PYROGENESIS CANADA INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and six months ended June 30, 2012

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

August 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 six months ending June 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 August 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 base sets 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 FINANCIALINFORMATION

Statement of Comprehensive Loss

	Three months ended June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Revenues	$ **777,197**	$ 167,054	365.2%	$ **1,585,140**	$ 1,374,707	15.3%
Cost of sales and services	**1,018,046**	1,408,180		**2,531,162**	2,239,062	
Selling, general and administrative	**1,013,083**	1,180,592		**2,052,217**	2,055,416	
Financing charges	**104,362**	221,387		**238,111**	427,501	
	2,135,491	2,810,159		**4,821,490**	4,721,979	
Loss from operations	**(1,358,294)**	(2,643,105)		**(3,236,350)**	(3,347,272)	
Other income	**45**	-		**9,938**	2,224	
Total comprehensive loss	**$ (1,358,249)**	$ (2,643,105)	-48.6%	**$ (3,226,412)**	$ (3,345,048)	-3.5%
Loss per share - basic	**(0.02)**	(0.05)		**(0.05)**	(0.07)	

Statement of Financial Position at :

	June 30, 2012	December 31, 2011
Total assets	$ **9,845,134**	$ 12,145,609
Total liabilities	**9,909,489**	12,547,389
Shareholders' equity	$ (64,355)	$ (401,780)

RESULTS OF OPERATIONS

Revenues

Revenues for the second quarter of fiscal 2012, ending June 30, 2012 "2012-Q2" were $777,197, an increase of 365% over the revenue of $167,054 reported during the same period in fiscal year 2011. The increase in revenues is a reflection of increased volume of services provided in the quarter as determined by percentage of completion on mainly fixed price contracts.

Revenues for the first six months of fiscal 2012 were $1,585,140, an increase of 15% over the revenues of $1,374,707 reported during the same period in fiscal year 2011.

Cost of Sales and Services

Cost of Sales and Services

	Three months ended June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Salaries and sub-contracting	**593,735**	913,142	-35.0%	**1,386,778**	1,772,029	-21.7%
Materials and equipment	**6,795**	348,233	-98.0%	**278,808**	591,292	-52.8%
Manufacturing overhead	**115,344**	191,965	-39.9%	**277,341**	392,211	-29.3%
Amortization of licences	**349,269**	348,312	0.3%	**698,537**	410,754	70.1%
Sub-total before government grants and research and development credits	**1,065,143**	1,801,652	-40.9%	**2,641,464**	3,166,286	-16.6%
Government grants and research and developmen	**(47,097)**	(393,472)	-88.0%	**(110,302)**	(927,224)	-88.1%
Total Cost of Sales	**$ 1,018,046**	$ 1,408,180	-27.7%	**$ 2,531,162**	2,239,062	13.0%

Cost of Sales before government grants and research and development tax credits for the second quarter of fiscal 2012, ending June 30, 2012 was $1,065,143, a decrease of 41% over the net costs of $1,801,652 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, that labor force was increased in anticipation of increased work load. As previously announced, the Company 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 (such as the permanent relocation of its manufacturing facility.

The level of government grants and research and development tax credits recorded in 2012-Q2 was $47,097, versus $393,472 in 2011-Q2. The important decrease in the level of research and development tax credits recorded is due to less favorable tax treatment available to public companies whereby credits available from the Federal government are in the form of non-refundable credits as well as the decreased spending on R&D eligible projects.

Cost of Sales for the six month period ending June 30, 2012 decreased by 17% before government grants and research and development tax credits, yet increased by 13% after applying the grants and R&D tax credits.

Selling, General and Administrative Expenses

	Three months ended June 30		%	Six months ended June 30		%
	2012	2011	Change	**2012**	2011	Change
Salaries	$ **360,575**	$ 215,000	67.7%	$ **761,214**	$ 615,000	23.8%
Stock based compensation	**208,523**	-		**417,046**	-	
Professional fees	**249,355**	523,583	-52.4%	**454,475**	619,408	-26.6%
Royalty	**-**	120,000	-100.0%	**-**	195,000	-100.0%
Office and general	**72,859**	128,799	-43.4%	**146,307**	231,238	-36.7%
Travel	**29,252**	78,219	-62.6%	**57,415**	153,758	-62.7%
Insurance & taxes	**21,987**	21,547	2.0%	**50,058**	62,658	-20.1%
Interest and bank charges	**5,462**	10,925	-50.0%	**37,095**	17,030	117.8%
Donations	**-**	1,208	-100.0%	**-**	1,208	-100.0%
Advertising	**2,180**	4,380	-50.2%	**2,827**	7,779	-63.7%
Amortization Machinery & Equipment	**62,890**	76,931	-18.3%	**125,780**	152,337	-17.4%
Total	**$ 1,013,083**	$ 1,180,592	-14.2%	**$ 2,052,217**	$ 2,055,416	-0.2%

Selling, general and administrative expenses for the second quarter of fiscal 2012, ending June 30, 2012 were $1,013,083, a decrease of 14% versus the $1,180,592, reported during the same period in fiscal year 2011. 2012-Q2, includes stock based compensation of $208,523, (Nil in 2010-Q2). 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. Excluding the stock based compensation of 2012-Q2, Selling, general and administrative, decreased by 32% in 2012-Q2 over the same time frame in the prior year. This was primarily as a result of reduction in professional fees, general office and travel costs, and elimination of royalties due to the acquisition of intellectual property during 2011, offset by $145,575 increase in salary costs.

Year-to-date 2012-Q2 selling, general and administrative costs are unchanged from the level in 2011, and excluding stock based compensation incurred in 2012, year-to-date costs are 20% below the level incurred in 2011.

Managements expects that costs associated with being a public company will decrease over time as the reliance on external professionals will diminish. Additionally, overall selling, general and administrative expenses as a percentage of revenues will improve significantly with the future growth in revenues.

Financing Charges

	Three months ended June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Financing charges	$ 104,362	$ 221,387	-52.9%	$ 238,111	$ 427,501	-44.3%

Financing charges decreased by 53% to $104,362 for the three months ended June 30, 2012, (2011: $221,387), and decreased by 44% to $238,111 for the six months ending June 30, 2012 (2011: 427,501).

The decrease in the 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 VC loans ($1,000,000 convertible debenture). As such there is no debt owing to external non-related parties.

Amortization of Machinery and Equipment

	Three months ended June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Amortization of machinery and equipment	**$ 62,890**	$ 76,931	-18.3%	**$ 125,780**	$ 152,337	-17.4%

Amortization of machinery and equipment decreased by 18% to $62,890 in 2012-Q2 (2011- Q2: 76,931), and decreased by 17% 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 June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Research tax credits	$ **14,597**	$ 393,472	-96.3%	$ **77,802**	$ 899,505	-91.4%

Research and development tax credits were accrued for in the amount of $14,597 in 2012-Q2 versus $393,472 in 2011-Q2. When PyroGenesis became a public company in

July 2011, its entitlement to research and development tax credits was significantly reduced and the credits available from the Federal government will be in the form of non-refundable credits. Additionally, spending in R&D eligible projects decreased significantly in 2012.

Net Profit/Loss

	Three months ended June 30 2012	2011	% Change	Six months ended June 30 2012	2011	% Change
Loss from operations	$ **(1,358,294)**	$ (2,643,105)	-48.6%	$ **(3,236,350)**	$ (3,347,272)	-3.3%
Total comprehensive loss	**(1,358,249)**	(2,643,105)	-48.6%	**(3,226,412)**	(3,345,048)	-3.5%

Loss from operations for the second quarter of fiscal 2012, ending June 30, 2012 was $1,358,294 as compared to a loss of $2,643,105 for the same period in 2011, a decrease of 49%. Year-to-date as at the end of the second quarter, loss from operations decreased by 3% over the prior year.

For the first two quarters of 2011 business year, PyroGenesis was a private company, and subsequently became a public company in July 2011. The costs of operation in 2012 include some increased costs with being a public company, mainly stock based compensation and increased professional fees. As mentioned previously, less favorable R&D credits rules due to PyroGenesis public status have contributed to the increased cost of operations in 2012.

In 2012- Q2, revenues increased significantly to $777,197 from $167,054 from the same period in the prior year. Despite this important increase, revenues need to increase in order to cover the manufacturing overhead and fixed costs associated with our systems and services.

All efforts are being made by management to decrease the costs of operations as we take appropriate actions to increase our business volume. Costs associated with additional reporting as a public company will continue to decrease as managements' reliance on external consultants and professions decrease.

SUMMARY OF QUARTERLY RESULTS

	2012	2012	2011			
		Amended		Amended	Amended	
	Q2	Q1	Q4	Q3	Q2	Q1
Revenues	**777,197**	**807,943**	1,781,643	1,909,231	167,054	1,207,653
Loss from operations	**(1,358,294)**	**(1,878,056)**	(789,059)	(2,165,062)	(2,643,105)	(704,167)
Total comprehensive loss	**(1,358,249)**	**(1,868,163)**	(783,958)	(2,815,300)	(2,643,105)	(701,943)
Net loss per share - basic	**(0.02)**	**(0.03)**	(0.01)	(0.05)	(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 first half of 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 June 30, 2012, PyroGenesis had cash on hand of $718,254 and negative working capital of $211,260, (-1,085,184 at December 31, 2011).

At December 3, 2011, PyroGenesis had available an investment tax credit demand facility. It is based on the Company’s 2010 claim, for an amount of $500,000 which bears interest at prime rate plus 2.40%. The loan is secured by a first ranking moveable hypothec of $500,000, on all present and future investment tax credits. PyroGenesis also had available a revolving demand loan facility of $740,000 (2010 - $1,500,000) which bears interest at the bank's prime rate plus 3.25%. The loan is secured by a first rank moveable hypothec in the amount of $1,500,000 on accounts receivable, inventory and work-in-process. As per its loan agreements, PyroGenesis was required to maintain a certain tangible net worth of at least $1,600,000. This covenant was waived by the lender until January 16, 2012. As at that date the facilities have been repaid in full by the Company and are 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. Currently, the Company is able to discount any receivables under its Air Force contracts with the Canadian

Commercial Corporation, and as such, the effect of repaying the bank loans has had limited effect on liquidity.
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 June 30		Six months ended June 30	
	2012	2011	2012	2011
Cash provided by (used) by operating activities	$ **(967,432)**	$ (1,311,179)	$ **(1,215,576)**	$ (6,024,450)
Cash provided by (used in) investing actiities	**37,359**	(12,782)	**(233,830)**	(19,231)
Cash provided by (used in) financing activities	**(25,642)**	1,334,813	**1,686,264**	5,806,390

Cash flow from operations resulted in a use of cash of $967,432 for the three-month period ended June 30, 2012 and a net use of cash of $1,215,576 for the six month period ending June 30, 2012, compared to a net use of cash of $1,311,179 and $6,024,450 for respective periods in the previous year. For 2012-Q2 despite a net loss $1,358,249, costs not requiring outlays of cash totaling $620,682 consisting mainly of costs related to issuance of options and amortization of machinery, equipment and licenses.

Investing activities resulted in cash inflows of $37,359 for the three month period ending June 30, 2012 and a net cash usage of $233,830 for the six month period ending June 30, 21012. Cash used for investment activities in 2012 was primarily for the acquisition of machinery and equipment.

Financing activities generated $1,686,264 for the six month period ended June 30, 2012, compared to an inflow of $5,806,360 for the same period in the previous year. During the first half of 2012, proceeds from equity issuance raised net cash of $3,539,644, and $1,491,493 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-Q2, financing activities were limited to a reduction in loans of $25,642.

RELATED PARTY TRANSACTION

Details of related party transactions are disclosed in note 16 of the financial statements for the period ended June 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 July 11th, 2012 PyroGenesis announced that it had been awarded a follow-on contract from a Multinational Mining and Metallurgical Company, which had requested that its name, as well as the details of the process be withheld for competitive reasons. This was as a result of the successful piloting work carried out by PyroGenesis for this Multinational Mining and Metallurgical Company over the past several years. PyroGenesis will now be engaged to carry out engineering, testing, and fabrication of plasma equipment and high temperature reactors as part of a plan to develop a novel, commercial scale plasma-powered metallurgical process. The total value of this contract is $1.07 million over nine months with the first phase valued at approximately $775,000.

On July 11th, 2012 the Company announced that management was confident that the gap period between the announcements in 2011 of the acceptance of PyroGenesis' first orders by the US Navy and the US Air Force, and reorders of the Company's plasma based waste destruction systems had successfully been managed.

OUTLOOK

Management previously identified the 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 land based systems), as being one which would be particularly challenging for the Company. This challenge has been particularly difficult in light of the financially unstable times we find ourselves. Public financings, which in the past were the backbone of such growth, are not as reliant a financing tool as they once were. Management is fully aware of the challenging prospect of rolling out a game changing technology during these trying financial times and is constantly looking at ways to mitigate this risk. The economic slowdown is undoubtedly having its impact on public markets and equity funding. Management is constantly looking at various strategies to mitigate any impact that may be associated with such adverse economic environments. As such, the Company has (i) engaged in significant cost containment initiatives to lower fixed and variable costs while at the same time (ii) defined new market niches for its other two business lines, Torch Manufacturing and Engineering Services with a view of increasing its backlog of new orders.

As a result of measures implemented, 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 (such as the permanent relocation of its manufacturing facility). Separately, as a result of having focused on defining new market niches management has identified several high margin niche markets for which its products are already commercially viable. Management believes these new markets will make a significant contribution to the company's overall performance in the very near future.

Management believes that with the recent announcement that it had been awarded a follow-on contract from a Multinational Mining and Metallurgical Company, together with recent discussions with the U.S. Armed forces for a plasma system reorder, and torch sale discussions, that the Company has successfully managed the gap period.

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. Management has been, and will continue to seek out, focused and targeted teaming arrangements to accelerate the Company's growth.

Looking forward, Management believes that the Company is now better positioned as a strong and credible player in the market for plasma based waste destruction technologies and in the long term, is positioned to take advantage of the global environmental movement, specifically in the waste-to-energy sector. As a result, management expects 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.