



**NXT ENERGY SOLUTIONS INC**  
**As at and for the three months ended March 31, 2011**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**

The following management's discussion and analysis ("MD&A") was prepared by management based on information available as at May 30, 2011. It should be reviewed in conjunction with the audited year end Consolidated Financial Statements for the year ended December 31, 2010.

As used in this MD&A, the terms "we", "us", "our", "NXT" and "company" mean NXT Energy Solutions Inc.

Our functional and reporting currency is the Canadian dollar. All references to "dollars" in this MD&A refer to Canadian or Cdn. dollars unless specific reference is made to United States or U.S. dollars.

**Forward-Looking Statements**

Certain statements in this document may constitute "forward-looking statements". These forward-looking statements can generally be identified as such because of the context of the statements including words such as "believes", "anticipates", "expects", "plans", "estimates" or words of a similar nature.

These forward-looking statements are based on current expectations and are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Except as required by law, the company assumes no obligation to update forward-looking statements should circumstances or the company's estimates or opinions change.

**Description of Business**

NXT is a Calgary based company providing airborne survey solutions that enable our clients to focus their exploration decisions concerning land commitments, data acquisition expenditures or prospect prioritization onto the areas as identified by SFD® with the greatest hydrocarbon potential. Utilizing its proprietary airborne Stress Field Detection ("SFD®") survey system, NXT provides a unique survey method that is environmentally noninvasive and unaffected by ground security issues or difficult terrain. Additionally, surveys can generally be conducted year round and are effective both onshore and offshore. The advantage to NXT's clients is an efficient and reliable method to explore for hydrocarbons. SFD® and NXT® in Canada and the U.S. are the registered trademarks of NXT Energy Solutions Inc.

**Overall Performance**

**Business Overview**

In 2011, NXT expects to generate revenue from the sales opportunities discussed in our 2010 year end Management Discussion and Analysis. The number of ongoing enquiries from potential client companies has increased noticeably over the past few months. NXT is now engaged in discussions with several groups concerning potential SFD® surveys in multiple domestic and international locations.

Our focus on Colombia and Latin America remains unchanged. The delays caused by national elections and the finalization of the 2010 bid round awards in Colombia are now behind us and we anticipate that our position in the Colombian market will be the catalyst for sales growth within Latin America this year.

Market conditions for our SFD® survey services have improved domestically and accordingly we have increased our sales and marketing activities within North America. This effort has resulted in the previously announced U.S. \$150,000 pilot project in Montana, USA, where flight operations have now been completed and project finalization is scheduled for the second quarter of 2011.

Our previously announced U.S. \$2.66 million contract in South Asia has encountered flight permitting delays but we now see encouraging progress on this initiative. Our local agent continues to diligently advance the permitting process. Multiple government agencies are being consulted with each having a role in the permitting process. Several of these agencies and key government decision makers have provided support for our SFD® survey. The exact timing for completion of the permitting process is unknown at this time.

Throughout 2011 we shall continue to broaden the profile of SFD® within our targeted markets through the generation and dissemination of SFD® case studies. SFD® case studies are an effective tool to showcase SFD® capabilities and to educate the industry about the value of our service. We are scheduled to present one study on the use of SFD® within Colombia as a paper at the XIV Latin American Congress of Geology and XIII Colombian Congress of Geology to be held in Medellín, Colombia on August 29th through September 2nd, 2011.

The company continues to project a working capital deficiency related to its anticipated operational requirements in 2011. This anticipated shortfall has increased since the end of 2010 due to not only the delay in commencing the South Asia survey but also the projected working capital requirements for anticipated new contracts. This shortfall is mitigated through our normal practice of obtaining partial pre-payments from clients prior to commencing surveys. However, the company anticipates that particularly with future anticipated contract awards, additional capital will be required in 2011 in order to complete the previously discussed surveys. Several sources of capital are being contemplated at this time. The company expects this additional capital to be obtainable when required to meet ongoing operational requirements, however, there can be no assurances that future financings will be available to the company or if available, that the terms will be acceptable to NXT.

## Results of Operations

The company reported a loss of \$792,717 for the period ended March 31, 2011 (Q1 2010 - \$1,322,472), representing an overall decrease in loss of \$529,755 for the period.

### SFD® Survey Revenue

There was no SFD® survey revenue in the first quarter of 2011 and 2010.

### Expenses

	For the three months ended	
	March 31, 2011	March 31, 2010
SFD® survey cost	\$ -	\$ 118,056
Administrative	733,408	1,148,084
Amortization, depreciation and depletion	36,267	44,291
	<u>\$ 769,675</u>	<u>\$ 1,310,431</u>

### Expenses - for the three months ended March 31, 2011 and 2010

- **SFD® survey costs** - survey costs for the first three months of 2011 are for an uncompleted contract and are shown on the balance sheet as work in progress. Survey costs for the first three months of 2010 relate to non-revenue surveys.
- **Administrative** - the decrease of \$414,676 in the first quarter of 2011 as compared to the first quarter of 2010 is due to salary reductions and administrative personnel cutbacks, reductions in audit fees and receivable insurance costs, lower stock based compensation costs due to contractor options being mostly vested and the repricing of all options in December 2010 to \$0.63, the reduction in personnel was reflected in correspondingly reduced marketing, communication and travel costs as fewer personnel went to conferences. We incurred one time start up costs for our Colombian branch that increased our Q1 2010 costs.

## Other Expense (Income)

	For the three months ended	
	March 31, 2011	March 31, 2010
Interest income	(2,417)	(947)
Loss on foreign exchange	24,942	12,312
Loss on sale of property	-	1,074
Accretion of asset retirement obligation	877	997
Other	(360)	(1,395)
	<u>\$ 23,042</u>	<u>\$ 12,041</u>

**Interest income** - interest income, generated by short term investments, was offset by interest expense from our capital lease resulting in \$2,417 net income in Q1 2011 (\$947 - Q1 2010).

**Loss on foreign exchange** - loss or gain on foreign exchange is caused by changes in the relative exchange values of the U.S. dollar, Canadian dollar and Colombian peso ("COP"). For example, when the Canadian dollar trades higher relative to the U.S. dollar or COP, cash held in U.S. dollars or COP will decline in value and this decline will be reflected as a foreign exchange loss in the period. The company normally holds its cash and investments in Canadian dollars to reduce the impact caused by market volatility; however, currently we are contractually obligated to hold certain Restricted Cash funds in U.S. dollar instruments to support bond commitments.

**Accretion of asset retirement obligation** - management conducted a review in 2008 of all wells for which NXT had a historical participation and determined that there is an obligation related to 8 gross (1.1 net) wells drilled in the years 2000 through 2004 that still require abandonment. Management has determined the asset retirement obligation based upon estimates of the costs to remediate, reclaim and abandon the wells and the estimated timing of the costs to be incurred. At March 31, 2011, the asset retirement obligation is estimated to be \$55,321 (December 31, 2010 - \$54,444), based on a total future liability of \$61,811. These obligations are estimated to be settled in four years. This amount has been calculated using an inflation rate of 3.4% and discounted using a credit-adjusted risk-free interest rate of 10.0%.

**Other** - the company is entitled to gross overriding royalties in Canada related to some previous SFD® surveys. In the period ended March 31, 2011, \$360 of royalty revenue was included in Other (\$1,395 - Q1 2010).

## Summary of Quarterly Results (Unaudited)

	Mar 31, 2011	Dec 31, 2010	Sep 30, 2010	Jun 30, 2010
Survey revenue	\$ -	\$ -	\$ -	443,011
Net loss from continuing operations	(792,717)	(1,276,690)	(962,590)	(890,673)
Basic and diluted loss per share	(0.02)	(0.04)	(0.03)	(0.03)
	Mar 31, 2010	Dec 31, 2009	Sep 30, 2009	Jun 30, 2009
Survey revenue	\$ -	\$ 1,044,766	\$ -	2,638,560
Net income (loss) from continuing operations	(1,322,472)	(657,401)	(969,591)	283,005
Basic and diluted earnings (loss) per share	(0.04)	(0.02)	(0.03)	0.01

Q1 2011 to Q4 2010 comparison; the company recognized nil in survey revenue and \$29,942 in stock based compensation expense in Q1 (respectively nil and \$404,053 - Q4). The decrease in stock based compensation expense is attributed to nearly all contractor options being fully vested and the re-pricing of options in December 2010 to \$0.63.

Q4 2010 to Q3 2010 comparison; the company recognized nil in survey revenue and \$404,053 in stock based compensation expense in Q4 (respectively nil and \$72,899 - Q3). The increase in stock based compensation expense is attributed to a one time valuation adjustment that occurred when 2,113,204 stock options were re-priced on December 8, 2010 to a new exercise price of \$0.63 per share.

Q3 2010 to Q2 2010 comparison; the company recognized nil in survey revenue and \$72,899 in stock based compensation expense in Q3 (respectively \$443,011 and 100,864 - Q2).

Q2 2010 to Q1 2010 comparison: the company recognized \$443,011 in survey revenue, \$31,507 in stock based compensation expense and recorded \$342,959 in survey costs in Q2 (respectively nil, \$69,356 and \$118,056 - Q1).

Q1 2010 to Q4 2009 comparison: the company recognized nil survey revenue, \$69,356 in stock-based compensation expense and recorded nil in survey costs in Q1 (respectively \$1,044,766, \$187,343 and \$508,308 - Q4).

Q4 2009 to Q3 2009 comparison: the company recognized \$1,044,766 in survey revenue in Q4 (nil - Q3) and recognized \$187,343 in stock-based compensation expense (\$112,254 - Q3).

Q3 2009 to Q2 2009 comparison: the net loss in Q3 is due to the company recognizing no survey revenue in Q3 (\$2,638,560 - Q2).

## Liquidity and Capital Resources

Our current cash and equivalents and short term investments held on account on May 30, 2011 is \$1,271,933. This current cash position includes the net proceeds of a private placement completed in March of 2011 in the amount of \$1,493,723. In the first quarter of 2011, \$267,000 was encumbered with a Canadian chartered bank to secure a contract performance bond and accordingly has been excluded from our current cash position and recorded as Restricted Cash. We project that the executed survey contracts scheduled for 2011 are profitable yet will require cash during the survey phase. Our current contracted backlog of surveys is U.S. \$2.8 million dollars.

The company projects liquidity constraints that will restrict our available working capital required to complete operational requirements. The company continues to review administrative cost cutting and other measures to conserve cash. The company has been successful in reducing administrative expenditures in the first quarter of 2011 as compared with the same period last year through salary reductions and administrative personnel cutbacks. In addition, the company is pursuing other means to conserve cash. Despite these measures the company likely will require an additional capital in 2011.

The following table summarizes the change in cash flow for the three months ended March 31, 2011 and 2010:

	<b>For the three months ended</b>	
	<b>March 31, 2011</b>	March 31, 2010
Cash used in operating activities	\$ (860,566)	\$ (372,244)
Cash generated by financing activities	1,491,436	18,834
Cash generated (used) in investing activities	328,636	(41,036)
	<u>\$ 959,506</u>	<u>\$ (394,446)</u>

### Operating Activities

- Q1 2011 - the \$860,566 cash balance used in operating activities reflects our net loss of \$792,717 adjusted for \$67,086 of non-cash or non-operating deductions and a \$166,215 net decrease in non-cash working capital.
- Q1 2010 - the \$372,244 cash balance used in operating activities reflects our net loss of \$1,322,472 adjusted for \$114,644 of non-cash or non-operating deductions and a \$833,589 net increase in non-cash working capital.

### Financing Activities

- Q1 2011 - we raised \$1,493,723 through a private placement and reduced our capital lease by \$2,287.
- Q1 2010 - we raised \$20,936 through the exercise of options and reduced our capital lease by \$2,102.

### Investing Activities

- Q1 2011 - the decrease in short term investments of \$600,684 was primarily used for ongoing day to day operating expenses, restricted cash increased by U.S. \$267,000 for a performance bond in order to fulfill a contract requirement and we used \$15,003 for property and equipment.
- Q1 2010 - the primary use of cash was for ongoing day to day operating expenses. We used \$41,036 for property and equipment.

### Contractual Commitments

The company has an office lease until October 31, 2012 which requires minimum monthly lease payments of \$32,212.

## Transactions with Related Parties

In the first quarter of 2011 an officer and a director of the company participated in a private placement for \$40,000. An officer of the company exercised 50,000 options in the first quarter of 2010.

## Additional Disclosures

### Outstanding share data

	As at May 30, 2011	As at December 31, 2010
Outstanding securities		
Common shares	34,002,396	30,801,796
Preferred shares	10,000,000	10,000,000
Options	2,134,804	2,134,804
Warrants	3,345,830	-
Total	49,483,030	42,936,600

## Critical Accounting Estimates

Factors are substantially unchanged; refer to annual MD&A as at December 31, 2010.

## Change in Accounting Policies Including Initial Adoption

Factors are substantially unchanged; refer to annual MD&A as at December 31, 2010.

## Disclosure Controls, Procedures and Internal Controls over Financial Reporting

The company's Chief Executive Officer and Chief Financial Officer (the "Responsible Officers") are responsible for establishing and maintaining disclosure controls and procedures, or causing them to be designed under their supervision, for the company to provide reasonable assurance that material information relating to the company is made known to the Responsible Officers by others within the organization, particularly during the period in which the company's quarterly and yearend financial statements and MD&A are being prepared.

Disclosure controls and other procedures are designed to ensure that information required to be disclosed in reports, filed or submitted is recorded, processed, summarized and reported within the time periods specified by the relevant security authority in either Canada or the United States of America. Disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in our reports is accumulated and communicated to management, including our Responsible Officers, to allow timely decisions regarding required disclosure.

As of March 31, 2011 an evaluation was carried out under the supervision of, and with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of the company's disclosure controls and procedures as defined under the rules adopted by the Canadian securities regulatory authorities and by the SEC. Through this evaluation the Chief Executive Officer and the Chief Financial Officer concluded that there are three deficiencies in the company's internal controls over financial reporting that have a direct impact on the company's disclosure controls:

- Due to the limited number of staff at the company's Calgary head office, it is not feasible to achieve adequate segregation of incompatible duties. The company mitigated this deficiency by adding management and audit committee review procedures over the areas where inadequate segregation of duties are of the greatest concern;
- The company does not retain staff with the specialized expertise required to prepare, nor does the company employ sufficient staff to adequately review, some complex or highly judgmental accounting issues. These complex areas include income tax accounting, financial reporting and other complex accounting matters. The company mitigates this deficiency by preparing financial statements with their best judgments and estimates of the complex accounting matters and relies on reviews by management, external consultants and the audit committee for quality assurance; and
- During the period ended March 31, 2011 there was a change in the company's internal controls following the formation of a Colombian branch office that processes regional financial transactions. The branch is staffed solely by one senior administrative manager. The company mitigated this deficiency by adding administrative and management procedures in the Calgary head office.

Notwithstanding the company's efforts to mitigate the risks associated with above mentioned deficiencies, the Chief Executive Officer and the Chief Financial Officer concluded that the company's internal controls over financial reporting are not effective and as a result its disclosure controls and procedures are not effective as at March 31, 2011. The company reached this conclusion based upon their assessment that there is more than a remote likelihood that its internal control over financial reporting will not prevent or detect material misstatements if they should exist in our financial statements.

For additional information on NXT Energy Solutions Inc. please consult our web page at [www.nxtenergy.com](http://www.nxtenergy.com), or the SEDAR webpage at <http://www.sedar.com>.