of fossil fuels across the entire aluminum value chain. The project is expected to commence in the near term; the initial payment was received during Q2 2025.
- **In March** [news release dated March 11, 2025] the Company announced a memorandum of understanding (MOU) that outlines a co-venture between PyroGenesis and the Power Conversion division of GE Vernova. The Company previously noted in an earlier Outlook that it was in negotiations with a large global manufacturer of energy equipment to co-venture with PyroGenesis on the electrification of third-party furnaces; the co-venture with GE Vernova is the result of those negotiations. The MOU initiates discussions toward a multi-year strategic collaboration in the development and testing of PyroGenesis technologies that replace fossil fuel combustion in high temperature processes with all-electric plasma torches, specifically targeting multi-megawatt industrial processes of the type required by aluminum and steel producers, or calcination processes such as in the alumina, cement, and quicklime industries.

Commodity Security & Optimization

- **In February** [news release dated February 27, 2025], PyroGenesis announced the successful production of the first batch of fumed silica materials from a week-long operation of the fumed silica reactor pilot plant. The material produced was visually analyzed and confirmed to be consistent with material seen in the previous lab-scale size plant. Analysis was scheduled to be conducted at an independent laboratory, to verify structural and chemical properties with more quantitative data, and to validate product quality, all of which will be used for next step process optimization related to further tests. The results of those tests are expected in the near term, with commercial samples scheduled to be sent to key parties such as global chemical manufacturer Evonik (under the terms of an existing letter of intent) and others under NDA in the period to follow.
- **In March** [news release dated March 03, 2025], the Company identified Boeing as the customer for whom a multi-year product certification process is being conducted related to titanium metal powder produced by PyroGenesis' NexGen plasma atomization process. The Company also stated that all technical requirements for titanium coarse metal powder have been met by PyroGenesis NexGen plasma atomized powder for Boeing, and that PyroGenesis continues to move forward in the approved supplier list process, with an expectation of being formally added to Boeing's supplier list in the near term.

Waste Remediation

- **In January** [news release dated January 23, 2025], the Company announced the granting of European Patent EP 2 686 100 B1, titled "Steam Plasma Arc Hydrolysis of Ozone Depleting Substances", which covers PyroGenesis' process for the destruction of ozone depleting substances, such as used refrigerants from end-of-life cooling equipment, including fridges and air conditioners. This European patent strengthens the position of PyroGenesis' SPARC™ technology that specifically targets the destruction of those refrigerants such as CFCs, HCFCs, and HFCs. These refrigerants are potent greenhouse gases with a high global warming potential that can be thousands of times greater than carbon dioxide.

Q1 2025 FINANCIAL HIGHLIGHTS

- **In January** [news release dated January 20, 2025], the Company received a payment of approximately \$1,850,000, representing a portion of an outstanding receivable under PyroGenesis' existing \$25,000,000 Drosrite contract with Raidan Oil and Gas Services Company.
- **In January** [news release dated January 21, 2025], the Company received a payment of approximately \$1,040,000 under PyroGenesis' existing \$4,100,000 contract with a U.S. aeronautics and defense client for a 4.5MW plasma torch
- **In January** [news release dated January 31, 2025], the Company announced that up to 1,710,350 common share purchase warrants (the "Warrants") would be amended. Of the 1,710,350 Warrants, 1,520,350 Warrants had an exercise price of \$0.75 and 190,000 Warrants had an exercise price of \$1.25. The Warrants would expire on March 7, 2025. Commencing on February 17, 2025, the exercise price of the Warrants held by holders wishing to participate in this repricing would be reduced to \$0.60 per share. The warrant certificates would also be amended to reflect the recent change in PyroGenesis' corporate name and address. All other terms of the Warrants will remain unchanged. None of the holders of Warrants that were to be amended are insiders of the Company.
- **In March** [news release dated March 31, 2025], the Company announced 2024 Q4 and full-year results: quarterly revenue of \$4.22 million, up 40% year-over-year; quarterly net income of \$145,320; full year revenue of \$15.7 million, up 27% year-over-year; backlog of \$54.4 million.

Q1 2025 OPERATIONAL HIGHLIGHTS

- **In February** [news release dated February 4, 2025], the Company provided comments in response to investor questions about the impact from the recent trade policy disagreements between the U.S. and Canada, specifically with regards to potential U.S. tariffs imposed on Canadian products. Management is of the opinion that tariffs will have little to no direct negative impact on PyroGenesis' bottom line. The Company manufactures and assembles many of its key systems and components outside of Canada, including its Drosrite™ aluminum metal dross recovery systems, which are manufactured in the U.S. Additionally, outside of clients in the U.S. defense sector, the bulk of the company's current and prospective clients are located outside of the United States, specifically in Europe, Canada, and the Middle East, and the majority of the Company's contracts are denominated in US Dollars or Euros.

FINANCIAL SUMMARY

1. Revenues

PyroGenesis recorded revenue of \$3.0 million in the first quarter of 2025 ("Q1, 2025"), representing a decrease of \$0.5 million compared with \$3.5 million recorded in the first quarter of 2024 ("Q1, 2024"),

Revenues recorded in the three-months ended March 31, 2025, were generated primarily from:

	Three months ended March 31		Variation
	2025	2024	2025 vs 2024
High purity metallurgical grade silicon & solar grade silicon from quartz (PUREVA P™)	159,830	394,444	(234,614)
Aluminium and zinc dross recovery (DROSRITE™)	168,740	663,185	(494,445)
Development and support related to systems supplied to the U.S. Navy	217,867	1,044,434	(826,567)
Torch-related sales	530,267	877,048	(346,781)
Refrigerant destruction (SPARC™)	276,784	102,718	174,066
Biogas upgrading and pollution controls	1,412,461	32,049	1,380,412
Other sales and services	221,586	372,519	(150,933)
Revenue	2,987,535	3,486,397	(498,862)

Q1, 2025 revenues decreased by \$0.5 million, mainly as a result of:

- PUREVA P™ related sales decreased by \$0.2 million, attributable to the ongoing phases of the project. In February 2025, a successful week-long operation led to the production of the first batch of material. Preliminary visual analysis confirmed consistency with materials previously produced at lab scale. A comprehensive analysis is currently underway at an independent laboratory to verify the structural and chemical properties, provide quantitative data, and validate product quality. The results will inform process optimization for subsequent testing phases,
- DROSRITE™ related sales decreased by \$0.5 million, due to the decrease in spare parts orders from existing clients and the decrease in storage revenue and other ancillary revenue related to the DROSRITE units,
- Support services related to systems supplied for the US Navy decreased by \$0.8 million, due to the current stage of the project, with the advancements contingent upon the client's inspections which will be completed in Q2, 2025, partially offset, by the increase in awarded contracts for spare parts and engineering services from clients that are third-party

suppliers of the US Navy,

- Torch-related products and services decreased by \$0.4 million, due to the completion of the project, with the Company currently providing continuous 24/7 onsite support,
- SPARC™ related sales increased by \$0.2 million, reflecting the steady progress achieved throughout the period. The pace is expected to accelerate with the anticipated completion of fabrication in Q2, 2025, followed by a structured ramp-up for delivery in fall 2025,
- Biogas upgrading and pollution controls related sales increased by \$1.4 million specifically due to the project advancement of the Company's gas desulfurization projects, and,
- Other sales and services decreased by \$0.2 million, which is primarily attributable to variations in project timelines, customer demand, and the timing of service contracts.

As of May 13, 2025, revenue expected to be recognized in the future related to backlog of signed and/or awarded contracts is \$52 million,¹ of which 88% is in US dollars. Revenue will be recognized as the Company satisfies its performance obligations under long-term contracts, which are expected to occur over a maximum period of approximately 3 years.

¹This excludes the contract with Varennes Carbon Recycling following the March 21, 2025, announcement that the company managing the project filed for protection under the *Companies Creditor Arrangement Act*.

2. Cost of Sales and Services and Gross Margins

Cost of sales and services for the three months ended March 31, 2025, totaled \$2.2 million, a decrease of \$0.5 million compared to the same period in 2024. This reduction was primarily driven by a \$0.2 million decrease in employee compensation, which declined to \$0.9 million from \$1.1 million in the prior year period, as well as a \$0.8 million reduction in direct materials costs, which fell to \$0.4 million from \$1.2 million, largely due to a lower volume of materials and labor costs incurred during the quarter.

Amortization of intangible assets also decreased by \$0.08 million, mainly attributable to intangible assets related to the Pyro Green-Gas acquisition, which were fully amortized by January 2024. The Company's remaining intangible assets are primarily composed of patents and deferred development costs, which will continue to be amortized over their respective useful lives.

These decreases were partially offset by an increase in subcontracting expenses, which rose to \$0.6 million from \$0.07 million, representing an increase of \$0.5 million. The rise in subcontracting costs reflects a strategic shift toward outsourcing certain specialized services to third-party providers to enhance operational efficiency and support higher project volumes during the period.

Gross profit for Q1 2025 was \$0.8 million, representing 27% of revenue, compared to \$0.8 million, or 22% of revenue, for Q1 2024. The increase in gross margin percentage was primarily attributable to a favorable sales mix featuring higher-margin services and improved cost efficiencies, including reductions in direct material costs and amortization expenses as well as operational improvements that enhanced productivity and resource utilization.

As a result of the type of contracts being executed and the nature of the project activity, the mix between labor, materials and subcontracts may be significantly different. In addition, due to the nature of these long-term contracts, the Company has not necessarily passed on to the customer, the increased cost of sales which was attributable to inflation, if any. The costs of sales and services are in line with management's expectations and with the nature of the revenue.

3. Selling, General and Administrative Expenses

Included within Selling, General and Administrative expenses ("SG&A") are costs associated with corporate administration, business development, project proposals, operations administration, investor relations and employee training.

Selling, general and administrative (SG&A) expenses for the three months ended March 31, 2025, were \$3.7 million, representing a decrease of \$0.8 million, compared to \$4.5 million in the same period of 2024. The reduction was primarily driven by a \$0.2 million decrease in employee compensation, reflecting workforce optimization initiatives implemented to enhance operational efficiency. Share-based compensation expense, a non-cash item, declined by \$0.5 million due to the absence of option grants in Q1 2025, in contrast to the prior year's expense related to grants issued in 2024. Professional fees decreased by \$0.1 million, largely due to lower legal expenditures. Additionally, insurance and other general expenses declined by \$0.2 million, mainly as a result of ongoing cost control measures and a reduction in insurance premiums following the Company's transition from dual-listing status.

These decreases were partially offset by a \$0.2 million foreign exchange loss, resulting from currency fluctuations, and a \$0.1 million increase in expected credit loss and bad debt expense, reflecting the continuous application of the credit risk policy during the quarter.

Share-based compensation expenses are non-cash expenses and are directly impacted by the vesting structure of the stock option plan whereby options vest between 10% and up to 100% on the grant date and may require an immediate recognition of that cost.

4. Research and Development ("R&D") Costs, net

During the three months ended March 31, 2025, the Company incurred \$0.3 million in net R&D expenses on internal projects. The increase was driven by a \$0.1 million rise in employee compensation and other related expenses, reflecting additional personnel assigned to support the development of new technologies and enhancements to existing product lines. This investment aligns with the Company's strategy to strengthen its innovation pipeline and expand its market offerings.

These increases were offset by a \$0.07 million decrease in materials and equipment costs, which declined as several hardware-intensive phases of R&D projects were completed. During the quarter, the Company shifted its focus toward software development, process optimization, and design refinement activities, which generally require fewer material inputs. Management expects continued R&D investment in upcoming quarters to support the Company's long-term growth objectives.

In addition to internally funded R&D projects, the Company also incurred R&D expenditures during the execution of client funded projects. These expenses are eligible for Scientific Research and Experimental Development (“SR&ED”) tax credits. SR&ED tax credits on client funded projects are applied against cost of sales and services (see “Cost of Sales” above).

5. Finance Expenses (income), net

Financial expenses for the three months ended March 31, 2025, totaled \$0.3 million, compared to \$0.2 million for the same period in 2024, reflecting an increase of \$0.09 million year-over-year. This increase was driven by the higher interest accretion on the convertible debenture, additional penalties & other interest and the interest on and revaluation of balance due on the business combination. These increases were partly offset by a decrease in interest expenses on the convertible debenture as the capital due is decreasing.

6. Strategic Investments

During the three-months ended March 31, 2025, the adjustment to fair market value of strategic investments for Q1 2025 resulted in a loss of \$0.7 million compared to a loss in the amount of \$0.2 million in Q1 2024. The increase in loss is attributable to the variation of the market value of the common shares owned by the Company of HPQ Silicon Inc. and the fair value of the warrants. The decrease in stock price was greater in Q1 2025 than in the same period last year, and a larger number of units were held in 2025

7. Comprehensive Income (loss)

The net loss for the three months ended March 31, 2025, totaled \$4.3 million, compared to a loss of \$4.4 million for the same period in 2024. Although the Company had a lower net loss from operations in Q1 2025 by \$0.04 million, this was offset mainly by the loss from, changes in fair value of strategic investments. The comprehensive loss in Q1 2025 was affected by the foreign currency translation on investments in foreign operations. As a result, the Q1 2025 comprehensive loss is comparable to Q1 2024.

8. Liquidity and Capital Resources

As at March 31, 2025, the Company had cash of \$0.2 million, included in the net working capital deficiency of \$16.4 million. Certain working capital items such as billings in excess of costs and profits on uncompleted contracts do not represent a direct outflow of cash. The Company expects that with its cash, liquidity position, the proceeds available from the strategic investment and its access to capital markets it will be able to finance its operations for the foreseeable future.

The Company's term loan balance at March 31, 2025, was \$294,074 and decreased by \$0.01 million since December 31, 2024, due to the net accretion and monthly payments. During the period, the Company fully reimbursed and extinguished the credit facility. The average interest expense on the other term loans and convertible debenture is approximately 10%. The Company does not expect changes to the structure of term loans and convertible debentures in the next twelve-month period.

A commercial bank issued standby letters of credit on behalf of the Company to customers in the amounts of \$220,000 and \$257,000 on advance guarantees secured by Export Development Canada. The letters of credit expire in March 2026 and November 2026, respectively.

The Company's Canadian subsidiary benefited from a line of credit of \$500,000 (\$88,046 was drawn on this facility as at December 31, 2024). In January 2025, the entirety of the facility was reimbursed, and the available facility was terminated.

OUTLOOK

Consistent with the Company's past practice, and in view of the early stage of market adoption of our core lines of business, the Company is not providing specific revenue or net income (loss) guidance for 2025.

The following is an outline of the many factors that impact the Company's strategy and future success, plus key developments that are expected to impact subsequent quarters.

Overall Strategy

PyroGenesis provides technology solutions to heavy industry that leverage the Company's expertise in ultra-high temperature processes. The Company has evolved from its early beginnings as a specialty-engineering firm to being a provider of a robust technology eco-system for heavy industry that helps address key strategic goals.

The Company believes its strategy to be timely, as multiple heavy industries are committing to major electrification, carbon reduction, and waste reduction programs at the same time as many governments are increasingly supportive – from both a policy and financial perspective – of environmental technologies and infrastructure projects. Additionally, both industry and government are developing strategies to ensure the availability of critical minerals during the coming decades of increased output demand.

While there can be no guarantees, the Company believes the evolution of its strategy beyond greenhouse gas emission reduction, to an expanded focus that encapsulates the key verticals listed in the section “Q1 2025 Production and Sales Highlights”, both (i) improves the Company's chances for success while (ii) also providing a clearer picture of how the Company's wide array of offerings work in tandem to support heavy industry goals.

PyroGenesis' market opportunity is significant, as major industries such as aluminum, steelmaking, manufacturing, cement, chemicals, defense, aeronautics, and government seek factory-ready, technology-based solutions to help steer through the challenging landscape of increasing demand, tightening regulations, and material availability.

As more of the Company's offerings reach full commercialization, PyroGenesis will remain focused on attracting influential customers in broad markets while at the same time ensuring that operating expenses are controlled to achieve profitable growth.

Key Performance Indicators

The Company uses key performance indicators (KPIs) to monitor, analyze, and optimize organizational output and performance, with KPIs specific to different parts of its production and manufacturing (such as cycle time, capacity utilization, yield, changeover time, and scrap), plus a different set of

KPIs designed to evaluate the broader corporate results and uptake, identify trends affecting the business, and make strategic decisions. This latter category of KPIs includes:

Industry Depth: number of customers within an industry and/or amount and % of revenue from that industry. To date, the Company's greatest depth has been with the aluminum, military, and government industries.

New Industry Engagement: as the energy transition and carbon/GHG-reduction trends grow, more industries are realizing the benefit of using PyroGenesis' technology. Over the past five years the Company has begun to penetrate the mining and metal, iron ore, aerospace, automotive, general parts manufacturing, steel, materials (especially silica and silicon), chemical, and cement industries, among others.

Customer Depth: the number of projects with a single customer and/or amount of revenue from that customer. The Company treats most customer identities as confidential unless otherwise approved or suggested by the customer.

New Customer Engagement: as a relatively small company with technology that is potentially of interest across thousands of companies in many different industries, the Company takes a cautious approach when engaging with new customers. Primarily, the Company evaluates the potential customer's access to capital, operational history, and reputation when weighing engagement. With regard to net new technology ideas or start-up customers, PyroGenesis considers the long-term commercialization potential of the idea, the possibility of revenue sharing or royalties, and access to capital. Aligning to the Company's three tier business model is imperative, though exceptions can be made.

Studies Undertaken: scientific and engineering studies have been a key part of new customer acquisition for much of the Company's history. A study such as a computational fluid dynamics (CFD) study is often the first phase requirement for a potential customer in investigating the potential future use of the Company's technology. Since transitioning from a legacy fossil fuel-based system to the Company's all-electric plasma can be a transformative and often expensive proposition, a study allows a potential new client to better understand the future technological fit and prospective budgetary requirements, while also gaining an understanding of the high-quality working relationship with the Company. The wide array of different specs, uses, industries, and in-factory customization of furnace, heating, and melting machinery, mandates ground-up studies for most new initiatives. The Company's experience conducting studies and its exposure to more and different types of systems, especially over the last 5 years, has allowed the Company to further streamline and perfect its study process as a route to new business. The number, type, and duration of studies undertaken during each quarter varies.

Monthly Recurring Revenue: ongoing, repeating revenue is a major goal for the Company. To date, after-sale parts and components (such as those related to consumable aspects of plasma torches) have represented the largest revenue and growth potential on a recurring basis. As the energy transition trend grows and more plasma systems are sold, recurring revenue is expected to represent a much larger percentage of overall revenue. Other areas targeted for recurring revenue include sales of titanium metal powders, revenue from tolling contracts in areas such as aluminum dross treatment and metal recovery, and co-venture/royalty agreements such as those related to waste remediation.

Revenue Mix: PyroGenesis has established a technology eco-system comprised of a number of inter-related solutions, often referred to in previous Company communications as a "multi legged stool". This type of diversification offers a measure of protection to the Company in both difficult and rapidly changing economic environments. As such, the Company targets a wide versus a narrow mix of revenue sources.

Growth Mix: new revenue is currently driven by existing customers. A key goal for the Company is to develop an optimal mix of existing and new customers.

Cost Controls and Efficiencies

PyroGenesis has been, and continues to, scrutinize both potential and existing projects to ensure that the utilization of labour and financial resources are optimized. The Company continues to only engage in projects that reflect significant benefits to PyroGenesis and the risks of which are defined. The Company intends to intensify its focus on project and budgetary clarity during this period of elevated inflationary pressures, by identifying alternative suppliers while constantly adjusting project resources. The early-stage project assessment process has also been refined to allow for faster "go / no-go" decisions on project viability. Through an ongoing Cost Optimization program, the Company has further identified areas to reduce costs and expenses in 2025.

Continuing the cost optimization program began in fiscal 2024, as described in the Q4 2024 Financial Highlights, which resulted in over \$3 million in savings, the Company has already identified areas of optimization in early 2025. To date the Company has identified savings in patent expenses, insurance and optimization of the workforce, for a net benefit of \$2 million. The Company has targeted between \$3-5 million in cost optimization for 2025. These are recurring cost savings which will benefit the Company on a recurring annual basis. All cost optimization is done with a view to not jeopardize revenues or market competitiveness.

Enhanced Sales and Marketing

Against the backdrop of its 3-tiered strategy, the Company continues to focus on sales, marketing, and R&D efforts in-line with – and in some cases ahead of – the growth curve for industrial change related to energy transition, electrification, and greenhouse gas reduction efforts.

Macroeconomic Conditions

With some continued uncertainty in the macroeconomic environment, including ambiguity in the banking sector with regard to interest rate adjustments, the continued inflationary pressures causing shifting demand dynamics across various industries at different times, and the possibility of recessionary conditions, it may be difficult to assess the future impact these events and conditions will have on our customer base, the end markets we serve, and the resulting effect on our business and operations, both in the short term and in the long term.

Despite these uncertainties, we continue to believe there is an accelerated need for PyroGenesis' solutions in the industries we serve as heavy industry continues to transition and/or electrify their energy sources, decarbonize, manufacture utilizing both lighter metals (such as aluminum) and additive manufacturing, and deal with tighter hazardous waste regulations.

While we expect these uncertainties and other macroeconomic conditions to continue to impact the variability in our quarter-to-quarter revenue, we believe our diversity in both customer base and solution set will continue to be a strong mitigating factor to these challenges. Additionally, the Company's ongoing efforts to reduce costs through various measures including the sourcing of more high quality, cost-competitive suppliers, further

bolsters the Company against cost fluctuations.

The various military conflicts in the Middle East and Eastern Europe continue to create some level of global economic uncertainty, as well as supply chain disruptions that can change at any time. However, it's important to note that the Company does not have any operations, customers or supplier relationships in Russia, Belarus or Ukraine, and as such are not directly impacted at a customer level in these countries. The Company does have customer relationships and projects in Poland and will continue to monitor the situation in the region regarding challenges to the completion of current projects, which at this time are not inhibited.

As always, the Company monitors the potential impact macroeconomic events and conditions could have on the business, operations, and financial health of the Company.

Generally, the Company believes that broad-based threats to global supply chains increase awareness and interest in the many solutions the Company offers. This is particularly true within the minerals and metals industries, as manufacturers seek alternatives to offshore suppliers as well as technologies that could optimize output or recycle critical material from by-products or waste – solutions that the Company currently offers.

Business Line Developments

The upcoming milestones which are expected to confirm the validity of our strategies are outlined below. Please note that these timelines are estimates based on information provided to us by the clients/potential clients, and while we do our best to be accurate, timelines can and will shift, due to protracted negotiations, client technical and resource challenges, or other unexpected situations beyond our or the clients' control:

Business Line Developments: Near Term (0 – 3 months)

Financial

Payments for Outstanding Major Receivables:

Regarding the outstanding receivable under the Company's existing \$25 million+ Drosrite™ contract, and as previously announced, PyroGenesis had agreed to a strategic extension of the payment plan, by the customer and its end-customer, geared to better align the pressures on the end-user's operating cash flows created by increased business opportunities. The next payment(s) to PyroGenesis are expected in the near term.

Energy Transition & Emission Reduction

Plasma Torches for Alumina Calcination:

In Q1 2025, the Company signed an initial testing contract with a large European aluminum producer with a 100+ year history. The contract will test plasma torches as part of the calcination step for alumina, the last step of the Bayer process for refining bauxite ore into alumina, which is the raw material for producing aluminum. The project is scheduled to commence in the latter part of Q2 2025.

Plasma-Based Glass Recycling:

The Company previously noted in an earlier Outlook that it was in advanced negotiations with a global leader in glass recycling, to investigate plasma as part of the customer's energy transition initiatives, and that the project has advanced sooner than originally anticipated. The project is related to the spheronization of recycled glass using plasma. During Q1 2025, the Company signed an R&D / testing contract to help establish proof of concept. The contract involves multiple tests to optimize parameters and produce high-quality spherical glass particles for use in glass bed applications. The project is scheduled to commence in the latter part of Q2 2025.

Plasma Torches for Aluminum Remelting Furnaces / Casthouses:

The Company has been working on aluminum remelting furnace solutions using plasma for use by secondary aluminum producers or any manufacturer of aluminum components that uses recycled or scrap aluminum. With gas-fired furnaces responsible for much of the scope 1 emissions of secondary aluminum production, aluminum companies have been searching for solutions such as plasma burners that can help in the decarbonization efforts of aluminum remelting and cast houses.

An LOI for large-scale plasma remelting furnaces with Constellium, a global aluminum product manufacturer, was originally announced during Q2 2024 [news release dated April 10, 2024]. During Q4 2024, the first project under a letter of intent (LOI) previously signed with Constellium progressed to advanced negotiations, and a near-term announcement in late Q2 2025 regarding this project is anticipated.

Separately, an existing contract with one of the world's largest manufacturers of products that serve the mining and defense industries [news release dated April 17, 2024] to examine the use of plasma in decarbonizing of its casthouses, was also discussed in previous Outlooks. Successful results from the test project which used plasma torches as part of the customer's high temperature process steps, have led to ongoing discussions for potential next steps. These discussions continue at both a local and international level for this global entity, with decisions around funding and funding cycle being the primary criteria.

Discussions also remain underway with other clients for similar contracts.

Aluminum Furnace Tests:

The Company has started, and will continue in the near term, live furnace tests of plasma as a process heat source in melting and holding furnaces with major aluminum companies, while also being in advanced discussions with other companies yet to be named for similar live furnace tests. Due to the nature of these tests and the increasing number of similar tests, the Company may choose not to announce every test session it engages in.

Iron Ore Pelletization Torch Trials:

CLIENT B:

As mentioned in previous Outlooks, the commissioning of the plasma torch systems – for use in the pelletization furnaces of a client previously identified as Client B – was underway, with the Company's engineers onsite at Client B's iron ore facility. The commissioning process includes installation, start-up, and site acceptance testing (SAT). The Company previously announced that it had shipped four 1 MW plasma torch systems for use in Client B's iron ore pelletization furnaces, for trials toward potentially replacing fossil-fuel burners with plasma torches in Client B's furnaces.

As also mentioned in previous Outlooks, this project continues to move forward after the commissioning suffered a series of unforeseeable delays and infrastructure challenges caused by, among other things, damaging torrential rainstorms that flooded and damaged the facility's electrical system and furnace components, and intermittent power outages that led to damage of the plasma burners cooling system.

Client B remains committed, and live trials using PyroGenesis plasma torches are occurring and ongoing and will remain as such until the customer determines they have sufficient performance data. The latest information provided to the Company suggests a Q2 2025 timeline for the completion of this performance testing and data gathering phase, though this is an estimate.

CLIENT C:

Client C, a global market-leading client who the Company previously identified as one "who is not only a significant player in the iron ore pelletization industry, but is also a major player in the steel industry", has been working with PyroGenesis over the past few years on various potential initiatives related to using plasma for decarbonization. PyroGenesis was previously awarded official supplier status to Client C as part of an impending initiative that was subsequently announced during Q4 2024 [news release dated November 19, 2024], for a contract to assess the applicability of PyroGenesis' fully electric plasma torches for use in part of the customer's electric arc furnace (EAF) steelmaking and casting process. The initial project is currently underway with a near-term Q2 2025 expected completion date. The first stage of the project was concluded in Q1 2025, with assessment report towards next steps expected in Q2 2025.

With live pelletization furnace plasma trials (with Client B) continuing, as the latest development with Client C renews their commitment to investigating plasma, and as new interest from other entities within the steelmaking industry continue to appear, the Company believes its position relative to both the steelmaking and iron ore industries remains strong. The early publicity and research results surrounding plasma's potential for use in iron ore pelletization opened the doors to these and multiple other industries for electrification of furnaces and other high heat applications using PyroGenesis plasma torches, which the Company believes will ultimately far surpass the specific iron ore pelletization application.

Commodity Security & Optimization

Titanium Metal Powder:

During Q4 2024, the Company identified Boeing as the customer for whom a multi-year product certification process is being conducted related to titanium metal powder produced by PyroGenesis' NexGen plasma atomization process. The Company also stated that all technical requirements for titanium coarse metal powder have been met by PyroGenesis NexGen plasma atomized powder for Boeing, and that PyroGenesis continues to move forward in the approved supplier list process, with an expectation of being formally added to Boeing's supplier list in the near term.

Fumed Silica Reactor ("FSR") Project:

The Company previously noted in an earlier Outlook, that the Company's client HPQ Polvere (a wholly owned subsidiary of HPQ Silicon Inc.), had announced the successful completion of commissioning of the Fumed Silica Reactor (FSR) pilot plant that PyroGenesis has been designing, engineering, and constructing to convert quartz into fumed silica in a single and eco-friendly step. At that time, the pilot plant had commenced pre-commercial production tests of fumed silica. Additionally, PyroGenesis previously announced in a press release dated May 30, 2024, its intent to exercise its right to convert its annual royalty rights into a 50% ownership stake of HPQ Polvere pursuant to a design and development agreement.

In Q1 2025, [news release dated February 27, 2025], PyroGenesis announced the successful production of the first batch of materials from a week-long operation of the pilot plant. The material produced was visually analyzed and confirmed to be consistent with material seen in the previous lab-scale size plant. The results of planned further tests are expected in the near term, with commercial samples scheduled to be sent to key parties such as Evonik, a global specialty chemicals company that manufactures a wide range of high-performance materials and who is a global leader in fumed silica production (under the terms of an existing letter of intent), and others under NDA in the period to follow.

Drosrite Factory Trials:

During Q4 of 2024, the Company conducted on-site trials of the Company's Drosrite furnace system for the processing of aluminum dross, at the facilities of European aluminum manufacturers. Additionally, representatives from potential new customers conducted on-site visits at an existing PyroGenesis customer's factory, where a Drosrite system has been successfully operating for several years. Data from the various tests and site visits are currently being analyzed during Q1 and Q2 to help determine next steps, if any, towards the possible purchase of Drosrite systems.

Waste Remediation

Plasma Resource Recovery System (PRRS):

As mentioned in previous Outlooks, the Company is in discussions with a European company for the Company's Plasma Resource Recovery System, for use in the pyrolysis of plastic. This potential project has progressed to final negotiations with an expected outcome in the near term.

SPARC Refrigerant Waste Destruction System:

The Company previously noted in an earlier Outlook that it was in negotiations (with a mid-term 3-6 month outlook) with a large US-based distributor of refrigerants and specialty gases, regarding PyroGenesis' SPARC system for the safe destruction of hazardous end-of-life refrigerants such as CFCs, HCFCs, and HFCs, with a potential contract amount of approximately \$2-3 million. The discussions continue and are expected to be concluded in the near term.

Plasma-Based Glass Valorization:

The Company is in final negotiations with an entity in Canada, for a plasma-based furnace for use in the melting and valorization of recycled glass, with an estimated contract value of approximately \$2 million. This potential client is currently assembling funds from a consortium of international contributors, across government and private entities. The amount secured will determine a potential start and/or the scope of the project, with a current timeline for final decision estimated as near-term.

SPARC Refrigerant Waste Destruction System:

The Company is in negotiations with a Middle Eastern customer regarding PyroGenesis' SPARC system for the safe destruction of hazardous end-of-life refrigerants such as CFCs, HCFCs, and HFCs. The customer has access to a very large existing stockpile of these hazardous

materials. Discussions continue as a possible co-venture, whereby PyroGenesis would receive revenue on a profit-sharing basis. PyroGenesis is conducting due diligence on key elements related to the potential business model, and a memorandum of understanding is currently being finalized.

Business Line Developments: Mid Term (3-6 months)

Commodity Security & Optimization

Plasma Torches for Cement-Related Calcination:

The Company is in negotiations with a European entity to use plasma torches during a calcination process related to cement production, with an estimated initial project value of \$500,000 to \$1 million.

Plasma Torches for Global Chemical Firm:

The Company is in discussions with an American entity for the potential sale of plasma torches to aid in the production of carbon black. Potential initial value of \$2-3 million with additional longer-term potential.

Commodity Security & Optimization

Plasma Torch System for Pyrolysis:

The Company is in discussions with a European entity for the sale of a plasma torch system and/or plasma reactor system, which the customer would utilize in their production of carbon black and hydrogen for use in batteries and graphite production. A project quote has been submitted with a potential project value of approximately \$2 million.

Drosrite Systems:

The Company is in various stages of discussions with aluminum manufacturers to purchase Drosrite aluminum dross processing systems, including with two Middle Eastern aluminum companies for the purchase of multiple 5,000+ tonnes per year Drosrite furnaces. In addition, multiple European and American aluminum manufacturers are considering systems of various capacities.

Titanium Metal Powder:

The Company is in discussions with several companies in both North America and Europe regarding the potential sale of titanium metal powder, across both "coarse" and "fine" powder cuts.

Green Cement Additive:

PozPyro is a cement additive material produced by PyroGenesis' as a collaboration with its client Progressive Planet. The proprietary plasma process converts widely available, high-grade crystalline silica into amorphous silica that can be used to enhance the strength of concrete as a replacement for fly ash which is in diminishing supply. Previous announcements [news release dated May 2, 2024] showed compressive strength tests for PozPyro of up to 99.5% above standards for similar material such as fly ash, while surpassing even the full-strength value of the Portland Cement control by up to 49.67%. A potential contract for a future pilot plant has an estimated value of \$15-20 million. In Q1, the Company developed and delivered an advanced feasibility and technical study towards the construction of a pilot plant.

Business Line Developments: Long Term (> 6 months)

Commodity Security & Optimization

Silicon, Nano-Silicon, and Silica Production:

The Company is in discussions at quotation stage with several potential customers who have expressed interest in PyroGenesis' advanced methods for producing silicon, nano-silicon, and silica. The potential customers include:

- a major global automaker (whose interest lies in both nano-silicon and silicon oxide [SiOX] for EV batteries) who is considering a lab-scale production system (approximate value of \$500,000) with a long-term potential pilot plant with an estimated contract value of \$10-15 million.
- a US battery manufacturer considering a lab-scale production system for anode material (approximate value of \$500,000); cost and scope development meetings towards a potential project are underway and further scheduled for Q2 2025
- a raw material supplier to the construction materials industry who is considering a lab-scale production system (approximate value of \$150,000) with a long-term potential pilot plant with an estimated contract value of \$10-15 million. Negotiations continue throughout Q2.
- a raw material producer and manufacturer in South Asia is considering a production system with an estimated contract value of \$10-15 million.

Silica Compound Production:

The Company is in early-stage discussions with an Asian commodity producer to use plasma to transform waste into a variety of in-demand silica compounds.

Waste Remediation

Plasma Torch for Hazardous Waste Destruction:

The Company is in early-stage discussions with an operator of a large North American hazardous waste facility for the sale of a plasma torch system. The facility destroys a variety of hazardous waste, including PFAS "forever chemicals", currently using an incineration process.

Plasma Torches for Tunnel Boring:

As noted above, the Company is a party to a framework master agreement with EarthGrid, which included the payment to the Company of a non-refundable downpayment for \$667,000. Negotiations of a first substantial statement of work are ongoing and remain positive but depend in large part on the client's ability to secure funding in a timely manner. The client now anticipates proceeding with the purchase of a single plasma

torch system in the near to mid term, followed by one or more larger orders in subsequent quarters, dependent upon the client's financing. While there is no guarantee this statement of work or additional ones will be completed, if successful the Company foresees the potential for a multi-phase, multi-year partnership with the client that may result in materially significant additional plasma torch orders over the next few years. EarthGrid continues to have challenges raising capital sufficient to make purchases under this agreement.

Plasma Waste-to-Energy System / Resource Recovery System (PRRS):

The Company previously announced the signing of a 2-stage contract for a land-based plasma waste-to-energy system with a European consortium. The first stage consists of a conceptual and preliminary design phase for approximately \$2 million, which commenced in Q3 and was scheduled to last no more than one year. The design of the Plasma Waste-to-Energy System is based on the Company's Plasma Resource Recovery System (PRRS), a waste-to-energy technology that eliminates toxic compounds while transforming waste into reusable products such as syngas and chemicals such as methanol. This project is currently on hold as the client lost its first stage financing. The client is looking for alternate funds. Until such time as those funds have been secured and the project restarted, \$2 million was removed from the Company's reported backlog during Q4 2024.

Plasma Torches for 3rd Party Waste-to-Energy Systems:

The Company has been in discussions over several years with a European entity, to act as a potential supplier of plasma torches for the entity's waste-to-energy initiative; the entity has at times, listed PyroGenesis as their torch supplier in various publications online. In Q3 2024, this entity announced having entered into an agreement with a German multi-Billion-dollar leading technology company to accelerate green energy transition through waste-to-energy technology. The entity announced that it aims to establish 300 plants producing 1 million tons of hydrogen over the next several years.

**** Please note that projects or potential projects previously announced, or listed in previous Outlooks, that do not appear in the above summary updates, should not be considered as at risk. Noteworthy developments can occur at any time based on project stages, and the information presented above reflects information on hand. Projects not mentioned may have simply not concluded or not passed milestones worthy of discussion. ****

FURTHER INFORMATION

Additional information relating to Company and its business, including the 2024 consolidated financial statements, the Annual Information Form and other filings that the Company has made and may make in the future with applicable securities authorities, may be found on or through SEDAR+ at www.sedarplus.ca, or the Company's website at www.pyrogenesis.com.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, is also contained in the Company's most recent management information circular for the most recent annual meeting of shareholders of the Company.

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: 8PY1). For more information, please visit: www.pyrogenesis.com.

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.

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