

PyroGenesis Announces Q3-2017 Results: Cash Flow Positive on EBITDA (Modified) Basis; Revenues Increase by 7%; Positive Gross Margin of 57%; Current Backlog \$7.41MM

MONTREAL, Nov. 28, 2017 -- PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX-V:PYR) (OTCQB:PYRNF), a high-tech company (the "Company" or "PyroGenesis") that designs, develops, manufactures and commercializes plasma waste-to-energy systems and plasma torch products, is pleased to announce today its financial and operational results for the third quarter ended September 30, 2017.

Results for the first nine (9) months, and Q3, of 2017 reflected the following:

- Nine (9) month revenues increased 58% to \$5.90MM over that of \$3.74MM posted in the same period in 2016;
- Revenues for Q3 2017 increased 7% to \$2.03MM over that of \$1.9MM posted in the same period in 2016.
- Gross Margin Before Amortization of Intangible Assets increased to 52.2% in the first 9 months of 2017 from 42.5% posted over the same period in 2016.
- Gross Margin After Amortization of Intangible Assets increased to 52.2% from 14.5% over the same period in 2016.
- Gross Margin Before Amortization of Intangible Assets decreased to 57.1% in the third Quarter of 2017, from 64.2% posted in the same period in 2016.
- Gross Margin After Amortization of Intangible Assets increased to 57.1% from 45.8% over the same period in 2016.
- Most importantly, for the first nine months of 2017 EBITDA (mod.) improved to a loss of \$73.8K as compared to an EBITA (Mod.) loss of \$1.1 Million posted in the same period of 2016.
- For Q3 2017 we posted an EBITA (Mod.) of \$92K versus that of \$239K for the same period in 2016.
- Backlog of signed contracts as of the date of this writing is \$7.41MM.

At year end 2016, we described the preceding twelve months as being a pivotal year for PyroGenesis as the Company shifted its focus away from being a fabricator of plasma-based systems that produced unique titanium powders, in favour of becoming a producer of metal powders for the Additive Manufacturing Industry (the "Industry").

Given their unique properties (pure, small, spherical, and uniform) which make them flow like water these powders are greatly sought after in the Industry, particularly for 3D printing. Given this strategic shift, together with the backlog of signed contracts from our non-additive manufacturing business ("Core/Traditional Lines of Business"), we projected that 2017 was shaping up to be a break out year for PyroGenesis, and the first nine months of 2017 have not been disappointing as (i) our powder production system comes on-line (ii) an order for a second DROSRITE™ system from an existing client (iii) US Navy poised to order a 3rd waste destruction system, and (iv) our chemical warfare weapon destruction system is in the testing phase.

What is important to note is that these results reflect revenues from what we call our Core/Traditional Lines of Business (with little to no revenues from powder sales). During this period we completed our first powder production system which following certain improvements came on stream in Q1-2017 and ramped up to full production mode during Q3-2017 and is now complete.

We are more convinced than ever before that 2017 is becoming the break out year for which we have positioned the Company for a number of reasons:

- The healthy gross margins established in 2016 (before consideration of the 2016 write-offs) have improved, and are expected to continue to improve once powder production is in full swing.
- Established backlog of signed contracts,
- Our Core/Traditional Lines of Business are poised to contribute significantly to the bottom line and be both profitable and significant in their own right.

The following is a non-exhaustive review of PyroGenesis' main commercial activities:

A) Powder Production: The Company has met every major milestone previously announced on the road to making metal powders for the Industry; particularly, the completion of the assembly of its first powder production system; the first powder run; and the completion of ramp-up.

Also, as previously announced in recent press releases, interest has far exceeded management's expectations as several initial contracts were received for sample powders during the ramp-up phase. Furthermore, the Company announced having signed several agreements with significant players in the Industry, whereby the Company is in discussions regarding the possibility of concluding business relationships or transactions geared to the production of its powders.

These discussions are continuing as the Company actively expands the number, and type, of agreements it is entering into with potential clients. The Company cannot comment on the specific details of these discussions, or communicate the comments that it has received with regards to the samples provided, other than to say that nothing negative has been

reported.

Of note, during the first nine months of 2017, not only was the Company's first powder production system completed but the Company successfully delivered sample orders for Titanium powder, as well as for Inconel powders. Furthermore, during this period, the Company announced one of the most significant developments to date, possibly even more significant than the Company's original invention of Plasma Atomization, which is that it has developed a new plasma-based process that provides significant control over its particle size distributions with little to no waste and which, in turn, has enabled the production of MIM cut powders in quantity.

The current system is the first of many PyroGenesis expects to make in order to address an increasing need for metal powders in the Industry¹.

B) DROSRITE™: As the Company positioned itself, during the first 9 months of 2017, to become a significant powder producer to the Additive Manufacturing Industry, it also positioned its DROSRITE™ Furnace System to become a fully commercial product line in and of its own right.

The DROSRITE™ Furnace System was proven at a North American customer's Mexican facility during the first half of 2016. Soon thereafter, a successful demonstration of the DROSRITE™ System took place in the Middle East, following which an unsolicited request to exclusively market the process in the region was received, and is, as of this writing, in the closing months of being concluded. The Company has also received a request to demonstrate DROSRITE's™ capabilities in India in early 2018. This flurry of activity and interest for the DROSRITE™ System resulted in the Company dedicating a full time business development manager to market the DROSRITE™ System.

With the recent announced reorder for a DROSRITE™ system by an existing client, management believes it has succeeded in positioning DROSRITE™ as a fully commercial product line.

The market potential for PyroGenesis' DROSRITE™ System from aluminium dross alone exceeds \$400MM.

C) HPQ: On August 2, 2016, PyroGenesis announced that it had signed contracts totalling CAN\$8,260,000 with HPQ Silicon Resources Inc., formally Uragold Bay Resources Inc. ("HPQ") for the sale of IP and to provide a 200 metric tonne (MT) per year PUREVAP™ pilot system to produce silicon metal directly from quartz. Of particular note, if successful, PyroGenesis benefits from a 10% royalty on all revenues derived from the use of this system by HPQ, subject to annual minimums.

D) Chemical Warfare Destruction System: The Company recently announced that PyroGenesis has, in coordination with the US-based Southwest Research Institute (SwRI), successfully completed long-duration performance tests using the Company's tactical Plasma Arc Chemical Warfare Agents Destruction System ("PACWADS") against surrogate chemical warfare agent material. These tests supported the Defense Advanced Research Projects Agency (DARPA) Agnostic Compact Demilitarization of Chemical Agents (ACDC) program and far exceeded minimum requirements with over 99.9999% destruction efficiency. The PACWADS has been delivered to the testing site and is currently going through final testing using real chemical warfare agents. The completion of these tests has been delayed due to unrelated program testing schedules. The testing timeline is out of the Company's control but now looks like it will be concluded in early 2018.

E) Other Contracts: The Company is in discussions relative to other contracts such as a third order for a PAWDS for a New US Aircraft Carrier which is expected to be ordered sometime in the first half of 2018 with an estimated value of approximately \$6MM and the sale of the Company's SPARC system.

Management remains focused on reducing PyroGenesis' dependency on long-cycle projects by developing a strategic portfolio of volume driven, high margin/low risk products that resolve specific problems within niche markets, and doing so by introducing these plasma-based technologies to industries that have yet to consider such solutions.

Management is also actively targeting recurring revenue opportunities that will generate a growing, and profitable, regular cash flow to the Company.

PyroGenesis has one of the largest concentrations of plasma expertise in the world, with over 250 years of accumulated technical experience and 54 patents (issued/pending), combined with unique relationships with major universities performing cutting edge plasma research and development, which positions the Company well to execute upon its various strategies.

Financial Summary

Revenues

The Company posted revenues of \$2,026,557 in the third quarter of 2017 ("Q3, 2017"), representing an increase of 7% compared with \$1,902,748 recorded in the third quarter of 2016 ("Q3, 2016"). Revenue recorded in Q3 2017 was generated primarily from (i) the development of a vacuum arc reducing process to convert Silica into high purity Silicon metal, (ii) manufacture and further field testing of Tactical PACWADS, the first mobile plasma system for destruction of chemical warfare agents under contract with an international military consortium, (iii) the demonstration of the viability of PyroGenesis' existing plasma chemical warfare agent destruction platform with locally available materials, for the complete eradication of chemical warfare agents without creating hazardous by-products, and (iv) support services related to PAWDS-Marine systems supplied

to the US Navy.

Cost of Sales and Services and Gross Margins

Cost of sales and services before amortization of intangible assets was \$870,352 in Q3, 2017, representing an increase of 28% compared with \$682,105 in Q3, 2016. Total costs of sales and services, was \$870,352 representing a decrease of 16% compared with \$1,031,373 in Q3, 2016.

Various factors, including, but not limited to, the mix of long and short-term manufacturing projects, project complexity and scale, and project R&D content, may significantly impact both the composition and overall level of cost of sales and services reported in a given period, as the mix of labor, materials and subcontracts may be significantly different.

The costs incurred in Q3, 2017 are primarily attributable to the work completed under PyroGenesis' project to develop a vacuum arc reducing process to convert Silica into high purity Silicon metal, work completed on the tactical mobile plasma system for destruction of chemical warfare agents under contract with an international military consortium, and support services related to PAWDS Marine systems supplied to the US Navy.

Investment tax credits recorded against cost of sales are primarily related to client funded projects that qualify for tax credits from the provincial government of Quebec. Qualifying tax credits increased to \$88,338 in Q3, 2017, compared with \$16,354 in Q3, 2016. This represents an increase of 440% quarter-over-quarter. The Company continues to make investments in research and development projects incorporating the involvement of strategic partners and government bodies.

In Q3, 2017, the gross margin before amortization of intangible assets was \$1,156,205, which represents 57% of revenue. This compares with a gross margin before amortization of intangible assets of \$1,220,643 (64% of revenue) for Q3, 2016.

The amortization of intangible assets of Nil in Q3, 2017 (\$349,268 in Q3, 2016) relates to the licenses and know-how purchased in 2011 from a company under common control. This expense is a non-cash item and the underlying asset was fully amortized by December 31, 2016.

Selling, General and Administrative Expenses

Selling, general and administrative expenses ("SG&A") for Q3, 2017 were \$1,160,752, representing a decrease of 17% compared with \$1,397,638 reported for Q3, 2016. Excluding the costs associated with share-based compensation (a non-cash item in which options vest over a four-year period), SG&A expenses increased by 4% in Q3, 2017 compared with Q3, 2016.

The increase in SG&A expenses is attributable to the net effect of (i) an increase of 13% in employee compensation, (ii) a decrease of 31% for professional fees, primarily due to a decrease in accounting fees and deferred patent expenses, (iii) an increase of 16% in office and general expenses, due to an increase in computers and internet expenses, (iv) travel costs increased by 157%, due to an increase in travel abroad, (v) depreciation on property and equipment decreased by 12%, asset under development in Q3 2017 will begin to be depreciated when the asset is available or ready for use, (vi) government grants increased by 100% due to a higher level of activities supported by such grants, (vii) other expenses increased by 31%, primarily due to the higher cost of freight and shipping, and (viii) a decrease in share base payments of 65% primarily due to the vesting structure of the stock option plan and the stock options exercised to date.

Total Comprehensive Loss

The comprehensive loss for Q3, 2017 was \$360,083 compared to a loss of \$717,041 in Q3, 2016, representing a decrease of 50% quarter-over-quarter.

The decrease of \$356,958 in the comprehensive loss in Q3, 2017 is primarily attributable to: (i) an increase in product and service related revenue of \$123,809, (ii) an increase in cost of sales and services totaling \$188,249 as explained above (iii) a decrease in amortization of intangible assets of \$349,268, (iv) a decrease in SG&A expenses of \$236,886 as explained above, (v) an increase in R&D expenses of \$37,668 primarily due to the fact that many of the Company's engineering and R&D resources were concentrated on activities within projects under construction for clients, with such costs being recorded within cost of sales, (vi) an increase in net finance costs of \$127,090 due to a decrease in the fair value of investments of \$115,513 compared to the same period in 2016.

EBITDA

The EBITDA loss in Q3, 2017 was \$161,094 compared with an EBITDA loss of \$176,553 for Q3, 2016, representing a decrease of 9%.

EBITDA (Mod.) gain in Q3, 2017 was \$91,713 compared with an EBITDA (Mod.) gain of \$238,860 for Q3, 2016. The decrease of \$147,147 in the EBITDA (Mod.) in Q3, 2017 is mainly attributable to the decreased comprehensive loss of \$356,958, a decrease in depreciation on property and equipment of \$3,808, a decrease of \$349,268 in amortization of intangible assets, an increase in finance charges of \$11,577, a decrease in share-based payments of \$278,119, and a decrease in the fair value of investments of \$115,113.

Liquidity

As at September 30, 2017, the Company had cash on hand of \$317,931 and negative working capital of \$5,590,101 compared with a cash balance of \$385,257 and negative working capital of \$2,079,353 as at December 31, 2016.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc. is the world leader in the design, development, manufacture and commercialization of advanced plasma processes. PyroGenesis provides engineering and manufacturing expertise, cutting-edge contract research, as well as turnkey process equipment packages to the defense, metallurgical, mining, additive manufacturing (3D printing), oil and gas, and environmental industries. PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization with a team of experienced engineers, scientists and technicians working out of our Montreal office and our 3,800 m² manufacturing facility. Its core competencies allow PyroGenesis to lead the way in providing innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. Its operations are ISO 9001:2008 certified, and have been ISO certified since 1997. PyroGenesis is a publicly-traded Canadian company on the TSX Venture Exchange (Ticker Symbol: PYR) and on the OTCQB Marketplace (Ticker Symbol: PYRNF). For more information, please visit www.pyrogenesis.com

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