PYROGENESIS CANADA INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three months ended March 31, 2012

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

May 29, 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 period ending March 31, 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 May 29, 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. A long-standing relationship with the US Navy together with a system in operation at a US Air Force base sets the Company's business apart from many of its competitors. The Company's innovative product offerings have translated into numerous signed contracts. 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

For the three months ended March 31	2012	2011
Revenues	$ 1,544,943	$ 1,207,653
Cost of sales and services	1,513,116	830,882
Selling, general and administrative	1,039,134	874,824
Financing charges	133,749	206,114
	2,685,999	1,911,820
Loss from operations	(1,141,056)	(704,167)
Other income	9,893	2,224
Total comprehensive loss	$ (1,131,163)	$ (701,943)
Loss per share - basic	(0.02)	(0.01)

Statement of Financial Position at :	March 31, 2012	Dec. 31, 2011
Total assets	$ 12,180,181	$ 12,145,609
Total liabilities	10,357,810	12,547,389
Shareholders' equity	$ 1,822,371	$ (401,780)

RESULTS OF OPERATIONS

Revenues

Revenues for the first quarter of fiscal 2012, ending March 31, 2012 “2012-Q1” were $1,544,943, an increase of 28% over the revenue of $1,207,653, 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.

Cost of Sales and Services

For the three months ended March 31	2012	2011
Salaries and sub-contracting	793,043	858,887
Materials and equipment	272,013	243,059
Manufacturing overhead	161,997	200,246
Amortization of licences	349,268	62,442
Sub-total before government grants and research and development credits	1,576,321	1,364,634
Government grants and research and development tax credits	(63,205)	(533,752)
Total Cost of Sales	$ 1,513,116	$ 830,882

Cost of Sales before government grants and research and development tax credits for the first quarter of fiscal 2012, ending March 31, 2012 “2012-Q1” was $1,576,321, an increase of 16% over the net costs of $1,364,634 reported during the same period in the prior fiscal year. This percentage increase is favorable in comparison to the 28% increase in revenues in the period.

2012-Q1 Cost of sales (before grants and tax credits) was impacted by a 5-fold increase in amortization of licenses costs to $349,268 (2010: $62,442) over the prior year. This increase in the non-cash entry amortization of licenses was predominantly related to the acquisition of patents from a related party (see “Licenses and intellectual property”, note 8 on the March 31, 2012 financial statements).

The level of government grants and research and development tax credits recorded in 2012-Q1 was $63,205, versus $533,752 in 2011-Q1. 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.

Cost of sales and services net of recoveries of government grants and research and development tax credits, as a percent of revenues increased to 98% for 2012-Q1, versus 69% for 2011-Q1. However cost of sales and services before non cash items (amortization of licenses) as a percent of revenues is 75% for 2012-Q1 versus 64% for 2011-Q1.

Selling, General and Administrative Expenses

For the three months ended March 31		2012		2011
Salaries	$	400,639	$	400,000
Stock based compensation		208,523		-
Professional fees		205,120		95,825
Royalty		-		75,000
Office and general		73,448		102,439
Travel		28,163		75,539
Insurance & taxes		28,071		41,111
Interest and bank charges		31,633		6,105
Donations		-		-
Advertising		647		3,399
Amortization Machinery & Equipment		62,890		75,406
Total	**$**	**1,039,134**	$	874,824

Selling, general and administrative expenses for the first quarter of fiscal 2012, ending March 31, 2012 were $1,039,134, an increase of 19% over the $874,824, reported during the same period in fiscal year 2011. 2012-Q1, includes stock based compensation of $208,523, (Nil in 2010-Q1). Excluding the stock based compensation of 2012-Q1, Selling, general and administrative, decreased by 5% in 2012-Q1 over the same time frame in the prior year. This was primarily as a result of reduction in general office and travel costs, elimination of royalties due to the acquisition of intellectual property during 2011, offset by $109,295 increase in professional fees associated with the Company going public.

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

For the three months ended March 31		2012		2011
Financing charges	$	**133,749**		206,114

Financing charges decreased by 35% to $133,749 for the three months ended March 31, 2012, (2011: $206,114).

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-Q1 relate primarily to the non-current debt and current portion of long-term debt.

Amortization of Machinery and Equipment

For the three months ended March 31		2012		2011
Amortization of machinery and equipment	**$**	**62,890**	$	75,406

Amortization of machinery and equipment decreased by 17% to $62,890 in 2012-Q1 (2011- Q1: 75,406). 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

For the three months ended March 31		2012		2011
Research tax cedits	$	**63,205**	$	506,033

Research and development tax credits were accrued for in the amount of $63,205 in 2012-Q1 versus $506,033 in 2011-Q1. 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.

Net Profit/Loss

For the three months ended March 31		2012		2011
Loss from operations	$	**(1,141,056)**	$	(704,167)
Total comprehensive loss		**(1,131,163)**		(701,943)

Loss from operations for the first quarter of fiscal 2012, ending March 31, 2012 “2012-Q1” was $1,141,056 as compared to a loss of $704,167 for the same period in 2011, an increase of 62%.

For the first two quarters of 2011 business year, PyroGenesis was a private company, and subsequently became a public company in July 2011. The results of 2012-Q1 reflect increased costs associated directly or indirectly with PyroGenesis being a public company, including increased professional fees and stock based compensation costs ($208,523 which is a non-cash item). As mentioned previously, less favorable R&D credits rules due to PyroGenesis public status has contributed significantly to the increased cost of operations in 2012.

Despite revenues increasing by 28% in 2012-Q1 to $1,544,943 ($1,207,653 in 2011-Q1), Cost of sales and services increased by 82% over the same period. The items that had a significant impact in the increase in cost of sales are: the lower level of R&D credits entitlement, and the increased cost of amortization of licenses due to the purchase of intellectual property in March 2011.

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	2011			
	Q1	Q4	Amended Q3	Amended Q2	Q1
Revenues	**1,544,943**	1,781,645	1,909,231	167,052	1,207,653
Loss from operations	**(1,141,056)**	(789,058)	(2,165,060)	(2,643,108)	(704,167)
Total comprehensive loss	**(1,131,163)**	(757,097)	(2,842,161)	(2,643,105)	(701,943)
Net loss per share - basic	**(0.02)**	(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 quarter 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 March 31, 2012, PyroGenesis had cash on hand of $1,673,969 and positive working capital of $1,253,086, (-1,085,184 at December 31, 2011).

At December 31, 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.

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

For the three months ended March 31		2012		2011
Cash provided by (used) by operating activities	$	**(248,144)**	$	(4,599,553)
Cash provided by (used in) investing actiities		**(271,189)**		(7,642,875)
Cash provided by (used in) financing activities		**1,711,906**		11,997,697

Cash flow from operations resulted in a use of cash of $248,144 for the three-month period ended March 31, 2012 compared to a use of cash of $4,599,553 for the same period in the previous year. For 2012-Q1 despite a net loss $1,131,163, costs not requiring outlays of cash totaling $589,715 consisting mainly of costs related to issuance of options (to management, employees and Board members), and amortization of machinery, equipment and licenses.

Investing activities resulted in cash inflows of $271,189 for the three month period ending March 31, 2012 compared to cash outflows of $7,642,875 for the same period in the previous year. Cash used for investment activities in 2012-Q1 was primarily for the acquisition on machinery and equipment. Cash used for investment activities in 2011-Q1, was primarily used for the acquisition of patents in the amount of $7,636,426.

Financing activities generated $1,711,906 for the three month period ended March 31, 2012, compared to an inflow of $11,997,697 for the same period in the previous year. During 2012-Q1, proceeds from equity issuance raised net cash of $3,539,644, and $1,465,851 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 2011-Q1, inflows from financing activities consisted mainly of proceeds from equity issuances.

RELATED PARTY TRANSACTION

Details of related party transactions are disclosed in note 16 of the financial statements for the period ended March 31, 2012.

There are no material changes during 2012-Q1 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 May 15, 2012 PyroGenesis announced that, in response to the gap 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 well as in light of the current state of the economy, it has recently engaged in significant cost containment initiatives to lower fixed and variable costs.

The Company has decided to proceed with cost containment measures including temporary layoffs, pay cuts, a reduced work week and a permanent relocation of its manufacturing facility. The actions are taken to reduce operating costs while the Company works at increasing its backlog of new orders.

Management is of the opinion that teaming arrangements with larger more established firms in specific business segments will not only help offset this gap period risk but will also 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. As such, Management is evaluating strategic alternatives available to the Company with the intent of enhancing shareholder value, including but not limited to alternate debt or equity financing arrangements, seeking a joint venture partner, licensing or sale of certain Corporation assets, or merging, amalgamating, or selling mature parts of the Company to a larger, better-financed entity. Although there is no assurance that these efforts will be successful, the Company is already engaged in early stage discussions in all of these areas.

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. These strategic initiatives will have an immediate positive impact on the Company's bottom line while ensuring that its key personnel are available to respond to future contract requirements.

OUTLOOK

As anticipated, 2012 is shaping up to be another watershed year for the company as it both (i) builds upon the historic game-changing announcements of last year that both of its plasma based waste destruction/waste to energy contracts, (the first being the marine based system contracted for installation on a US aircraft carrier, and the second being the land based system contracted by the US Air Force) were delivered in a timely fashion and accepted by the end users, and (ii) manages the gap period between these game-changing announcements and reorders of the Company's marine and land based systems.

2012 will continue to see the implementation of changes initiated in 2011; a year which saw management change its focus from concentrating all of the Company's energies towards the successful completion of its two main contracts and the going public process, to aggressively growing the future revenue stream by, amongst other things, defining new market niches for its other two business lines, Torch Manufacturing and Engineering Services; management expects significant 2012 revenue streams to be generated from these business lines, particularly torch manufacturing.

Managing this gap period has proven to be extremely challenging particularly in light of such 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 prudently looking at various strategies to mitigate any impact that may be associated with such adverse economic environments.

The worldwide economic slowdown, and significant budgetary constraints in the United States, does not seem to have impacted interest in the Company's main product lines; in fact there is some indication that the cost benefits associated with waste-to-energy technologies have in fact increased interest in the Company's product lines. However, the Company is seeing that due to such constraints there is an increased interest in the "build-own-operate" model as opposed to an outright sale. As such, management believes that teaming arrangements with larger more established firms who act as Prime Contractors will help accelerate market acceptance of its technologies. Management has been, and will continue to seek out, focused and targeted teaming arrangements to accelerate this growth.

Looking forward, Management believes that the Company is well 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.