



PYROGENESIS CANADA INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and nine months ended Sept 30, 2012

(All figures expressed in Canadian dollars unless otherwise noted.)

November 27, 2012

This management's discussion and analysis (MD&A) of PyroGenesis Canada Inc. ("PCI" or the "Company") have been prepared by management and should be read in conjunction with the unaudited financial statements and related notes thereto of the Company for the three and nine months ending September 30, 2012 which were prepared in accordance with International Financial Reporting Standards ("IFRS"). The Company's Audit Committee has reviewed and approved this MD&A.

The MD&A was prepared as of November 27, 2012. Additional information regarding the Company is available on SEDAR (www.sedar.com).

FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements. All statements other than statements of historical fact contained in this MD&A are forward-looking statements, including, without limitation, the Company's: statements regarding its products and services; relations with suppliers and customers; future financial position; business strategies; potential acquisitions; potential business partnering; litigation; and plans and objectives. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "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" or "will be taken", "occur" or "be achieved" and similar words or the negative thereof. Although management of the Company believes that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct.

In particular, this MD&A contains forward-looking statements relating to:

- the business strategies of the Company;
- the capital resources of the Company;
- the ability of the Company to increase sales, including as a result of the successful completion of the Company's current projects;



- management's expectation that the Company will achieve sustained annual growth and profitability, and that gross margins will increase resulting in a decrease in expenses as a percentage of revenue; and
- the Company's overall financial performance.

By their nature, forward-looking statements require assumptions and are subject to inherent risks and uncertainties including those discussed herein. In particular, forward-looking statements relating to future sales, growth and profitability are based on the assumption that current projects will be completed and the Company will be awarded certain anticipated contracts pursuant to recent negotiations with, and statements made by, third parties. There is significant risk that predictions and other forward-looking statements will not prove to be accurate. Readers are cautioned to not place undue reliance on forward-looking statements made herein because a number of factors could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including, but not limited to, the strength of the Canadian and US economy; operational, funding, and liquidity risks; unforeseen engineering and environmental problems; delays or inability to obtain required financing and/or anticipated contracts; risks associated with licenses, permits and regulatory approvals; supply interruptions or labour disputes; foreign exchange fluctuations and collection risk; competition from other suppliers or alternate less capital intensive energy solutions; and the risk factors described under the heading "Risk Factors" in the Company's annual information form for the financial year ended December 31, 2011. We caution that the foregoing list of factors is not exhaustive, and that, when relying on forward-looking statements to make decisions with respect to the Company, investors and others should carefully consider these factors, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. Forward-looking statements are provided as of the date of this MD&A, and the Company assumes no obligation to update or revise such forward-looking statements to reflect new events or circumstances except as required under applicable securities laws.

The forward-looking statements contained herein are expressly qualified in their entirety by this cautionary statement. The forward-looking statements included in this MD&A are made as of the date of this MD&A or such other date specified herein.



OVERVIEW

PyroGenesis is a leader in the design, development, manufacture and commercialization of advanced plasma waste to energy systems. The Company's systems are capable of converting waste into energy and non-hazardous products. The Company's proprietary and proven technologies have been developed over 20 years. Accepted systems by the US Navy and the US Air Force set the Company's business apart from many of its competitors. The Company has three distinct product offerings. The Company's marine based Plasma Arc Waste Destruction System ("PAWDS") treats combustible waste on board ships while its land based Plasma Resource Recovery System ("PRRS") is designed to treat a range of industrial, hazardous, clinical and municipal waste streams on land. The Company's plasma torch systems are sold world-wide to other plasma companies who do not have the know-how to build this type of equipment and also to those using high temperature metallurgical and advanced material applications.

SELECTED FINANCIAL INFORMATION

Statement of Comprehensive Loss

	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Revenues	\$ 516,595	\$ 1,909,231	-72.9%	\$ 2,101,735	\$ 3,283,938	-36.0%
Cost of sales and services	1,121,276	1,962,530		3,652,438	4,201,592	
Selling, general and administrative	1,041,685	1,932,554		3,093,902	3,987,970	
Financing charges	96,392	179,209		334,503	606,710	
	2,259,353	4,074,293		7,080,843	8,796,272	
Loss from operations	(1,742,758)	(2,165,062)		(4,979,108)	(5,512,334)	
Other income	177	44,639		10,115	46,863	
Public company listing	-	(694,877)		-	(694,877)	
Total comprehensive loss	\$ (1,742,581)	\$ (2,815,300)	-38.1%	\$ (4,968,993)	\$ (6,160,348)	-19.3%
Loss per share - basic	\$ (0.027)	\$ (0.049)		\$ (0.080)	\$ (0.112)	

Statement of Financial Position at :

	September 30, 2012	December 31, 2011
Total assets	\$ 9,506,992	\$ 12,145,609
Total liabilities	10,862,265	12,547,389
Shareholders' equity	\$ (1,355,273)	\$ (401,780)



RESULTS OF OPERATIONS

Revenues

Revenues for the third quarter of fiscal 2012, ending September 30, 2012 (hereafter “2012-Q3”) were \$516,595, a decrease of 73% over revenues of \$1,909,231 reported during the same period in fiscal year 2011. The decrease in revenues in 2012 including Q3, reflects that the Company is in a “run-off period” whereby its main two contracts were winding down and that it is working through a “gap period” until the next large reorders are received from its established client base. In 2012-Q3 the Company commenced two new contracts on which minor amounts of revenues were recorded (combined in 2012 Q3 of \$175,400). It is expected that revenues attributable to these contracts will increase in future quarters reflecting increased project progress and in accordance with percent of completion accounting practices.

Revenues for the first nine months of fiscal 2012 were \$2,101,735, a decrease of 36% over the revenues of \$3,283,938 reported during the same period in fiscal year 2011.

Cost of Sales and Services

Cost of Sales and Services	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Salaries and sub-contracting	377,116	951,599	-60.4%	1,763,894	2,723,628	-35.2%
Materials and equipment	272,607	616,286	-55.8%	551,415	1,207,578	-54.3%
Manufacturing overhead	155,214	151,282	2.6%	432,555	543,493	-20.4%
Amortization of licences	349,268	352,297	-0.9%	1,047,805	763,051	37.3%
Sub-total before government grants and research and development credits	1,154,205	2,071,464	-44.3%	3,795,669	5,237,750	-27.5%
Government grants and research and development tax credits	(32,929)	(108,934)	-69.8%	(143,231)	(1,036,158)	-86.2%
Total Cost of Sales	\$ 1,121,276	\$ 1,962,530	-42.9%	\$ 3,652,438	4,201,592	-13.1%

Cost of Sales before government grants and research and development tax credits for the third quarter of fiscal 2012, ending September 30, 2012 was \$1,154,205, a decrease of 44% over the net costs of \$2,071,464 reported during the same period in the prior fiscal year. Salary costs in 2012 have been brought in line with the volume of work on hand, while in 2011, the labor force was increased in anticipation of a shorter than experienced gap period and subsequent increased work load.

As previously announced, the Company has implemented significant cost containment measures starting in May 2012. As a result of these measures management believes that the Company is better positioned and has become more competitive as many of the cost containment measures will have a long term positive impact on the company’s profitability (rental expenses were reduced by approximately 50% to \$350,000 per year).



The level of government grants and research and development (“R&D”) tax credits recorded in 2012-Q3 was \$32,929, versus \$108,934 in 2011-Q3. On a year-to-date basis, R&D tax credits recorded in 2012 are \$143,231 compared to \$1,036,158. This decrease in the level of R&D tax credits recorded is due to less favorable tax treatment available to public companies whereby credits available from the Federal government are now in the form of non-refundable credits as well as the decreased spending on R&D eligible projects.

Cost of Sales for the nine month period ending September 30, 2012 decreased by 27% before government grants and R&D tax credits, and decreased by 13% after applying the grants and R&D tax credits.

Selling, General and Administrative Expenses

	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Salaries	\$ 143,557	\$ 310,003	-53.7%	\$ 904,771	\$ 925,003	-2.2%
Stock based compensation	451,664	910,000		868,710	910,000	
Professional fees	147,296	518,737	-71.6%	601,771	1,138,145	-47.1%
Royalty	-	(120,000)	-100.0%	-	75,000	-100.0%
Office and general	65,019	154,183	-57.8%	211,326	385,421	-45.2%
Travel	135,514	36,626	270.0%	192,929	190,384	1.3%
Insurance & taxes	27,128	38,037	-28.7%	77,186	100,695	-23.3%
Interest and bank charges	4,246	5,448	-22.1%	41,341	22,478	83.9%
Donations	1,880	100	1780.0%	1,880	1,308	43.7%
Advertising	2,492	2,111	18.0%	5,319	9,890	-46.2%
Amortization Machinery & Equipment	62,889	77,309	-18.7%	188,669	229,646	-17.8%
Total	\$ 1,041,685	\$ 1,932,554	-46.1%	\$ 3,093,902	\$ 3,987,970	-22.4%

Selling, general and administrative expenses for the third quarter of fiscal 2012, ending September 30, 2012 were \$1,041,685, a decrease of 46% versus \$1,932,554, reported during the same period in fiscal year 2011. 2012-Q3, includes stock based compensation of \$451,664, (\$910,000 in 2010-Q3). The costs associated with stock based compensation (a non-cash item on which options vest over a four year period) commenced in 2011-Q3 when a stock option plan was put in place. The reduction in 2012-Q3 costs was primarily as a result of cost reduction measures implemented during 2012-Q2 which resulted in significant reductions primarily in salary costs as well as office and general costs. Other contributors to the overall reduction in selling, general and administrative costs are the reductions in non-recurring professional fees (2011-Q3 contained costs associated with the initial public offering), offset by an increase in travel costs as the Company increases its business development efforts.

Selling, general and administrative costs for 2012-Q3 excluding the non-cash cost of stock based compensation resulted in costs of \$590,021, versus comparable costs for 2011-Q3 of \$1,022,554. This reflects the more stream lined cost structure put in place in 2012-Q3 compared to the previous year where higher costs were incurred in becoming a publically traded company.



Year-to-date selling, general and administrative costs as at the end of 2012-Q3 are \$3,093,902 versus \$3,987,970 for the comparable period in the prior year; a reduction of \$894,068 or 22%.

Management is confident that additional cost reductions will be achieved through a closer management of expenses and better management of information from its recently implemented ERP (Enterprise Resource Planning) System.

Financing Charges

Financing Charges	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Financing charges	\$ 96,392	\$ 179,209	-46.2%	\$ 334,503	\$ 606,710	-44.9%

Financing charges decreased by 46% to \$96,392 for the three months ended September 30, 2012, (2011: \$179,209), and decreased by 45% to \$334,503 for the nine months ending September 30, 2012 (2011: 606,710).

The decrease in financing charges is primarily due to the repayment of the bank lines of credit which occurred during 2011-Q3 and Q4. Financing charges in 2012 relate primarily to the non-current debt and current portion of long-term debt.

As at the end of 2012-Q1, the Company had repaid all bank lines-of-credits and Venture Capital loans (\$1,000,000 convertible debenture from Fier Coissance Durable). As such there is no debt owing to external non-related parties.

Amortization of Machinery and Equipment

	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Amortization of machinery and equipment	\$ 62,889	\$ 77,309	-18.7%	\$ 188,669	\$ 229,646	-17.8%

Amortization of machinery and equipment decreased by 19% to \$62,889 in 2012-Q3 (2011- Q3: 77,309), and decreased by 18% on a year-to date basis. This is primarily as a result of decreased investments in machinery and equipment in 2011 and 2012 from the level invested in 2010.



Research and Development Tax Credits

	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Research tax credits	\$ 41,259	\$ 100,000	-58.7%	\$ 119,061	\$ 999,505	-88.1%

R&D tax credits were accrued for in the amount of \$41,259 in 2012-Q3 versus \$100,000 in 2011-Q3. When PyroGenesis became a public company in July 2011, its entitlement to R&D tax credits was significantly reduced and the credits available from the Federal government are now in the form of non-refundable credits. Additionally, projects qualifying for R&D tax credit treatment have decreased significantly in 2012 due to the fact that the Company is now commercializing its product line.

Investment in R&D is a priority for the Company, as new applications for its core technologies are identified. Whereas a significant source of funding for R&D projects in the past has been government R&D tax credits, current and future R&D investment type projects will be less reliant on this form of funding as i) Management believes this form of funding will be increasingly reduced by governments in general and ii) as a public company PyroGenesis entitlement to such funding is reduced. As such, the Company will rely more heavily on partnerships and other granting agencies.

Net Profit/Loss

	Three months ended Sept. 30			Nine months ended Sept. 30		
	2012	2011	% Change	2012	2011	% Change
Loss from operations	\$ (1,742,758)	\$ (2,165,062)	-19.5%	\$ (4,979,108)	\$ (5,512,334)	-9.7%
Total comprehensive loss	(1,742,581)	(2,815,300)	-38.1%	(4,968,993)	(6,160,348)	-19.3%

Loss from operations for the third quarter of fiscal 2012, ending September 30, 2012 was \$1,742,758 as compared to a loss of \$2,165,062 for the same period in 2011; a decrease of 19%. The year-to-date ending September 30, 2012, loss from operations decreased by 10% over the prior year (\$4,979,108 compared to \$5,512,334).

Total comprehensive loss for the third quarter of fiscal 2012, ending September 30, 2012 was \$1,742,581 as compared to a loss of \$2,815,300 for the same period in 2011; a decrease of 38%. The 2011-Q3 loss included one-time initial public listing cost of \$694,877. Excluding this one time cost in 2011 result, 2012 Q3 loss is decreased by 18% over the prior year. The year-to-date ending September 30, 2012, total comprehensive loss decreased by 19% over the prior year (2012 YTD: \$4,968,993 compared to 2011 YTD: \$6,160,348).

2012 has been defined by the management as a “gap period”, between the announcements in 2011 of the acceptance of its first orders by the US Navy and the US Air Force, and the reorder of the Company’s marine system. The level of revenues during the first three



quarters of 2012 reflect the lower volume of business as they do not include any revenues from these clients other than some minor follow-on work.

During 2012, Management restructured the organization with a view of rationalizing labor and reducing expenses thereby reducing its break-even point.

Loss from operations for 2012-Q3 after non-cash items (stock based compensation: \$451,664; amortization of licenses and machinery and equipment: \$412,157) was \$1,742,581. Before including these non-cash items, loss from operations for the quarter is \$878,760.

SUMMARY OF QUARTERLY RESULTS

	2012			2011			
	Q3	Q2	Amended Q1	Q4	Amended Q3	Amended Q2	Q1
Revenues	516,595	777,197	807,943	1,781,643	1,909,231	167,054	1,207,653
Loss from operations	(1,742,758)	(1,358,294)	(1,878,056)	(789,059)	(2,165,062)	(2,643,105)	(704,167)
Total comprehensive loss	(1,742,581)	(1,358,249)	(1,868,163)	(783,958)	(2,815,300)	(2,643,105)	(701,943)
Net loss per share - basic	0.027	(0.02)	(0.03)	(0.01)	(0.049)	(0.05)	(0.01)

Prior to June 2011, quarterly financial information is not available as PyroGenesis was a privately held company.

As illustrated above, the revenues and losses from operations have varied considerably from quarter to quarter. Revenues are recognized based on a percentage of completion basis, and project work is dependent on customer timing for project engineering, manufacturing, and testing.

LIQUIDITY AND CAPITAL RESSOURCES

During the 2012 fiscal year, the primary sources of funding for PyroGenesis have been cash generated through the sale of shares. On March 29, 2012, PyroGenesis completed its second public offering whereby it issued 4,424,555 units at a price of \$0.80 per unit for aggregate gross proceeds of \$3,539,644.

At September 30, 2012, PyroGenesis had cash on hand of \$1,124,249 and negative working capital of \$1,308,669, (-1,085,184 at December 31, 2011).

At December 3, 2011, PyroGenesis had available an investment tax credit demand facility. In January 2012, the facility has been repaid in full by the Company and is no longer in place. It is the Company's intent to reinstate a revolving line of credit once business levels increase to justify such a line.

On March 29, 2012, PyroGenesis paid off the convertible debt of \$976,396.



As at the end of 2012-Q1, there is no debt owing to external non-related parties.

Since the Company went public in July 2011, the primary source of funding has been the issuance of shares via public offerings. The Company's ability to raise additional funds from the equity markets will largely depend upon general market conditions and the company's ability to secure contracts. Current market conditions do limit the potential to raise additional funding.

Securing contracts and raising equity when the market permits will be entirely dependent on the company's continuing success in proving out its technology. Any perceived delay or setback in this area will negatively affect the company's ability to increase liquidity. However, management expects that its premier position in the plasma waste destruction/waste-to-energy sector will enable it to offset any negative impact rising from market conditions.

CASH USED IN OPERATIONS

	Three months ended Sept. 30		Nine months ended Sept. 30	
	2012	2011	2012	2011
Cash provided by (used) by operating activities	\$ 626,131	\$ 3,218,596	\$ (561,480)	\$ 667,913
Cash provided by (used in) investing activities	(191,203)	(333,166)	(425,032)	452,690
Cash provided by (used in) financing activities	(25,933)	(2,768,977)	1,629,365	(1,046,927)

Cash flow from operations resulted in a generation of cash of \$623,131 for the three-month period ended September 30, 2012 and a net use of cash of \$561,480 for the nine month period ending September 30, 2012, compared to a generation of cash of \$3,218,596 and of \$667,913 for respective periods in the previous year. For 2012-Q3 despite a net loss \$1,742,581, costs not requiring outlays of cash totaled \$863,822 consisting mainly of costs related to issuance of options and amortization of machinery, equipment and licenses.

Investing activities resulted in cash usage of \$191,203 for the three month period ending September 30, 2012 and a net cash usage of \$425,032 for the six month period ending June 30, 2012. Cash used for investment activities in 2012 was primarily for the Company's share of cost in the pilot plasma destruction unit under construction with a joint operator.

Financing activities generated \$1,629,365 for the nine month period ended September 30, 2012, compared to an outflow of \$1,046,927 for the same period in the previous year. During 2012, proceeds from equity issuance raised net cash of \$3,508,678, and \$1,517,426 was used for repayment of bank debt, repayment of loans and long-term debt and \$361,887 related to costs of the short form prospectus issue. During 2012-Q3, financing activities were limited to a reduction in loans of \$25,993.



RELATED PARTY TRANSACTION

Details of related party transactions are disclosed in note 16 of the financial statements for the period ended September 30, 2012.

There are no material changes during the 2012 fiscal year in the nature or extent of the related party transactions from those conducted in the 2011 business year, and these transactions are in the normal course of business.

SUBSEQUENT EVENTS

On November 19th 2012 PyroGenesis announced that the European Patent Office had granted the Corporation a patent for its Three Step Ultra-Compact Plasma System for the High Temperature Treatment of Waste which is ideal for niche markets such as small ships and isolated communities. Also referred to as the Electric Garbage Can (EGC), this system complements PyroGenesis' flagship product, the Plasma Arc Waste Destruction System (PAWDS) designed for aircraft carriers and commercial cruise ships. The EGC targets the lucrative and largely ignored markets of frigates, destroyers, cargo ships and isolated communities in general. This patented process addresses many of the shortcomings of conventional technologies. Not only is it compact and produces no secondary residues but, more importantly, it offers continuous operation without the need for fresh water; a scarce resource in isolated communities.

On November 28th 2012, PyroGenesis announced that it had secured a \$5.5 million reorder from a major customer to manufacture, commission and deliver a plasma waste destruction system over the next 18 months. Furthermore, PyroGenesis announced that as a result of this reorder, recent contracts and the cost containment measures it has implemented, the Company is now well positioned to expand its business across all sectors; Management expects to have its first steady state cash flow break-even quarter in early 2013 and projects to achieve significant growth in revenues and profitability in the mid-term. Finally, PyroGenesis also announced that pursuant to recent unsolicited requests for quotation from municipalities as well as unsolicited interest from funds to finance such opportunities, the Company has decided to aggressively target the build-own-operate waste-to-energy municipal (high tonnage) waste treatment market.

OUTLOOK

Management is proud to announce that with the recent announcements of new contracts totaling in excess of \$7.5MM the Company has successfully managed the previously identified gap period (the period between the announcements in 2011 of the acceptance of its first orders by the US Navy and the US Air Force, and reorders of the Company's marine and/or land based systems), and projects to be cash flow positive by early 2013.



The gap period was particularly challenging for the Company given the financially unstable times we, and our customer base, found ourselves in. The economic slowdown, and lower natural gas prices, undoubtedly had their impact on the conventional waste to energy sector. Because PyroGenesis' technologies focus on niche markets including mining and metallurgy, military, isolated communities, and the marine industry its value proposition is more robust and as such is able to be competitive even under more strained fiscal times.

Management, having identified the risks associated with a prolonged gap period, prudently looked at various strategies to mitigate any impact that might have been associated with such an adverse economic environment. In part, to manage this gap period the Company (i) engaged in significant cost containment initiatives to lower fixed and variable costs while at the same time (ii) defining new market niches for its other two business lines (Torch Manufacturing and Engineering Services) with a view of increasing its backlog of new orders. Once again, management is proud to announce that it has been successful on both of these fronts.

Many of the cost containment measures implemented by Management have had an immediate impact on profitability (for example, premise rent expense and utilities have, as a result of a permanent relocation of its manufacturing facility, decreased by over 50% to \$350,000 per annum). Furthermore, during the gap period, the Company not only rationalized its work force, but also realigned its focus from ensuring the successful delivery and timely acceptance of its two main projects, to undertaking an aggressive business development effort now that its main product line has been commercially validated by a recent reorder. Concurrently, the Company has implemented a Management Information System designed to ensure budgetary controls, based on past experiences, provide timely information, while at the same time relieving of the labor intensive nature of the system that was previously used.

Separately, as a result of having focused on defining new market niches management has identified several markets for which its products are already commercially viable. These new markets are already making a significant contribution to the Company's overall performance, and Management believes that this market segment may in time eclipse the results from the Company's environmental product offering.

The Company continues to seek out teaming arrangements with larger more established firms in specific business segments to accelerate market acceptance of the Company's technologies; as well as to accelerate its penetration of the larger BOO municipal waste market segment which it has recently targeted. Management has been, and will continue to seek out, focused and teaming arrangements to accelerate Company growth.

Looking forward, and as a result of these changes and developments, Management believes that the Company is now positioned as a strong and credible player within both the market for plasma based waste destruction technologies as well as that for niche torch applications. The Company has successfully realigned its workforce, rationalized and



significantly reduced its expenses, paid off all bank and VC debt and, is therefore ideally positioned to expand its business across all sectors. As a result, Management expects to have its first steady state cash flow break-even quarter in early 2013 and projects to achieve significant growth in revenues and profitability in the mid-term. In the short term however, quarterly results will be susceptible to quarter over-quarter variability as PyroGenesis builds its backlog of orders and increases personnel to service this business.

ADDITIONAL INFORMATION

Additional information is contained in the company's annual information form filed on SEDAR on November 4, 2011 (the "AIF"). The AIF and other additional information regarding the Company can be found on SEDAR at www.sedar.com.