

**PYROGENESIS CANADA INC.**  
**MANAGEMENT'S**  
**DISCUSSION AND ANALYSIS**

(All figures expressed in Canadian dollars unless otherwise noted)

August 25<sup>th</sup>, 2011

The following Management's Discussion and Analysis ("MD&A") provides information that management believes is relevant to an assessment and understanding of the Company's consolidated results of operations and financial condition. Management has prepared this document in conjunction with its broader responsibilities for the accuracy and reliability of the financial statements, the development and maintenance of appropriate information systems and internal controls to ensure that the financial information is complete and reliable. This MD&A as well as the unaudited interim consolidated financial statements have been prepared by management, and were not audited by the Company's external auditors. The Company's management is responsible for the preparation of the consolidated financial statements as well as other information contained in this report. On July 11, 2011, PyroGenesis amalgamated with Industrial Growth Income Corporation ("IGIC"). These financial statements have been prepared on the basis that the amalgamation was effective March 31, 2011.

The Board of Directors is required to ensure that management assumes their responsibility with regards to the preparation of the Company's financial statements. To assist management, the Board created an Audit Committee on July 11, 2011. The Board of Directors approved these consolidated financial statements.

This Q2 2011 Management's Discussion and Analysis should be read in conjunction with the Company's consolidated interim financial statements for the period ended June 30, 2011, which are prepared in accordance with International Accounting Standard ("IAS") 34 Interim Financial Reporting. These are the Company's International Financial Reporting Standards ("IFRS") condensed interim financial statements for part of the period covered by the IFRS annual financial statements and IFRS 1 First-time Adoption of International Financial Reporting Standards has been applied. These condensed interim financial statements do not include all of the necessary information required for full annual financial statements in accordance with IFRS.

Previously the Company prepared its interim and annual consolidated financial statements in accordance with Canadian generally accepted accounting principles ("Canadian GAAP").

For a discussion of the Company's adoption of International Financial Reports Standards (IFRS), refer to page 10 of this MD&A.

For all purposes, the “Company”, “PyroGenesis“ and “PCI” refer to PyroGenesis Canada Inc.

All financial information is presented in Canadian dollars unless otherwise noted.

Additional information may be found on the Company’s website [www.pyrogenesis.com](http://www.pyrogenesis.com) and also on SEDAR at [www.sedar.com](http://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, statements regarding the future financial position, business strategy, proposed acquisitions, budgets, litigation, projected costs and plans and objectives of the Company. Readers can identify many of these statements by looking for words such as "believe", "expects", "will", "may", "intends", "projects", "anticipates", "plans", "estimates", "continues" and similar words or the negative thereof. Although management of the Company believe that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct.

By their nature, forward-looking statements require assumptions and are subject to inherent risks and uncertainties including those discussed herein. 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 or incorporated by reference 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 risk factors mentioned above. 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.

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

## **OVERVIEW**

PyroGenesis Canada Inc. 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 15 years. A long-standing

relationship with the US Navy along 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.

## CEO'S MESSAGE

Management is pleased to report that the first six months of 2011, although a very challenging time for the company, has met or exceeded management's expectations for the period. During this period of time, management has completed an amalgamation which saw Industrial Income Growth Corporation, a public entity, combine with PyroGenesis Canada Inc, a private operating company. As time consuming as this process was, management kept its focus on the completion of its two major projects; that of the timely delivery of its marine based system to the US Navy, as well as the completion of its land based system for the US Air Force. Both of these projects are game changing advances in their own right. As such, management made the conscious decision to concentrate all of the company's energies towards the successful completion of these two projects, as opposed to expanding aggressively. Management believes that such a strategy is both conservative, and will pave the way for significant growth in revenues over the near term.

To date management is extremely pleased with how the company's main projects are progressing. That is not to say that these projects have not been without their hurdles, but it is safe to say that these challenges have all been expected and manageable. Management is also of the belief that any future obstacles will be similarly handled. All this to say, that once these two projects are successfully delivered/installed follow-on contracts are fully expected in the next year and will have an impact on the company's financial situation.

During the first six months of 2011 management has also taken steps to position itself for the expected growth in business by strategically hiring and with the implementation of advanced information management systems. This is expected to continue over the next two quarters.

The worldwide economic slowdown, and significant budgetary constraints in the USA, have not seemed to have impacted interest in the Company's main product lines and in fact there is some indication that the cost benefits associated with waste to energy products have in fact increased interest in the Company's waste to energy systems. Management, however, is prudently looking at various strategies to mitigate any delays that may be associated with such adverse economic environments.

## SELECTED INFORMATION

<b><u>For the six months ended June 30<sup>th</sup></u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	<b>\$</b>	<b>\$</b>
Total Sales	1,374,705	3,857,566
Expenses	4,748,842	4,984,762
Income (Loss) From Operations	(3,374,137)	(1,127,196)
Net Income (Loss)	(3,371,910)	(1,126,211)

<b><u>As at June 30<sup>th</sup></u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	<b>\$</b>	<b>\$</b>
Total Assets	18,012,855	5,984,087
Total Liabilities	15,968,637	7,363,576
Shareholder's Equity	2,044,218	(1,379,489)

## REVENUES / SALES

Sales decreased 64% to \$1,374,705 (2010: \$3,857,566) for the six months ended June 30, 2011, reflecting the nearing to completion of the Company's two major projects, namely the marine based contract with Newport News Shipbuilding ("NNS"), and the land based contract with the U.S. Air Force. Management expects the successful completion of these two projects to result in a significant increase in demand as it will have proved out the cost-benefit advantages of these systems

During this same period expenses decreased 4% to \$4,748,842 (2010: \$4,984,762) resulting in a net loss of \$3,371,910 (2010: loss of \$1,126,211).

PyroGenesis believes that its most significant opportunities for growth are within the US Armed Forces and isolated communities in general.

## COST OF SALES AND SERVICES

<u>Six Months ended June 30<sup>th</sup></u>	<u>2011</u>	<u>2010</u>
	\$	\$
Materials and Equipment	899,163	1,659,413
Salaries	769,707	843,734
Subcontracts	509,451	1,069,944
Rent	220,200	220,200
Utilities	92,850	75,805
F/X	6,191	59,582
Factory	23,143	76,204
Repairs	4,110	4,640
Rental	45,717	32,224
Government Grants	(27,719)	(22,963)
Tax Credits	(899,505)	(938,754)
Amortization Licences	410,754	38,632
	<u>2,054,063</u>	<u>3,118,660</u>

Cost of Sales and Services decreased 34% for the six months ended June 30<sup>th</sup> 2011 to \$2,054,063 (2010: \$3,118,660). This decrease was due in part to a decrease in Materials and Equipment (23% to \$899,163) and Subcontracts (52% to \$509,451) as the Company's two main projects are nearing completion; offset in part by an 11-fold increase in Amortization of Licenses costs to \$410,754 (2010: \$38,632) over the same period. This increase in Amortization of Licenses was predominantly related to the Acquisition of Patents from a related party (see Related Party Transactions).

However, Cost of Sales and Services, as a percent of Revenues, increased to 149% for the six months ended June 30, 2011 versus 80% for the same period 2010. This increase was primarily as a result of a 64% decrease in revenues over the same period.

## SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

<u>Six months ended June 30<sup>th</sup></u>	<u>2011</u>	<u>2010</u>
	\$	\$
Salaries	800,000	600,000
Professional Fees	516,306	326,070
Royalty	195,000	150,000
Office & General	361,199	292,517
Travel	153,758	216,512
Insurance / Taxes	62,658	56,839
Interest & Bank Charges	17,030	12,330
Donations	1,208	900
Advertising	7,779	31,066
Financing fees	124,938	0
Amortization Machinery & Equipment	152,337	58,124
	<u>2,392,215</u>	<u>1,744,358</u>

Overall, Selling, General and Administrative expenses increased by 37% to \$2,392,215 (2010: \$1,744,358) for the six months ending June 30, 2011. This was primarily as a result of a one-time financing fee, of \$124,938; a 33% increase in Administration Salaries to \$800,000 (June 2010: \$600,000) associated with the Company's hiring in anticipation of growth arising from the successful roll out of its two main projects; as well as an increase in Amortization of Machinery and Equipment by 262% to \$152,337 (2010: \$58,124) which was primarily as a result of the purchase in Q3 2010 of equipment valued at \$1,093,800.

PyroGenesis expects that its overall Selling, General and Administrative expenses will decrease as a percentage of sales, as sales increase as a result of the successful acceptance of both projects the Company is currently concluding as originally anticipated.

## AMORTIZATION OF MACHINERY AND EQUIPMENT

<u>For the six months ended June 30<sup>th</sup></u>	<u>2011</u>	<u>2010</u>
	\$	\$
	152,337	58,124

Amortization of machinery and equipment increased by 262% to \$152,337 (2010: \$58,124). This is primarily as a result of the purchase in Q3 2010 of equipment valued at \$1,093,800.

## HARDWARE AND SOFTWARE PURCHASES

<b>For the six months ended June 30<sup>th</sup></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	\$	\$
Hardware	7,776	5,331
Software	11,520	21,020
Hardware (Under Caplease)	0	0
	<u>16,282</u>	<u>26,351</u>

## INTEREST ON LONG TERM DEBT

<b>For the six months ended June 30<sup>th</sup></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	\$	\$
	302,563	121,744

Interest on long-term debt increased by 250% to \$302,563 (2010: \$121,744) for the period ending June 30, 2011.

This increase was primarily due to increased overall borrowings as well as interest accrued on debt for license purchases of \$104,514 for the six months ended June 30, 2011 (2010; \$0).

## RESEARCH AND DEVELOPMENT TAX CREDITS

<b><u>For the six months ended June 30<sup>th</sup></u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	\$	\$
	899,505	938,754

Development costs of \$1,914,760 were expensed in the first half of 2011 (2010 June 30 - \$1,359,661). As a private company, PyroGenesis qualified to receive research and development tax credits from the federal and Quebec provincial governments in the form of cash. Management foresees such contributions to be significantly impacted in the future given its current public company status; it is envisioned that the vast majority, if not all, of future benefits will be used to offset taxes due as opposed to cash reimbursements.

## NET PROFIT / LOSS

<b><u>For the six months ended June 30<sup>th</sup></u></b>	<b><u>2011</u></b>	<b><u>2010</u></b>
	\$	\$
	(3,371,910)	(1,126,211)

Net losses for the six months ending June 30<sup>th</sup>, 2011 were \$3,371,910 as compared to a loss of \$1,126,211 for the same period ending June 30, 2010.

These losses are expected as PyroGenesis focuses on the successful completion of its two current projects.

The successful introduction of these projects will, in the opinion of management of PyroGenesis, be the catalyst to PyroGenesis' return to profitability.

## LIQUIDITY AND CAPITAL RESSOURCES

The primary sources of funding for PyroGenesis have been cash generated through the sale of shares from debt conversions, as well as increase in bank indebtedness.

The subsequent amalgamation and concurrent financing will provide the Company with an additional source of liquidity to finance growth.

## CASH USED IN OPERATIONS

<b>For the six months ended June 30</b>	<b>2011</b>	<b>2010</b>
	<b>\$</b>	<b>\$</b>
Cash provided by (used in) operating activities	(5,948,357)	(1,684,093)
Cash provided by (used in) investing activities	(7,184,455)	(33,282)
Cash provided by (used in) financing activities	13,090,035	1,222,073

Included in cash from operations for the six month period ending June 30, 2011 is a non-cash operating working capital use of \$3,249,844 (June 30, 2010: \$654,638) of which \$3,596,375 (June 30, 2010: nil) represents an increase in escrow deposits from the concurrent financing associated with the subsequent amalgamation (see Subsequent Events).

Cash used in investment activities for the six month period ending June 30, 2011 of \$7,184,455 (June 2010: (\$33,282)) is predominantly related to the Acquisition of Patents from a related party (see Related Party Transactions) of \$7,636,426 (June 2010: nil).

Financing activities of \$13,090,035 for the six month period ending June 30, 2011 included proceeds from long term debt of \$7,740,940 associated with the patent purchase and proceeds from the issuance of common shares of \$4,632,968.

## RELATED PARTY TRANSACTION

### *Intellectual property*

On March 19, 2011, an agreement was signed between PyroGenesis and a company controlled by a shareholder. Per the agreement, intellectual property and know-how was sold to PyroGenesis for \$14,280,000 and will be payable in equal monthly instalments of \$40,000. The payments commence on April 1, 2011 and terminate December 31, 2040. The fair market value of this property is estimated to be \$7,636,426. The intellectual



property and know-how were amortized on a straight line basis over their remaining useful life of 5.79 years. Long term debt of \$7,636,426 was assumed on this transaction, and bears interest at an implicit rate of 4.85% per annum.

### *Class F shares*

On March 21, 2011, the holder of the 1,093,800 class F shares of PyroGenesis, a related party, waived and renounced any and all rights to receive dividends or redemption of these shares. Furthermore, the holder agreed to grant PyroGenesis the sole right to demand the exchange of all 1,093,800 class F shares for a total of 1,367,250 Class A shares of PyroGenesis. Such exchange took place immediately prior to the completion of the Qualifying Transaction (see Subsequent Events section).

### *Private Placement*

On March 29, 2011, PyroGenesis completed a non-brokered private placement with a related party for a total of 312,500 Class A shares at a price of \$0.80 per share for gross proceeds of \$250,000.

## ADOPTION OF ACCOUNTING STANDARDS AND PRONOUNCEMENTS UNDER IFRS

In February 2008, the Canadian Accounting Standards Board (“AcSB”) announced that publicly accountable enterprises in Canada will be required to prepare financial statements in accordance with International Financial Reporting Standards (“IFRS”) for fiscal periods beginning on or after January 1, 2011. PyroGenesis’ first annual IFRS financial statements will be for the year ending December 31, 2011 and will include the comparative period of 2010. Starting with this quarterly report, the Company has provided unaudited consolidated quarterly financial information in accordance with IFRS including comparative figures for 2010. Please refer to note 15 of the Second Quarter 2011 Consolidated Interim Financial Statements for a summary of the differences between financial statements previously prepared under Canadian GAAP to those under IFRS.

Recent accounting pronouncements

### *IFRS 9 Financial Instruments: Classification and Measurement*

IFRS 9 as issued reflects the first phase of the IASB’s work on the replacement of IAS 39 and applies to classification and measurement of financial assets and liabilities as defined in IAS 39. The standard is effective for annual periods beginning on or after January 1, 2013. The adoption of IFRS 9 is not expected to have a significant impact on the financial statements.

### *IFRS 13 Fair Value Measurements*

IFRS 13 establishes a single source of guidance for fair value measurements, when fair value is required or permitted by IFRS. The key features of IFRS 13 include: a single framework for measuring fair value while requiring enhanced disclosures when fair value is applied, fair value would be defined as the "exit price", and concepts of "highest and best use" and "valuation premise" would be relevant only for non-financial assets and liabilities. IFRS 13 is effective for annual periods beginning on or after January 1, 2013 and early adoption is permitted. The Company has not yet assessed the impact of the new standard on the financial statements.

### **SUBSEQUENT EVENTS**

#### *RES*

Following the completion of a technical feasibility study on the destruction of ozone depleting substances using Pyrogenesis' proprietary thermal destruction plasma technology (the « TDP ») for Recyclage EcoSolutions Inc. (« RES »), PyroGenesis and RES have entered into an agreement on May 6th 2011. Under this agreement Pyrogenesis will be developing, designing, building and operating a 50kg/h TDP dedicated to the destruction of ozone depleting substances.

#### *Amalgamation*

On July 11, 2011 Pyrogenesis and Industrial Growth Income Corporation (IGIC), a capital pool corporation, amalgamated to form "PyroGenesis Canada Inc." as contemplated by the arm's length amalgamation agreement dated June 1, 2011. As such, IGIC and PyroGenesis have combined to form a resulting issuer with the same name, PyroGenesis Canada Inc. (the "Resulting Issuer"). Pursuant to the amalgamation, 1,300,000 shares of the Resulting Issuer were issued to IGIC's shareholders at an exchange ratio of 0.32298 Resulting Issuer shares for each IGIC share. In exchange for the shares of PyroGenesis, 57,710,766 Resulting Issuer shares were issued to PyroGenesis shareholders at a deemed price of \$0.80 per share for a total deemed consideration of \$46,168,612.80. This amalgamation was approved as being the Qualifying transaction of IGIC as per Policy 2.4 Exchange Corporate Finance Manual. Following the amalgamation, the TSX Venture Exchange has accepted for filing the Company's Qualifying Transaction described in its Filing Statement dated June 29, 2011 and pursuant to this approval, the Resulting issuer started trading on the TSX Venture Exchange at the opening on Wednesday July 20<sup>th</sup> 2011 under the symbol "PYR".

In addition, immediately prior to the completion of the Qualifying Transaction, the convertible debenture issued to FIER Croissance Durable s.e.c on March 22, 2011 in the amount of \$1,000,000 bearing interest at 15% per annum compounded and payable monthly, was automatically converted into 1,388,889 PyroGenesis Shares at a price of \$0.72 per share.

## *FIER*

Immediately prior to the completion of the Qualifying Transaction, the convertible debenture issued to FIER Croissance Durable s.e.c on March 22, 2011 in the amount of \$1,000,000 bearing interest at 15% per annum compounded and payable monthly, was automatically converted into 1,388,889 PyroGenesis Shares at a price of \$0.72 per share.

## *Class F share*

Also immediately prior to the completion of the Qualifying Transaction, the 1,093,800 class F shares of PyroGenesis, which belonged to a related party (see Related Party section), were automatically converted into 1,367,250 Class A shares of PyroGenesis at a price of \$0.80 per share.

## OUTLOOK

In the long term, PyroGenesis's management believes that it is well positioned to take advantage of the global environmental movement, specifically in the waste to energy sector. As a result, management of PyroGenesis expects to achieve sustained annual growth and profitability. Management of PyroGenesis expects to increase gross margins across the board and expenses, as a percentage of revenue, are expected to decrease as a result. 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.

Having been already qualified by the US Department of Defense for several applications, PyroGenesis has led the way with the delivery and operation of actual commercial systems to the marketplace. Management of PyroGenesis believes that PyroGenesis is a strong and credible player in the emerging market for plasma based waste destruction technologies and has a good prospect of gaining a share of the emerging market for plasma-based waste processing.