

# Presentation Slides: Natural Gas and Hydrogen Infrastructure Opportunities: Markets and Barriers to Growth

Matt Most, Encana Natural Gas

take a closer look

## Natural Gas and Hydrogen Infrastructure Opportunities: Markets and Barriers to Growth

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## Future oriented information

in the course of providing Encana shareholders and potential investors with information regarding the Company and its subsidiaries, including management's assessment of Encana's and its subsidiaries' future plans and operations, certain statements and graphs throughout this presentation contain "forward-looking statements" within the meaning of the United States Private Securities (Litigation Reform) Act of 1995 or "forward-looking information" within the meaning of applicable Canadian securities legislation. "Forward-looking statements" in this presentation include, but are not limited to, statements with respect to: projected 2011 and 2012 production and overall growth; additional reserves and economic contingent resources; enhanced gas pricing; customer target to double production per acre by 2016; expected benefits of various play rock and gas factories; gasifier pilot plants and coal-to-liquids; including potential completion of joint venture with Pan-Asian; forecast growth under the 2011 to 2014 study to estimate investment grade credit ratings; ability to raise financing; successful execution of Encana's business model; 2011 Canadian production forecast; Encana's expenditures for future Table 1 exploration and Table 2 acquisition; and Table 3 acquisition. Encana does not intend to make any material changes to its gas pricing target to further reduce capital cost, consistent with respect to future production, additional reserves and resources, number of wells and other developments at various current and emerging plays, proposed flat production at lower breakeak, and expected future demand opportunities in transportation and power generation.

Reserves are contained in place unless otherwise stated in forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the conditions, forecasts, projections and other forward-looking statements will not occur, which may cause the Company's actual performance and financial results to differ materially from any estimates or projections of future performance as results expressed or implied by such forward-looking statements. These assumptions, risks and uncertainties include, among other things, volatility of and assumptions regarding commodity prices; assumptions regarding Encana's carbon footprint; the risk that the Company may not conclude potential joint venture arrangements with PetroChina or others and raise third party capital resources; fluctuations in currency and interest rates; product supply and demand; market competition; risks inherent in the Company's and its subsidiaries' marketing operations, including credit risk; operations of reserves and resources; inherent and estimated oil and natural gas reserves; ability to acquire and explore reserves; integrating energy systems; acquisition or unexpected technical difficulties in developing new facilities; unmet reserves or technical difficulties in constructing or modifying processing facilities; risks associated with technology; the Company's ability to generate sufficient cash flow from operations to meet its current and future obligations; the Company's ability to access potential sources of debt and equity capital; the rising and the costs of fuel and capital; construction; the Company's and its subsidiaries' ability to secure adequate product transportation; changes in regulatory, environmental, governmental, taxation, accounting and other laws or regulations in the jurisdictions of such laws or regulations; political and economic conditions in the countries in which the Company and its subsidiaries operate; terrorist threats; risks associated with pricing and production; future results and regulatory actions; credit support; the Company and its subsidiaries; and other risks and uncertainties identified from time to time in the reports and filings made with securities regulatory authorities by Encana. Although Encana 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. Encana is advised that the foregoing list of important factors is not exhaustive. The forward-looking statements with respect to anticipated production, reserves and production growth are based upon numerous facts and circumstances including a projected credit rating and average approximately \$8 billion per year that underlies the long range plan of Encana which is subject to certain annual and to seasonal factors including the volume of natural gas commodity prices and the expectations for regional investment by the Company, including an average drilling rate of approximately 2,500 net wells per year. Encana's current and drilling location inventory, natural gas price expectations over the next five years, production expectations made in light of advancements in technology, multi-stage fracture stimulation and multi-well pad drilling, the current and expected production characteristics of various existing reservoirs, Encana's production of reserves and economic contingent resources, uncertainties in the value of future which may be available at various prices for natural gas and current and expected oil trends. Forward-looking information regarding anticipated 2011 cash flow, operating cash flow and price per unit flow. The Company is based upon an average production of 61 and gas for 2011 of reserves 3,475 to 3,520 billion cubic feet equivalent ("Bcf") per day. The Company's commodity prices for natural gas are based on the NYMEX natural gas futures contracts as of 10/17/2011. Encana's 2011 production is \$10.5 billion. Encana's foreign exchange rate of \$1.00 to \$1.00 and an average average number of outstanding shares for Encana of approximately 726 million. Assumptions relating to forward-looking statements generally include Encana's current production and operations under the Company's light of all general commodity prices. It is important to note that the forward-looking information, as well as assumptions regarding the risks of exploration and production, generally contained with and informed by its past experience, all of which are subject to the risk factors identified elsewhere in this presentation.

Furthermore, the forward-looking statements contained in this presentation are made as of the date of this presentation, and do not constitute any obligation to update publicly or to revise any of the included forward-looking statements, whether as a result of new information, future events or otherwise. The forward-looking statements contained in this presentation are expressly qualified by this cautionary statement.



## Advisory Regarding Reserves Data & Other Oil & Gas Information Disclosure Protocols

National Instrument (NI) 51-101 of the Canadian Securities Administrators requires oil and gas disclosure standards for Canadian public companies engaged in oil and gas activities. In previous years, Enbridge relied upon an exemption from Canadian securities regulatory authorities to permit it to provide disclosure relating to reserves and other oil and gas information in accordance with U.S. disclosure requirements. As a result of the expiry of that exemption, Enbridge is providing disclosure which complies with the annual disclosure requirements of NI 51-101 in its Annual Information Form dated February 17, 2011 (AIF). The Canadian protocol disclosure is contained in Appendix A and under "Narrative Description of the Business" in the AIF. Enbridge has obtained an exemption dated January 4, 2011 from certain requirements of NI 51-101 to permit it to provide certain disclosure prepared in accordance with U.S. disclosure requirements in addition to the Canadian protocol disclosure. That disclosure is primarily set forth in Appendix C of the AIF. A description of the primary differences between the disclosure requirements under the Canadian standards and the disclosure requirements under the U.S. standards is set forth under the heading "Reserve Quantities and Other Oil and Gas Information" in the AIF.

The estimates of economic contingent resources contained in this presentation are based on definitions contained in the Canadian Oil and Gas Evaluation Handbook. Contingent resources do not constitute, and should not be confused with, reserves. Contingent resources are defined as those quantities of petroleum estimated, on a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Economic contingent resources are those contingent resources that are currently economically recoverable. In assessing economic viability, the same fiscal conditions have been applied as in the evaluation of reserves. There is a range of uncertainty of estimated recoverable volumes. A low estimate is considered to be a conservative measure of the quantity that will actually be recovered. It is likely that the actual remaining quantities recovered will exceed the low estimate, which under probabilistic methodology reflects a 90% confidence level. A best estimate is considered to be a realistic estimate of the quantity that will actually be recovered. It is equally likely that the actual remaining quantities recovered will be greater or less than the best estimate, which under probabilistic methodology reflects a 50% confidence level. A high estimate is considered to be an optimistic estimate. It is unlikely that the actual remaining quantities recovered will exceed the high estimate, which under probabilistic methodology reflects a 10% confidence level. There is no certainty that it will be economically viable or technically feasible to produce any portion of the volumes currently classified as economic contingent resources. The primary contingencies which currently prevent the classification of Enbridge's disclosed economic contingent resources as reserves are the lack of a reasonable expectation that all internal and external approvals will be forthcoming and the lack of a demonstrated intent to develop the resources within a reasonable time frame.

The estimates of reserve classes or resource classes (probable, possible and of contingent resources (low, best, high) in this presentation represent estimates. Such of multiple estimates of such classes for different properties, which statistical principles indicate may be misleading as to volumes that may actually be recovered. Readers should give attention to the estimates of individual classes of reserves and contingent resources and appreciate the differing probabilities of recovery associated with each class.

In this presentation, certain crude oil and NGL volumes have been converted to cubic feet equivalent (cfe) on the basis of one barrel BBL to ten thousand cubic feet (MMcf). Cfe may be misleading, particularly if used in isolation. A conversion ratio of one BBL to ten MMcf is based on an average engineering conversion method primarily applicable at the burner tip and does not represent value equivalency at the well head.

Enbridge uses the terms reserve play, total petroleum initially in place, original gas in place, initial gas in place, and crude oil in place. Reserve play is a term used by Enbridge to describe an accumulation of hydrocarbons located in and under a large area and includes both oil and gas. Total petroleum initially in place (TIP) is defined by the Society of Petroleum Engineers' Petroleum Reservoir Management System (PRMS) as the quantity of petroleum that is estimated to exist originally in a reservoir, including the quantity of petroleum that is estimated, as of a given date, to be contained or known accumulations prior to production plus those estimated quantities or accumulations yet to be discovered (applicable to "total resources"). Initial gas in place (IGIP) and crude oil in place (COIP) are defined in the same manner, with the substitution of "natural gas" and "crude oil" where appropriate to the word "petroleum".

In this presentation, Enbridge has provided information with respect to certain of its key resource plays and emerging opportunities which is "analogous information" as defined in NI 51-101. This analogous information includes estimates of TIP, IGIP or COIP, all as defined in the Canadian Oil & Gas Evaluation Handbook ("COGH") or by the SPE PRMS, and/or production type curves. This analogous information is presented on a basin, sub-basin or area basis utilizing data derived from Enbridge's internal sources, as well as from a variety of publicly available information sources which are professionally independent of Enbridge. Some of this data may not have been prepared by qualified reserves evaluators or auditors and the preparation of any estimates may not be in strict accordance with COGH. Regardless, estimates by engineering and geotechnical professionals may vary and the differences may be significant. Enbridge believes that the precision of this analogous information is relevant to Enbridge's oil and gas activities, given its average producer and operator (either ongoing or planned) in the areas in question.

For convenience, references in this presentation to "Enbridge", the "Company", "we", "us" and "our" may where appropriate, refer only to or include any relevant direct and indirect subsidiary corporations and partnerships ("Subsidiaries") of Enbridge Corporation, and the assets, activities and liabilities of such Subsidiaries.

All information included in this presentation is shown in a US dollar, after applicable basis unless otherwise noted.



## Natural Gas Value Proposition Four Deliverables

### Environmental Benefits

- Reduced GHG emissions (20-30%)
- Reduced associative emissions
  - CO, SO<sub>2</sub>, NO<sub>x</sub>
- Lower engine noise

### Social Benefits

- Production related revenues
  - Royalties, taxes, job creation
- Fueling infrastructure revenues
  - Job creation, taxes, economic spin-off

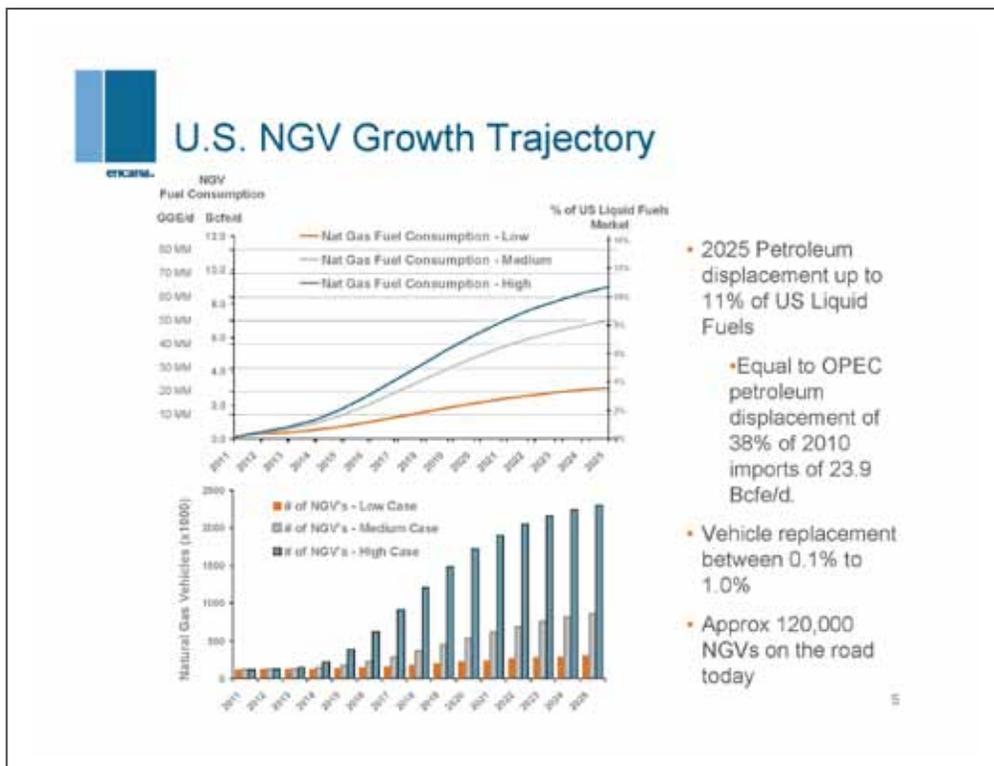
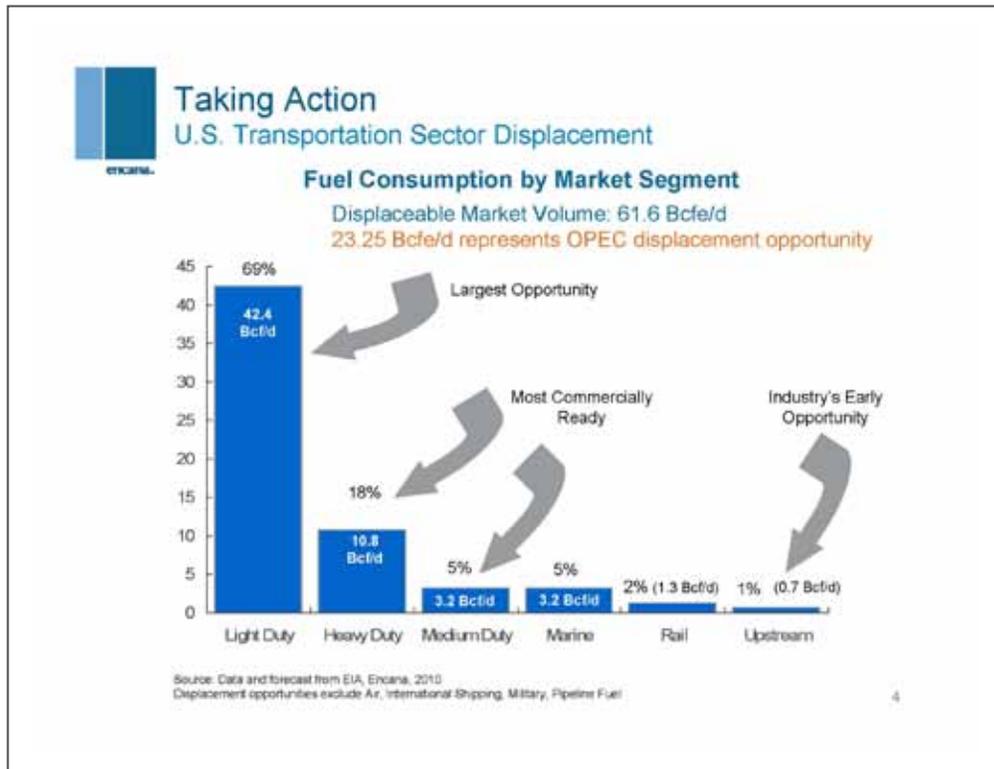
### Economic Benefits

- Lower fuel price than diesel / gasoline
- Reduced maintenance costs
  - DPF maintenance eliminated
  - Extended time between oil changes
- Jurisdiction dependent grants / credits

### Energy Security Benefits

- Domestic energy source
  - Economic benefits through value chain
- Displaces foreign oil
  - 49% US petroleum is imported
  - 40% CDN petroleum is imported







## Barriers and Opportunities for Transportation



	Infrastructure	Incentives	Policy Drivers	Vehicle Costs	OEM Vehicles
Path to VIABILITY	↑	↑	↑	↓	↑



## How Can the DOE Research Agenda Help?

- Technology accelerates market penetration, key challenges:
  - capital cost
  - tank design limitations
  - Vehicle range
- Adsorbed natural gas substrate conformable storage tank
  - Replacement for bulky, heavy-walled CNG tanks
  - Flat, lightweight tank stores natural gas in adsorbed form
  - Utilizes spent corn cobs inside the tank to absorb natural gas
  - Holds 180 times more gas per volume
  - Can be mounted under the floor