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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES  
EXCHANGE ACT OF 1934**

**For the month of May 2021**

Commission File Number: **001-39989-1**

**PYROGENESIS CANADA INC.**  
(Translation of registrant's name into English)

**1744, William St. Suite 200**  
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.  
Form 20-F [ ]    Form 40-F [ ]

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): \_\_\_\_

**Note:** Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders.

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): \_\_\_\_

**Note:** Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR.

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On May 17, 2021, PyroGenesis Canada Inc. (the “Company”) issued a press release, a copy of which is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

**EXHIBIT LIST**

**Exhibit**    **Description**

[99.1](#)            [Press Release dated May 17, 2021](#)

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## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PYROGENESIS CANADA INC.

(Registrant)

Date: May 17, 2021

/s/ P. Peter Pascali

P. Peter Pascali  
Chief Executive Officer

## PyroGenesis Announces Q1 2021 Results Revenues \$6.3MM; Net Earnings and Comprehensive Income \$3.7MM; Gross Margin 34%; Current Backlog \$26MM; Basic EPS \$0.02

MONTREAL, May 17, 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 its financial and operational results for the first quarter ended March 31<sup>st</sup>, 2021.

“We are happy to be announcing that our Q1 2021 financial results continue to reflect the historical trend set early last year. The last several quarters saw PyroGenesis more than triple its backlog of signed contracts, reduce debt to basically zero, and recording over \$25 million of cash on the balance sheet. All this, while graduating to the TSX, co-listing on the NASDAQ, and closing an oversubscribed bought deal of over \$10 million,” said Mr. P. Peter Pascali, CEO and Chair of PyroGenesis. “Q1 2021 saw PyroGenesis post \$6.3 million in revenues; over 7x that posted in same period 2020. Operations broke even after share-based compensation, costs associated with up-listings, as well as R&D expenses (Q1 2021: \$286K vs \$23K in same period last year) which were associated with developments in our additive manufacturing offering. The statistic I find most revealing in terms of what we have done in the past 12 months, and where we may be going, is the fact that we posted 40% more revenues in this quarter alone than we did for the entire year in 2019, a year that saw us post a net loss of over \$9 million. We believe that the Company has never been better positioned and is well placed to build upon this trend for the foreseeable future.”

### Q1 2021 results reflect the following highlights:

- Revenues of \$6,264,503, an increase of 771% over \$718,908 posted in Q1 2020,
- Net earnings and comprehensive income of \$3,712,903 an increase of \$5,469,931 over that posted in Q1 2020,
- Gross margin profit of \$2,143,010 an increase of 701% vs. \$267,414 in Q1 2020,
- Backlog of signed contracts of \$26MM,
- Cash and cash equivalents at March 31, 2021 of \$26,274,344 (December 31, 2020: \$18,104,899),
- Total Assets as at March 31, 2021 of \$87,339,065 (December 31, 2020: \$74,531,378),
- Gross margin of 34.2%, a decrease of 3% year over year,
- Shareholders’ Equity at March 31, 2021 of \$72,122,309 (December 31, 2020: \$59,423,106),
- Current Ratio at March 31, 2021 of 3.26x versus 2.20x at December 31, 2020 (versus 0.21x at March 31, 2020),
- Basic Earnings per Share (EPS) of \$0.02 for Q1 2021 as compared to (\$0.01) in Q1 2020.

### OUTLOOK

PyroGenesis continues to be well positioned, with a clean balance sheet, to execute on all its organic growth strategies as well as to actively pursue growth through synergistic mergers & acquisitions. The Company has recently focused its offerings to highlight their GHG emissions reduction benefits. Most of PyroGenesis’ product lines do not depend on environmental incentives (tax credits GHG certificates, environmental subsidies, etc.) to be economically viable.

We consider this strategy to be timely as many governments are considering stimulating their respective economies by promoting and funding both environmental technologies and infrastructure projects. As such, management expects that this will be a tailwind into an already strong pipeline which will further increase revenues, and add directly to shareholder value.

### Organic Growth:

Organic growth will be spurred on by (i) the natural growth of our existing offerings which can now be accelerated given our strong balance sheet and (ii) leveraging off our “Golden Ticket” advantage. We have described in the past our Golden Ticket advantage as one which occurs when one sells directly, or is engaged directly, with the end user and, as a result, is “inside the fence”. A Golden Ticket affords the opportunity to either, (i) cross sell other products or, ideally, (ii) identify new areas of concern that can be addressed uniquely by PyroGenesis. We call the latter our Coffee and Donuts strategy (if you are selling coffee you could generate additional revenues, with little additional effort, by adding on donuts).

Over the past several years, PyroGenesis has successfully positioned each of its business lines for rapid growth by strategically partnering with multi-billion-dollar entities. These entities have identified PyroGenesis’ offerings to be unique, in demand, and of such a commercial nature as to warrant such unique relationships. We expect that these relationships are now positioned to transition into significant revenue streams.

### **DROSRITE™**

Within the DROSRITE™ offering, the Company is aggressively exploring horizontal growth opportunities. The Company is currently bidding on an RFQ, valued at approx. \$40MM (estimated award date: within 3-4 months; estimated time to completion: approx. 15 months). Management notes that it has been very successful in the selection process to date. We consider this project to now have a better than average probability of success, and is an example of a company’s commitment to this strategy.

### **Additive Manufacturing**

With respect to additive manufacturing, we expect to see significant year over year improvements in our 3D metal powders offering as our NexGen™ facility, which incorporates all the previously disclosed benefits (increased production rates, lower capex, lower opex), is now on-line. There are major top tier aerospace companies and OEMs, in both Europe and North America, eagerly awaiting powders from this new state-of-the-art production line.

## **Plasma Torches**

With respect to the Company's plasma torch offerings, we expect this offering to be significantly impacted by continued developments in the iron ore pelletization industry, where serious consideration is being given to replacing the fossil fuel burners, currently being used throughout the industry, with PyroGenesis' proprietary plasma torches, in an effort to reduce their carbon footprint. To date, everything is proceeding as expected. Initial discussions have evolved into confirmation stages which typically consist of a computer simulation followed by a small torch order. These confirmation stages are expected, if successful, to result with a roll-out program to replace fossil fuel burners with PyroGenesis' plasma torches in the iron ore pelletization industry, in which PyroGenesis is patent protected.

PyroGenesis expects that the previously mentioned government initiatives, geared to stimulating their respective economies by promoting and funding environmental technologies and infrastructure projects, will only serve to increase interest in PyroGenesis' plasma torch offerings. However, this could delay the onset of contracts as potential clients seek government support for large initiatives. PyroGenesis is proactively targeting other industries which are experiencing significant pressure to reduce GHGs, and which utilize fossil fuel burners as well.

Separately, the Company also offers plasma torches to niche markets where there is a high probability of on-going sales from successful implementation. One such example is the previously announced contract with a very small company to produce a plasma torch ideal for tunneling. PyroGenesis has reason to believe that the real plasma-based tunneling opportunity may lie outside of the scope of the current agreement. PyroGenesis is in discussion with the client to determine the best way to terminate this arrangement. PyroGenesis is evaluating, and intends to pursue, plasma based tunneling opportunities, specifically those identified to be outside of the scope of the current agreement.

As sales of PyroGenesis' plasma torches increase, the Company will also benefit from providing proprietary spare parts from which the Company expects to generate significant recurring revenue, thus complementing the Company's long-term strategy to build upon a recurring revenue model.

## **HPQ/PUREVAP™**

With respect to HPQ, the goal is continue to expand our role as HPQ's technology provider for the game changing PUREVAP™ family of silicon processes which we are developing exclusively for HPQ and its wholly owned subsidiary HPQ Nano Silicon Powders Inc, namely:

- The PUREVAP™ "Quartz Reduction Reactors" (QRR), an innovative process (patent pending), which should permit the one step transformation of lower purity quartz (SiO<sub>2</sub>) then any traditional processes can handle into a silicon (Si) of a higher purity level (2N-4N) that can be produced by any traditional smelter, at reduced costs, energy input, and carbon footprint. The unique capabilities of this process could position HPQ as a leading provider of the specialized silicon material needed to propagate its considerable renewable energy potential; and
- The PUREVAP™ Nano Silicon Reactor (NSiR), which, if successful, could position itself as a new proprietary low-cost process that can transform the silicon (Si) made by the PUREVAP™ QRR into the nano-silicon materials (spherical silicon powders and silicon nanowires) sought after by energy storage, batteries, electric vehicle manufactures and clean hydrogen sectors participants. The aim of the ongoing work is to position HPQ NANO as the first to market with a commercial scale low-cost nanoparticle production system.
- A new plasma-based process that could convert Silica (Quartz, SiO<sub>2</sub>) into fumed silica (Pyrogenic Silica) in one step. This new process could be a low-cost and environmentally friendly option that combines HPQ Silicon High Purity Quartz initiatives with PyroGenesis' industry leading know-how in the development of commercial plasma processes. It is envisioned that the process will eliminate harmful chemicals presently generated by traditional methods. This new process could revolutionize the manufacturing of fumed silica, while repatriating production back to North America.

We expect 2021 to be a year in which significant development occurs on both these fronts.

## **Growth through Synergistic Mergers and Acquisitions:**

As previously disclosed, the Company would conservatively consider a synergistic M&A strategy to augment its growth, and the Company has been very actively involved in pursuing several opportunities in support of this strategy. In so doing, the focus has been on private companies exclusively which (i) primarily leverage the Company's Golden Ticket advantage/Coffee & Donuts strategy or (ii) could uniquely benefit from the Company's engineering advantage and/or international relationships.

PyroGenesis recently announced a Binding Letter of Intent with AirScience, a company with experience with biogas upgrading, under which the Company would acquire AirScience for \$4.8MM. PyroGenesis believes that AirScience's experience in biogas upgrading, combined with PyroGenesis' engineering and multidisciplinary skills, as well as its proven record of meeting the

exacting demands of multibillion dollar companies and the US military, positions the combination well to address the opportunities arising from this growing need to generate renewable natural gas.

The Company has been evaluating the following opportunities, additional details of which should be disclosed over the coming weeks.

### **DROSRITE™**

We expect to be able to announce within the next few weeks, the conclusion of a joint venture relationship with an existing and proven technology provider. The technology is geared to uniquely handle the residues resulting from the processing of dross in the aluminum industry. We had previously announced our intention to secure this technology and, if concluded, would not only make our traditional DROSRITE™ offering more appealing but could also be offered as a stand-alone product. We believe that valorizing the residues and producing high end products will further define us as the go-to company for all dross related processing. This is a prime example of our Coffee & Donuts strategy in play. For further clarity, the joint venture will only relate to the new technology and, as such, PyroGenesis will not have to vet in any assets, or IP (specifically not the DROSRITE™ technology).

### **Plasma Torches**

PyroGenesis often considers opportunities to leverage its plasma expertise and continues to review a torch technology which could complement PyroGenesis' existing offerings, and leverage off of our unique relationships. The Company gives this a very low probability of success given the initial valuation, provided by the sole owner, in the context of publicly available data. However, PyroGenesis has identified similar opportunities and is evaluating them in due course.

### **Conclusion**

In conclusion, PyroGenesis is well positioned in 2021 to take advantage of its unique position in its four main business offerings to accelerate growth in each, with a particular emphasis on offerings geared to aggressively reducing GHG emissions. Furthermore, we do not expect at this point in time, given our strong balance sheet, a need to raise capital to execute on our growth strategy over the foreseeable future.

### **Financial Summary**

#### **Revenues**

PyroGenesis recorded revenue of \$6,264,503 in the first quarter of 2021 ("Q1, 2021"), representing an increase of 771% compared with \$718,908 recorded in the first quarter of 2020 ("Q1, 2020").

Revenues recorded in the first quarter of 2021 were generated from:

- (i) DROSRITE™ related sales of \$2,740,725 (2020 Q1 - \$474,432)
- (ii) PUREVAP™ related sales of \$625,086 (2020 Q1 - \$17,965)
- (iii) torch related sales of \$195,221 (2020 Q1 - \$87,944)
- (iv) support services related to PAWDS-Marine systems supplied to the US Navy \$2,586,021 (2020 Q1 - \$23,896)
- (v) other sales and services of \$117,450 (2020 - \$114,671)

#### **Cost of Sales and Services and Gross Margins**

Cost of sales and services before amortization of intangible assets was \$4,114,713 in Q1 2021, representing an increase of 825% compared with \$444,681 in Q1 2020, primarily due to an increase in employee compensation, subcontracting, direct materials and manufacturing overhead and other and foreign exchange charge on materials.

In Q1 2021, employee compensation, subcontracting, direct materials and manufacturing overhead increased to \$4,176,248 (Q1 2020 - \$391,305). The gross margin for Q1 2021 was \$2,143,010 or 34.2% of revenue compared to a gross margin of \$267,414 or 37.2% of revenue for Q1 2020. As a result of the type of contracts being executed, the nature of the project activity, as well as the composition of the cost of sales and services, as the mix between labour, materials and subcontracts may be significantly different.

Investment tax credits related to qualifying projects from the provincial government were \$26,649 (2020 - \$131,871) and \$Nil (2020 \$1,058,017) of investment tax credits earned in prior years that met the criteria for recognition. The Company also recorded for the three months ended March 31, 2021 \$1,183 (2020 - \$18,420) of the investment tax credits against cost of sales and services, \$17,967 (2020 - \$1,141,468) against research and development expenses and \$7,500 (2020 - \$30,000) against selling general and administrative expenses.

The amortization of intangible assets of \$6,780 in Q1 2021 and \$6,813 for Q1 2020 relates to patents and deferred development costs. Of note, these expenses are non-cash items and will be amortized over the duration of the patent lives.

#### **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.

SG&A expenses for Q1 2021 excluding the costs associated with share-based compensation (a non-cash item in which options vest principally over a four-year period), were \$2,803,095 representing an increase of 132% compared with \$1,205,726 reported for Q1 2020.

The increase in SG&A expenses in Q1 2021 over the same period in 2020 is mainly attributable to the net effect of:

- an increase of 35% in employee compensation due primarily to additional head count,
- an increase of 1,805% for professional fees, primarily due to an increase in accounting fees, legal fees, and listing fees.
- an increase of 112% in office and general expenses, is due to an increase in safety supplies and computer related expenses,
- travel costs decreased by 82%, due to a decrease in travel abroad,
- depreciation on property and equipment increased by 659% due to higher amounts of property and equipment being depreciated,
- depreciation on right of use assets increased by 14% due to higher amounts of right of use assets being depreciated,
- Investment tax credits were the same year to year,
- government grants decreased by 100% due to lower levels of activities supported by such grants,
- other expenses increased by 346%, primarily due to an increase in insurance.

Separately, share based payments increased by 1,202% in Q1 2021 over the same period in 2020 as a result of the stock options granted on July 16, 2020. This was directly impacted by the vesting structure of the stock option plan with options vesting between 25% and 50% on the grant date requiring an immediate recognition of that cost.

### **Research and Development (“R&D”) Costs**

The Company incurred \$286,307 of R&D costs, net of government grants, on internal projects in Q1 2021, an increase of 1,140% as compared with \$23,088 in Q1 2020. The increase in Q1 2020 is primarily related to a decrease in government grants recognized.

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.

### **Net Finance Costs**

Finance costs for Q1 2021 totaled \$53,087 as compared with \$232,736 for Q1 2020, representing a decrease of 77% year-over-year. The decrease in finance costs in Q1 2020, is primarily attributable to lower interest and accretion on lower amounts of debt.

### **Strategic Investments**

The adjustment to the fair market value of strategic investments for Q1 2021 resulted in a gain of \$5,634,722 compared to a gain in the amount of \$492,024 in Q1 2020.

### **Net Earnings and Comprehensive Income (Loss)**

The net comprehensive income for Q1 2021 of \$3,712,903 compared to a loss of \$1,757,027, in Q1 2020, represents an increase of 311% year-over-year. The increased in income of \$4,253,146 in the comprehensive income in Q1 2021 is primarily attributable to the factors described above, which have been summarized as follows:

- an increase in product and service-related revenue of \$5,545,595 arising in Q1 2021,
- an increase in cost of sales and services of \$3,669,999, primarily due to an increase in employee compensation, subcontracting, direct materials, manufacturing overhead & other, and a decrease in foreign exchange, investment tax credits, and amortization of intangible assets,
- an increase in SG&A expenses of \$1,597,369 arising in Q1 2021 primarily due to an increase in employee compensation, professional fees, office and general, depreciation in property and equipment, depreciation ROU assets, other expenses and share based expenses, and a decrease in travel, and government grants,
- an increase in R&D expenses of \$263,219 primarily due to an increase in subcontracting, material and equipment and other expenses,
- a decrease in net finance costs of \$179,649 in Q1 2021 primarily due to lower interest and accretion on lower amounts of debt,
- an increase in fair value adjustment of strategic investments of \$5,142,698 in Q1 2021.

### **EBITDA**

The EBITDA gain in Q1 2021 was \$3,950,881 compared with an EBITDA loss of \$1,418,057 for Q1 2020, representing an increase of 379% year-over-year. The \$5,368,938 increase in the EBITDA gain in Q1 2021 compared with Q1 2020 is due to the increase in comprehensive income of \$5,469,930, an increase in depreciation on property and equipment of \$66,261, and an

increase in depreciation ROU assets of \$12,429, offset by a decrease in amortization of intangible assets of \$33 and a decrease in finance charges of \$179,650.

Adjusted EBITDA gain in Q1 2021 was \$4,873,221 compared with an Adjusted EBITDA loss of \$1,347,190 for Q1 2020. The increase of \$6,220,411 in the Adjusted EBITDA gain in Q1 2021 is attributable to an increase in EBITDA gain of \$5,368,938, and by an increase of \$851,473 in share-based payments.

The Modified EBITDA loss in Q1 2021 was \$761,501 compared with a Modified EBITDA loss of \$855,166 for Q1 2020, representing a decrease of 11%. The decrease of \$93,664 in the Modified EBITDA gain in Q1 2021 is attributable to the increase as mentioned above in the Adjusted EBITDA of \$6,220,411 and a decrease in the change of fair value of strategic investments of \$6,126,745.

## **Liquidity**

As at March 31, 2021, the Company has cash and cash equivalents of \$26,274,344. In addition, the accounts payable and accrued liabilities of \$8,236,489 are payable within 12 months. The Company expects that its cash position will be able to finance its operations for the foreseeable future.

## **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 m<sup>2</sup> and 2,940 m<sup>2</sup> 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](http://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](http://www.sedar.com), or at [www.sec.gov](http://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.*

## **FURTHER INFORMATION**

*Additional information relating to Company and its business, including, the first quarter ended March 31<sup>st</sup> 2021, the 2020 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.sedar.com](http://www.sedar.com), EDGAR at [www.sec.gov](http://www.sec.gov) or the Company's website at [www.pyrogenesis.com](http://www.pyrogenesis.com).*

SOURCE PyroGenesis Canada Inc.

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