

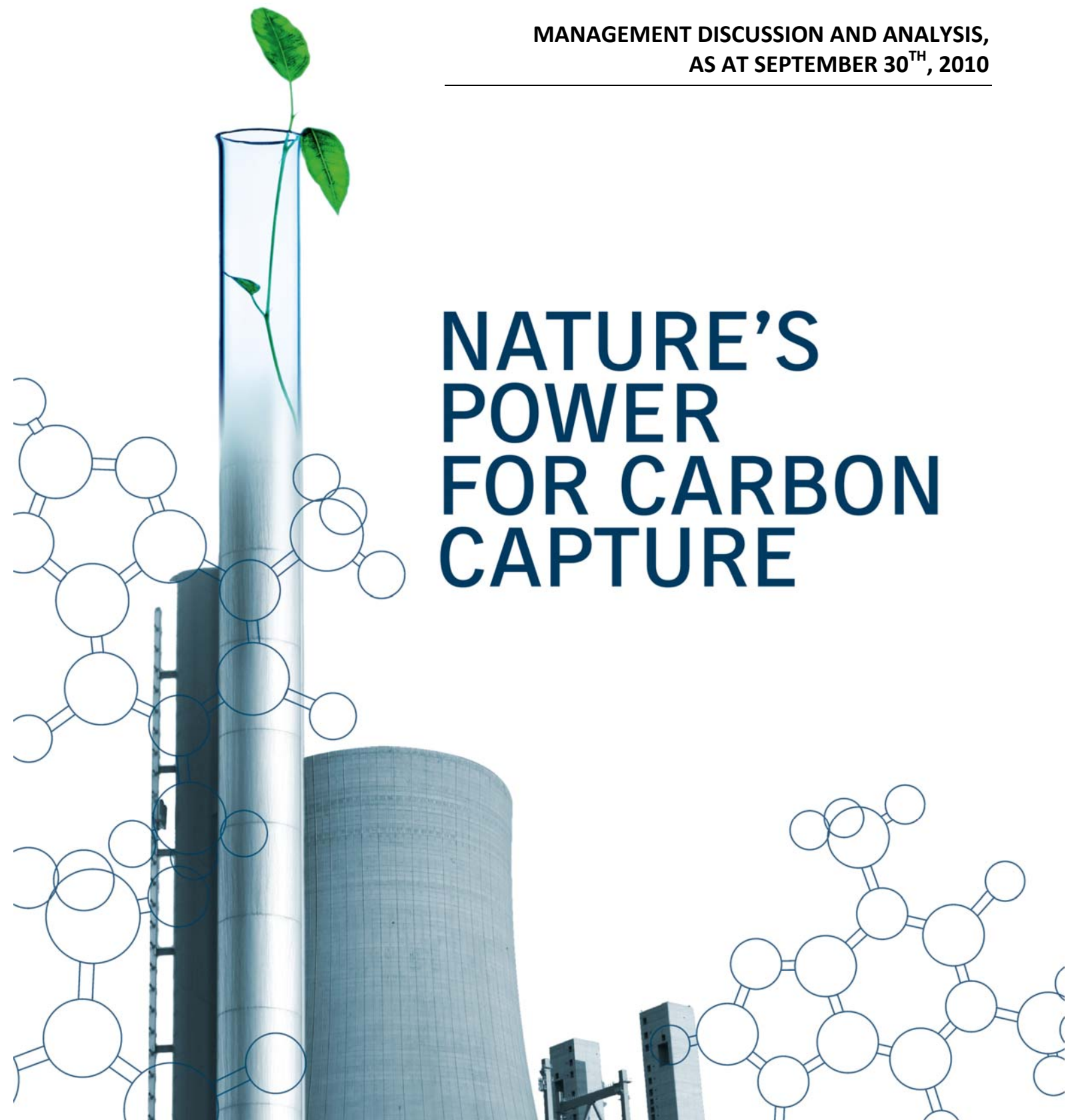
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MANAGEMENT DISCUSSION AND ANALYSIS,  
AS AT SEPTEMBER 30<sup>TH</sup>, 2010

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# NATURE'S POWER FOR CARBON CAPTURE





## MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE FIRST QUARTER ENDED SEPTEMBER 30, 2010

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### GENERAL

This management analysis of the operating results and the consolidated financial condition of CO<sub>2</sub> Solution, Inc. (“CO<sub>2</sub> Solution” or the “Company”) is for the periods ended September 30, 2010 and 2009. These consolidated financial statements include the accounts of the Company, its subsidiary companies and other entities, directly or indirectly controlled by the Company. This analysis must be read in conjunction with the audited consolidated financial statements and consolidated notes to the financial statements for the year ending June 30, 2010, which are prepared in accordance with Canadian generally accepted accounting principles. Unless otherwise specified, all numbers are expressed in Canadian dollars.

### FORWARD-LOOKING STATEMENTS

All statements in this Management's Discussion and Analysis that are other than statements of historical facts are forward-looking statements which contain the Company's current expectations about its future results. Forward-looking statements, by their nature, involve risks and uncertainties.

Although the Company believes that the expectations reflected in all of its forward-looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. A number of factors may affect the Company's future results and may cause those results to differ materially from those indicated in any forward-looking statements made by the Company. Other than as required by Canadian securities laws, the Company undertakes no obligation to publicly update or revise any of its forward-looking statements, whether as a result of changed circumstances, new information, future events, or for any other reason occurring after the date of this Management's Discussion and Analysis.

### COMPANY OVERVIEW

CO<sub>2</sub> Solution is a leading developer of proprietary technologies for carbon dioxide (CO<sub>2</sub>) capture and management. More specifically, the Company is currently focused on commercializing an enzyme-based, enabling technology for efficient CO<sub>2</sub> capture from fossil fuel-power plants and other large stationary emitters of CO<sub>2</sub>.

Since its establishment, the Company has worked on developing its technology platform and assembling a broad patent portfolio. To support this effort, it has raised capital, recruited highly-qualified personnel and established strategic partnerships and alliances.

## **SECTOR AND POTENTIAL MARKET OVERVIEW**

Climate change is already resulting in negative environmental and human consequences including the melting of the polar icecaps, rising sea levels, increasingly violent and destructive storms and persistent droughts, such as those seen in India and Russia over the last year. Our collective failure to deal with CO<sub>2</sub> emissions has already had important economic and social impacts and could cost the world economy more than U.S. \$20 Trillion by the end of the century (*Tufts University's Global Development and the Environment Institute*)<sup>1</sup>.

The consensus among the scientific community, the public and our governments is clear; the world is getting warmer due to human activity, this warming is accelerating, and it is urgent that we act now to slow, and eventually reverse this trend by reducing our greenhouse gas (GHG) emissions. While 2010 did not result in any substantial legislative progress in this regard, the period was marked by announcements of more than US \$500 million in new governmental funding for the research and development of carbon capture technologies, namely in the United States and France, a recognition that the development of lower cost technologies will be critical to exploiting the full GHG reduction potential of carbon capture and storage (CCS).

## **RECENT DEVELOPMENTS**

### **CO<sub>2</sub> Solution Renews Expiring Shareholder Rights Plan**

The Company has had a shareholder rights plan in place since 2007 (the “2007 Plan”). The 2010 shareholder rights plan (the “2010 Plan”) maintains the protection afforded to shareholders under the 2007 Plan and was not adopted in response to any anticipated take-over bid. The 2010 plan is substantially similar to the 2007 plan and to plans recently adopted by other Canadian companies and approved by their shareholders.

The 2010 Plan will be effective on November 24, 2010, or earlier if certain events under the 2007 Plan were to occur. The 2010 Plan has been approved by the TSX Venture Exchange on October 19, 2010, and will be submitted to shareholders of the Company for approval at CO<sub>2</sub> Solution’s Annual and Special meeting of Shareholders to be held on November 24, 2010. A complete copy of the 2010 plan and a material change report in connection therewith will be filed on sedar.com.

In addition, on September 30, 2010, the Board of Directors of the Company approved certain modifications to the Stock Option Plan of the Company (the “Stock Option Plan”) to increase the number of common shares of the Company reserved for issuance under the Stock Option Plan from 5,026,114 to 6,026,113. The modifications to the Stock Option Plan have been approved by the TSX Venture Exchange on October 6, 2010.

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<sup>1</sup> [http://www.ase.tufts.edu/qdae/policy\\_research/CostsofInaction.html](http://www.ase.tufts.edu/qdae/policy_research/CostsofInaction.html)

## **CO<sub>2</sub> Solution and Codexis Unveil Carbon Capture Program**

CO<sub>2</sub> Solution and Codexis, Inc. made their first joint public presentation on their program to develop carbon capture technology to reduce pollution from coal-fired power plants. The presentation was made in July 2010, at the 4th Annual Carbon Capture and Sequestration Business Summit in Washington, DC ([www.infocastinc.com/carbon10](http://www.infocastinc.com/carbon10)) by James Lalonde, Ph.D., Vice President of Biochemistry and Engineering Research and Development, Codexis and Jonathan Carley, Vice President, Business Development, CO<sub>2</sub> Solution.

In May 2010, Codexis was selected to receive up to a \$4.7 million ARPA-E Recovery Act program grant from the U.S. Department of Energy for development of innovative technology to remove carbon dioxide from coal-fired power plant emissions. The grant was one of 37 research projects which the DoE said "could fundamentally change the way the country uses and produces energy." This grant supports development of biocatalysts for more efficient carbon capture from these plants. Codexis and CO<sub>2</sub> Solution are jointly developing this technology. The collaboration focuses on the development of customized carbonic anhydrase (CA) biocatalysts and their process applications which have the potential to enable cost-effective, industrial scale capture of CO<sub>2</sub> from power plant flue gases.

## **CO<sub>2</sub> Solution Announces U.S. Patent Issuance**

CO<sub>2</sub> Solution announced in June 2010 that it had received a new United States patent, 7,740,689 - **An improved CO<sub>2</sub> absorption solution**. The patent provides for exclusivity in the field of using the enzyme, carbonic anhydrase, or an analog thereof, for the capture of carbon dioxide with amine solvents, including MDEA, or any combination or part thereof in any process and in any enzyme delivery configuration. In particular, MDEA is viewed as a commercially attractive amine to be kinetically accelerated by carbonic anhydrase given its low regeneration energy and low volatility. The Company believes that the patent has significant value, given the broad process exclusivity that it provides. This patent supports the commercialization of MDEA and other amine solvent enzyme-accelerated carbon capture processes, for which significant technical evaluation results have recently been achieved. Based on these results, significant capital and operating savings at commercial scale are projected based on the ability of the enzyme technology to dramatically increase the CO<sub>2</sub> absorption rate of MDEA.

## **CO<sub>2</sub> Solution Announces Significant Technical Results**

CO<sub>2</sub> Solution also announced in June 2010, that it had achieved significant technical results towards validating the impact of its enzymatic process on reducing the cost of carbon capture at commercial scale. In conjunction with its consultant, Procede Group B.V., lab scale testing and process modelling demonstrated the potential to reduce the size of CO<sub>2</sub> absorber columns at coal-fired power plants by more than 90% when the enzymatic technology was used with MDEA, as opposed to pure MDEA. MDEA is a widely used solvent for natural gas treating, but is generally regarded as too kinetically limited for CO<sub>2</sub> capture from power plant flue gas and other low-pressure gas effluent streams. By employing the enzyme, the rate of CO<sub>2</sub> absorption in MDEA was increased more than 10 fold, reducing the height of the modelled CO<sub>2</sub> absorption column from more than 200 meters to approximately 20 meters. Additionally, by taking advantage of the low-energy properties of MDEA, solvent regeneration

and process energy consumption is predicted to be reduced by approximately 30% compared to the current industry standard monethanolamine (MEA) process.

These results point to a significant reduction in capital and operating costs of commercial scale carbon capture at typical coal-fired power plants or other large emitters, while utilizing a widely available commercial solvent.

## **OPERATING RESULTS**

### **Comparison between the three-month periods ended September 30<sup>th</sup>, 2010 and 2009**

#### Revenues

The Company recorded revenues totalling \$91 212 for the three-month period ended September 30, 2010, (nil for the same period in 2009). These revenues come from the sale of enzymes and initial process evaluation work for potential partners.

#### Cost of products sold

The company incurred direct costs of \$544 for salaries related to research and development activities, \$25,701 for honorariums and \$2,456 for laboratory supplies. (Nil for the same period in 2009).

#### Technology platform development - R&D Expenses

Research and development expenditures, net of investment tax credits and government assistance, decreased by \$16,129, totalling \$78,171 for the three-month period ended September 30, 2010, compared with \$94,300 for the same period in 2009. This decrease is mainly attributable to the increase in government assistance within the framework of a precompetitive research project. An increase in professional fees is attributable to work done by consultants relative to enzyme performance characterization under various industrially relevant operating conditions.

#### Business development expenses

Business development expenses amounted to \$160,684 for the three-month period ended September 30, 2010, compared with \$113,501 for the same period in 2009, representing an increase of \$47,183. This increase is mainly attributable to legal and travel expenses incurred for negotiations with collaborators/partners abroad.

#### General and administrative expenses

General and administrative expenses totalled \$314,389 for the three-month period ended September 30, 2010, compared to \$292,208 for the same period in 2009, representing an increase of \$23,181. This increase is mainly attributable to consultant fees for the interim replacement of the Vice President Finance and Administration.

#### Financial expenses and interest income

Net financial expenses for the three-month period ended September 30, 2010, resulted in a revenue of \$969, compared to a revenue of \$6,458 for the same period in 2009, representing an increase of \$5,489 in net financial expenses. This is primarily due to a decrease in interest income of \$5,364, compared with the same period in 2009, resulting from the variation in temporary investments and interest rates during the respective periods.

### Loss for the period

The Company recorded a loss of \$489,764, or \$0.01 per share, for the three-month period ended September 30, 2010, compared to a loss of \$492,551, or \$0.01 per share, for the same period in 2009, a decrease of \$2,787. No significant factors, other than those described above, contributed to increasing the loss.

### **UNAUDITED QUARTERLY FINANCIAL INFORMATION**

The following tables provide a summary of certain elements of financial data regarding the Company for each of the last eight quarters:

	Quarters ended			
	December 31, 2009	March 31, 2010	June 30, 2010	September 30, 2010
Revenues	\$0	\$10,118	\$0	\$91,212
Net loss	\$439,477	\$540,245	\$598,171	\$489,764
Net loss per share	\$0.01	\$0.01	\$0.01	\$0.01

	Quarters ended			
	December 31, 2008	March 31, 2009	June 30, 2009	September 30, 2010
Revenues	\$0	\$0	\$0	\$0
Net loss	\$528,045	\$479,228	\$319,953	\$492,551
Net loss per share	\$0.01	\$0.01	\$0.01	\$0.01

### **LIQUID ASSETS AND CASH FLOWS**

Cash (bank loan) totalled (\$46,363) as at September 30, 2010, compared with \$311,752, as at September 30, 2009.

For the three-month period ended September 30, 2010, cash flow required for operating activities totalled \$668,757, compared with \$484,548 for the same period in 2009, representing an increase of \$184,209, primarily due to the variation in non-cash working capital.

For the three-month period ended September 30, 2010, cash flow generated by investing activities amounted to \$250,214, compared with \$467,784 generated for the same period in 2009, a difference of \$217,570. This difference is mainly attributable to the following factors:

#### Temporary investments

The temporary investments come from available cash and are available for the Company's day-to-day activities.

### Capital expenditures / Patents

During the three-month period ended September 30, 2010, the Company filed six new patent applications in order to strengthen its position in the enzymatic capture of carbon dioxide.

### **LIQUIDITY AND SOLVENCY**

To date, the Company has financed its operations mainly through cash flow obtained from the issuance of capital stock, tax credits and government assistance.

At September 30, 2010, the Company used its line of credit for an amount of \$46,363 and has \$1,712,373 in temporary investments for a total of \$1,666,012 (\$1,361,169 as at September 30, 2009). The Company currently has sufficient funds to meet its needs for the next thirteen (13) months.

Although the Company currently has the necessary funds for the next thirteen (13) months, it will have to raise additional funds in the near future. The current economic climate could affect the availability of such funding and thus have an adverse impact on the Company's future activities.

The Company's access to sufficient long-term capital depends on the ability to generate a profit in the future. This will depend in part on its ability to effectively commercialize its technology, the results of research and development activities, favourable market conditions, and to overall economic conditions. Investments in commercialization activities are used to generate income however, it is difficult to predict exactly when this income will materialize.

The Company benefits from credit facilities in the form of an operating line of credit for an authorized amount of \$100,000, bearing interest at prime plus 2.25% and guaranteed by a \$60,000 certificate of deposit. As at September 30, 2010, this operating line of credit was used for an amount of \$46,363.

### **CONTRACTUAL OBLIGATIONS**

The Company is committed, under a lease agreement expiring in February 2015, to paying a total amount of \$661,311. The payments scheduled for the next five years are of \$116,140 in 2011, \$153,258 in 2012, \$152,209 in 2013, \$151,392 in 2014 and \$88,312 in 2015.

The Company is also committed, under a lease agreement expiring in September 2011, to paying a total amount of \$18,000 for the rental of automotive equipment. Minimum lease payments amount to \$13,500 in 2011 and \$4,500 in 2012.

### **INFORMATION REGARDING CAPITAL STOCK**

As at November 24<sup>th</sup>, 2010, the number of outstanding common shares, warrants and stock options is respectively 60,261,136, 1,000,000, and 3,955,440.

## **RELATED PARTY TRANSACTIONS**

During the period ended September 30, 2010, the Company recorded a \$475,000 advance from a shareholder with significant influence, bearing no interest and payable in January 2011 (nil for the same period in 2009).

## **MAJOR ACCOUNTING POLICIES AND ESTIMATES**

The Company's interim consolidated financial statements for the period ended September 30, 2010, are in accordance with the accounting policies and application methods described in the audited consolidated financial statements for the period ended June 30, 2010.

## **CHANGES IN ACCOUNTING STANDARDS**

### **Future Accounting Standards**

#### International Financial Reporting Standards (IFRSs)

In 2009, the Canadian Accounting Standards Board confirmed that the Canadian GAAP, for publicly accountable enterprises, will be replaced by the IFRSs and take effect during the year 2011. IFRSs use a conceptual framework similar to that of the Canadian GAAP, but composed of important differences on the subjects of posting, evaluation, presentation and information to be supplied. During the period preceding the changeover, the International Accounting Standards Board (IASB) will continue to publish new accounting standards and, consequently, the final incidence of IFRSs on the consolidated financial statements of the Company will not be evaluated until all applicable IFRSs at the changeover date are known. That said, according to the report issued in December 2009 by the IASB: "the International Accounting Standards Board (IASB) has recently revised its program of action and has readjusted the schedule of several projects for IFRS changes. Following these adjustments, it now seems clear that no other significant changes to IFRSs will become obligatory for the periods that coincide with calendar year 2011."

For the Company, the conversion to IFRSs will be required for the financial statements for the periods starting on July 1, 2011. The comparative data will need to be reprocessed in order to respect IFRSs. Consequently, the Company has elaborated a conversion plan to IFRSs for its financial statements which focuses on the principle elements concerned, including financial information, Company operations, systems and process, internal controls, as well as communications and training. This plan consists of four phases: Phase 1 – Preliminary diagnosis, planning and definition of the scope, Phase 2 – Detailed evaluation, Phase 3 – Definition of the solution and Phase 4 – Implementation.

Phase 1 has been completed and few impacts are expected with the exception of the initial and subsequent evaluation of an amount to be paid to a shareholder with significant influence, the reporting of the share-based remuneration and the warrants. The Company does not expect that any changes regarding information technology and internal controls will be required.



The Company is presently completing Phases 2 and 3 of its conversion plan, namely the detailed evaluation and the definition of the solution. The Company will validate the results of this work with the external auditors by January 2011.

Phase 4 will start at the beginning of 2011. The Company estimates that it will have completed the major part of its conversion plan before the end of the third quarter of fiscal 2011. Changes to accounting conventions are probable.

The Company is currently evaluating the impacts of the new standards on its consolidated financial statements.

## **OUTLOOK**

Building on 2010's accomplishments, CO<sub>2</sub> Solution's management team is continuing to pursue a multi-pronged strategy aimed at advancing its technology development and concluding valuable partnerships to serve key future end markets. The prime focus is as follows:

### Securing Scale-Up Partnerships with Global Leaders in Power Generation and other Key Markets

CO<sub>2</sub> Solution's enzymatic platform is uniquely positioned as an enabling technology to increase the efficiency, and lower the cost, of solvent-based carbon dioxide capture processes. As such, opportunities exist to form partnerships with leading providers of environmental controls for power generation and other emission-intensive industries where these organizations have existing carbon capture processes which can be enhanced by CO<sub>2</sub> Solution's technology. These companies also have a large existing base of customers to which to deploy these capture processes, representing a clear path to market for the Company's technology. To this end, CO<sub>2</sub> Solution has been in active discussions with such providers to the power generation markets that also have the breadth of technical expertise to collaboratively work to scale-up the technology and efficiently integrate it to best serve their respective customer sectors.

Encouraging discussions have also been held with large end-use customers in the cement, aluminum and oil and gas sectors who are interested in CO<sub>2</sub> Solution's technology as a potential solution to manage their carbon footprints. In some cases, these customers may also have developed, or are developing, proprietary carbon capture processes suited to their specific emission sources which can be significantly enhanced by CO<sub>2</sub> Solution's enzymatic technology. These opportunities represent the potential to work through tailored scale-up and validation programs, both in the lab and in the field, toward eventual commercial scale deployment in their operations and/or licensing to others in their respective industries.

Given the positive nature of a number of these discussions, management is confident that one or more valuable partnerships will be secured in 2011.

### Advancing the Industrial Readiness of the Technology

Leveraging its internal R&D focus and efforts, CO<sub>2</sub> Solution intends to continue to fully exploit its relationships with Codexis, Procede Group and CLEA Technologies, to bring the best resources to bear in advancing its technology towards commercial readiness. On the enzyme evolution and supply front, Codexis has, and is expected to continue to make significant progress in increasing the industrial stability and longevity of the enzyme catalyst. This will assist in positioning CO<sub>2</sub> Solution's technology for larger scale demonstration under real-world conditions where significant quantities of robust enzymes are required.

In the area of enzyme delivery and management in the carbon capture process, the Company will continue work on parallel technology paths, both with Cross Linked Enzyme Aggregates (CLEAs), and with internal development efforts which leverage the Company's significant expertise in the area of enzyme immobilization. This work is expected to enhance industrial readiness by incorporating leading-edge processes in which the enzyme is delivered to the carbon capture system as micro-sized particles possessing improved tolerance to high-process temperatures. In addition, these particles can be confined to the front-end CO<sub>2</sub> absorption stage (where the enzyme provides the maximum beneficial impact), without being exposed to the harsher, back-end desorption process, leading to improved system economics.

Lastly, on the process development and engineering front, the Company expects that most of its lab-scale validation work will be completed in 2011, positioning the company to begin small pilot-scale testing at its facility, or at that of a partner's, by the end of 2011. Working closely with Procede Group, system optimization and modeling of the enzyme with low-energy aqueous amine, carbonate and amino acid solutions should provide a solid techno-economic basis to pursue this scale-up effort, which the Company foresees will position it for larger scale field testing and commercial demonstrations.

### Leveraging Government Funding for Development and Scale-Up

To further support its technology validation and scale-up efforts, CO<sub>2</sub> Solution has confidence that it can continue to tap into beneficial government funding programs in Canada, the U.S. and abroad, and with strategic partners. In Canada, the Company remains hopeful that the Federal Government will see the significant economic and environmental value that exists in supporting home grown, exportable carbon capture technologies such as CO<sub>2</sub> Solution's that have the potential to significantly reduce the current high cost of carbon capture in Canada and internationally. In the U.S., in addition to the ARPA-E project with Codexis, CO<sub>2</sub> Solution will continue to pursue funding opportunities where possible for its technology, with the possibility of exploiting cross-border clean technology initiatives.

### Continued Expansion of Intellectual Property Dominance

Continuing along the trend started in 2008, the growth in industry interest in the potential of enzyme-enabled carbon capture was even more pronounced in 2009 and 2010. As the world searches for innovative solutions to lower the current cost barrier to CO<sub>2</sub> capture, enzymatic capture, largely pioneered by CO<sub>2</sub> Solution, has emerged as a focal point in its own right. This is particularly the case

south of the border, where the United States' government has recently invested millions of dollars in enzyme-related projects. It is fortunate that the Company has a broad patent position in the field which will both allow it to commercialize its technology and block potential competitors from entering the market. In this regard, CO<sub>2</sub> Solution will continue to expand its intellectual property dominance with the filing of new patents.

## **RISK FACTORS AND UNCERTAINTIES**

CO<sub>2</sub> Solution's activities are subject to a number of risks and uncertainties which, as stated in its 2010 Annual Report, have not significantly changed.

## **INTERNAL CONTROLS REGARDING FINANCIAL INFORMATION**

There are no amendments to internal controls with regard to the financial information that could have, or that are likely to have, important incidences on these controls during the first quarter ending on September 30, 2010.

## **AUDITORS**

This Management's Discussion and Analysis and the interim financial statements for the three-month periods ended September 30, 2010, and 2009 have not been verified by external auditors.

## **ADDITIONAL AND CONTINUOUS DISCLOSURE**

This analysis was prepared on November 24<sup>th</sup>, 2010. Additional disclosure is provided on the SEDAR Web site at: [www.sedar.com](http://www.sedar.com).