

# Report to the State of Alaska



## Analysis and Findings Regarding TransCanada's AGIA Application

Goldman, Sachs & Co.  
16-May-2008

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## Disclaimers

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The analysis and conclusions set forth herein are based on economic, financial, political, market and other conditions as they exist and can be evaluated on the date hereof, and we have not undertaken to reaffirm or revise this Report or otherwise comment upon any conditions or events occurring after the date hereof. Our analysis and conclusions also involve numerous assumptions and uncertainties, many of which cannot be verified or ascertained presently. Goldman Sachs does not provide accounting, tax or legal advice, and we make no representation as to the appropriateness or adequacy of the information contained herein or our procedures for, and express no view as to, the tax, accounting or legal treatment of any matter.

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# I. Introduction

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On February 19, 2008, Goldman, Sachs & Co. (“Goldman Sachs” or the “Firm”) and the State of Alaska (the “State”), acting through its Department of Natural Resources (“DNR”) entered into an advisory contract with respect to the State’s ongoing Alaska Gasline Inducement Act (“AGIA”) activities. In particular, Goldman Sachs was retained by the State to evaluate a range of financial issues that arise in the course of reviewing *TransCanada’s Application for License: Alaska Gasline Inducement Act, Application to Build, Own and Operate (the “Proposal”)*, submitted on November 30, 2007 pursuant to AGIA. The purpose of this report is to summarize the Firm’s analysis, rationale and overall findings with respect to our work on this matter. We understand that this report will become part of the public record and shall be attached in some form as background information to the AGIA Commissioners’ Finding (the “State’s Findings”).

## A. Scope of Assignment

Goldman Sachs was retained to consider a specific set of issues that relate to evaluating TransCanada’s AGIA Proposal. Goldman Sachs was retained after the State had finalized its completeness review of the proposals received under AGIA on November 30, 2007. The Firm has not reviewed any of the other proposals. Key elements of Goldman Sachs’ review include:

- **Review the Financial Elements of the Proposal** – Review elements and assumptions within the Proposal that have an impact on the finance plan and its overall viability. Considerations include (but are not limited to) capital structure, rate structure, shipping contract assumptions, Federal Loan Guarantee assumptions, etc.
- **Analyze TransCanada’s Financial Wherewithal** – Goldman Sachs has conducted an analysis of publicly available financial information on TransCanada (“the Company”) to project the financial impact on the Company of implementing the Proposal.
- **Evaluate the Financeability of the Proposal** – Goldman Sachs has reviewed the finance plan information in the Proposal, made assumptions regarding credit analysis, investor requirements, and used information supplied by other State consultants to develop a funding scenario for the Proposal.
- **Review Assumptions Regarding the Use of Federal Loan Guarantee** – The Firm has reviewed Section 116, Loan Guarantees of the Alaska Natural Gas Pipeline Act and other federal statutes and regulations cross referenced therein (together, “the Federal Loan Statute”). We have analyzed assumptions made in the Proposal with respect to the Federal Loan Statute.
- **Other Important Issues** – The Firm also reviewed a number of other issues that may impact the State’s Finding with respect to its review of the Proposal. These include (but are not limited to) the “withdrawn partners” issue; a comparative assessment of LNG alternatives, potential impacts of different assumptions about proven reserves, etc.

The Firm’s analysis and conclusions in each of these areas are described in the executive summary and balance of the report below. However, it is important to note the following: First, the Firm has limited its focus to matters of financial viability, financial wherewithal, and investor and market preferences. Second, the State has employed a range of consultants to study and analyze engineering, regulatory, legal, gas market, LNG, etc., issues. Where appropriate, Goldman Sachs has relied upon (and cited herein), without independent verification, the work and findings of the State’s other consultants. Third, it is understood that we are not experts in the areas covered by the State’s other consultants and therefore express no view on the work and findings of those consultants. Fourth, since it is a broader decision than the scope of our analysis and expertise, we have not been



asked for an overall recommendation regarding the award of a license to TransCanada pursuant to AGIA. Finally, it is important to note that this project is unprecedented in terms of scope, cost and financing requirements and therefore it is important to qualify the analytic results and findings herein to some extent based upon the size and complexity of the Proposal, and the length of time between this Report date and some of the key 'financial events' associated with the Proposal. The assumptions we have made throughout this report are based on our best available knowledge of the financing markets for gas pipeline and LNG project debt and equity. However, since the first major financing associated with the Proposal is set for five to six years from now, it is difficult to predict if market conditions at the time will support the conclusions continued herein. Goldman Sachs does not make any representation or warranty as to the accuracy or completeness of the materials set forth herein and nothing contained in this document is, or shall be relied upon as a promise or representation as to the past or the future. This Report has been prepared for presentation solely to the State in connection with its ongoing AGIA review and its consideration of the Proposal and is not to be used, circulated, quoted or otherwise referred to for any other purpose without the express written consent of Goldman Sachs.

## B. Organization of the Report

The balance of this report is organized as follows:

<b>Section</b>	<b>Title</b>	<b>Description</b>
II	Executive Summary	Summarize the framework for analysis and key findings.
III	Project Finance Overview	Review project finance market; size and scope of market; key attributes of project financings; risk and credit analysis; and review of elements of the Proposal which are key to financial viability.
IV	Financial Review of TransCanada	Evaluation of the financial strength of TransCanada; review of current ratings position; and analysis of financial impacts of implementing the Proposal.
V	Project Capital Structure Analysis	Development of a funding plan (or "capital structure") for the project based on the Proposal and assumptions provided by the State and its AGIA consultants; and developing the analytic 'Proposal Base Case.'
VI	Analysis of Project Alternatives	Analysis comparing various alternatives and financial outcomes to the Proposal Base Case. Alternative cases were run varying: project size (gas lines of various initial capacity); reservoir usage assumptions; shipping contract length; and technology (gas pipeline vs. LNG).
VII	Federal Loan Guarantee	Review of the Federal Loan Statute; review of Federal Loan Guarantee assumptions made by TransCanada in the Proposal. Analysis of Federal Loan Guarantee financial and credit impact on the Proposal.
VIII	TransCanada Withdrawn Partners Issue	Discuss impacts of the withdrawn partners issue on the viability of the financing.
IX	The Importance of the Alaska Gas Pipeline Project to TransCanada	Discussions of project impacts on and importance to TransCanada.

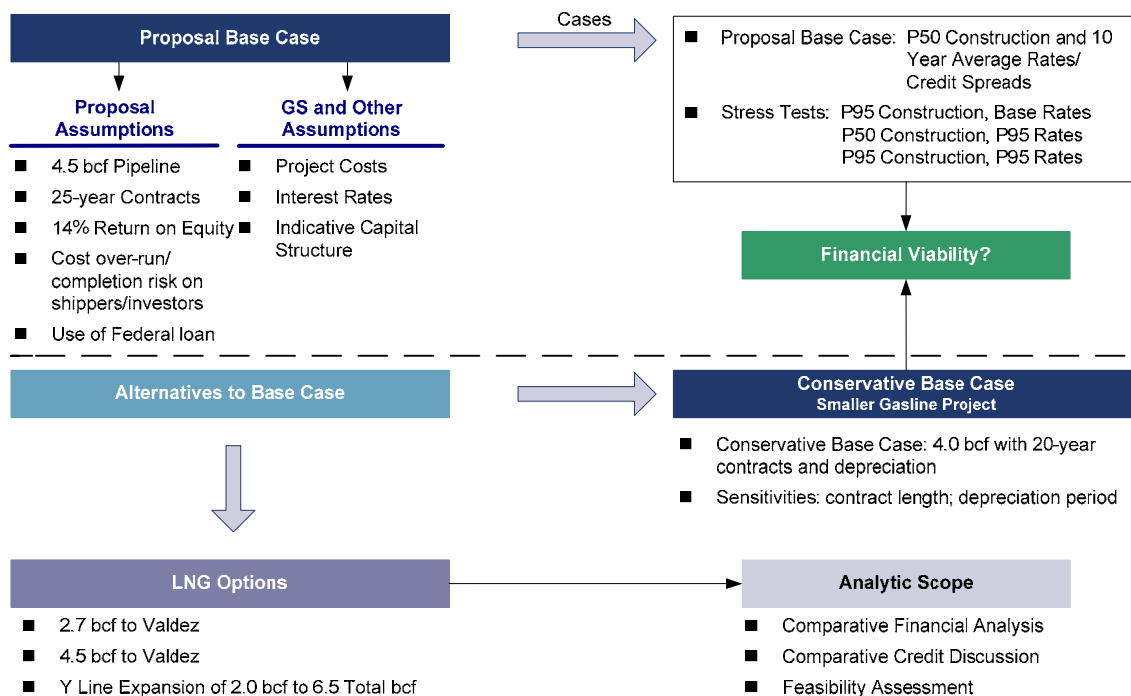
Goldman Sachs is pleased to be a part of the State's AGIA review team and looks forward to assisting the State as the AGIA process continues.

## II. Executive Summary

### A. Overview of Analysis

In the course of its work, Goldman Sachs participated in the review and analysis of the financial aspects of the Proposal and project. Working with the State and its other consultants, our principal objective was to develop an analysis of the financial viability of the Proposal. Goldman Sachs developed a capital structure analysis designed to reflect key financing related assumptions, sources and uses, and financing results. These results were fed into a more comprehensive investment analysis model developed by Black & Veatch and a variety of cases were analyzed. A principal focus was placed on analyzing the TransCanada Proposal and developing a 'Proposal Base Case' which reflects explicit assumptions contained in the Proposal. In order to test the robustness of the Proposal Base Case results, a range of 'sensitivity cases' were run by varying key inputs such as project costs and interest rates. In addition, to recognize the uncertainty built into any project of this size, cost and complexity, a range of additional cases were run to test how well results hold up when project configuration assumptions (i.e., capacity, technology, length of shipping contracts, etc.) are changed in various combinations. All of these analyses are described more fully later in this report. Figure 1 below reflects the range of analytic cases completed.

**Figure 1: Cases Under Consideration**



For each case, Goldman Sachs provided interest rate assumptions and basic assumptions regarding the size and timing of debt and equity financings. Results in terms of weighted average cost of debt, fully loaded transportation costs versus projected gas prices and overall capital structure viability have been presented and reviewed herein.



## B. Reliance on State and Other Consultants

In conducting its review of the Proposal, the State has assembled a team of expert consultants from a range of fields. In developing its analysis, Goldman Sachs has relied on these other consultants and in some cases the State to provide specific analytic inputs or general guidance. In particular our analysis and conclusions have relied upon the following:

Source	Information Provided
Black & Veatch Corporation	Project revenues available for debt service and equity returns; annual funding requirements; reservoir assumptions; and project transportation costs (i.e., tariffs).
Westney Consulting Group	Project cost and timing information.
Gas Strategies Consulting	LNG market and LNG price analysis. Assessment of Alaska LNG project.
Wood McKenzie Research and Consulting	Analysis of future gas prices.
Greenberg Traurig, LLP	FERC matters; legal analysis of TransCanada Withdrawn Partners Issue.
The State of Alaska	Case definitions; reservoir assumptions.

While each consultant, including Goldman Sachs, participated in different aspects of the analysis, an effort was made overall to use common assumptions provided by each of the relevant experts.

## C. Key Financing Related Proposal Assumptions

The TransCanada Proposal does not include detailed financing assumptions. In developing a detailed financial plan, our approach was to use the broad financing related themes in the Proposal as the basis for the more detailed assumptions we made. Key Proposal assumptions that impact the financing structure are listed below.

- The Project is a 4.5 bcf/day system to transport natural gas from Prudhoe Bay to the Alberta market hub;
- 25-year ship-or-pay contracts with market standard shipper credit requirements;
- Debt is non-recourse to TransCanada (i.e., the debt is 'project debt');
- Capitalization of 70% debt and 30% equity during construction;
- Capital cost overruns to be financed through federally guaranteed cost overrun loans;
- Federally guaranteed capital cost overrun loans to be repaid through shipper surcharge; and
- No project completion guarantee or pre-completion debt guarantee from equity sponsors is assumed.

***It is important to note that these assumptions underlie all of our conclusions with regards to the Proposal, and unless otherwise noted, any cases based on the Proposal.***



## D. Principal Findings

Goldman Sachs was hired by the State to address a set of specific questions and to comment on a range of issues which may have some impact on the State's decision with regard to awarding an AGIA license. Our findings are summarized below.

Question/Issue	Goldman Sachs Finding
<p data-bbox="326 441 698 556"><b><i>Does TransCanada have the financial strength to meet its commitments under the Proposal?</i></b></p> <p data-bbox="381 724 673 787" style="border: 1px solid black; padding: 2px;">See Report Section IV</p>	<p data-bbox="698 441 1521 588">Based on the assumptions outlined previously in Subsection C, Goldman Sachs believes that TransCanada, through its AGIA bidding entities, Foothills Pipe Lines Ltd. and TransCanada Alaska Company, LLC, has the financial wherewithal to meet the financial obligations implied in the Proposal. This finding is based upon:</p> <ul data-bbox="698 588 1521 829" style="list-style-type: none"><li>■ Assumption that TransCanada implements the Proposal without equity partners;</li><li>■ Project cost assumptions based on 'P50' construction cost and timing estimates from Westney, provided to Goldman Sachs by Black &amp; Veatch (See Westney report, "Analysis of the TransCanada's AGIA Application" for a description of the cost ranging methodology); and</li><li>■ Review and analysis of publicly available financial information regarding TransCanada.</li></ul> <p data-bbox="698 829 1521 1239">We believe that TransCanada has the ability to fund all of the predevelopment costs and early construction costs from company equity. As construction and procurement spending increases during the execution phase (2014-2019), we believe TransCanada would be able to raise 100% of the substantial equity funded portion of the project through internally generated cash and/or corporate debt. However, funding 100% of the project equity requirements with no equity partners or by raising additional primary equity at the TransCanada level could put financial strain and downward credit ratings pressure on TransCanada during construction. Nevertheless, we expect that TransCanada's credit ratings would remain investment-grade and the company will be able to attract external capital to fund its commitment to the project because the strain is a temporary effect of the major financial requirements during development and project execution and the potential strategic and financial benefits of the Project to the Company are compelling.</p>
<p data-bbox="326 1239 698 1386"><b><i>Do the financial elements of the Proposal reflect market based, reasonable assumptions for a large scale, complex project financing?</i></b></p> <p data-bbox="381 1417 673 1480" style="border: 1px solid black; padding: 2px;">See Report Section III</p>	<p data-bbox="698 1239 1521 1497">We have reviewed the Proposal submitted on November 30, 2007 pursuant to AGIA. We believe that the financing related elements of the Proposal (noted above) reflect sound assumptions and a business structure that makes sense in comparison to other major gas sector project financings. Critical assumptions necessary for the Proposal in this respect are the rate structure, the long-term ship-or-pay contracts assumed to be in place for 25 years, the proposed debt/equity ratios, the existence of the Federal Loan Guarantee and its use to lower debt costs and to backstop cost overrun loans.</p>



Question/Issue	Goldman Sachs Finding
<p data-bbox="332 226 633 304"><b><i>Is the Proposal Base Case viable from a financing standpoint?</i></b></p> <div data-bbox="381 415 673 472" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">See Report Section V</div>	<p data-bbox="714 226 1518 525">We have worked with the State and its other consultants to develop and analyze a “Proposal Base Case” which reflects a combination of the financial and business approach outlined in the Proposal and certain specific assumptions contained therein, and certain other assumptions developed by Goldman Sachs, the State and its other consultants in order to either (1) translate Proposal figures into year of expenditure amounts; or (2) use market-based assumptions where the Proposal didn’t include adequate detail to fully analyze financial results. Based on this analysis and a series of ‘sensitivity cases’ which vary key inputs, Goldman Sachs believes that the Proposal Base Case is financeable based on the following:</p> <ul data-bbox="714 535 1518 808" style="list-style-type: none"><li>■ Strength of the project sponsor;</li><li>■ Strength of the prospective shippers;</li><li>■ Proposal assumptions regarding the nature and provisions of the shipping contracts and cost overrun surcharge;</li><li>■ Federal Loan Guarantee is available as assumed and a federally guaranteed cost overrun facility is put in place;</li><li>■ Robust pro forma financial results;</li><li>■ Favorable capital markets conditions for sizable transactions exist at funding.</li></ul> <p data-bbox="714 814 1518 976">Separate and apart from our review of TransCanada and specifics of the Proposal, we point out that this project is unprecedented in terms of scope, size, cost and financing requirements. As such, developing and executing a finance plan for the project will be a challenge and success will ultimately depend on a wide range of project-related and market factors being in place at the time financings are required.</p>
<p data-bbox="332 987 633 1060"><b><i>Are the alternative project configurations analyzed financially viable?</i></b></p> <div data-bbox="381 1081 673 1138" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">See Report Section VI</div>	<p data-bbox="714 987 1518 1102">We have reviewed a range of project configurations that are different from the Proposal Base Case in a variety of ways. As described above, alternative cases were developed to test the impact on financial results and financing viability of changing key Proposal assumptions.</p>
<p data-bbox="479 1186 706 1239"><b>Gas Pipeline Based Alternatives</b></p>	<p data-bbox="714 1186 1518 1543">A range of cases that look at different combinations of project capacity, shipping contracts lengths and depreciation periods were used. Cases were defined based on the flexibility within the Proposal to develop a project with a capacity as low as 3.5 bcf, the fact that there is geologic uncertainty with regards to proven and yet-to-find gas available for the project, and business uncertainty with regards to actual volumes that shippers will contract for in the open season process. It is important to note that as project capacity is reduced, and ship-or-pay contracts are reduced in length, that both estimated transportation costs and the risk of negative netbacks increase. Configurations with capacity ranging from 3.5 bcf to 4.5 bcf, and contract lengths ranging from 15 to 25 years were analyzed. A “Conservative Base Case” was developed assuming 20-year contracts and 4.0 bcf project capacity.</p> <p data-bbox="714 1549 1518 1659">Based on analysis which evaluates the impact on overall project financial returns and transportation costs, Goldman Sachs believes that a range of project configurations are viable from a financing standpoint based on the same underlying strengths reflected in the Proposal Base Case.</p>
<p data-bbox="479 1669 706 1722"><b>LNG Project Based Alternatives</b></p>	<p data-bbox="714 1669 1518 1921">Cases were also developed relying on or incorporating LNG technology. LNG projects are generally more difficult than gas pipeline projects in terms of credit analysis and financing complexity. They are typically more costly as well, especially when the gas is stranded far from tidewater, as is the case in Alaska. That said, gas prices worldwide are such that LNG cargos can demand prices today in excess of those expected in North America. As a result, from a purely financial standpoint, it is conceivable that a more costly LNG project could have more favorable expected returns than a less costly gas line, provided that international natural gas</p>



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**Question/Issue****Goldman Sachs Finding**

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prices remain greater than North American natural gas prices.

Based on the LNG cases (outlined above in Section II.A), Goldman Sachs believes that the fundamental underlying economics of an Alaska LNG project *may potentially* provide the basis for a viable financing based on:

- Comparison of projected LNG market prices to the fully loaded project costs of treatment, liquefaction, shipping, regasification, and delivery;
- Strength of potential shippers, sponsors and gas purchasers; and
- Strong contractual and business arrangements among parties

However, we believe it is difficult to reach a definitive conclusion at this stage about viability of the LNG-based cases:

- Absence of key project elements upon which to base analysis. An in-depth analysis of each would require, at a minimum:
  - Defined business structure/finance plan
  - Equity sponsor/developer
  - Gas purchaser
  - Ship builder/operator
  - Committed gas volumes to supply the project
- As discussed below and in more depth in Section VII of this report, the Federal Loan Guarantee will be an important feature of the overall finance plan for the Proposal Base Case or any project that meets the federal criteria. The Federal Loan Guarantee statute may exclude LNG projects. Absence of the Federal Loan Guarantee for debt associated with the LNG project will make financing a project already difficult by virtue of size and credit complexity even more so.

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***Comment on the use of and importance of the Federal Loan Guarantee to financial viability.***

Our review was intended to determine if the approach for use of the Federal Loan Guarantee outlined in the proposal is consistent with the provisions of the Federal Loan Statute, both in terms of qualification and amount. We also looked at credit and cost benefits of the federal loan to overall financial viability of the Proposal. In order to analyze considerations related to the potential Federal Loan Guarantee, Goldman Sachs:

See Report Section VII

- Reviewed the Alaska Natural Gas Act of 2004, Section 116, Federal Loan Guarantee and related code crossed referenced therein (the "Federal Loan Statute");
- Reviewed the Proposal sections describing TransCanada's assumptions about the use of the Federal Loan Guarantee; and
- Participated in the development and analysis of the Proposal Base Case which incorporates use of the Federal Loan Guarantee based on TransCanada's Proposal assumptions.

Based on the foregoing, Goldman Sachs believes that:

- TransCanada has made assumptions regarding the use of the Federal Loan Guarantee that are consistent with the Federal Loan Statute;
- TransCanada's Proposal assumptions regarding the use of the Federal Loan Guarantee are sensible in terms of managing project financing costs and in mitigating construction completion risk related to financing; and
- Because of the unprecedented size of the financing requirements associated with the project and the fact that certain typical construction risk mitigation provisions that favor lenders are not contemplated in the Proposal Base Case, the Federal Loan Guarantee is a critical factor in our evaluation of financing viability.

It is understood that we are not experts in law and therefore express no view as to the legal aspects of the Federal Loan Guarantee provisions, nor have we retained outside counsel to review the Federal Loan Statute on our behalf.



Question/Issue	Goldman Sachs Finding
<p data-bbox="332 226 657 336"><b><i>Comment on the potential impact of the TransCanada Withdrawn Partners Issue to financial viability.</i></b></p> <p data-bbox="373 535 682 588" style="border: 1px solid black; padding: 5px; text-align: center;">See Report Section VIII</p>	<p data-bbox="722 226 1510 388">In analyzing considerations related to the withdrawn partners issue we have reviewed a wide range of documents including among others the original ANNGTC partnership agreement, legislative testimony on the matter from TransCanada and others, and legal analyses prepared by the State's outside attorneys, Greenberg Traurig. In addition, Goldman Sachs consulted with outside counsel.</p> <p data-bbox="722 399 1112 420">The key questions in this matter are:</p> <ol data-bbox="722 430 1510 546" style="list-style-type: none"><li>1. How large is the potential liability?</li><li>2. Does TransCanada, the parent of both its AGIA bidding entities and of two other subsidiaries that are the remaining partners in ANNGTC, owe a fiduciary 'duty of loyalty' to the withdrawn ANNGTC partners?</li></ol> <p data-bbox="722 556 1510 745">Goldman Sachs is making no comment on how these questions will ultimately be answered by those with jurisdiction and authority (i.e., the FERC and the courts). Based upon our review we believe that a) there could be legal merit in the notion that TransCanada has a 'duty of loyalty' to the withdrawn partners; and b) that this would create a degree of contingent liability and legal risk for potential shippers and/or investors. However, we believe these risks are manageable:</p> <ul data-bbox="722 745 1510 955" style="list-style-type: none"><li>■ Major and binding commitments to the project are not required for several years, leaving time for TransCanada to seek resolution through various means;</li><li>■ Further legal and regulatory analysis and action may clarify the actual risk faced by potential project participants; and</li><li>■ There are various other approaches TransCanada could take to mitigate the risk associated with this issue.</li></ul>
<p data-bbox="332 961 657 1039"><b><i>Discuss the impact and importance of the project to TransCanada.</i></b></p> <p data-bbox="373 1092 682 1144" style="border: 1px solid black; padding: 5px; text-align: center;">See Report Section IX</p>	<p data-bbox="722 961 1510 1186">TransCanada is a large, diversified participant in the North American pipeline and power generation space. It has substantial physical and financial resources and a number of announced growth initiatives, including the Project. As we have described, the Company has the financial ability to meet its obligations under the Proposal; it also has strategic and financial reasons to be incentivized to do so successfully, including the impact the Project would have in terms of leveraging and enhancing the value of its existing assets.</p> <p data-bbox="722 1186 1510 1323">The three principal Alaska North Slope ("ANS") producers have also clearly indicated their view on the strategic importance of an Alaska natural gas project. The potential benefits to the producers of participating in a project that commercializes their Alaska gas holdings are substantial and should lead the producers to move forward with a project to do so.</p>

## E. Overall Evaluation

Financing the project, as outlined in the Proposal and as analyzed in the Proposal Base Case, will not be without its challenges. The sheer size of the financial requirements will be a challenge for the financing markets. The project funding plan will have to be carefully structured to take full advantage of the Federal Loan Guarantee; all principals and lenders will have to be satisfied with allocations of risks between parties; and a construction implementation plan will have to be developed that protects all parties from the risk that increasing project costs could erode overall economics.

The analysis we have completed herein is based on the terms and approaches outlined in the Proposal. Where necessary in order to develop the analysis, in conjunction with the State and its other consultants, we have made reasonable assumptions regarding funding that we believe reflect the project finance market and terms and conditions for a finance plan. The pro forma results of our capital structure analysis of the Proposal Base Case indicate that project economics should support investment grade project debt to fund the project.



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It is important to restate however that these results are based on key financing assumptions in the Proposal principally regarding shipping contract length, credit requirements, shipper contracts, and terms and the use of the Federal Loan Guarantee. The assumptions are critical underpinnings of our analysis. Further, development of an actual financing plan for a complex project financing is an enormously detailed process that requires a substantial amount of interaction with project principals, potential investors, project finance banks, export credit agencies, rating agencies, credit enhancers, regulators, and a wide range of engineers, attorneys, etc. What we have prepared and presented herein reflects the information available today about the project and our best market based information, but the results need to be understood as necessarily lacking the veracity of a fully developed plan of finance and qualified by the fact that no financing of this size has been executed.

However, there are a number of major factors that we believe support financial viability based on the Proposal. Some of these are driven by project fundamentals that are independent of TransCanada and the Proposal; others are a direct result of TransCanada's involvement and the term of the Proposal itself:

- The Project is strategically important for all key principals: TransCanada, the Federal Government, the State of Alaska and prospective shippers;
- TransCanada and the principal Alaska North Slope shippers are financially strong;
- The project shows strong financial results.

The balance of this report details the background, information, and analyses underlying the principal findings summarized above.

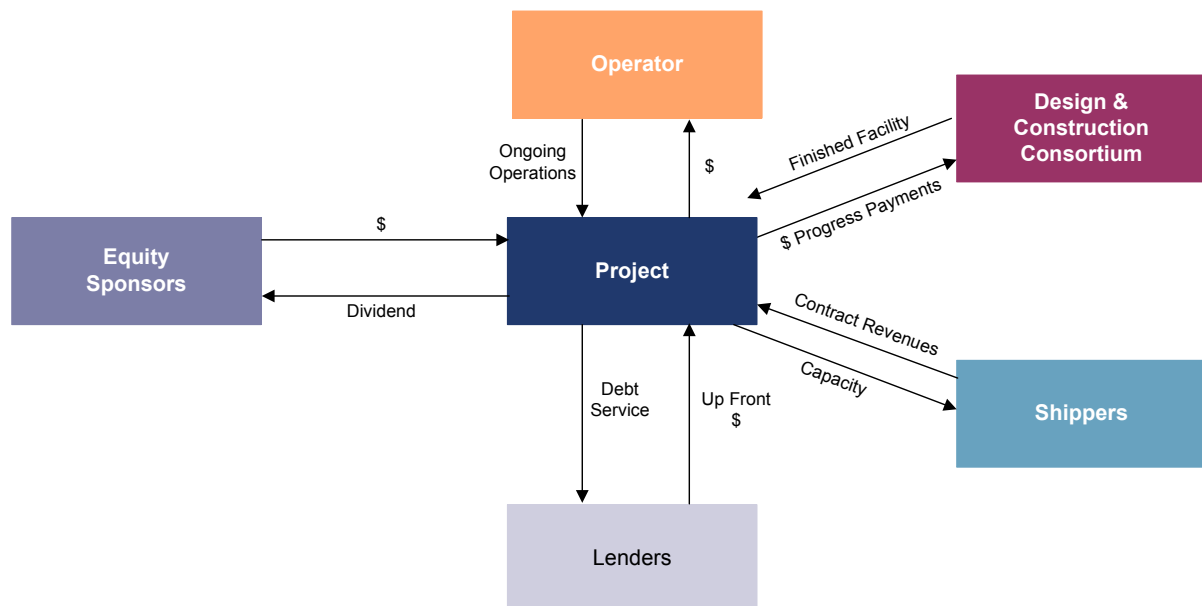
### III. Project Finance Overview

#### A. Basic Structure of a Project Deal

Project finance is generally used to finance assets in which investors rely solely on the project assets and their operating cash flows for repayment of debt and to provide a return on equity. There is limited or no recourse to the sponsor of the project, which allows for the creditworthiness of the project itself to be evaluated on a standalone basis. Usually, the debt is issued by a special purpose vehicle that is bankruptcy remote and includes a cash waterfall. Project finance often employs various structural features in the financing plan in order to mitigate risks that lenders may not be comfortable with. In many cases, and particularly for large and complex projects, lenders may seek from sponsors pre-completion debt guarantees or cost overrun protection facilities to mitigate construction risk and to enhance the creditworthiness and viability of a project. In light of the focus on the credit quality of the individual assets and corresponding cash flows used in project finance, this method of financing is most commonly used to finance power, oil and gas, and metals and mining and transportation assets, all of which tend to have very long and stable cash flow profiles. The terms of the Proposal imply that TransCanada is planning a project finance approach.

The basic structural framework for a gas pipeline project financing can be seen in Figure 2. This diagram highlights the major participants of a project financing and the exchange of responsibilities in the form of risks and returns. These shared responsibilities are the backbone for creating an economically viable and credit-worthy project.

**Figure 2: Basic Project Finance Structure**



#### Equity and Debt Investors

As can be seen in the diagram, the project is financed through a combination of debt and equity. Typically the project sponsor provides the equity, and debt is financed through the bank market and



capital markets. Our analysis describes the appropriate mix and timing of use for debt and equity in Section V of this report.

### **Bank Loans vs. Bonds**

The bank market is the optimal source of financing for the construction phase of a project as banks are quite sophisticated at understanding construction risk and are comfortable with its limited associated risk. Banks' credit departments have the capacity and expertise to analyze the engineering, procurement and construction ("EPC") contract, the counterparty risk associated with the EPC contract, and the technical risks associated with the construction process. They rely heavily on an independent engineering consultant whose responsibilities include: reviewing the EPC contract and its liability coverage, providing technical assessments to ensure that the project can be completed on schedule and on budget, and monitoring the project's progress.

Banks provide a commitment of financing that allows for the project to access funding over the construction period. Instead of funding upfront like the capital markets, requisite funds can be drawn as needed and undrawn portions incur a commitment fee, which is smaller than the funded cost, thus reducing interest expense and the associated "negative carry." Another benefit to the bank market is that the drawn amounts may be repaid without any penalty. Prepayability gives the sponsor the option to refinance the bank facility once construction is completed with capital markets debt that can provide longer maturities structured against expected revenue streams.

The capital markets are not an optimal source of financing for construction projects as it is often difficult to get capital markets investors comfortable with the construction completion risk. Instead, the capital markets are generally a preferred financing market post-completion. This financing source prefers operating assets, especially since these investors have less appetite for the risks inherent in the construction phase.<sup>1</sup> Generally, the risk profile of the project reduces after completion, providing the opportunity to refinance outstanding bank construction loans at a potentially lower cost of funds in the debt market. These investors, who are primarily insurance companies, pension funds, and mutual funds are looking for long-term assets in order to match the duration of their liabilities. Overall the project bond market is effectively the permanent debt market for project finance once operating cash flows can be extracted on a predictable basis from the assets.

### **Shippers**

In the case of a pipeline project financing, one of the most important structural elements is the quality of the upstream shippers and the project's shipper contracts. These contracts will significantly influence the creditworthiness and therefore the financing terms of the project. In a gas pipeline project financing, shippers generally enter into long-term 'ship-or-pay' contracts which require payment for pipeline capacity even if gas is not available. Only under very limited circumstances may shipper contract payments be suspended. Those contracts serve as a key source of revenues to repay the debt.

### **Operator**

It is critical to the economic viability of a project financing that there be an experienced and financially strong operator. The operator's credentials and track record must be substantial in order to attract shippers and investors. It is also important to have the ability to replace the operator if needed and to have replacement options.

### **Construction Contract**

It is a primary objective for any project financing to create as much certainty as possible around cost and timing of completion. This is key because payment obligations under shipper contracts don't commence until project completion. Often, certainty is sought by entering into an EPC contract. The characteristics and certainty of the EPC contract will be a significant factor for the rating agencies as they evaluate the project and in turn will have a major influence on the financing terms of the project.

<sup>1</sup> Private placement investors have the capacity to analyze construction projects and frequently invest in these types of projects, but this market, which is much smaller, is not contemplated for this project given its size.

The most desirable situation from a credit and investment perspective is to have a fixed price, date certain turnkey contract, which shifts completion and cost overrun risk to the builder.

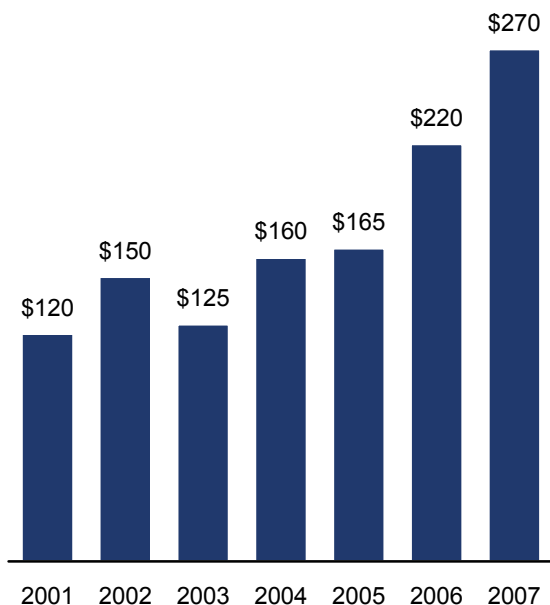
## B. Market Size, Scope and Sectors

The project finance market has grown substantially over the last six years when measured by principal volume of deals (in dollars) completed. As can be seen on the left side of Figure 3, volumes have grown by 125% percent over the last six years. In 2007, there were \$270 billion in deals that were broken up into seven primary sectors including in descending order: energy, infrastructure, oil and gas, petrochemical, industrial, mining and telecom. As can be seen, 67% of the global project financings were infrastructure and energy related. The pie chart in Figure 3 details the percentage share done in each of these sectors in 2007.

**Figure 3: Global Project Finance Volumes by Year and Sector**

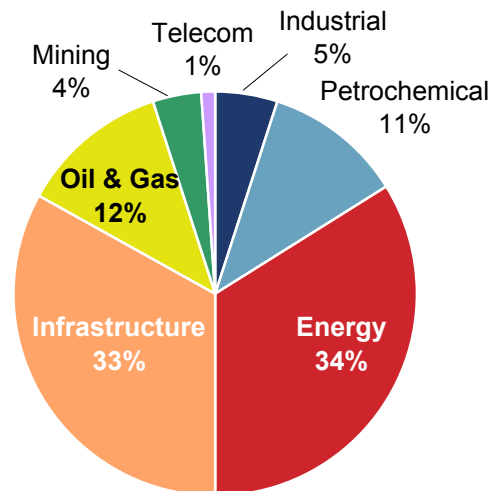
(\$ in billions)

**Annual Global Project Finance Volumes**



Source: Project Finance Magazine March 2008

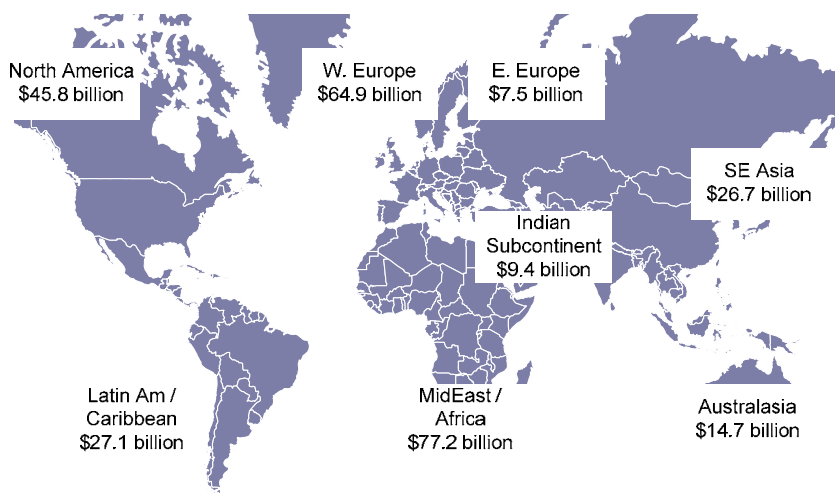
**Global Sector Share in 2007**



Source: Project Finance Magazine March 2008

Project finance structures are accepted and utilized in all parts of the world. Figure 4 details the geographic distribution of project finance deals completed in 2007. As can be seen, project finance structures are well accepted globally, with the majority of deals taking place in the Middle East, Africa, Europe and North America. Roughly 17% of deals executed in 2007 were completed in North America.

**Figure 4: Global Project Finance Volumes by Region in 2007**



Source: *Project Finance Magazine* March 2008

Table 1 details the largest deals completed in 2007. This list also speaks to the health and global diversity in project finance.

**Table 1: Global Top 10 Project Finance Deals in 2007**

Borrower Name	Project Name	Amount (\$Mm)	Country	Sector	Financial Close
Emirates Aluminum - EMAL	Abu Dhabi Aluminum Smelter	\$7,050	United Arab Emirates	Processing Plant	12-Dec-2007
Qatar Liquefied Gas Co Ltd (Qatargas) IV	Qatargas 4	5,714	Qatar	Oil Refinery /LNG and LPG Plants	30-Jul-2007
Fujian Refining & Petrochemical Co Ltd - FREP	Fujian Refining and Ethylene Joint Venture Project	5,600	China	Petrochem/ Chemical Plant	6-Sep-2007
Qatalum	Qatar Aluminum Plant	4,739	Qatar	Processing Plant	23-Aug-2007
Red de Carreteras de Occidente	FARAC Toll Road PPP	4,280	Mexico	Road	27-Sep-2007
Ambatovy Minerals SA	Ambatovy Nickel Project	3,700	Madagascar	Mining	22-Aug-2007
Tokyo Crimson Energy Holdings Corp (Mirant)	Mirant Acquisition	3,678	Philippines	Power	7-Jun-2007
Bombela Concession Co Pty Ltd	Gautrain Rapid Rail Link	3,630	South Africa	Rail-Infrastructure	25-Jan-2007
Yucpa Finance BV	Western Energy Development and Anaco Project - PDVSA	3,500	Venezuela	Oil Refinery/ LNG and LPG Plants	21-Feb-2007
Jubail Power & Water Co	Marafiq IWPP	3,500	Saudi Arabia	Power	14-May-2007

Source: *Project Finance Magazine* March 2008

### Project Finance Market Lenders and Investors

Project finance structures are financed with a combination of debt and equity. Project finance structures usually allow for more leverage than corporate financing given the long-term nature of the



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asset and contracted cash flows. In the past few years, the bank market has been the market of choice, financing approximately 90% of global project financings (greenfield and brownfield). This is primarily due to the increased appetite from the bank market to provide: longer tenors than historically; high leverage; and low cost of funds. However, currently the market is in a state of flux which is affecting the bank's appetite.

## C. Importance of Credit Analysis

Creating a solid framework from a credit perspective is paramount to providing the project's equity and debt investors comfort their investment return objectives will be realized and/or their principal and interest will be promptly serviced. Simply put, project investors are relying on three primary factors when considering their risks: strength of the sponsor, strength of the project economics, and strength of the project structure (as described in D following).

### Strength of the Sponsor

Investors need to have comfort that the project sponsor has the financial and technical wherewithal to complete the project and to manage the operations smoothly and efficiently.

### Strength of the Project Economics

Ultimately, investors need to have some comfort that the project will be completed and that the revenue generated from the completed project will be sufficient to fully repay debt service. Project economics are driven by, among other things, cost and constructability, credit quality of the shippers and the strength of the contracts with shippers, and the market for gas at time of production.

## D. Project Finance Risks and Mitigants

There are a multitude of risks associated with project financings and the degree of risk will vary depending on the characteristics of the project. Typically, the risks can be broken down into two major categories: Pre-Completion Risks and Post-Completion Risks.

### Pre-Completion Risks

During the pre-completion phase of the project, lenders generally will take limited completion risk. Completion risks include construction risk and funding risk.

**Construction Risk** – Will the project be completed on time and within budget? Construction risk is typically mitigated through a combination of:

- Strong EPC contracts (fixed price, date certain, turnkey contract) that includes liquidated damages from an experienced, creditworthy contractor;
- Substantial project contingencies included in the contract price;
- Owner / sponsor pre-completion guarantees – will repay debt if project is not completed; and
- Independent engineer's strong involvement to insure that the project is built on budget and on time. Engineer's report demonstrates viability of project budget, schedule, technology and cost, and the engineer has an oversight / limited approval role during construction.

**Funding Risk** – Is adequate funding to cover all required costs available? Lenders will want to ensure that all funding needs are committed upfront. At financial close, funding and repayment should be relatively tied down through the following mechanisms:

- Off-take or capacity contracts in place with limited outs in order to obtain financing;



- 
- Independent market study demonstrates viable relationship between project revenues arising from contracts and the costs of the fully funded / committed capital structure;
  - Project funding is fully secured via equity commitments, project debt and / or bank commitments; and

Additional pre-completion risks, impacts, and mitigants are described in Table 2 below.

### **Post-Completion Risks**

Lenders need to be assured that once constructed, the project will be operated efficiently and the projected revenues will materialize as projected.

**Operating Risk** – What is the potential for interruptions in project availability and revenues? Lenders will assess operating risk as part of the overall project and will seek protections from business interruption risk. Some of the mitigants lenders will seek include:

- Strong, creditworthy operator with direct experience;
  - Ability to replace operator with a “qualified operator”
- Limited force majeure;
- Insure everything commercially insurable – casualty, earthquake, terrorism, business interruption;
- Limited planned outages;
- Project operating and maintenance reserves.

**Production/Volume Risk** – Are there adequate proven reserves to support assumptions about volumes and shipper contracts? The project credit and in turn lenders willingness to invest will be based heavily on contracted cash flows. Some of the features credit analysts and lenders will look for to mitigate this risk include:

- Strong, contracts with creditworthy off taker or shipper(s),
- Price and volume contracted, and
- Market consultant study evaluating the ability for the market to absorb projected supply.

Lenders will give limited credit to un-contracted cash flows unless there is strong market demand. Therefore it is important for a project to have a market consultant study conducted which supports a strong market demand.

Additional post-completion risks, impacts and mitigants are described in Table 2 below. Many of these risks are typically mitigated through a combination of commercial and financing arrangements (such as debt service reserve accounts, cash flow waterfalls, standby funding plans, and restrictive debt covenants). If the associated risks are not sufficiently mitigated, the credit markets will want comfort that the sponsor is willing and able to inject liquidity into the project to enable the project to operate effectively.



**Table 2: Credit Market Reactions to Different Project Risks**

Pre-Completion Phase			Post-Completion Phase		
Risk	Impact	Typical Mitigants	Risk	Impact	Typical Mitigants
Cost Overruns	Project costs escalate due to higher than budgeted costs	Contingencies, contractor payments equity contributions, etc	Single Asset Risk	Temporary or extended reduction in cash flow	Terrorism, Business Interruption, Physical Damage/Loss Insurances, Debt service reserve account
Completion Delays	Shortfalls in debt service until project completion is reached	Standby funding plan, contractor payments, insurances, Sponsor guarantees	Commodity Price Risk	Temporary or extended reduction in cash flows	Low breakeven output price, hedging of price risk in future production
Technical Risks	Field production below expectation from the outset	Insurances, payments from contractors, strong contracts, certification by independent engineer that construction is completed to spec	Production Volume Risk	Temporary or extended reduction in output from the field	Take-or-pay offtake agreements
Pre-completion <i>Force Majeure</i> Risk	Delays in completion and delivery of first gas	Business interruption insurance, strong contracts	Reserve Risks	Insufficient production to meet debt servicing requirements	Conservative capital structure, shorter amortization profile, reserve reports by independent engineer
			Post-completion <i>Force Majeure</i> Risk	Temporary or extended disruption of cash flow	Business Interruption Insurance
			Technical and Operating Risks	Temporary or extended disruption of cash flow, increased leverage and diminished creditworthiness	Penalties and Liquidated Damages due from Operator

## E. Project Finance Review of Proposal

The financing related terms incorporated in the Proposal clearly dictate that a project finance approach is assumed by TransCanada. As such, we have geared our credit analysis and capital structure development along those lines: a) what are the credit strengths and weaknesses inherent in the Proposal as compared to typical project financing terms (discussed below); and b) what capital structure approaches could TransCanada deploy to optimize the likelihood of a successful project financing (discussed in Section V, Project Capital Structure Analysis). Table 3 highlights the aspects of the Proposal that are key to project financing viability.

**Table 3: Key Financial Elements of TransCanada Proposal**

<b>Structural Category</b>	<b>Financial Element</b>	<b>Impact on Financing</b>
<ul style="list-style-type: none"> <li>■ Rate Structure</li> </ul>	<ul style="list-style-type: none"> <li>■ Combination of negotiated and recourse rates</li> <li>■ Surcharge for cost overrun funding</li> <li>■ Long term contracts</li> </ul>	<ul style="list-style-type: none"> <li>■ Flexibility will positively enhance open season process</li> <li>■ Project risk allocation acceptable to all principals is critical to securing financing</li> </ul>
<ul style="list-style-type: none"> <li>■ Capital Structure</li> </ul>	<ul style="list-style-type: none"> <li>■ Rolled in rates</li> <li>■ Construction – 70% debt / 30% equity</li> <li>■ Operations – 75% debt / 25% equity</li> <li>■ Expansion funding – 60% debt / 40% equity</li> <li>■ Higher equity ratio for recourse rates</li> <li>■ Equity return: 10 yr UST+ 965 basis points</li> </ul>	<ul style="list-style-type: none"> <li>■ Debt/Equity mix is acceptable to the current conventions of the capital markets and bank market</li> <li>■ Equity return acceptable to induce sponsor interest</li> </ul>
<ul style="list-style-type: none"> <li>■ Shipping Agreements</li> </ul>	<ul style="list-style-type: none"> <li>■ Credit thresholds</li> <li>■ General provisions</li> </ul>	<ul style="list-style-type: none"> <li>■ Necessary and adequate to gain capital markets and bank market access</li> </ul>
<ul style="list-style-type: none"> <li>■ Cost Overruns</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduced equity return</li> <li>■ Use of federal loan</li> </ul>	<ul style="list-style-type: none"> <li>■ Key to capital structure</li> </ul>
<ul style="list-style-type: none"> <li>■ Federal Involvement</li> </ul>	<ul style="list-style-type: none"> <li>■ Bridge shipper</li> <li>■ Federal loan</li> </ul>	<ul style="list-style-type: none"> <li>■ Degree of positive impact depends on use within capital structure</li> <li>■ Assume no bridge shipper agreement</li> </ul>
<ul style="list-style-type: none"> <li>■ Cost Estimating</li> </ul>	<ul style="list-style-type: none"> <li>■ Proposal includes a Class 5 cost estimate</li> <li>■ Class 4 cost estimate to be developed in Proposal Sub-Phase to support open season</li> <li>■ Class 3 cost estimate in place at end of Definition Sub-Phase                             <ul style="list-style-type: none"> <li>— Project Baseline Budget for control during Execution Phase</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Refining cost estimates will have a positive impact</li> </ul>

Rating agencies will look at these provisions in the context of their overall credit review that encompasses both debt specifics but also broader project economic drivers. The following Table 4 shows key themes of a gas pipeline project financing credit review, related both in terms of market norms and how the Proposal stacks up against these norms.

**Table 4: TransCanada Alaska Pipeline Proposal Credit Summary**

Credit Factor	Typical for Investment Grade	Trans Canada Proposal
<b>Sponsors</b>	<ul style="list-style-type: none"> <li>■ Strong project sponsor(s) with project execution, operations and financial experience</li> <li>■ Highly rated / strong financials</li> </ul>	(+) TransCanada – well capitalized, highly expert sponsor with strong incentives to complete project
		(+) Most likely other equity participants are financially strong producers
<b>Reserves / Gas Supply</b>	<ul style="list-style-type: none"> <li>■ Diversified supply with proven reserves</li> <li>■ Manageable and predictable costs to produce</li> <li>■ Solid YTF prospects</li> </ul>	(+) Prudhoe Bay field most certain but limited life
		(-) Point Thompson uncertainty
		(+ / -) Consensus on substantial YTF volumes
<b>Construction and Completion Risk</b>	<ul style="list-style-type: none"> <li>■ Manageable and predictable construction program – scope, technology, schedule</li> <li>■ Overrun and delay risk mitigated through EPC contract, sponsor guaranties, etc.</li> </ul>	(-) Scope and complexity of project without precedent
		(-) Construction environment and scale most likely rule out turnkey EPC approach
		(-) No sponsor completion guarantee
		(+) Federal Loan Guarantee overrun facility
		(+) Sponsor financial incentives to complete on budget
		(+) Sponsor pre-completion guarantee
<b>Offtake Contracts and Rates</b>	<ul style="list-style-type: none"> <li>■ Ship or pay contracts with investment grade or credit enhanced shippers</li> <li>■ Limited outs</li> <li>■ Rates adequate to cover debt with coverage and targeted equity levels</li> </ul>	(+) Most likely shippers are very strong
		(+) Proposed terms, to extent detailed, provide solid source of security
		(+) Netback risk reasonable assuming capital and financing costs do not substantially increase
<b>Gas Market / Netback Risk</b>	<ul style="list-style-type: none"> <li>■ Independent feasibility study reviews capacity of market to absorb new supply and verifies prices used in project feasibility analysis</li> </ul>	(+) North America market tremendously diverse with large capacity to absorb supply
		(+) Netback risk reasonable assuming capital and financing costs do not substantially increase
<b>Finance Plan</b>	<ul style="list-style-type: none"> <li>■ Minimum equity 20%+ – more equity viewed as strength</li> <li>■ Full project funding obtained or committed at closing</li> <li>■ Adequate contingencies and overrun facilities</li> <li>■ Debt reserves in place during operations</li> <li>■ Appropriate structure for efficient market funding</li> <li>■ Sponsor pre-completion guarantee</li> </ul>	(+) 70% debt / 30% equity during construction
		(+) Federal Loan Guarantee
		■ Reduces capital cost
		■ Overrun facility
		(+) Shippers with strong underlying credits
		(-) Size and length of construction will test project finance market capacity.
<b>Operating Risk</b>	<ul style="list-style-type: none"> <li>■ Expert operator with limited planned shutdowns</li> <li>■ Strong maintenance plan</li> <li>■ Insurable business interruption events covered</li> </ul>	(+) TransCanada is a strong operator
		(+ / -) Complex operating environment
		(+) Positive

(+) Positive      (-) Negative      (+ / -) Neutral

As you can see the Proposal (just like any project) has strengths and weaknesses relative to market standard credit provisions. That said, in key areas such as sponsor and potential shipper strength, assumed contract terms and netback risks, the Project is very strong. Areas that will need particular attention when structuring the financing will be: covering construction completion risk currently allocated to lenders; gaining more clarity on reserves and the contract length they will support; and simply on developing a structure that can best be executed given the unprecedented large size of the financing requirements. These issues are discussed in Section V, Project Capital Structure Analysis.



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## IV. Financial Review of TransCanada

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### A. Introduction

A central theme in the credit review of the Project will be TransCanada's ability to meet the financial obligations outlined in the Proposal. In order to assist in their AGIA evaluation, Goldman Sachs analyzed TransCanada's current financial position and developed a range of scenarios for how the financial requirements of the Proposal might be met and how the Company's finances and credit position could be impacted. Our review is based upon the following public sources of information:

- The Proposal
- TransCanada's SEC Filings, SEDAR filings, and other public information provided on its web site
- Reports of Standard and Poor's and Moody's as cited in the text

Goldman Sachs' believes that TransCanada likely has the financial capacity to undertake the project outlined in the Proposal, assuming that TransCanada continues to pursue consistent growth and funding strategies and that there are no unusual material adverse changes in its core businesses. TransCanada will most likely require substantial external financing to meet its financial commitment to the Project that could cause company leverage metrics to worsen during the construction phase. However, TransCanada's financial profile will improve rapidly post-completion. Overall, the timing of the need to finance significant amounts is distant and allows for financial planning and balance sheet management that could result in maintenance of the company's credit ratings and facilitate fund-raising.

A strong ratings reception for the Company (separate and apart from the Project) will be a key factor in the success of the finance plan for the project. Maintenance of solid investment grade ratings (BBB/Baa2 or higher) on TransCanada will be very helpful for its debt and equity market access. As the ratings agencies may view TransCanada's credit rating as a limiting factor for the Project's credit ratings, strong ratings on TransCanada are important for the Project's credit rating. Key ratings/credit analysis questions will include:

- What can go wrong with the Project and within TransCanada's core businesses?
- How will TransCanada ultimately finance their equity contribution?
- Will TransCanada be required to make additional capital contributions if the pipeline project experiences delays or cost overruns?
- To consolidate or not consolidate?
- Would TransCanada ever really "walk away" either during construction or after operations commence?
- Ratings Approach? Rate to the trough (i.e., the point in time during construction when financial pressure is highest), likely post-construction profile, or somewhere in between?

TransCanada is a complex multi-billion dollar company that operates a range of technical businesses and assets across a large and, in some cases, remote geographic range. The Project on its own merits has the same qualities and is still relatively undefined. As such, and given the long lead time before construction, developing a clear view of how the Project financial requirements will impact the company is difficult. That said, overall we believe:



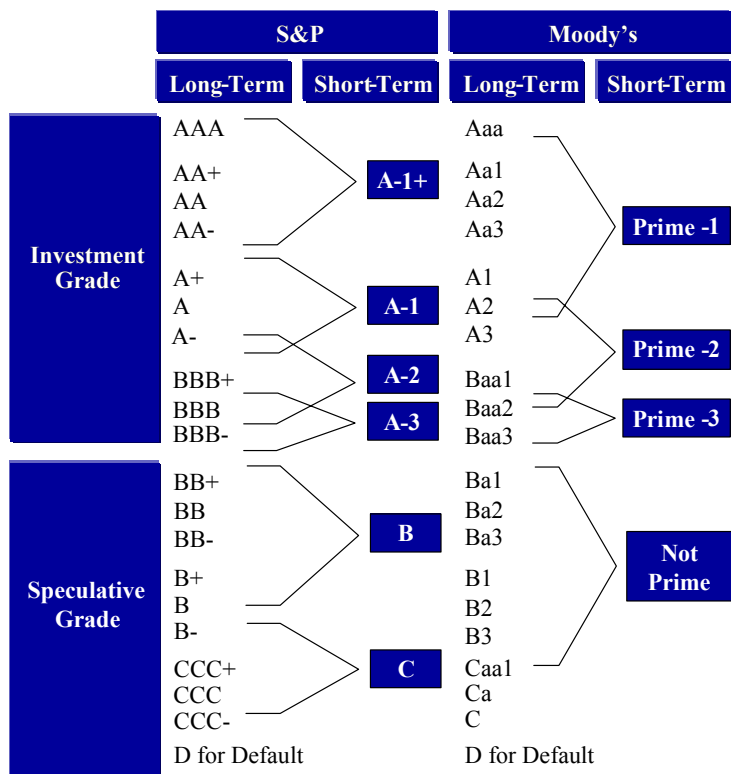
- TransCanada has very stable, durable, and free cash flow generative businesses;
- TransCanada’s business and financial risk profiles substantially improve if the Project is completed;
- Rating agency concerns about additional capital calls on TransCanada during construction likely would be alleviated by the cost overrun facility;
- If capital calls are required because costs escalate, TransCanada should have the ability to contribute additional capital (if needed);
- TransCanada generates substantial free cash flow at the corporate level that should enable the Company to potentially debt-finance the majority of its equity contribution;
- If TransCanada finances its capital contribution to the pipeline entirely with debt, ratings downgrades are possible (all else being equal) but maintenance of investment-grade ratings is expected; and
- Maintenance of current ratings is possible if TransCanada takes actions to fortify its financial strength in anticipation of the project and ensures the agencies view the pipeline as having a high probability of success.

The balance of this section summarizes our review and analysis.

### Current Rating Agency Views

TransCanada PipeLines Ltd. is rated A2 by Moody’s and A- by S&P. TransCanada Corp., the parent of TransCanada PipeLines Ltd., is rated A3 by Moody’s and is unrated by S&P. These ratings are ‘investment grade’ and place the Company solidly within the upper tiers of corporate bond issuers. Figure 5 shows the ratings scales for both Moody’s and Standard and Poor’s.

Figure 5: Moody’s and S&P Ratings Scales





In Table 5, we have summarized key points from rating agency commentary regarding TransCanada.

**Table 5: Key Rating Agency Commentary Regarding TransCanada**

<b>Moody's</b>		<b>Standard &amp; Poor's</b>	
Senior Unsecured Rating Outlook	A2 <sup>1</sup> Review (Downgrade)	Senior Unsecured Rating Outlook	A- Stable
<b>Key Strengths</b>		<b>Key Strengths</b>	
<ul style="list-style-type: none"> <li>■ Predominately low risk, regulated gas pipeline operations with clear focus on gas transmission and power businesses</li> <li>■ Strong competitive position driven by importance of TransCanada's Canadian pipelines in transporting gas out of the WCSB</li> <li>■ TCPL's electricity generation assets tend to be characterized by either low marginal cost of production or long-term power purchase agreements with highly rated counterparties</li> <li>■ Stable and predictable free cash flow generation</li> </ul>		<ul style="list-style-type: none"> <li>■ Business profile is "excellent" driven by predictable earnings from TCPL's mature, wholly-owned Canadian and US natural gas transmission systems which are supported by transparent regulation</li> <li>■ Strong competitive position driven by importance of Canadian pipelines in transporting gas out of the WCSB</li> <li>■ Investments in other pipeline operations provide a stabilizing offset to gradually declining earnings from traditional pipelines</li> <li>■ Consistent free cash flow generation remains a fundamental Company strength and provides a buffer against cost overruns and other project setbacks</li> </ul>	
<b>Key Weaknesses</b>		<b>Key Weaknesses</b>	
<ul style="list-style-type: none"> <li>■ Weak financial profile for the rating category – high leverage driven by deemed capital structure allowed on Canadian regulated pipelines and mitigated by generally more supportive regulatory and business environments in Canada</li> <li>■ Long-term declining WCSB production leads to increasing supply risk (may be offset by non-conventional production)</li> <li>■ Increasing exposure to power and unregulated businesses that may necessitate lower corporate leverage to offset a rise in business risk</li> <li>■ Growing portfolio of projects exposes the company to increasing levels of execution risk including allocation of management resources, management of construction cost and schedule risks and financing risk</li> </ul>		<ul style="list-style-type: none"> <li>■ Somewhat high leverage levels although credit ratios remain acceptable for its ratings</li> <li>■ Increasing earnings volatility as TCPL purchases power for resale into primarily unregulated markets (somewhat mitigated by forward sales contracts)</li> <li>■ Declining rate base (related to maturity of gas production in western Canada) and ROE (due to linkage to interest rates) has reduced earnings in recent years</li> <li>■ Near-term cost and operating uncertainty related to Bruce A Restart</li> </ul>	

On April 2, 2008, both Moody's and Standard & Poor's respectively placed the TransCanada family on Review For Downgrade and CreditWatch-Negative in response to TransCanada's agreement to purchase the 2,480 MW Ravenswood generating facilities from National Grid for US\$2.85 billion. It is not unusual for the agencies to put a rated entity on watch while a review is completed of a major financial or operational event, or transaction. The reviews were prompted by the agencies' concern that the acquisition and a continued expansion into the power business would raise business risk relative to TransCanada's capital structure. On April 18, 2008, Standard & Poor's affirmed TransCanada's "A-" corporate and senior unsecured debt ratings with a "stable" outlook citing "we expect that TCPL will finance this purchase with a considerable equity component, and the company's credit measures will not deteriorate as a result. Finally, we expect that the company's growth initiatives, most notably the Keystone Pipeline, will keep its portfolio heavily weighted towards

<sup>1</sup> Moody's has assigned an A2 corporate rating to TransCanada PipeLines Ltd., which is an operating company and intermediate holding company of TransCanada Corp. The A3 rating on TransCanada Corp. reflects the effect of structural subordination of TransCanada Corp. to debt at TransCanada PipeLines.

assets that produce stable and predictable earnings.”<sup>1</sup> TransCanada’s ratings remain on review for a downgrade by Moody’s although at this time it appears unlikely that its rating would fall more than one notch.

Overall, the agencies have focused on TransCanada’s diversified, predictable, and competitive operations and strong free cash flow weighed against a relatively high degree of leverage in setting their ratings. We believe that a consistent weakness highlighted by the ratings agencies is the potential for declining Western Canadian Sedimentary Basin (“WCSB”) production and TransCanada turning to non-pipeline operations for growth. Against that background, we believe that the ratings agencies would view the Alaska gas pipeline project as having important benefits to TransCanada’s business risk profile upon completion.

In assigning ratings, the rating agencies also perform comparative analysis. Today, TransCanada compares favorably against its industry peer group in terms of size, business stability, and financial strength. Table 6 shows current Moody’s and Standard & Poor’s ratings for a range of TransCanada comparables.

**Table 6: Current Moody’s and S&P Ratings for TransCanada Comparables<sup>2</sup>**

	TransCanada	Enbridge	MidAmerican Energy Holdings	Spectra Energy	Kinder Morgan Energy Partners
Corporate Ratings	A3/A-	Baa1/A-	Baa1/A-	Baa1/BBB+	Baa2/BBB
Outlook	Negative/Stable	Stable/Stable	Stable/Stable	Stable/Stable	Stable/Stable
Assets (\$ millions)	\$30,717	\$20,161	\$39,216	\$22,970	\$15,178
Revenues	8,941	12,072	12,376	4,742	9,218
EBITDA	3,888	1,768	3,838	1,965	1,732
Net Income	1,239	716	1,189	957	590
Debt/EBITDA <sup>3</sup>	4.0x	6.0x	5.2x	4.8x	4.1x
Debt/Cap <sup>3</sup>	59%	64%	67%	55%	61%
EBIT/Interest <sup>4</sup>	2.7x	2.1x	2.1x	2.3x	3.0x
RCF/Debt	14%	9%	12%	12%	4%

## B. Analysis of TransCanada Capital Structure

### Balance Sheet Adjustments

In analyzing a company’s ratings, both rating agencies make analytical adjustments to financial statements as part of the rating process in order to accurately reflect the true commitments a company may have that could impact its ability to repay debt. Key adjustments to the company’s financial statements and credit statistics include the imputation of debt for operating leases, postretirement employee benefits, power purchase agreements, and hybrid securities, and debt associated with non-consolidated joint ventures and non-recourse project financings. Similarly, operating cash flows may be reclassified from operating cash flow to financing cash flow (or vice versa) or interest expense to account for the financing component of these transactions or liabilities. It should be noted that S&P and Moody’s make different adjustments.

A key issue for TransCanada with regards to the Project will be how the non-recourse project debt will be treated by accountants, lenders, ratings agencies, and investors. Clearly, corporate debt issued by TransCanada to fund its equity commitments will be ‘on balance sheet’ from both accounting and credit analysis perspectives. Generally, non-recourse joint venture debt is proportionately

<sup>1</sup> S&P Press Release April 18 2008. “TransCanada Pipelines Ltd. A- Ratings Affirmed, Off Watch After Purchase Review.”

<sup>2</sup> Credit statistics as of 12/31/07 from Capital IQ.

<sup>3</sup> Lower is better

<sup>4</sup> Higher is better

consolidated and considered “on-credit” by both Moody’s and S&P even if “off-balance sheet” for accounting purposes. For this project, Goldman Sachs would expect that Moody’s and S&P would employ the same proportionate consolidation approach with respect to the pipeline even though pipeline creditors have no recourse to TransCanada or its affiliates. However, during the construction phase of the project when TransCanada’s credit ratios are distorted by the booking of project debt ahead of cash flows, we also expect that the agencies will examine the “standalone” credit quality of TransCanada by compiling credit ratios and cash flow forecasts excluding the Alaska pipeline project debt.

The analysis in Table 7 shows TransCanada’s year-end 2007 debt figures along with adjustments for items that the agencies consider should be treated as debt. These are standard rating agency adjustments for all corporate debt issuers. Moody’s and S&P methodologies differ slightly with respect to certain off-balance sheet items, particularly purchase power agreements.

**Table 7: TransCanada Debt as of 2007 and Rating Agency Adjustments**

(\$ in millions)

	Reported 12/31/2007	Moody's Adjustment	Moody's Adjusted	S&P Adjustment	S&P Adjusted
Short-Term Borrowings	55		55		55
Current Portion of long-term debt	556		556		556
Current Portion of long-term debt of JVs	30		30		30
<b>Total Short-Term Debt</b>	<b>641</b>		<b>641</b>		<b>641</b>
Secured Debt	-		-		-
Senior Debt	12,377		12,481		15,279
Subordinated Debt	975		1,364		975
Capitalized Leases			630		522
Consolidated JV Debt	873		873		873
<b>Total Long-Term Debt</b>	<b>14,225</b>		<b>15,348</b>		<b>17,648</b>
<b>Total Debt</b>	<b>14,866</b>		<b>15,989</b>		<b>18,289</b>
Operating Leases		630		522	
Power Purchase Agreements				2,501	
Asset Retirement Obligations				57	
Pensions		104		149	
Hybrids <sup>1,2</sup>		389		195	

Source: Moody's Financial Metrics™ and CreditStats Direct™

### Credit and Ratings Impact of Alaska Pipeline Project

Assuming that TransCanada continues to maintain its current capital structure and business profile until the commencement of pipeline financing, we believe that TransCanada’s financial profile will remain sufficiently strong to weather the impact of the incremental debt needed to fund its capital commitment to the Project. In addition, we believe that the rating agencies will maintain investment-grade ratings (and possibly its current ratings) on TransCanada through the construction of the Alaska gas pipeline. When evaluating the potential credit impact and credit rating agency reaction of the Alaska pipeline on TransCanada, Goldman Sachs examined:

- TransCanada’s projected leverage and cash flow through the commencement of operations;
- Comparisons of TransCanada’s projected credit statistics to historic ranges and peers; and
- TransCanada’s implied ratings from the Moody’s Factor Model.

<sup>1</sup> Moody’s: Hybrid Securities Classified as Minority Interest (Preferred shares of subsidiary).

<sup>2</sup> S&P: Low-Equity Hybrid Reported as Equity (50% of Preferred shares of subsidiary).



## Pro Forma Financial Analysis

In projecting TransCanada's operating performance, Goldman Sachs used its equity research analyst estimates for the years 2008-2010. These projections are primarily based on company guidance and historical performance and are published for Goldman Sachs' clients. Included in these projections is the recent Ravenswood acquisition, which was announced on March 31st, 2008. For the years beyond 2010, Goldman Sachs has assumed a 2% annual growth rate for revenues, general and administrative and operating expenses. General operating capital expenditures are assumed to be 10% of revenues per year, which equates to roughly \$1.0-1.2 billion annually. During the period of 2010-2013, the company generates significant free cash flow, which we assume is reinvested as growth capital expenditures. Growth capital expenditures are assumed to provide a 10% return with a one year lag. During 2013, we assume the Company pays down outstanding debt with the generated free cash flow. Dividends grow at 2% each year, except during the 2014-2017 when the Alaska pipeline capital contributions are at their peak. During this period dividends are held flat at 2013 levels.

Goldman Sachs analyzed the following four cases:

- **Case 1 – “Base Case”:** assumes that the costs related to TransCanada are equal to its equity investment only and are being financed 100% with debt. The equity method of consolidation accounting is used (i.e., revenues, costs, assets, debt, and cash flows at the Alaska pipeline level are not consolidated; only net income available to TransCanada is consolidated) and cash payments to TransCanada are equal to the amount distributed to equity holders and is recorded as other income.
- **Case 2 – “Fully Loaded”:** assumes that TransCanada fully consolidates the project and all costs are on its balance sheet, financed 100% with debt. All income and expenses of the project are recorded on TransCanada's financial statements.
- **Case 3 – “50% JV Sell Down”:** assumes TransCanada splits 50% of the project with a third party and proportional accounting is used. As such, 50% of the project's income and expenses are recorded on TransCanada's financial statements.
- **Case 4 – “Base with 25% Stock Financing”:** uses the same methodology as Case 1, only instead of funding the costs with 100% debt, 25% of its capital commitment to the pipeline during years 2014-2017 are being financed through common equity issuance.

These cases are presented in Table 8 and Table 9. In our view, TransCanada's financial profile remains very durable. In particular:

- In Cases 1 and 4, TransCanada generates substantial free cash flow from operations and reasonably strong credit ratios during the construction phase. After operations commence, TransCanada's financial position becomes materially stronger, greatly surpassing those of the peer group and TransCanada's historic averages.
- In Case 2, TransCanada's consolidated financial profile weakens during construction but rapidly recovers after operations commence. We believe that lenders to TransCanada would be most concerned about the company's financial profile on a non-consolidated basis prior to construction completion because they would recognize the non-recourse nature of the project debt and its effects on consolidated credit ratios and the depiction of consolidated cash flow. However, post-completion, lenders may look to the consolidated profile because of the strategic importance and earnings power of the asset (i.e., TransCanada would not be willing to “walk away”).
- In Case 3, TransCanada's credit profile weakens mildly versus historic averages during construction but strengthens appreciably post-construction. Similar to Case 2, we believe that most lenders to TransCanada will be more concerned about the company's financial profile on a non-consolidated basis prior to construction completion and the consolidated financial profile post-completion.

**Table 8: TransCanada Financial Analysis: Peak Construction Impact in 2019<sup>1</sup>**
*(\$ in millions)*

	2019E			
	Case 1	Case 2	Case 3	Case 4
	Base Case	Fully Loaded	50% JV Sell Down	Base Case 25% Common Stock
<b>Income Statement Data</b>				
Core EBITDA	\$ 5,391	\$ 5,391	\$ 5,391	\$ 5,391
+ EBITDA from Reinvested Cash Flow	292	292	301	292
- D&A	2,405	3,684	2,678	2,405
<b>Total EBIT</b>	<b>\$ 3,278</b>	<b>\$ 1,999</b>	<b>\$ 3,014</b>	<b>\$ 3,278</b>
- Interest Expense	(1,706)	(3,712)	(2,058)	(1,399)
+ Other Income	--	--	--	--
<b>Pre-Tax Income</b>	<b>\$ 1,572</b>	<b>\$(1,713)</b>	<b>\$ 956</b>	<b>\$ 1,879</b>
- Taxes	(436)	550	(251)	(528)
- Minority Interest	(96)	(96)	(96)	(96)
- Preferred Dividends	(24)	(24)	(24)	(24)
<b>Net Income</b>	<b>\$ 1,017</b>	<b>\$(1,283)</b>	<b>\$ 585</b>	<b>\$ 1,231</b>
Weighted Average Shares Outstanding	575	575	575	685
<b>EPS</b>	<b>\$ 1.77</b>	<b>\$(2.23)</b>	<b>\$ 1.02</b>	<b>\$ 1.80</b>
<b>Cash Flow Data</b>				
Net Income	\$ 1,017	\$(1,283)	\$ 585	\$ 1,231
+ D&A	2,405	3,684	2,678	2,405
+ Minority Interest	96	96	96	96
- Distributions to Minorities	(84)	(84)	(84)	(84)
+ Deferred Taxes	52	(550)	57	52
<b>Operating Cash Flow / FFO</b>	<b>\$ 3,485</b>	<b>\$ 1,863</b>	<b>\$ 3,332</b>	<b>\$ 3,700</b>
- Change in Working Capital	0	0	0	0
- CapEx	(1,093)	(4,708)	(2,901)	(1,093)
- Dividends	(1,038)	(1,038)	(1,038)	(1,038)
<b>Free Cash Flow / (Financing Requirement)</b>	<b>\$ 1,355</b>	<b>\$(3,883)</b>	<b>\$(606)</b>	<b>\$ 1,570</b>
- Reinvested Cash Flow (Incremental CapEx)	\$ 0	\$ 0	\$ 0	\$ 0
- Reinvested Cash Flow (Debt Reduction)	\$(1,355)	\$ 0	\$ 0	\$(1,570)
<b>Retained Cash Flow / (Financing Requirement)</b>	<b>\$ 0</b>	<b>\$(3,883)</b>	<b>\$(606)</b>	<b>\$ 0</b>
<b>Balance Sheet Data (Y/E)</b>				
Shareholder Equity	\$ 15,867	\$ 9,918	\$ 15,392	\$ 20,518
Minority Interest	635	635	635	635
Total Debt	25,807	58,138	32,004	21,155
<b>Implied Credit Rating</b>	<b>Baa3</b>	<b>B1</b>	<b>Ba1</b>	<b>Baa2</b>
<b>Selected Credit Ratios</b>				
Total Debt / Cap	61.0%	84.6%	66.6%	50.0%
EBITDA / Interest	3.3 x	1.5 x	2.8 x	4.1 x
Total Debt / EBITDA	4.5	10.2	5.6	3.7
FFO Interest Coverage	3.2	1.5	2.7	3.9
FFO / Total Debt	13.5%	3.2%	10.4%	17.5%

**2002-2007 Averages**

Selected Credit Ratios	TransCanada	Enbridge	Spectra
Total Debt / Cap	63.5%	66.6%	54.7%
EBITDA / Interest	3.6 x	3.4 x	4.3 x
Total Debt / EBITDA	3.7	5.0	3.4
FFO Interest Coverage	2.2	1.8	1.9
FFO / Total Debt	16.9%	10.7%	12.8%

<sup>1</sup> Source: Goldman, Sachs & Co.

**Table 9: TransCanada Financial Analysis: First Full Year of Stable Operations in 2022<sup>1</sup>**

(\$ in millions)

	2022E			
	Case 1	Case 2	Case 3	Case 4
	Base Case	Fully Loaded	50% JV Sell Down	Base Case 25% Common Stock
<b>Income Statement Data</b>				
Core EBITDA	\$ 5,720	\$ 12,350	\$ 9,035	\$ 5,720
+ EBITDA from Reinvested Cash Flow	292	292	301	292
- D&A	2,555	3,834	2,828	2,555
<b>Total EBIT</b>	<b>\$ 3,458</b>	<b>\$ 8,808</b>	<b>\$ 6,509</b>	<b>\$ 3,458</b>
- Interest Expense	(949)	(2,970)	(1,432)	(746)
+ Other Income	2,991	16	16	2,991
<b>Pre-Tax Income</b>	<b>\$ 5,500</b>	<b>\$ 5,854</b>	<b>\$ 5,093</b>	<b>\$ 5,703</b>
- Taxes	(1,614)	(1,720)	(1,492)	(1,675)
- Minority Interest	(96)	(96)	(96)	(96)
- Preferred Dividends	(24)	(24)	(24)	(24)
<b>Net Income</b>	<b>\$ 3,766</b>	<b>\$ 4,014</b>	<b>\$ 3,481</b>	<b>\$ 3,908</b>
Weighted Average Shares Outstanding	575	575	575	685
<b>EPS</b>	<b>\$ 6.55</b>	<b>\$ 6.98</b>	<b>\$ 6.05</b>	<b>\$ 5.71</b>
<b>Cash Flow Data</b>				
Net Income	\$ 3,766	\$ 4,014	\$ 3,481	\$ 3,908
+ D&A	2,555	3,834	2,828	2,555
+ Minority Interest	96	96	96	96
- Distributions to Minorities	(84)	(84)	(84)	(84)
+ Deferred Taxes	56	78	61	56
<b>Operating Cash Flow / FFO</b>	<b>\$ 6,388</b>	<b>\$ 7,938</b>	<b>\$ 6,381</b>	<b>\$ 6,531</b>
- Change in Working Capital	0	0	0	0
- CapEx	(1,159)	(1,159)	(1,159)	(1,159)
- Dividends	(1,101)	(1,101)	(1,101)	(1,101)
<b>Free Cash Flow / (Financing Requirement)</b>	<b>\$ 4,128</b>	<b>\$ 5,677</b>	<b>\$ 4,121</b>	<b>\$ 4,270</b>
- Reinvested Cash Flow (Incremental CapEx)	\$ 0	\$ 0	\$ 0	\$ 0
- Reinvested Cash Flow (Debt Reduction)	\$ 0	\$ 0	\$ 0	\$ 0
<b>Retained Cash Flow / (Financing Requirement)</b>	<b>\$ 4,128</b>	<b>\$ 5,677</b>	<b>\$ 4,121</b>	<b>\$ 4,270</b>
<b>Balance Sheet Data (Y/E)</b>				
Shareholder Equity	\$ 25,161	\$ 17,143	\$ 21,563	\$ 30,310
Minority Interest	669	669	669	669
Total Debt	16,850	42,708	20,700	16,850
<b>Implied Credit Rating</b>	<b>A2</b>	<b>A3</b>	<b>A2</b>	<b>A1</b>
<b>Selected Credit Ratios</b>				
Total Debt / Cap	39.5%	70.6%	48.2%	35.2%
EBITDA / Interest	6.3 x	4.3 x	6.5 x	8.1 x
Total Debt / EBITDA	2.8	3.4	2.2	2.8
FFO Interest Coverage	8.4	3.8	5.8	10.7
FFO / Total Debt	37.9%	18.6%	30.8%	38.8%

**2002-2007 Averages**

Selected Credit Ratios	TransCanada	Enbridge	Spectra
Total Debt / Cap	63.5%	66.6%	54.7%
EBITDA / Interest	3.6 x	3.4 x	4.3 x
Total Debt / EBITDA	3.7	5.0	3.4
FFO Interest Coverage	2.2	1.8	1.9
FFO / Total Debt	16.9%	10.7%	12.8%

**Moody's Factor Model**

An approach to evaluating how the Company will look after absorbing the impacts of the Project is based on the Moody's Factor Model, which develops ratings guidance based on four key factors, each of which is weighted by importance: Scale (i.e., size of business) (10%); Diversification (20%);

<sup>1</sup> Source: Goldman, Sachs & Co.

Management Strategy and Financial Policy (10%); and Financial Strength (60%). Targets or ranges are set for each factor for each ratings category. In Table 10, we summarize the Moody's North American Diversified Natural Gas Transmission and Distribution Factor Model.

**Table 10: Moody's North American Diversified Natural Gas Transmission and Distribution Factor Model<sup>1</sup>**

	Aaa	Aa	A	Baa	Ba	B	Caa
<b>Factor 1: Scale (10% weighting)</b>							
<b>Total Assets (\$bn)</b>	>\$11	\$11-\$8	\$8-\$5	\$5-\$3	\$3-\$2	\$2-\$1	<\$1
<b>Net Profit<sup>2</sup> (\$mm)</b>	>\$700	\$700-\$500	\$500-\$300	\$300-\$100	\$100-\$50	\$50-\$0	<\$0
<b>Factor 2: Quality of Diversification (20% weighting)</b>							
<b>Scale of Unregulated Exposure</b>	The higher % of: ■ Operating income from unregulated operations <20%	The higher % of: ■ Operating income from unregulated operations 20-30%	The higher % of: ■ Operating income from unregulated operations 30-40%	The higher % of: ■ Operating income from unregulated operations 40-50%	The higher % of: ■ Operating income from unregulated operations 50-60%	The higher % of: ■ Operating income from unregulated operations >60%	The higher % of: ■ Operating income from unregulated operations >60%; Losses evident in portfolio
	Or	Or	Or	Or	Or	Or	Or
	■ Assets from unregulated operations <20% of consolidated assets	■ Assets from unregulated operations 20-30%	■ Assets from unregulated operations 30-40%	■ Assets from unregulated operations 40-50%	■ Assets from unregulated operations 50-60%	■ Assets from unregulated operations >60%	Or ■ Assets from unregulated operations >60%
<b>Degree of Business Risk</b>	LDC <sup>3</sup> w/ very good regulatory support and rates; Pipeline w/ scope, contract stability, and market/supply attributes consistent with Aaa-Aa	LDC w/ reasonable regulatory support and rates; Pipeline w/ scope, contract stability, and market/supply attributes consistent with Aa	LDC w/ inadequate regulatory support and rates; Pipeline w/ scope, contract stability and market/supply attributes consistent with A-non-IG	w/ reserve profile, replacement, full-cycle costs consistent with IG; w/ minimal keep-whole risk; large position in long-lived basin	E&P <sup>4</sup> w/ reserve profile, replacement, full-cycle costs consistent with Ba' G&P <sup>5</sup> w/ moderate keep-whole risk; good position in long-lived basin	E&P w/ reserve profile, replacement, full-cycle costs consistent with B; significant keep-whole risk; average position in average-lived basin	E&P w/ reserve profile, replacement, full-cycle costs consistent with Caa; G&P w/ significant keep-whole risk; small position in short-lived basin
<b>Factor 3: Management Strategy &amp; Financial Policy (10% weighting)</b>							
<b>Management Strategy &amp; Financial Policy</b>	Growth substantially organic w/ excellent track record; Demonstrated commitment to Aaa financial strategies	Minor acquisition event risk <sup>6</sup> w/ good management track record; Demonstrated commitment to Aa financial strategies	Moderate acquisition event risk w/ above average management track record; Commitment to A financial strategies	Meaningful acquisition event risk w/ average management track record; Baa Financial strategies	Meaningful acquisition event risk with below average management track record; little record of issuing equity	Weak or very short management track record for strategy and financial policy. Large write-downs raise potential for liquidity problems	Poor management track record; Substantial write-downs likely to result in liquidity problems and restructuring. No access to equity.
<b>Factor 4: Financial Strength (60% weighting)</b>							
<b>EBIT/Interest Expense</b>	>6x	6x - 5x	5x - 4x	4x - 3x	3x - 2x	2x - 1x	<1x
<b>Debt/Capitalization<sup>7</sup></b>	<25%	25% - 35%	35% - 45%	45% - 60%	60% - 70%	70% - 80%	>80%
<b>RCF<sup>8</sup> / Debt</b>	>40%	40% - 30%	30% - 20%	20% - 10%	10% - 6%	6% - 3%	<3%
<b>Return on Equity</b>	>19%	16% - 19%	16% - 13%	13% - 10%	10% - 7%	7% - 4%	<4%

<sup>1</sup> Moody's Rating Methodology: North American Diversified Natural Gas Transmission and Distribution Companies. March 2007.

<sup>2</sup> Net Profit after-tax and before unusual items

<sup>3</sup> Local Gas Distribution Company

<sup>4</sup> E&P stands for exploration and production focused oil and gas business

<sup>5</sup> G&P stands for gathering and processing focused business

<sup>6</sup> Acquisition event risk refers to frequency and size of acquisitions, financing structure, relationship to existing business and management expertise and integration risk

<sup>7</sup> Excluding Goodwill

<sup>8</sup> Retained Cash Flow



The purpose of the Moody's Factor Model is to provide investors and other interested parties with a clear understanding of how Moody's assigns ratings to North American diversified natural gas transmission and distribution companies. The model is intended to help the market understand the factors considered most important for this sector and how they map to specific rating outcomes. The Moody's Factor Model is expected to gauge a company's ratings within two notches. Outliers (greater-than-two-notch deviation) can occur (albeit infrequently) and Moody's explains the reasons for such deviation in supplementary commentary.<sup>1</sup> In Moody's literature and in our conversations with analysts, the model is not intended to be a replacement for Moody's ratings, which are forward looking and consider future expectations for company performance as well as historical information.

Table 11 and Table 12 summarize Goldman Sachs' hypothetical application of the Moody's Factor Model to TransCanada at various stages in the Project, assuming a range of financing strategies and analytical treatments of the non-recourse project financing. This analysis employs the same financial model and cases as in the aforementioned pro forma analysis. Cases prepared include:

- Moody's implied rating at December 31, 2008.
- **Case 1 – "Base Case"**: assumes that the costs related to TransCanada are equal to its equity investment only and are being financed 100% with debt. The equity method of consolidation accounting is analytically employed (i.e., revenues, costs, assets, debt, and cash flows at the Alaska pipeline level are not consolidated; only net income available to TransCanada is consolidated) and cash payments to TransCanada are equal to the amount distributed to equity holders and is recorded as other income. However, given that TransCanada may have 100% of the project equity, the accounting for this project may be full consolidation. This case provides a view of the credit quality of TransCanada without the burden of the Alaska pipeline debt. This case is the most representative of TransCanada's legal commitments as it has no obligation to use its consolidated financial resources to support the Alaska pipeline project debt.
- **Case 2 – "Fully Loaded"**: assumes that TransCanada fully consolidates the project and all costs are on its balance sheet, financed 100% with debt. All income and expenses of the project are recorded on TransCanada's financial statements. This case is the most punitive for TransCanada during the construction phase. In this case, leverage reaches a zenith in 2019 when pipeline construction is completed.
- **Case 3 – "50% JV Sell Down"**: assumes TransCanada splits 50% of the project with a third party and proportional accounting is used. As such, only 50% of the project's debt, assets, income, and expenses are recorded on TransCanada's financial statements. In this case, we believe that rating agencies would proportionately consolidate the Project debt.
- **Case 4 – "Base with 25% Stock Financing"**: uses the same consolidation methodology as Case 1, only instead of funding TransCanada's capital commitment with 100% debt, 25% of its capital contribution during years 2014-2017 are being financed through common equity issuance.

When Goldman Sachs applies the Moody's Factor Model to TransCanada for projected year-end 2008 (and when Moody's has applied the factor model in the past)<sup>2</sup>, the factor model has implied a rating two notches lower (Baa1) than the Moody's actual rating on TransCanada PipeLines Ltd. and one notch lower than TransCanada Corp. This is the result of the weight of financial ratios, which are weaker compared to US companies in part because of Canada's deemed capital structure and relatively low returns on equity granted to its Canadian pipelines. However, in reconciling the model results to the actual ratings, Moody's has written the following:

*"While the methodology-implied rating falls within the one to two notch band that Moody's rating methodologies aim to achieve, it does not capture all of the factors considered by Moody's rating committees. For instance, based on our discussions with the company, Moody's anticipates that TCPL's financial profile will improve into the Baa category over the next two to*

<sup>1</sup> For example, Nexen Inc. is rated Baa2 while its Moody's factor model implies a B1 rating per Moody's Credit Opinion for Nexen Inc. dated 8/1/07.

<sup>2</sup> See TransCanada Credit Opinion dated August, 2007 and North American Diversified Natural Gas Transmission And Distribution Companies Rating Methodology, March 21, 2007.

three years. In addition, Moody's rating committee places considerable emphasis on the strategic importance of the Alberta System and the Mainline in moving the majority of the gas production out of the WCSB and on the relatively supportive regulatory and business climates in Canada."<sup>1</sup>

When examining Case 1 and Case 4, the model implies that TransCanada's credit quality should remain investment-grade. Case 1, in which TransCanada funds its equity contribution with new debt implies a debt rating of Baa3 at the height of construction spending and a higher rating upon completion. In Case 4, in which the equity component of the Alaska pipeline is funded with a portion of new common equity, the implied rating would be Baa2 in 2019 and would improve when the pipeline is completed. If Moody's maintains its one notch difference between actual and implied ratings, Moody's may rate TransCanada higher in each case.

**Table 11: Hypothetical Application of Moody's Factor Model to TransCanada in 2019**

Factor	Sub-Factor	2019									
		2008E Standalone		Case 1		Case 2		Case 3		Case 4	
				Base Case	Fully-Loaded <sup>2</sup>			50% JV		Base Case 25% Common Stock	
<b>Incremental Debt</b>		--		\$8,701		\$41,032		\$14,898		\$4,049	
<b>Total Debt</b>		\$17,106		\$25,807		\$58,138		\$32,004		\$21,155	
<b>Scale (10%)</b>	<b>Total Assets (\$bn)</b>	\$33.9	Aaa	\$47.7	Aaa	\$73.2	Aaa	\$53.5	Aaa	\$47.7	Aaa
	<b>Net Profit (\$mm)</b>	1,239	Aaa	1,017	Aaa	(1,283)	Caa2	585	Aa2	1,231	Aaa
<b>Quality of Diversification (20%)</b>	<b>Scale of Unregulated Exposure</b>	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2
	<b>Degree of Business Risk</b>	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2
<b>Management Strategy &amp; Financial Policy (10%)</b>	<b>Strategy &amp; Financial Policy</b>	A2	A2	A3	A3	A3	A3	A3	A3	A3	A3
<b>Financial Strength (60%)</b>	<b>EBIT / Interest</b>	3.0x	Baa3	1.9x	B1	0.5x	Caa2	1.5x	B2	2.3x	Ba3
	<b>Debt / Cap</b>	58.7%	Baa3	61.0%	Ba1	84.6%	Caa2	66.6%	Ba2	50.0%	Baa2
	<b>RCF / Debt</b>	10.3%	Baa3	9.5%	Ba1	1.4%	Caa2	7.2%	Ba3	12.6%	Baa3
	<b>Return on Equity</b>	10.8%	Baa3	6.4%	B1	-12.9%	Caa2	3.8%	Caa2	6.0%	B1
<b>Overall Indicated Rating</b>			<b>Baa1</b>		<b>Baa3</b>		<b>B1</b>		<b>Ba1</b>		<b>Baa2</b>
<b>Actual Rating</b>			<b>A3</b>								

<sup>1</sup> Moody's Credit Opinion, August 3, 2007

<sup>2</sup> By 2020 Moody's Factor Model implies a rating of Baa1 and by 2022 implies a rating of A3

**Table 12: Hypothetical Application of Moody's Factor Model to TransCanada in 2022**

Factor	Sub-Factor	2008E Standalone	2022								
			Case 1 Base Case		Case 2 Fully-Loaded		Case 3 50% JV Sell Down		Case 4 Base Case 25% Common Stock		
<b>Incremental Debt</b>		--		\$(256)		\$25,602		\$3,594		\$(256)	
<b>Total Debt</b>		\$17,106		\$16,850		\$42,708		\$20,700		\$16,850	
<b>Scale (10%)</b>	<b>Total Assets (\$bn)</b>	\$33.9	Aaa	\$48.3	Aaa	\$65.2	Aaa	\$48.6	Aaa	\$53.4	Aaa
	<b>Net Profit (\$mm)</b>	1,239	Aaa	3,766	Aaa	4,014	Aaa	3,481	Aaa	3,908	Aaa
<b>Quality of Diversification (20%)</b>	<b>Scale of Unregulated Exposure</b>	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2	Aa2
	<b>Degree of Business Risk</b>	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2	Baa2
<b>Management Strategy &amp; Financial Policy (10%)</b>	<b>Management Strategy &amp; Financial Policy</b>	A2	A2	A3	A3	A3	A3	A3	A3	A3	A3
<b>Financial Strength (60%)</b>	<b>EBIT / Interest</b>	3.0x	Baa3	3.6x	Baa2	3.0x	Baa3	4.5x	A2	4.6x	A2
	<b>Debt / Cap</b>	58.7%	Baa3	39.5%	A2	70.6%	B1	48.2%	Baa1	35.2%	A1
	<b>RCF / Debt</b>	10.3%	Baa3	31.4%	Aa3	16.0%	Baa2	25.5%	A2	32.2%	Aa3
	<b>Return on Equity</b>	10.8%	Baa3	15.0%	A1	23.4%	Aaa	16.1%	Aa3	12.9%	Baa1
<b>Overall Indicated Rating</b>			<b>Baa1</b>		<b>A2</b>		<b>A3</b>		<b>A2</b>		<b>A1</b>
<b>Actual Rating</b>			<b>A3</b>								

If Moody's were to analytically consolidate all of the Alaska project debt (Case 2) during the construction phase, the Moody's Factor Model implied rating falls to B1 in 2019, which is not investment grade. The low implied rating during construction is driven by the large increase in TransCanada's total debt in advance of receiving pipeline cash flows. However, its rating recovers to Baa1 by the end of 2020 after only one full year of operations. Additionally, by 2022 the factor model indicates a rating of A3, which is one notch higher than the indicated rating today. In our view, the swift recovery in ratings predicted by the factor model supports maintaining investment-grade ratings and would be consistent with Moody's philosophy of forward-looking analysis.

The Moody's Factor Model analysis presented in this report excludes important events that are likely to occur in advance of financing and are excluded from the AGIA application, namely:

- TransCanada entering into discourse with the ratings agencies about the financial risks and strategic benefits associated with the pipeline;
- TransCanada taking financial actions to ensure that ratings remain at a level that would enable it and the project to access sufficient funds at an acceptable cost;
- TransCanada describing how it would fund its equity contribution to the pipeline;
- Other planned capital projects within the same timeframe.



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Although the analysis presented in this report has been highly focused on Moody's, we believe that their methodology is a reasonable proxy for the other major ratings agencies (i.e., Standard & Poor's, Fitch, DBRS) because:

- Standard & Poor's, Fitch, and DBRS generally consider the same factors as Moody's.
- Ratings among the major ratings agencies generally do not greatly vary (i.e., more than one notch.)

### **Conclusions**

We believe that TransCanada can shoulder the financial burden of pipeline construction and that the company ultimately could be stronger for having made the investment if it can successfully complete the project. If needed, TransCanada can fully finance its contribution to the pipeline with new debt and still generate substantial free operating cash flow for debt retirement, distributions to shareholders, or new growth projects even if the Alaska gas pipeline were to prove unsuccessful. The financial position of TransCanada ex-Alaska appears consistent with its historic profile during the construction phase and could strengthen appreciably if the company can successfully complete the pipeline. TransCanada is likely to remain investment-grade even if it were to finance its capital contribution to the pipeline fully with debt and could hold its current ratings if it were to conservatively finance its contribution. Ultimately, if successfully completed, the Project could lead to improved credit ratings for TransCanada because of its strategic and financial benefits.

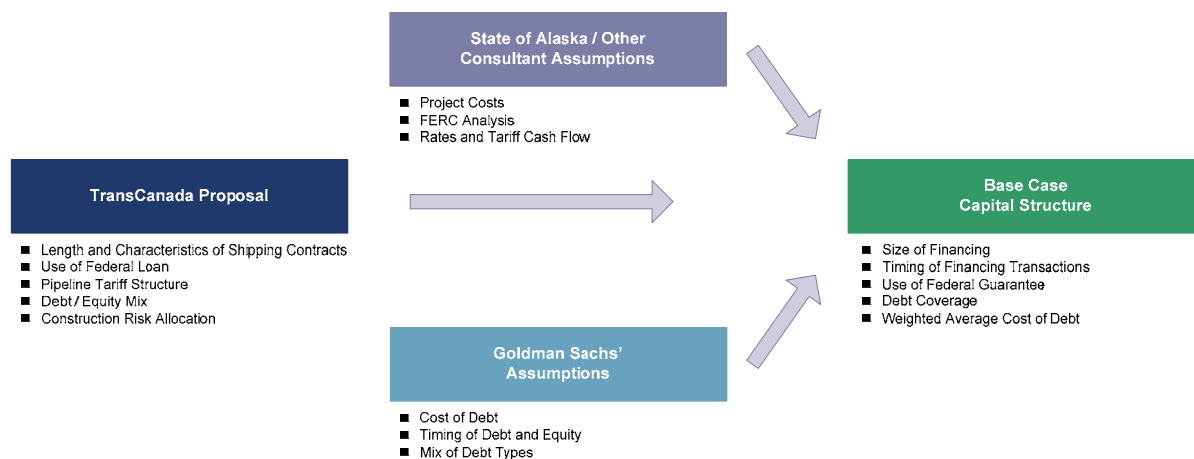
# V. Project Capital Structure Analysis

In order to provide an analytic basis for evaluating the financial viability of the Proposal, and to serve as a tool for analyzing variations to the Proposal, Goldman Sachs has developed a capital structure analysis that reflects the assumptions and approach outlined by TransCanada in the Proposal. The goal of this analysis was to develop a financing structure ‘Proposal Base Case’ that reflects the terms of the Proposal and incorporates reasonable assumptions for year of expenditure project costs (as provided by the AGIA consultants) and costs of funds. Certain analytic assumptions were provided by Goldman Sachs; others by the State and its other AGIA consultants. Results of the Proposal Base Case are the standard against which various analytic alternatives are tested. In this section of the report we focus on the Proposal Base Case, analytic approach and results. Later, in Section VI, we discuss and analyze a range of alternatives to the Proposal Base Case.

## A. Analytic Approach

As mentioned above, the goal of the analysis described in this section was to develop and analyze a Proposal Base Case that reflects the financing related assumptions and finance plan approach included in the Proposal. We note that given the size and complexity of the project and the long lag time between Proposal submission (November 30, 2007) and the projected first major financing (approximately 2015 in our Proposal Base Case), TransCanada’s Financial Plan (Proposal Section 2.8) is necessarily somewhat vague. In order to develop the analysis to a sufficient level of detail, it was necessary to develop a set of additional assumptions in order to either translate the Proposal assumptions into risk adjusted future year figures (i.e., project costs and interest rates) or to develop more detailed assumptions about certain matters discussed in the Proposal (i.e., the timing of debt and equity contributions). Figure 6 diagrams key capital structure model inputs and results.

**Figure 6: Capital Structure Modeling Framework**



### Running Analytic Cases

The Proposal Base Case results and alternatives discussed later in this report are each the product of an iterative process between Goldman Sachs and Black & Veatch. Black & Veatch (B&V) was retained by the State to among other things develop a pipeline transportation cost and cash flow model. The B&V model produces certain information which feeds into the Goldman Sachs’ capital structure model and vice versa. The two models iterate until the case results are finalized.



- The B&V model is initially run with a rough guess at cost of debt and produces the following inputs into the Goldman analysis:
  - Cash flow available for debt service and equity return;
  - Annual cash flow requirements to fund predevelopment costs, construction costs and taxes during construction
- The Goldman Sachs’ analysis takes these inputs and funds the project requirements making assumptions about:
  - Timing of equity and debt
  - Mix of sources of debt
  - Cost of debt products
  - Use of the Federal Loan Guarantee
- The Goldman Sachs’ model produces debt repayment cash flows and a weighted average cost of debt which is fed back into the B&V model:
  - B&V then computes final returns, cash flows and transportation costs based on the repayment schedule and weighted average cost of debt.

### Key Drivers of Capital Structure

A number of detailed assumptions impact the development of the Proposal Base Case:

- *Annual Funding Requirements* – Section 2.5 of the Proposal “Project Cost Estimate” outlines expected costs for both the development and execution phases of the project, each shown in 2007 dollars as stipulated by the AGIA RFA. In order to develop a hypothetical funding plan, these costs were translated into year of expenditure dollars. In addition, a determination was made by the State that Proposal Base Case project cost estimates should be based on an engineering analysis of potential project cost outcomes. This work was undertaken by various State consultants and cost estimates adjusted for inflation, risk of delay and cost increases were provided to Goldman Sachs through B&V. Two sets of cost estimates were used as inputs in the financing model. The “P50” case, which reflects the combination of potential outcomes of costs and timing wherein 50% of all cases have higher overall costs and 50% have lower overall costs. A P95% case, which reflects outcomes that are worse than 95% of the cases run. Table 13 below compares the Project cost estimates included in Section 2.5 of the Proposal to the P50 and P95 cases used for Goldman Sachs’ analysis.

**Table 13: Comparison of Construction Cost Estimates**

(\$ in millions)

Scenario	Aggregate Cost <sup>1</sup>
TransCanada Proposal, 2007\$	\$26,487 <sup>2</sup>
TransCanada Proposal, Inflation Adjusted	35,191 <sup>3</sup>
P50 Construction	45,970
P95 Construction	54,339

Source: TransCanada Proposal and Alaska AGIA Consultants

- *Mix of Funding Sources* – Section 2.8 of the Proposal “Financial Plan” describes in general terms that the project will be funded with a combination of equity and debt of different types (e.g. bank debt<sup>4</sup> vs. capital markets). In TransCanada’s March 12, 2008 response to the State’s March 5,

<sup>1</sup> Includes Gas Treatment Plant, Alaska section and Yukon section.

<sup>2</sup> Source: The Proposal Section 2.5, Project Cost Estimates

<sup>3</sup> Inflated from 2007\$’s by 4% annually.

<sup>4</sup> We have assumed that the export credit agencies are included in the bank loan tranche.



2008 request for information (as provided for in AGIA), TransCanada acknowledged that the actual mix of debt and equity and types of debt instruments would be decided closer to funding. In order to develop the Proposal Base Case, Goldman Sachs assumed that four types of debt are issued to maximize total financing proceeds: project bonds with a federal guarantee; project bonds issued without a federal guarantee; bank loans without a federal guarantee; and a federally guaranteed bank cost overrun loan facility. The size and timing of each of these debt types used in the Proposal Base Case is discussed below.

- *Use of the Federal Loan Guarantee* – Section 2.2.3.11 “U.S. Loan Guarantee for Capital Cost Overrun” describes TransCanada’s plan for applying a portion of the available Federal Loan Guarantee to backstop loans that might be required to fund cost overruns. Goldman Sachs believes that this is an effective use of federal assistance on this project since (as discussed earlier) completion and cost overrun risk will be difficult to completely mitigate on a project of this size and complexity, and because under the Proposal shippers and investors bear the bulk of this risk. Having debt investors subject to construction risk is very unusual. Having the Federal Loan Guarantee available will therefore be a key element in the finance plan. For the purposes of developing the Proposal Base Case, Goldman Sachs has assumed a significant portion of the available Federal Loan Guarantee capacity is preserved for cost overrun financing. Specifically, we have assumed that Federal Loan Guarantee capacity of two times the difference between the P95 and P50 construction cost estimates – or roughly \$16 billion (once the financing and capitalized interest costs are included) is preserved to fund potential cost overruns. The balance of the federal loan capacity is used to guarantee project bonds issued to fund construction, given the bond market’s limited appetite for construction risk. Detailed information regarding the allocation of debt sources and Federal Loan Guarantee capacity follows later in this section. Additional discussion regarding the Federal Loan Guarantee is included in Section VII, Federal Loan Guarantee.
- *Interest Rate Assumptions* – Section 2.2.3.5 of the Proposal indicates that the actual cost of debt funding will be a driver of pipeline transportation costs. For purposes of the Proposal, TransCanada assumed, based on market rates available at the time the Proposal was submitted, a 4.70% cost for debt backed by the federal government and 6.20% for non-federally guaranteed debt. For the purposes of developing a detailed financing plan for a project where the principal funding events are 5-6 years away, the Firm believes that conservative interest rates, reflecting a variety of market conditions should be used. Actual interest rates for the debt will ultimately be set based on (1) an underlying reference rate (typically a certain maturity of United States Treasury “UST” bonds or the London Interbank Offered Rate “LIBOR”); plus (2) a credit spread related to the project which reflects the strength of the repayment stream and security package for the particular loan or bond financing. For Proposal Base Case debt costs, we have assumed a range of costs based on ten year averages of underlying rates and credit spreads associated with different credit ratings. Interest rates for analytic purposes were set on March 7, 2008.

## B. Allocation of Funding Sources in the Proposal Base Case

The funding requirements associated with the Project are unprecedented, and as discussed earlier, several typical project financing features that mitigate construction completion risk are not contemplated as part of the Proposal. As a result, it will be critical that the available funding sources are used strategically to optimize overall funding availability, funding cost and risk mitigation.

### Timing of Equity vs. Debt

TransCanada assumes in the Proposal that debt and equity will be contributed pro rata 70% debt/30% equity to fund project costs. In TransCanada’s March 12, 2008 reply to the State’s March 5, 2008 Request for Information, the Company acknowledges that the actual timing of debt and equity contributions will be set closer to funding. Given the unprecedented size of the Project and the fact that equity holders are not providing any completion guarantee’s, Goldman Sachs believes that



lenders (bank and bond investors) will want to see a front loading of equity contributions as part of the overall financial plan. For the Proposal Base Case, we have assumed that the first \$2 billion of project costs, including pre-development, are funded with equity. Subsequent costs are funded 50/50 until the targeted level of 30% equity as a percentage of project capitalization is reached.

### **Debt: Bank Loans vs. Bonds**

As discussed earlier, project finance debt requirements are generally funded through bank loan and capital markets issuances, with banks tending to comprise a larger share of the market for several reasons. Banks are better able to evaluate and accept limited construction and start up risks associated with project financings. Banks also may offer cost of funds advantages. First, bank financings are structured so they are drawn down over time, reducing the need to capitalize (i.e., fund upfront with debt) interest during construction. Second, bank loans can also be structured to reflect the appropriate credit spread for the pre-completion period and the post-completion period (in other words, a rate “step-down” after completion for this project given the construction risks). In this Project, we have assumed that post-completion the credit spread would be tighter given the benefit of reaching completion and the expected strong shipper contracts. For capital market issuances, the rate is set upfront for the life of the transaction, usually based on the weakest credit period (construction period for this project). Inasmuch as there is an economic benefit to the project of more, rather than less bank debt, we would recommend maximizing the amount available and used in the funding. We have also assumed that there is a tranche of unwrapped capital markets debt, though we would minimize this tranche as much as possible given the negative carry and the uncertainty of raising sizeable capital markets debt for a project with no construction-related guarantees.

### **Allocation of Federal Loan Guarantee to Debt**

As mentioned above, we endorse the Proposal concept of preserving a portion of the Federal Loan Guarantee capacity as a means of providing a mitigant to construction risk through a secure funding source for potential cost overruns. The Federal Loan Guarantee was approved in 2004 at a level of \$18 billion dollars (not to exceed 80% of project costs) with a provision for inflation of the original amount. See Section VII, Federal Loan Guarantee, for a discussion of Federal Loan Guarantee capacity. In the Proposal Base Case, we reserve roughly \$16 billion of the Federal Loan Guarantee to wrap a bank line of credit for the purpose of funding cost overruns. The balance of the federal guarantee capacity, approximately \$12 billion, is available to provide credit enhancement to the financing of project costs. This \$12 billion is all allocated to wrapping project bonds rather than bank loans for two reasons. First, we believe the cost advantage offered by a federal debt guarantee will be greater in the bond market. Second, of the three main classes of prospective investors in the project (additional equity investors, banks, and capital markets investors), capital markets investors have the least amount of appetite for construction risk. Given the assumed lack of pre-completion debt guarantee and fixed price, date certain, turnkey construction contracts, we believe that the Federal Loan Guarantee will play an important role in inducing capital markets investors to participate in the financing. The wrapped capital markets bonds could be issued earliest, even before obtaining all the necessary debt financing commitments/funding for the project, since it is fully wrapped and thus eliminates the repayment risk if the Project was not completed.

### **Summary: Allocation of Funding Sources**

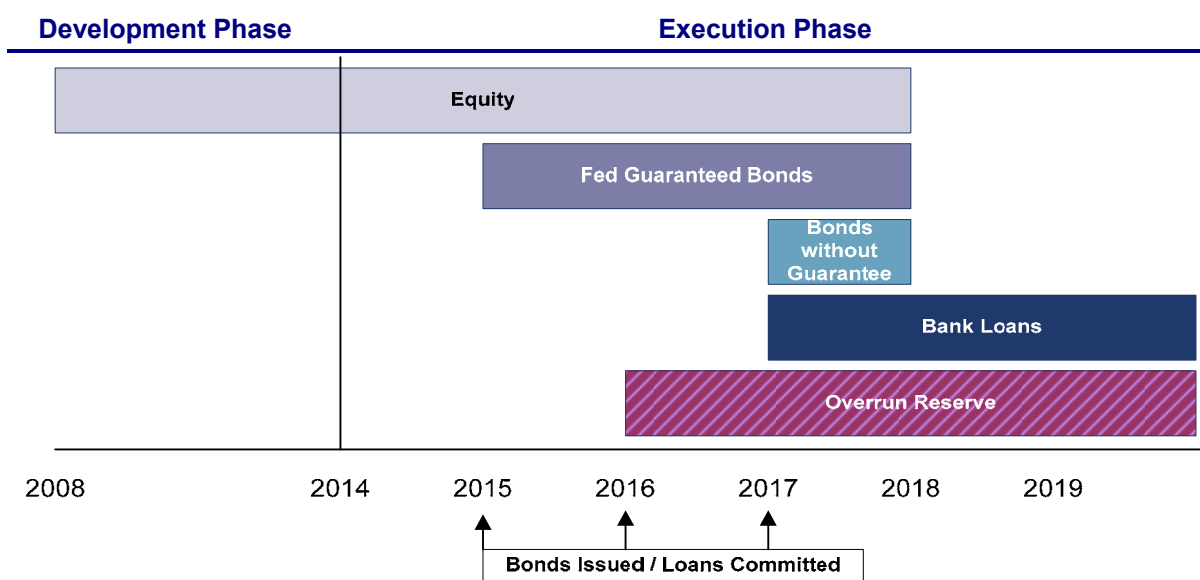
Our approach to allocating funding sources in the Proposal Base Case is reflected in Figure 7 and can be summarized as follows:

- Equity requirement is significant and front loaded to attract lenders and to ensure investment grade credit ratings
  - First \$2.0 billion of requirements (includes development phase) to be equity
  - 50/50 basis with debt thereafter until the targeted debt / equity ratio is reached



- Optimize impact of Federal Loan Guarantee
  - Reserving two times the difference between the P95 and P50 construction estimates – roughly \$16 billion in 2016 dollars for cost overruns
  - The unreserved portion of federal capacity is used to secure the initial bonds
- Minimize overall interest costs
  - Bank loans that can be drawn as needed and should be maximized in order to minimize capitalized interest and negative carry
  - As construction winds down / is completed, unused federal loan capacity may be used to fund late-year draws and to refinance higher cost project debt – not incorporated into analysis because the legal authorization for this is unclear.

**Figure 7: Schematic: Allocating Funding Sources**



## C. Proposal Base Case Results

The following reflects the Proposal Base Case capital structure assumptions, project funding requirements, sources and uses of funds, and key outputs.

### Project Funding Requirements:

Table 14 shows the P50 and P95 project funding requirements used in the Proposal Base Case

**Table 14: Annual Funding Requirements for P50 and P95 Cases**

(\$ in billions)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
P50 Case	0.04	0.06	0.10	0.04	0.01	0.02	0.68	5.88	11.91	15.77	7.86	3.62	-	-	45.97
P95 Case	-	-	0.04	0.07	0.12	0.05	0.02	0.05	0.86	7.05	13.93	18.61	9.27	4.27	54.34

Source: AGIA Consultants, through Black & Veatch.

## Key Financing Assumptions:

Table 15 summarizes key financing assumptions used in the Proposal Base Case:

**Table 15: Summary of Key Financing Assumptions**

Capital Structure			Federal Guarantee		Other
	Pre-Completion	Post-Completion			
Equity	30%	25%	Beginning Amount	\$18 bn	Debt Service Reserve: 50% of MADS
Debt	70	75	Beginning Year	2004	
<b>Weighted Average Cost of Debt</b>			CPI Adjustments 2004-2008 <sup>1</sup>	3.0%	Investment Earning Rate: 3.0%
			CPI Adjustment 2008 and after	4.0%	
6.05% – 7.35%, before fees, depending on structure			<b>Overrun Reserve</b>		
			Committed Date	2016	
			Committed Amount	\$16 bn	

## Sources and Uses of Funds:

Using the funding approach and assumptions described thus far in this section results in an overall project financing requirement of approximately \$55.5 billion, which is funded as outlined in Table 16.

**Table 16: Aggregate Proposal Base Case Sources and Uses of Funds**

(\$ in millions)

Sources of Funds		% of Total
Equity	\$16,875.0	30.2%
Bonds with Federal Guarantee	12,033.0	21.6%
Bonds without Federal Guarantee	6,826.2	12.2%
Bank Loans without Federal Guarantee	19,709.3	35.3%
Interest Earnings	381.0	0.7%
<b>Total Sources of Funds</b>	<b>\$55,824.4</b>	<b>100.0%</b>
Uses of Funds		% of Total
Project Costs <sup>2</sup>		
Development Costs	\$301.1	0.5%
Capital Expenditures	44,835.1	80.3%
Property Taxes	833.6	1.5%
<b>Subtotal</b>	<b>45,969.8</b>	<b>82.3%</b>
Other Costs		
Capitalized Interest <sup>3</sup>	7,385.3	13.2%
Debt Service Reserve Fund	817.8	1.5%
Financing Fees	1,651.6	3.0%
<b>Subtotal</b>	<b>9,854.7</b>	<b>17.7%</b>
<b>Total Uses of Funds</b>	<b>\$55,824.4</b>	<b>100.0%</b>

<sup>1</sup> Average of Actual Rates from U.S. Department of Labor, Bureau of Labor Statistics.

<sup>2</sup> Provided by Black & Veatch.

<sup>3</sup> Borrowed funds used to pay loan interest prior to revenue start-up.



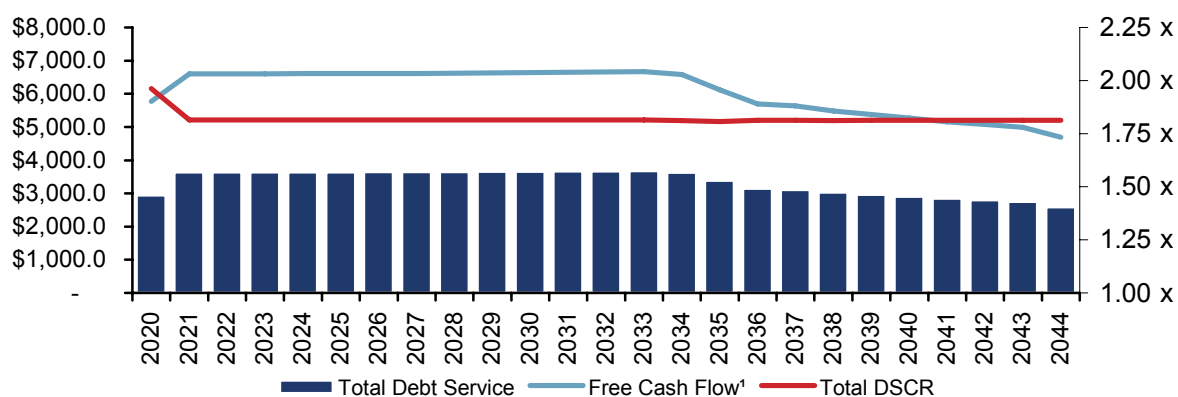
## Summary of Results:

Table 17 and Figure 8 show key model results for the Proposal Base Case including weighted average cost of debt, annual debt service requirements and debt service coverage.

**Table 17: Summary of Key Proposal Base Case Statistics**

■ Average Annual Debt Service:	\$3,341.9
■ Average Aggregate Debt Service Coverage:	1.82 x
■ Weighted Average Cost of Debt:	7.06%
■ Weighted Average Cost of Capital:	9.11%
■ Transportation Cost (per Dekatherm) <sup>1,2</sup>	\$4.73

**Figure 8: Proposal Base Case Cash Flows and Coverage**



## Proposal Base Case Sensitivities:

In order to test the sensitivity of results to changes in key variables, Goldman Sachs developed three basic variations on the Proposal Base Case: (1) assumes construction costs stay at P50 levels but interest rates are substantially increased (to levels where underlying interest rates have been higher only 5% of the time during the past 10 years); (2) assumes construction costs are at P95 rather than P50 levels but interest rates stay the same; and (3) where both construction costs and interest rates are increased. The results of the increased construction cost cases assume the higher costs are known at the start of execution and are funded similarly to the Proposal Base Case in terms of debt/equity mix. Results are shown in Table 18 below.

<sup>1</sup> Provided by Black & Veatch.

<sup>2</sup> In 2025, includes GTP, Alaska Segment, Yukon Segment and Alberta Tariff.



**Table 18: Summary of Proposal Base Case Sensitivities**

Case	Construction Case	Interest Rate Case	Weighted Average Cost of Debt	Average Annual Debt Service	Total Pipeline Transp. Costs <sup>1,2</sup>	Average Annual DSC
<b>Proposal Base Case</b>	P50 Total Construction \$46bn	10 Year Averages of Rates and Credit Spreads	7.06%	\$3,341.9 mm	\$4.73	1.82 x
<b>Interest Rate Stress Test</b>	P50	P95 Worst Case of Last 10 Year Observations	8.81%	\$4,071.4 mm	\$5.22	1.71 x
<b>Construction Cost Stress Test</b>	P95 Total Construction \$54bn	10 Year Averages of Rates and Credit Spreads	7.02%	\$3,937.4 mm	\$5.51	1.82 x
<b>Construction Cost and Rate Stress</b>	P95	P95 Worst Case of Last 10 Year Observations	8.77%	\$4,774.6 mm	\$6.10	1.71x

## D. Summary - Project Capital Structure Analysis

There are a number of key considerations to the analysis of any project financing. Is the equity sponsor financially strong and experienced in project development and operations? Is the same true of potential project shippers? Are the fundamental economic assumptions sound? Do the contractual underpinnings of the transaction appropriately obligate project participants and reflect sensible allocation of risk among parties? Do the construction mitigants, project cash flows and financing structure support investment grade ratings? Are pro forma financial results robust, even in the face of stress tests? In the case of the Project, we believe that the answer to each of these questions is yes, assuming that the basic business approach, contracting assumptions, and costs reflected in the Proposal and the Proposal Base Case are realized and the deal progresses.

In terms of the finance plan outlined in the Proposal, we believe that TransCanada has proposed an approach that provides a sound basis for a viable finance plan, when financing is ultimately required. Assumptions about the debt/equity ratio, the use of the Federal Loan Guarantee, and the nature of the shipping contracts should all be viewed favorably by investors. That said, the project itself, separate and apart from the details of the Proposal, has inherent characteristics that will make the financing challenging. No project of this size has been financed before, costs of steel and other key inputs have risen markedly in recent years, and allocating construction completion risk between the equity sponsor, the shippers, investors, the Federal government and potentially the State will be difficult. This is reflected in the Proposal, which currently allocates completion risk to the Federal government, the shippers and lenders. As we have discussed, this is an unusual allocation and will present a particular challenge in terms of enticing lenders to participate. Overall, however, we believe that: if long-term ship-or-pay contracts are signed with the key Alaska North Slope producers, as outlined in the proposal; the Federal Loan Guarantee can be implemented (and used in large part as a cost overrun facility); construction costs can be contained, credit markets are favorable for this project at the time of financing, and significant market capacity for debt financing exists; that the Proposal, as reflected in the Proposal Base Case, is viable from a financing standpoint.

<sup>1</sup> Provided by Black & Veatch.

<sup>2</sup> In 2025, per Dekatherm. Includes GTP, Alaska Segment, Yukon Segment and Alberta Tariff.



## VI. Analysis of Project Alternatives

### A. Analytic Approach

As described in Section II, Executive Summary, a variety of analytic cases were developed which vary key elements contained within the Proposal. In Section V, Project Capital Structure Analysis, we presented our analysis of the Proposal Base Case including reviewing the impacts of different combinations of project cost and interest rates. In this section, we present our analysis of alternative project configurations – those that vary core project characteristics such as pipeline capacity, gas reserve assumptions, rate making assumptions and project technology. This section is divided into two subsections: (B) Pipeline-Based Alternatives (including a “Conservative Base Case”), which looks at project variants that fit within the range of flexibility outlined by TransCanada in the Proposal, and (C) LNG Project Alternatives, which looks at two LNG-only options and an LNG Y-Line developed as an add-on to the Proposal Base Case project.

The goal in both subsections is essentially the same, to analyze and assess financing viability. For the gas pipeline based alternatives, the question essentially boils down to “is there a smaller project that works?” This is reasonable to ask because the proven reserve profile available for commitment to the project may lead shippers to subscribe for capacity that is less than the 4.5 bcf outlined in the Proposal as the baseline capacity number. In the Proposal, TransCanada recognized this possibility and allowed for flexibility in project size down to 3.5 bcf. The LNG cases were developed and reviewed at the request of the State based on their commitment to a thorough review of all potential approaches to commercializing the State’s stranded gas assets. Table 19 shows the range of cases completed.

**Table 19: Summary of Cases Analyzed**

Case	TC or LNG	Pipe Size	Contract Length	Depreciation	Construction Case	Interest Rates	Federal Loan Available
<b>Proposal Base Case – Described in Section V, Project Capital Structure Analysis</b>							
1	TC	4.5	25	25	P50	Base	Yes
<b>Proposal Base Case Sensitivities</b>							
2	TC	4.5	25	25	P50	High	Yes
3	TC	4.5	25	25	P95	Base	Yes
4	TC	4.5	25	25	P95	High	Yes
<b>Conservative Base Case</b>							
5	TC	4.0	20	20	P50	Base	Yes
<b>Conservative Base Case Sensitivities</b>							
6	TC	4.0	20	20	P50	High	Yes
7	TC	4.0	20	20	P95	Base	Yes
8	TC	4.0	20	20	P95	High	Yes
<b>Lower Volume Sensitivity Case</b>							
9	TC	3.5	20	20	P50	Base	Yes
<b>Reserve Risk Sensitivity Case</b>							
10	TC	4.5	20	25	P50	Base	Yes
11	TC	4.0	20	25	P50	Base	Yes
12	TC	4.0	15	25	P50	Base	Yes



Case	TC or LNG	Pipe Size	Contract Length	Depreciation	Construction Case	Interest Rates	Federal Loan Available
<b>LNG Cases</b>							
13	LNG	2.7	25	25	P50	Base	No
14	LNG	4.5	25	25	P50	Base	No
15	TC / LNG	4.5 / 2.0	25	25	P50	Base	No
16	LNG	2.7 / 1.8	25	25	P50	Base	No
<b>Other Sensitivity Cases</b>							
17	TC	4.5	25	25	P50	Base with 12% ROE	Yes
18	TC	4.5 / 2.0	25	25	P50	Base	Yes
19	TC	4.0 / 1.0 a (25-year)	20	20	P50	Base	Yes
<b>Other Cases Run by Black &amp; Veatch That Did Not Need Input from Goldman Sachs</b>							
20	TC	4.0 / 1.0 b (30-year)	25	25	P50	Base with 12% ROE	Yes
21	TC	4.0 / 2.0 Multiple	25	25	P50	Base	Yes

## B. Pipeline-Based Alternatives (Conservative Base Case)

The analyses in this section are effectively constructed as variations off of the Proposal Base Case, designed to look at impact on financial viability of changes in key assumptions that may arise as a result of decisions about reservoir utilization that may be made by the State or prospective shippers. The Proposal itself acknowledges that there is a fair degree of uncertainty around the issue of amounts of capacity which shippers will subscribe for at open season; the Proposal outlines an approach towards capacity that could see initial capacity range from 3.5 to 4.5 bcf per day and further notes that while it is targeting 25-year ship-or-pay contracts, the possibility exists for shorter contracts. Therefore, a range of project capacities and related assumptions were reviewed and an alternative based on more conservative assumptions was developed (the “Conservative Base Case”). The following Table 20 presents a comparative summary of Proposal Base Case and Conservative Base Case assumptions.

**Table 20: Review of Conservative Base Case (Case 5) Assumptions**

Key Assumption	Used in Analysis	Comment
<b>Pipeline Capacity</b>	<ul style="list-style-type: none"> <li>Proposal Base Case: 4.5 bcf/day</li> <li>Conservative Base Case: 4.0 bcf/day</li> </ul>	<ul style="list-style-type: none"> <li>Smaller pipe allows for lower construction cost, and may make sense depending on the amount of proven available gas for the pipe</li> </ul>
<b>Cost</b>	<ul style="list-style-type: none"> <li>Proposal Base Case: \$45,970 mm</li> <li>Conservative Base Case: \$43,146 mm</li> </ul>	<ul style="list-style-type: none"> <li>Difference is mainly due to more compressors in the Proposal Base Case</li> </ul>
<b>Reserve Assumptions</b>	<ul style="list-style-type: none"> <li>Proposal Base Case: Pt. Thompson</li> <li>Conservative Base Case: No Pt. Thompson</li> </ul>	<ul style="list-style-type: none"> <li>Conservative approach assuming Point Thompson gas is not initially available</li> </ul>



Key Assumption	Used in Analysis	Comment
<b>Contract Length</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 25 years</li> <li>■ Conservative Base Case: 20 years</li> </ul>	<ul style="list-style-type: none"> <li>■ Assumes known gas reserves support only 20-years contracts</li> </ul>
<b>Depreciation Period</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 25 years</li> <li>■ Conservative Base Case: 20 years</li> </ul>	<ul style="list-style-type: none"> <li>■ Shorter deprecation matches the length of the contracts, leaving little long-end risk for TransCanada, but increases transportation costs for shippers</li> </ul>
<b>Debt Amortization Period</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 25 years</li> <li>■ Conservative Base Case: 20 years</li> </ul>	<ul style="list-style-type: none"> <li>■ Debt amortization needs to match the length of the contract</li> <li>■ As reserves are found and contracts are extended, the tenor of the debt can be extended as well</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>■ Interest Rates: Base Rates</li> <li>■ Return on Equity: 14.0%</li> </ul>	<ul style="list-style-type: none"> <li>■ Same for Proposal Base Case and Conservative Base Case</li> </ul>

### Capital Structure Considerations

We believe that the overall financing approach developed for the Proposal Base Case would be applicable for the Gas Pipeline-Based Alternatives in terms of the timing of debt and equity, the use of the Federal Loan Guarantee and the rationale for allocating debt financing between bank loans and project bonds. The key changes in these cases as compared to the Proposal Base Case are reduced capacity and shorter contract lengths, both driven by assumptions about proven reserves and open season shipping commitments. Reduced capacity means less volume against which to spread project costs, therefore transportation costs go up. In addition to shipping contract length, final debt maturity is also a function of proven reserves. As reserve assumptions lead to shorter assumed contract length, we also assume in these cases that debt must be repaid and the asset depreciated over a shorter period. These changes also lead to higher projected transportation costs for these cases than for the Proposal Base Case.

### Results of Gas Pipeline Alternative Analysis

Table 21 shows summary results of the analysis of the Conservative Base Case.

**Table 21: Comparison of Proposal Base Case vs. Conservative Base Case**

	Proposal Base Case	Conservative Base Case
<b>Sources of Funds</b>		
Equity	\$16,875.0	\$15,900.0
Bonds with Federal Guarantee	12,033.0	12,744.2
Bonds without Federal Guarantee	6,826.2	3,724.8
Bank Loans without Federal Guarantee	19,709.3	19,704.9
Interest Earnings	381.0	386.4
<b>Total Sources of Funds</b>	<b>\$55,824.4</b>	<b>\$52,460.2</b>
<b>Uses of Funds</b>		
Project Costs <sup>1</sup>		
Development Costs	\$301.1	\$301.4
Capital Expenditures	44,835.1	42,074.2
Property Taxes	833.6	770.4
<b>Subtotal</b>	<b>45,969.8</b>	<b>43,146.1</b>
Other Costs		
Capitalized Interest	7,385.3	6,952.0
Debt Service Reserve Fund	817.8	786.1
Financing Fees	1,651.6	1,576.0
<b>Subtotal</b>	<b>9,854.7</b>	<b>9,314.1</b>
<b>Total Uses of Funds</b>	<b>\$55,824.4</b>	<b>\$52,460.2</b>

#### Key Statistics

Average Annual Debt Service	\$ 3,341.9	\$ 3,471.2
Average Debt Service Coverage	1.82 x	1.76 x
Weighted Average Cost of Debt	7.06%	7.06%
Weighted Average Cost of Capital	9.11%	9.04%
Transportation Cost (per Dekatherm) <sup>1,2</sup>	\$ 4.73	\$ 5.33

## C. LNG Project Alternatives

The analyses in this section assess the financial results of two LNG only cases and a third reflecting a Gas Pipeline/LNG 'Y Line' approach. These cases were developed to create an analytic basis for comparing the Proposal Base Case to potential LNG alternatives.

### Summary of Key Assumptions

As mentioned earlier, LNG projects are inherently more complex than gas pipelines. Simply put there are more steps in the 'value chain' which translates into more parties involved, more contractual arrangements, and more technology and construction complexity. Further, in the case of analyzing an Alaska LNG project, there is no formal proposal to compare versus the Proposal Base Case and therefore no clear set of assumptions to drive the analysis. As a result, we have worked with the State and their other consultants to develop assumptions for a set of indicative Alaska LNG projects:

**Capacity** – Three capacity cases were developed, a 4.5 bcf all LNG project which is most comparable to the Proposal Base Case; a 2.7 bcf all LNG project; and a 2.0 bcf expansion project that would be configured as a dedicated LNG spur to Valdez branching off the Proposal Base Case TransCanada Project at Delta Junction. Capacity alternatives and configuration assumptions were primarily developed by the State and Westney.

<sup>1</sup> Provided by Black & Veatch.

<sup>2</sup> In 2025, includes Gas Treatment Plant, Alaska Pipeline Segment, Yukon Pipeline Segment and Alberta Tariff.



*Project Costs* – Project costs estimates were developed for the portions of the LNG alternatives from gas treatment through and including the costs of shipping but excluding the cost of regasification. Project cost assumptions were developed by Westney. Shipping costs were estimated by Gas Strategies.

*LNG Prices* – Natural gas prices in North America have a relationship to world oil prices based loosely on a translation of energy content between the two commodities but are also driven by natural gas market specific supply and demand factors. LNG prices are tied much more directly to world oil prices and have typically been higher than North America natural gas prices. See Gas Strategies report [“Potential LNG from North Slope Gas”] for further discussion regarding LNG pricing and market dynamics. LNG price forecasts for the financial analysis were developed by Gas Strategies.

*LNG Market* – LNG market dynamics are described in some depth in the Gas Strategies report. The key takeaways for purposes of analyzing potential Alaska LNG projects are:

- The market for LNG volumes is substantially more developed in Asia than in North America. We assume that cargoes from any Alaska LNG plant will be principally sold to Asia buyers via long-term contracts; and
- As a result of the cost and complexity of LNG projects, the LNG market is in large part a long term contracted market, i.e., an LNG developer will not build without long term LNG sales contracts at volume and price levels which provide adequate revenues for amortization of costs, financings and to meet equity return targets. Further, an LNG project can’t proceed without adequate untraced gas supply to the project.

*Interest Rates* – Goldman Sachs developed interest rate assumptions for all of the financial analysis described in this report. We have assumed the same interest rate matrix for LNG and Proposal based cases. Similarly rated securities and loans in each analysis carry the same debt cost assumptions.

*Federal Loan Guarantee* – Based on the Federal Loan Statute code, we have assumed no Federal Loan Guarantee will be available for any LNG related project costs.

*Other Assumptions* – Table 22 below outlines additional assumptions used in the analysis of LNG Alternatives.

**Table 22: Review of LNG Project Assumptions**

Key Assumption	Used in Analysis	Comment
<b>Capacity Assumptions</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: Pt. Thompson</li> <li>■ 2.7 bcf: No Pt. Thompson</li> <li>■ 4.5 bcf: Pt. Thompson</li> <li>■ 2.0 Exp: Pt. Thompson</li> </ul>	<ul style="list-style-type: none"> <li>■ Provided by the State</li> </ul>
<b>Contract Length</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 25 years</li> <li>■ LNG Cases: 25 years</li> </ul>	<ul style="list-style-type: none"> <li>■ To be consistent with the Proposal Base Case, LNG options were analyzed with a similar contract length</li> </ul>
<b>Debt/Equity Ratio Pre-Completion</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 70 / 30</li> <li>■ LNG Cases: 70 / 30</li> </ul>	<ul style="list-style-type: none"> <li>■ LNG projects are generally view as more risky and typically have a greater percentage of equity funding</li> </ul>
<b>Depreciation Period</b>	<ul style="list-style-type: none"> <li>■ Proposal Base Case: 25 years</li> <li>■ LNG Cases: 25 years</li> </ul>	<ul style="list-style-type: none"> <li>■ To be consistent with the Proposal Base Case, LNG options were analyzed with a similar depreciation length</li> </ul>



Key Assumption	Used in Analysis	Comment
Debt Amortization Period	<ul style="list-style-type: none"> <li>Proposal Base Case: 25 years</li> <li>LNG Cases: 25 years</li> </ul>	Debt amortization matches the assumed length of contracts

### Capital Structure Considerations

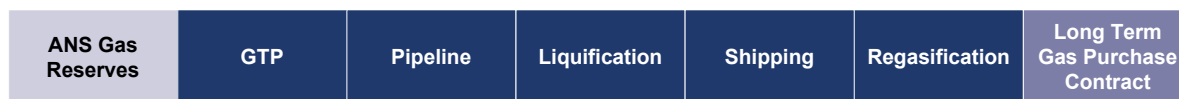
As discussed in Section III, Project Finance Overview, project financings are those where a 'closed system' of project economics are tied together via contracts. Investors look primarily to the revenues that arise from the project, rights under the contracts, and a comprehensive independent financial feasibility and engineering analysis to make their investment decisions. The analysis conducted by the project finance independent engineer and credit rating agencies will look at the economics, contracts and risks associated with each element in the delivery or value chain between the gas in the ground and the end purchaser. Therefore, it is clear why LNG projects are more complex from a credit standpoint than straightforward gas pipelines, and are funded via equity only or heavily equity weighted financing structures. Figure 9 below shows a comparison of the steps to bring gas to market for gas pipelines versus LNG projects.

**Figure 9: LNG Project Complexity**

#### Gas Pipeline



#### LNG Project



As a result of the additional steps in the process to bring LNG to market, and the likelihood that the ultimate gas purchaser will be offshore, there are a range of incremental credit issues that will be analyzed in depth by potential LNG project developers, investors, and other participants:

- Country risk (buyer)
- Currency risk
- Liquefaction and regasification technology risk
- Ship construction, cost and timing
- Shipping risks – weather, damage/spill, jurisdiction issues
- Gas supply – price and adequacy
- Jones Act limitations
- Safety and terrorism

From a comparative standpoint (i.e., land gas line project versus an LNG alternative), injecting this broad range of incremental credit issues and risk factors substantially raises the bar in terms of obtaining investment grade ratings, favorable financing rates and ultimately developing a viable financing plan.

## Results of LNG Project Alternatives Analysis

Table 23 shows summary results of the analysis of the LNG based cases.

**Table 23: Summary of LNG Cases vs. Proposal Base Case**

	Proposal Base Case	All LNG 2.7 bcf	All LNG 4.5 bcf	LNG Y Line Expansion of 2.0 bcf to 6.5 Total <sup>4</sup>
<b>Sources of Funds</b>				
Equity	16,875.0	16,450.0	26,000.0	11,950.0
Debt	38,568.4	37,039.3	58,468.9	26,857.3
Interest Earnings	381.0	366.4	336.2	382.5
<b>Total Sources of Funds</b>	<b>55,824.4</b>	<b>53,855.6</b>	<b>84,805.1</b>	<b>39,189.8</b>
<b>Uses of Funds</b>				
Project Costs <sup>1</sup>				
Development Costs	301.1	276.5	276.5	366.0
Capital Expenditures	44,835.1	40,638.7	64,798.9	31,843.5
Property Taxes	833.6	1,823.0	2,887.0	862.1
<b>Subtotal</b>	<b>45,969.8</b>	<b>42,738.2</b>	<b>67,962.4</b>	<b>33,071.6</b>
Other Costs				
Capitalized Interest	7,385.3	9,728.5	14,775.8	5,120.8
Debt Service Reserve Fund	817.8	323.0	338.1	375.1
Financing Fees	1,651.6	1,065.9	1,728.8	622.3
<b>Subtotal</b>	<b>9,854.7</b>	<b>11,117.4</b>	<b>16,842.7</b>	<b>6,118.2</b>
<b>Total Uses of Funds</b>	<b>55,824.4</b>	<b>53,855.6</b>	<b>84,805.1</b>	<b>39,189.8</b>
<b>Key Statistics</b>				
Average Annual Debt Service	\$ 3,341.9	\$ 3,221.5	\$ 5,086.4	\$ 2,718.7
Average Debt Service Coverage	1.82 x	1.64 x	1.75 x	1.89 x
Weighted Average Cost of Debt	7.06%	7.05%	7.18%	7.20%
Weighted Average Cost of Capital	9.11%	7.85%	8.55%	9.88%
Transportation Cost (per Dekatherm) <sup>1,2,3</sup>	\$ 4.73	\$ 9.74	\$ 9.46	\$4.66 / \$10.40

## D. Discussion of Results – Analysis of Project Alternatives

As outlined above, a wide range of cases were run designed to test the impact on pro forma financial results of changing key variables such as project size, shipping contract length, depreciation period etc. For each case, where possible, we applied the same financial framework developed for the Proposal Base Case in terms of mix of debt products, timing of debt and equity etc. For the LNG Based Alternatives, a more general financial framework was developed given that there is no formal LNG proposal from which to draw key assumptions.

### Proposal Based Alternatives (Conservative Base Case)

The principal comparison developed here was between the Proposal Base Case and a hypothetical smaller project reflected in the Conservative Base Case. The rationale for looking at a smaller project is based on gas reservoir uncertainty and the potential that less than 4.5 bcf will be subscribed for at open season. The 4.0 bcf capacity is based on reservoir assumptions that assume 20 years worth of proven gas. In order to be conservative, we have assumed that under these assumptions, shippers would likely only contract for 20-year ship-or-pay commitments and that debt would be amortized in 20 years as well. As you can see from Table 21 above, reducing project capacity from 4.5 bcf to 4.0 bcf saves roughly \$3.4 billion in project funding requirements. However, shorter contracts and less

<sup>1</sup> Provided by Black & Veatch.

<sup>2</sup> In 2025, includes Gas Treatment Plant, all applicable pipeline segments, and/or Alberta Tariff, LNG Plant and shipping costs where applicable.

<sup>3</sup> Shipping costs provided by Gas Strategies.

<sup>4</sup> Sources and uses in addition to Proposal Base Case sources and uses.



capacity means that costs are spread over less units of throughput and repaid within a shorter time frame. This results in a higher transportation cost, a change from \$4.73 up to \$5.33. We believe that these higher levels are supportable given future gas prices estimated by the State's gas market consultants. A series of downside cases were run against the smaller project configuration. The most extreme downside case increased construction costs to P95 levels and increased assumed interest rates substantially. Even under this more extreme set of assumptions, the estimated transportation cost is \$6.61, which while high, is still well below natural gas prices forecasted for the year post-project completion.

### **LNG Based Alternatives**

LNG based alternatives to the Proposal Base Case were developed in order to test how various LNG configurations – all LNG, or an LNG spur – compare to the Proposal in terms of financeability. A range of cases were developed and similar financial results were produced. Based upon the results, we believe that an Alaska LNG *may* be viable from a project finance standpoint. However, LNG project financings are more complex to execute and the costs substantially outstrip those associated with comparable capacity land project. Table 23 shows Proposal Base Case results versus three LNG based alternatives. The first item to note is the comparison of overall financing requirements. Comparing the 4.5 bcf Proposal Base Case to the 4.5 bcf LNG case provides a clear cost/per capacity measure. The Proposal Base Case has an all-in financing requirement of \$56 billion, which in and of itself will be a challenge in terms of financing market capacity. The LNG project with comparable capacity requires \$85 billion in funding. The second key comparison is between fully loaded transportation costs. In the case of the Proposal Base Case, the transportation cost is \$4.73. For both the 4.5 bcf and the 2.7 bcf all LNG projects, the transportation cost is estimated to be between \$9.46 and \$9.74. In the case of the 4.5 bcf project, this is driven by larger capital costs; in the case of the 2.7 bcf project, capital costs are roughly the same as the Proposal Base Case but are spread over fewer units of throughput resulting in a higher transportation cost. Further, the LNG project cost assumptions leave out a key and costly element in the LNG delivery chain – regasification. As a result, these substantially higher LNG costs are not themselves full loaded and therefore don't present a true apples to apples comparative figure.

The LNG financial results also suffer in comparison to the land project cases in that we have assumed that the Federal Loan Guarantee is not available for an LNG project based upon language in the Federal Loan Statute that defines the term 'qualified infrastructure project' as one which is 'used to transport natural gas from the Alaska North Slope to the continental United States. Given Jones Act restrictions, the lack of US flagged LNG tankers and that the most likely buyer (based on market pricing dynamics) for ANS based LNG would be in Asia, we assume the project will not meet the criteria for use of the Federal Loan. This increases both overall project interest rates and means that any LNG project could not rely on the federal loan to serve as a construction cost overrun risk mitigant.

Finally, given that there is no formal proposal, reaching even qualified conclusions about viability is difficult. As mentioned, LNG project financings are quite complex. Each step in the process must be fully analyzed economically and contractually to ensure that projected returns are adequate, contracting parties have adequate expertise and resources, and that overall project transportation and delivery costs are reasonable in light of projected gas market costs. With no parties identified, and no clear business structure laid out, the analysis and conclusions must necessarily be more general. That said, while the LNG project transportation costs are plainly higher than those associated with the Proposal Base Case, world LNG prices tend to be higher as well and could potentially support the higher costs. Viability will ultimately depend on the actual characteristics of the project, the sponsor and the contractual arrangements which define the deal.



## VII. Federal Loan Guarantee

The scope of our assignment includes reviewing the availability and applicability of the Federal Loan Guarantee as authorized in the Alaska Natural Gas Pipeline Act. In this section, we A) review the loan statute and related provisions; B) discuss the amount of Federal Loan Guarantee available to the project and the timing of use; C) describe Goldman Sachs' base case assumptions and the rate and overall economic impact to the project; D) describe TransCanada's proposed use of the Federal Loan program; and E) other considerations for structuring the loan. It is understood that we are not experts in law and therefore express no view as to the legal aspects of the Federal Loan Guarantee provisions, nor have we retained outside counsel to review the Federal Loan Statute on our behalf.

### A. Review of Loan Statute and Related Provisions

Table 24 below describes key features of the Alaska Natural Gas Pipeline Act, Section 116 Loan Guarantees.

**Table 24: Key Features of the Alaska Natural Gas Pipeline Act**

Loan Feature	Description
Authority	<ul style="list-style-type: none"> <li>Secretary may issue Federal guarantee instruments for Alaska and / or Canada Section.</li> </ul>
Conditions	<ul style="list-style-type: none"> <li>Authority expires two years after issuance of Certificate of Public Convenience and Necessity (Certificate)</li> <li>Instruments may only be issued after Certificate</li> <li>Instruments are not direct loans; must guarantee loans issued by an eligible lender</li> <li>Secretary shall not require credit support from sponsors or shippers which is greater than required by project owner</li> </ul>
Limitations on Amount	<ul style="list-style-type: none"> <li>80% of total capital cost including interest during construction</li> <li>The principal amount not to exceed \$18 billion indexed for inflation from the date of this Act (10/13/2004)</li> </ul>
Loans Terms and Fees	<ul style="list-style-type: none"> <li>Terms shall take into account repayment profiles and grace periods justified by project cash flows and project-specific considerations</li> <li>30 year limit</li> <li>Lender of guaranteed loan may charge customary fees</li> </ul>
Regulations	<ul style="list-style-type: none"> <li>Secretary may issue regulations</li> </ul>
Authorization of Appropriations	<ul style="list-style-type: none"> <li>Appropriations authorized as defined in Section 502(5) of Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5)) <ul style="list-style-type: none"> <li>§661a(5)(A): The term "cost" means the estimated long-term cost to the Government of a direct loan or loan guarantee or modification thereof, calculated on a net present value basis, excluding administrative costs and any incidental effects on governmental receipts or outlays</li> </ul> </li> </ul>



Loan Feature	Description
Definitions	<ul style="list-style-type: none"> <li>■ Consumer Price Index – The term “Consumer Price Index” means the Consumer Price Index for all-urban consumers, United States city average, as published by the Bureau of Labor Statistics, or if such index shall cease to be published, any successor index or reasonable substitute thereof</li> <li>■ Eligible Lender – The term “Eligible Lender” means any non-Federal qualified institutional buyer (as defined by section 230.144A(a) of title 17, Code of Federal Regulations (or any successor regulation), known as Rule 144A(a) of the Securities and Exchange Commission and issued under the Securities Act of 1933), including               <ul style="list-style-type: none"> <li>— A qualified retirement plan (as defined in section 4974(c) of the Internal Revenue Code of 1986 (26 U.S.C. 4974(c)) that is a qualified institutional buyer; and</li> <li>— A governmental plan (as defined in section 414(d) of the Internal Revenue Code of 1986 (26 U.S.C. 414(d)) that is a qualified institutional buyer</li> </ul> </li> <li>■ Federal Guarantee Instrument – The term “Federal Guarantee Instrument” means any guarantee or other pledge by the Secretary to pledge the full faith and credit of the United States to pay all of the principal and interest on any loan or other debt obligation entered into by a holder of a certificate of public convenience and necessity</li> <li>■ Qualified Infrastructure Project – The term ‘qualified infrastructure project’ means an Alaskan natural gas transportation project consisting of the design, engineering, finance, construction, and completion of pipelines and related transportation and production systems (including gas treatment plants), and appurtenances thereto, that are used to transport natural gas from the Alaska North Slope to the continental United States</li> </ul>

## B. Amount of Federal Loan Available and Timing of Use

The amount of loans available subject to the Federal Loan guarantee are based on two constraints established in the Act. The first constraint establishes a not to exceed principal amount limit of \$18 billion as of October 13, 2004 which can be inflated at the CPI to the time the money would actually be borrowed. The second constraint limits the total amount borrowed to 80% of capital costs of the project. Capitalized interest is included in the definition of capital costs under this constraint.

### \$18 Billion / CPI Growth Scenario

Table 25 below shows the actual CPI rate for the years 2004 through 2007 and an estimate for 2008 through 2021. Table 26 shows the principal amount limit based on these CPI growth factors.

**Table 25: Actual and Estimated CPI for 2004 through 2021**

Year	CPI Growth
2004A	2.69%
2005A	3.39%
2006A	3.23%
2007A	2.85%
2008-2021E	4.00% <sup>1</sup>

<sup>1</sup> As provided by Black & Veatch.



**Table 26: Federal Loan Guarantee Limit Based on CPI Growth Factors**

(\$ in billions)

Year	2004	2014	First Use 2015	2016	2017	2018	2019	2020	2021	2022
Inflated	18.0	26.0	27.0	28.1	29.2	30.4	31.6	32.9	34.2	35.6

### Analysis of 80% of Construction Costs Limitation

Table 27 below shows base case P50 (most likely cost and highly probable case) and P95 (higher cost, less probable case) construction cost estimates. You can see that in both cases the maximum dollar amount allowed to be borrowed under this scenario exceeds the limit established by the CPI growth scenario.

**Table 27: Base and High Construction Costs Compared to Federal Guarantee Limits**

(\$ in billions)

Construction Cost Scenario	Total Cost <sup>1</sup>	Guarantee Limited Based on 80% of Construction	Guarantee Limit Based on CPI Growth Factor	Bonds with Federal Guarantee Used	Amount Reserved for Cost Overruns	Total
P50 Construction	\$53.6 bn	\$42.7 bn	\$28.1 bn	\$12.0 bn	\$16.1 bn	\$28.1 bn
P95 Construction	63.1	50.4	30.4	14.4	16.0	30.4

Goldman Sachs' base case capital structure, as described in Section V of this report, contemplates using roughly \$12 billion of bonds with the Federal Guarantee, which is less than the limits imposed under these two constraints. The remainder is reserved for cost overruns. In no cases do we assume an amount of Federal Loan Guarantee is used and/or reserved that is in excess of the programmatic cap.

### Timing of Use

Given the unprecedented size of this project and the Proposal assumption that lenders are at risk for construction completion, having the Federal Loan Guarantee such as this is very significant to ensuring the project gets fully funded and completed. As discussed in Section V, for the purposes of developing the Proposal Base Case, Goldman Sachs has assumed a significant portion of the available Federal Loan Guarantee capacity is preserved for cost overrun financing. Specifically, we have assumed that Federal Loan Guarantee capacity of two times the difference between the P95 and P50 construction cost estimates – or roughly \$16 billion is preserved to fund potential cost overruns. The balance of the federal loan capacity is used to guarantee project bonds issued to fund construction. It is assumed the Federal guarantee would be applied to the first project bonds issued.

One of the conditions under the Act is that the authority to utilize the loan expires two years after issuance of Certificate of Public Convenience and Necessity (the "Certificate"). The implications of this condition are that the project could only borrow money guaranteed by the Federal government at the beginning (first two years) of construction. The construction period will last at least 5 years and could be as long as 8 years so in order to preserve the ability to draw funds under this program the team will need to explore the ability to establish a bank line of credit (for up to 5 years) near the end of the 2 year expiry. In executing the bank letter of credit the Federal guarantee will be preserved for use in the later years as the team will have locked in borrowing that is secured by the Federal guarantee program for the term of the bank line of credit. Goldman Sachs recommends the team

<sup>1</sup> With capitalized interest.



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seek clarity from the Federal Government as to its latitude of use with regard to securing a bank line of credit.

## C. Rate and Economic Impact to the Project

The Federal guarantee program will have a significant positive effect on the economics of the project as the program provides credit enhancement to a portion of the project cost funding. Additionally, the program provides cost overrun protection which will help make all project debt offered more marketable given the assumed lack of pre-completion debt guarantee and/or fixed price turnkey construction projects.

In the Proposal Base Case, we reserve roughly \$16 billion to secure a bank line of credit set up to be drawn only for cost overruns. The balance of the federal guarantee capacity – approximately \$12 billion is available to provide credit enhancement to funding of project costs. This \$12 billion is all allocated to project bonds rather than banks two reasons. First, we believe the cost advantage offered by a federal debt guarantee will be greater in the bond market. Second, of the three main classes of prospective investors in the project (additional equity investors, banks, and bond investors), bond buyers are the least flexible about taking construction risk.

We are assuming that a savings of 100 to 150 basis points could be realized in the market by applying the federal guarantee to the project bonds. For the \$12 billion in project bonds a 100 basis point savings translates to raw debt service savings of \$2.4 billion or \$1.2 billion on a present value basis. A 150 basis points savings translates to raw debt service savings of \$3.6 billion or \$1.8 billion on a present value basis.

## D. Use of the Federal Guarantee in the Proposal

TransCanada's Proposal is missing two typical project finance elements: pre-completion debt guarantee and cost overrun capital expenditure facility. Section 2.2.3.11 of the Proposal "U.S. Loan Guarantee for Capital Cost Overrun" describes TransCanada's plan for applying a portion of the available Federal Loan Guarantee to backstop loans that might be required to fund cost overruns. Goldman Sachs believes that this is an effective use of federal assistance on this project since (as discussed earlier) construction completion and cost risk will be difficult to completely mitigate on a project of this size and complexity, and because under the Proposal shippers and investors bear the bulk of this risk.

## E. Other Considerations for Structuring the Loan

There are a number of other considerations and conditions that may need some clarity prior to implementation of the program:

- Timing (ability to enter into a bank line of credit that extends beyond the 2 year expiry of Authority);
- How will inflation and the cap on the program be applied;
- The Federal government's view of the TransCanada Withdrawn Partners Issue (see Section VIII of this report);
- Conditions language unclear: "The Secretary shall not require as a condition of issuing a Federal guarantee instrument under this section any contractual commitment or other form of credit support of the sponsors (other than equity contribution commitments and completion guarantees), or any throughput or other guarantee from prospective shippers greater than such guarantees as shall be required by the project owners;" and

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- Determination of “Cost”

- What is the OMB’s role
- Definition of cost under the Credit Reform Act: “The net present value, at the time when the guaranteed loan is disbursed, of the following estimated cash flows: (i) payments by the Government to cover defaults and delinquencies, interest subsidies or other payments; and (ii) payments to the Government including origination and other fees, penalties and recoveries; including the effects of changes in loan terms resulting from the exercise by the guaranteed lender of an option included in the loan guarantee contract, or by the borrower of an option included in the guaranteed loan contract. “ 2 USC 661 (a)(5)(C).”

Finally, the team will need to gain a better understanding of the process for implementing the Federal guarantee program as contemplated by the Federal government. Goldman Sachs recommends the team seek and gain clarity around each of these considerations early in the process so as to have a clear message to send to lenders at time of funding.



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## VIII. TransCanada Withdrawn Partners Issue

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### A. Introduction

Since the TransCanada entities submitted their AGIA application on November 30, 2007, substantial attention has been paid in Juneau, Anchorage and the press to what has become known as the "Withdrawn Partners Issue." The State has asked Goldman to assess whether this issue is likely to affect adversely the viability of TransCanada's proposed project. After consultation with legal counsel, we have reached the following assessment.

### B. Project Background

#### **Selection and Conditional Certification of the Partnership's Project**

Under the Natural Gas Act, a company that constructs facilities for the interstate transportation of natural gas must first obtain a federally-issued certificate of public convenience and necessity. See 15 U.S.C. Chapter 15B. The Federal Power Commission (the "FPC") administered the Natural Gas Act until mid-1977, when the FPC's responsibilities were transferred to the newly-established Federal Energy Regulatory Commission (the "FERC").

In the mid-1970s, the FPC was presented with several, dramatically different proposals to move Alaska natural gas to the contiguous United States. The proposals included, as examples, construction of an over-ground pipeline through Canada and construction of facilities to allow the overseas shipping of liquefied natural gas. In 1976, to expedite the FPC's review, Congress enacted the Alaska Natural Gas Transportation Act. The Act called for the President to select the pending proposal that was most suited to the public interest. The FPC was to review quickly the selected proposal under the Natural Gas Act's remaining standards for issuance of a public convenience and necessity. See 15 U.S.C. Chapter 15C.

In 1977, President Carter selected an over-ground pipeline system that would begin at Prudhoe Bay, pass through Canada, and ultimately serve markets in several areas of the United States. See Executive Office of the President, Energy Policy and Planning, *Decision and Report to Congress on the Alaska Natural Gas Transportation System*, September 22, 1977 (the "President's Report"). The Alaska portion of the selected system was to be constructed by Alcan Pipeline Company ("Alcan"), which later became the Northwest Alaskan Pipeline Company ("Northwest"). The President's Report noted (1) that the selected system was to be privately financed on a project finance basis, (2) that "the equity investment [would] be placed at risk under all circumstances . . . and [would] be considered the first funds spent," (3) that consumers would not bear the risk of non-completion and (4) that "the rate of return on equity would compensate sponsors for bearing this risk." See President's Report at xiii and 100-127.

Within months of the President's selection, FERC issued conditional certificates of public convenience and necessity to the developers of the selected system, including Alcan. The certificates were conditioned on FERC's future resolution of outstanding issues, such as rate of return. See *Alcan Pipeline Co.*, 1 FERC ¶ 61,248 (1977).

#### **Early Investment and Development**

In 1978, Northwest and five other companies entered into a partnership: the Alaskan Northwest Natural Gas Transportation Company (the "Partnership" or "ANNGTC"). The Partnership's original partners included United Alaska Fuels Corporation ("United Fuels"), which was later acquired by what



is now an indirect subsidiary of TransCanada Corporation, also the indirect parent of the two AGIA applicants ("TransCanada"). Other partners joined the Partnership in the late 1970s and early 1980s, bringing the number of partners to eleven.

Under ANNGTC's partnership agreement, the Partnership succeeded to Alcan's rights under Alcan's conditional certificate of public convenience and necessity. See *Alaskan Northwest Natural Gas Transportation Company General Partnership Agreement (Effective as of January 31, 1978)* (the "Partnership Agreement") §3.3. The Partnership Agreement provides for the Partnership to build the Alaska facilities that were described in the President's Report and to own and operate the pipeline portion of those facilities. See *id.* §§ 2.22, 2.31 and 3.3. The Partnership Agreement contemplates an in-service date of January 1, 1983 "or as soon thereafter as practicable." See *id.* § 3.3. The Partnership Agreement requires the partners and their affiliates – including companies that are under common control – to cooperate in obtaining authorizations that are necessary to operate the pipeline. See *id.* §§ 2.1, 3.3.

Between 1978 and 1983, the partners contributed approximately \$200 million in equity capital. During the same period, the Partnership (1) undertook preliminary work, (2) obtained Section 404 permits under the Clean Water Act, (3) obtained federal rights of way, (4) obtained a waiver that would permit equity participation by producers, (5) applied for state permits and easements, (6) obtained a license agreement with the owners of the Trans Alaska Pipeline System, (7) entered into an agreement with three producers (which was later terminated by the producers) and (8) generally developed assets. During the same period, FERC resolved some of the issues that had been left open in the conditional certification, including rate of return.

### **Stagnation and Withdrawal**

By the mid-1980s, progress on the Partnership's project stalled because of the Partnership's inability to secure debt financing. This inability to secure debt financing appears to have resulted from a change in the market for natural gas and an increase in interest rates; the price of natural gas no longer supported the cost of the proposed system. As the project languished, most of Partnership's eleven partners withdrew from the partnership. The last withdrawal from the Partnership was in 1994, when Northwest, the managing partner and operator, withdrew. Today, the only remaining partners are United Fuels and TransCanada PipeLine USA Ltd. ("TC PipeLine") – both indirect, wholly-owned subsidiaries of TransCanada.

### **Ongoing Contingent Liabilities**

The Partnership Agreement creates certain, conditional rights for withdrawn partners and corresponding, contingent liabilities for the Partnership. Under section 4.4.4 of the Partnership Agreement, withdrawn partners are entitled to receive their capital contributions plus a return on those capital contributions calculated using the rate of return that FERC approved for funds used during construction. The payments are due only after the Partnership's pipeline becomes operational and only when the payments could be made without undue hardship to the Partnership. The payments are also subordinated to the rights of any creditor of the Partnership:

"[A withdrawn] partner shall be entitled to receive, after the Line has become operational and at a time when the Executive Committee determines payment may be made without undue hardship to the Partnership . . . (a) an amount equal to its Capital Account . . . on the date of withdrawal, and (b) return on such amount from the date of withdrawal to date of payment, calculated at the rate permitted by the FERC to the Partnership as the Partnership's allowance for such funds used during construction. The Capital Account balance of a withdrawing partner shall be recorded as a contingent liability of the partnership, and not as a partner's capital account, from and after the Date of Withdrawal. This right of reimbursement shall be subordinate to the rights of any creditor of the Partnership . . . ."<sup>1</sup>

While the Partnership's project lay dormant, the Partnership's contingent liabilities steadily increased. In a 2007 report to FERC, the Partnership indicated that the contingent liabilities to the withdrawn

<sup>1</sup> *Partnership Agreement* § 4.4.4(i).



partners were over \$8.9 billion as of December 31, 2006. Of that amount, more than \$2.6 billion would be owed to withdrawn partners that are now affiliates of TransCanada. The rights to \$1 billion of the contingent liabilities (as measured on December 31, 2006) are reportedly held in trust for the benefit of the California Public Utilities Commission.

### **Recent Developments**

In the early 2000s, the price of natural gas also started to increase, and in 2001 the Partnership began efforts to resurrect its project, including by reactivating the Partnership's application for a state right-of-way for the project. Also in 2001, the Partnership initiated negotiations with the withdrawn partners, offering the withdrawn partners an agreement under which the withdrawn partners would relinquish any further claim concerning the contingent liabilities. The negotiations were abandoned as unsuccessful in 2003.

In 2004, Congress amended the Alaska Natural Gas Transportation Act to permit other projects to deliver Alaska natural gas to the contiguous United States. The amended Act permits final certification of the originally-selected pipeline system (including the Partnership's project) while also allowing FERC to certify alternative projects. Similar to the original Act, the amended Act requires expedited consideration by FERC. See 15 U.S.C. § 720a.

TransCanada now proposes a pipeline from Prudhoe Bay that would be developed not by the Partnership but by two affiliates of the Partnership's remaining partners. TransCanada asserts that, in light of the \$8.9 billion in contingent liabilities, the Partnership's project is no longer viable. The TransCanada applicants state that the replacement project does not rely on any of the Partnership's assets. Nevertheless, a question has arisen whether the contingent liabilities might carry over to the replacement project. Accordingly, the withdrawn partners have been asked whether they would relinquish any claims concerning the contingent liabilities. The withdrawn partners have not relinquished the claims, and not all of the withdrawn partners have responded to requests for information.

## **C. Discussion**

### **If the Partnership constructed its project today, would the withdrawn partners be entitled to \$8.9 billion?**

We do not believe that the withdrawn partners would prevail in a claim for \$8.9 billion. As discussed above, the Partnership Agreement provides for payment to the withdrawn partners only when the payment would not unduly harm the Partnership. See Partnership Agreement § 4.4.4(i). Payment of \$8.9 billion – most of which represents return on equity – would unduly harm the Partnership for two reasons. First, the withdrawn partners' original capital investment has not and cannot now produce revenues that would support billions of dollars in return. Second, it is extremely unlikely that FERC would allow the Partnership to recover the needed amounts from consumers. Consumers would not realize commensurate benefits from the withdrawn partners' investment and moreover, under the President's Report, consumers were to be insulated from the risks of project development and were to be charged enough to provide a rate of return, but only after project completion.

Although (in our view) the withdrawn partners would not be entitled to \$8.9 billion, the mere possibility of a claim by the withdrawn partners creates uncertainty and therefore would impose additional expense on the Partnership. Unless the uncertainty was resolved on a timely basis, the uncertainty could threaten financing of the project.

### **Would the withdrawn partners be entitled to \$8.9 billion if an entity that was not affiliated with the Partnership constructed a pipeline in Alaska?**

We see two possible claims if an unaffiliated third party developed the pipeline. First, the withdrawn partners might have a valid claim to compensation if the third party relied on any of the Partnership's assets. The claim would be directed primarily at the Partnership and the general partners and only secondarily at the third party. The value of the claim would be based on the value of the diverted

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assets, which presumably would be far less than \$8.9 billion. We note that TransCanada has stated that the AGIA application does not contemplate the use of any Partnership assets. See TransCanada's 1/24/08 and 2/13/08 responses to requests for information.

Second, the withdrawn partners might initiate a claim under the Fifth Amendment of the United States Constitution. Their argument would be that FERC's certification of the third party's project constituted a taking of the Partnership's rights (and the withdrawn partners' derivative rights) as would warrant compensation through revenues from the third party's project. For several reasons, including the fact that the Partnership never received final certification from FERC, it is unlikely that such claim would succeed. The withdrawn partners do not have a viable right to \$8.9 billion and therefore could not suffer \$8.9 billion in compensable loss. Thus, even if the claim succeeded, the value of the claim would likely be far less than \$8.9 billion.

### **Would the withdrawn partners be entitled to \$8.9 billion if the TransCanada applicants –affiliates of the Partnership – constructed a pipeline in Alaska?**

The withdrawn partners might claim that TransCanada, by proceeding through its subsidiaries, breached a fiduciary duty to the withdrawn partners to pursue the Partnership's business. An important factor in relation to this claim is whether the contingent liabilities render the Partnership's project infeasible, as TransCanada has stated; if so, it will be hard to conclude that TransCanada, in developing an alternative project, breached any fiduciary duty to the withdrawn partners. See Applicants' January 16, 2008 response to request for information at page 12.

We cannot, at this time, definitively conclude that the contingent liabilities render the Partnership's project infeasible. It is nevertheless clear that the contingent liabilities create risk and therefore would impose additional expense on the project. The withdrawn partners do not have a viable right to \$8.9 billion and therefore, could not suffer a loss of \$8.9 billion. Even if a claim of breach of fiduciary duty were to succeed, the value of this claim would likely be far less than \$8.9 billion.

## **D. Conclusion**

The Partnership's contingent liabilities create a degree of uncertainty about the cost of constructing a natural gas pipeline from Prudhoe Bay. This uncertainty would exist regardless of who is selected to construct the pipeline. For example, if the Partnership constructs the pipeline, the withdrawn partners might have a claim to partial payment under the Partnership Agreement. If the TransCanada applicants construct the pipeline, the withdrawn partners might have a claim to comparable compensation on the grounds that TransCanada should have proceeded through the Partnership. In that event the withdrawn partners might choose to litigate against other third parties in an effort to wrest something from them as well. We do not predict that these claims would succeed, only that uncertainty and risk of expense will remain pending relinquishment or resolution of these claims.

On the other hand, the uncertainty should not be of a magnitude that should threaten development of the pipeline. The value of the withdrawn partners' claims is likely to be far less than \$8.9 billion and, indeed, might be \$0. The value turns on the present usefulness – if any – of the assets that the Partnership acquired with the partners' original equity capital.

In any event, there are a number approaches TransCanada could take to mitigate the risk that the Withdrawn Partners Issue could adversely impact the financing:

- TransCanada could provide potential shippers, lenders and governmental and other partners with a package of financial protections that insulates them from potential financial loss associated with the Withdrawn Partners Issue. This could include indemnification, litigation reserves or debt guarantees, for example. This approach effectively makes the Withdrawn Partners Issue "TransCanada's problem."
- TransCanada seeks a negotiated settlement with the withdrawn partners in exchange for a renegotiation of the original Partnership Agreement either to limit the liability or to renounce any

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right to claim that anything is owed as a result of the AGIA project. This would include exploring the possibility of dissolving or otherwise liquidating the original partnership.

- TransCanada seeks FERC action to clarify matters that fall under FERC jurisdiction, i.e. whether any amounts that might be owed could be recouped in rates.
- TransCanada seeks a court venue to litigate some or all of the remaining issues, including whether TransCanada and/or any of its subsidiaries owes or has breached a duty of loyalty to the withdrawn partners.

We believe that TransCanada has the time before major shipping or financial agreements are required to settle this matter and thereby to help ensure timely implementation of the Proposal.



# IX. The Importance of the Alaska Gas Pipeline Project to TransCanada

## TransCanada’s Historical Success in Growing its Asset Base

TransCanada has repeatedly communicated to the investing public its vision of becoming “the leading energy infrastructure company in North America... with a strong focus on pipelines and power generation opportunities... located in regions where [it] enjoy[s] significant competitive advantages.”<sup>1</sup> In order to achieve this goal, TransCanada needs to grow in a manner consistent with its past growth. TransCanada has spent over \$18 billion over the last eight years on a significant number of growth capital expenditures and acquisitions, generating, per TransCanada, compound average annual total shareholder return over the same period of approximately 21%.

**Table 28: Growth in TransCanada’s Asset Base**

Assets - 1999	Assets - 2007
<ul style="list-style-type: none"> <li>■ 39,000 km (24,100 mi) of wholly owned pipeline</li> <li>■ Interests in an additional 7,400 km (4,500 mi) of pipeline</li> <li>■ 12 Bcf/d</li> <li>■ 30 Bcf of natural gas storage capacity</li> <li>■ 2 power plants</li> <li>■ 400 megawatts</li> </ul>	<ul style="list-style-type: none"> <li>■ 59,000 km (36,500 mi) of wholly owned pipeline</li> <li>■ Interests in an additional 7,800 km (4,800 mi) of pipeline</li> <li>■ 15 Bcf/d</li> <li>■ 360 Bcf of natural gas storage capacity</li> <li>■ 16 power plants</li> <li>■ 7,700 megawatts</li> <li>■ Crude oil pipeline project and two proposed LNG terminals</li> </ul>

An illustrative list of some of TransCanada’s recent pipeline growth projects and the associated capital outlays include:

- TransCanada’s acquisitions of the ANR (\$3.4Bn) and GTN and North Baja (\$1.7Bn) pipeline systems
- TransCanada’s increase in its ownership stake in the Great Lakes (\$950mm), Northern Border (\$300mm), Foothills (\$250mm), Iroquois (\$14mm), Portland (\$47mm) and Tuscarora (\$100mm) pipeline systems
- TransCanada’s construction of the Tamazunchale (\$180mm) pipeline in Mexico

In conjunction with expanding its physical operations through acquisitions and expansion projects, TransCanada has successfully raised significant levels of equity and debt financing, including (on a consolidated basis):

- 2008 - \$1.1 billion in common shares
- 2007 - \$1.725 billion in common shares and \$600 million in common units; \$2.6 billion of long term debt and \$1 billion of junior subordinated notes
- 2006 - \$700 million of Medium-Term Notes and \$500 million of Senior Unsecured Notes
- 2005 - \$400 million of senior debt and \$300 million of Medium-Term Notes

## TransCanada’s Need to Continue to Grow its Asset Base

TransCanada now expects to spend over \$5 billion in the next three years on pipeline projects, which include a mix of greenfield projects and extensions and expansions of existing assets. However, TransCanada’s growth beyond 2010 at a level consistent what it has achieved to date is less certain,

<sup>1</sup> TransCanada Corporation 2008 Annual Meeting Presentation, April 2008.

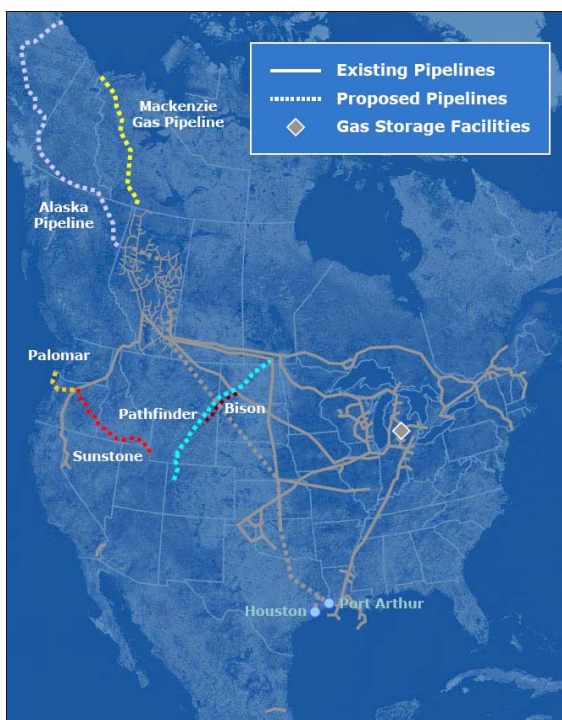
and TransCanada has emphasized the Alaska gas and Mackenzie pipelines as sources of long-term growth. Further, TransCanada currently has the largest natural gas transportation footprint in Canada, with the Foothills Pipeline forming the pre-build for the Alaska natural gas pipeline project. TransCanada is clearly heavily incentivized to utilize, and should benefit from its ability to leverage, its existing asset footprint in Western Canada to bring Northern gas to market.

As evidence of TransCanada’s plans to continue to grow its asset base and the fact that growth projects beyond the window over the next three years are much less clear, Table 29 includes descriptions and projected in-service dates for TransCanada’s currently disclosed pipeline growth projects.

**Table 29: TransCanada Growth Projects and In-Service Dates**

Project	In-Service Date
■ Keystone –Oilsands Conversion / Greenfield	■ 2009-2010
■ Alberta System – Expansions	■ 2008 - 2010
■ Canadian Mainline – Expansions	■ 2008 - 2010
■ ANR – Storage Expansion	■ 2008
■ Palomar – GTN lateral	■ 2011
■ North Baja – Expansion	■ 2008, 2013
■ Tamazunchale – Expansion	■ 2009
■ Pathfinder Pipeline – Rockies Greenfield	■ 2010
■ Sunstone Pipeline – Rockies Greenfield	■ 2011
■ Mackenzie Delta – Northern Canadian Greenfield	■ ~2010+
■ Alaska Natural Gas – Alaska Greenfield	■ ~2010+

**Figure 10: TransCanada Current and Projected Asset Map**



Source: TransCanada Public Presentations

**TransCanada’s Coming Need to Replace Western Canada Natural Gas Supply Decline**

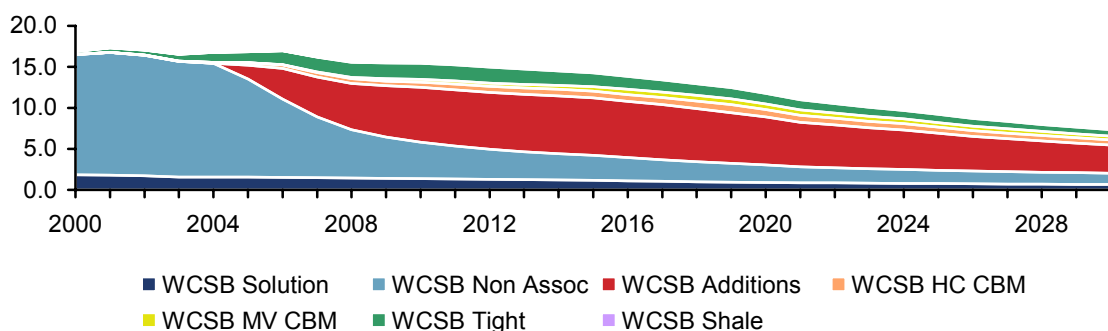
TransCanada is generally bullish with respect to its views on projected natural gas demand in North America. To wit, TransCanada believes that North American demand will increase by 15 bcf/d by

2020.<sup>1</sup> TransCanada's current's natural gas transportation operations are highly leveraged to Western Canada Sedimentary Basin (WCSB) natural gas production, a basin generally thought to be in the early stages of production decline. TransCanada's pipeline systems depend upon reliable sources of natural gas to provide product for transportation, thus, without replacement, significant WCSB production loss should result in declining volumes on the TransCanada system. This could prove problematic for TransCanada from an operational and financial perspective.

TransCanada is clearly aware of the coming disconnect between increased North American demand and decreasing WCSB production. TransCanada predicts that its Mainline system could see transported volumes decrease by 2.5 Bcf/d, or 35%, by 2015 when compared with 2000 volume levels<sup>2</sup>. Thus the incremental 4 to 6 bcf/d of transportable natural gas supply that Alaska natural gas could provide would potentially more than replace the declining WCSB production to be potentially lost on the Canadian Mainline.

**Figure 11: Historical and Projected Western Canadian Production<sup>3</sup>**

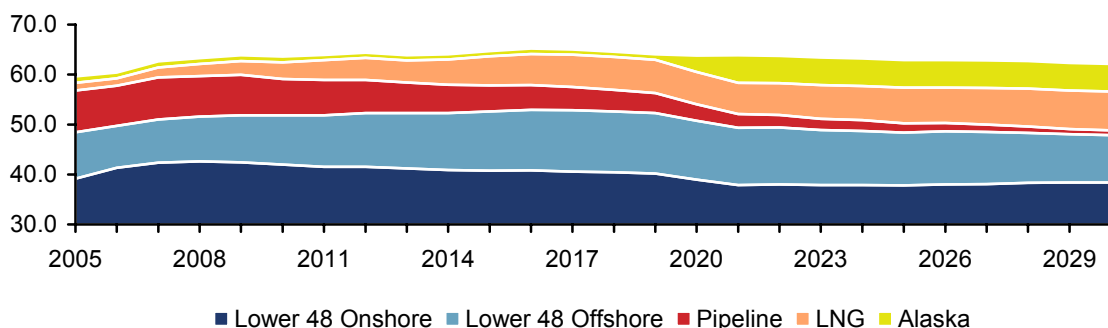
(bcf/day)



Source: National Energy Board, Canada's Energy Future – Reference Case and Scenarios to 2030, Nov-2007.

**Figure 12: Historical and Projected US Gas Supply**

(bcf/day)



Source: Energy Information Association, Annual Energy Outlook 2008 with Projections to 2030, February 2007

Additionally, TransCanada will most likely need to source additional natural gas supplies sufficient to not only meet growing U.S. demand, but also increasing demand from within Western Canada for end use and to provide energy for oil sands production. TransCanada predicts that Western Canada gas

<sup>1</sup> Bill Langford, TransCanada Vice President of Pipeline Strategy, Presentation at the Energy Futures Workshop, 22-Jan-2008.

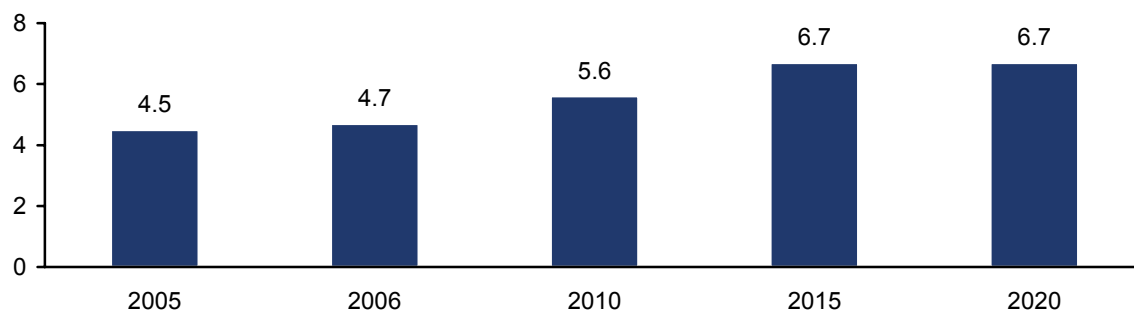
<sup>2</sup> Bill Langford, TransCanada Vice President of Pipeline Strategy, Presentation at the Energy Futures Workshop, 22-Jan-2008.

<sup>3</sup> Assumes no incremental production from Mackenzie Delta, LNG or other non-Western Canada sources.

demand will increase approximately 50% from 2005 to 2020, as shown in Figure 13. Such increased demand may be in large part due to significantly increasing oil sands production as shown in Figure 14.

**Figure 13: Historical and Projected Western Canada Gas Demand**

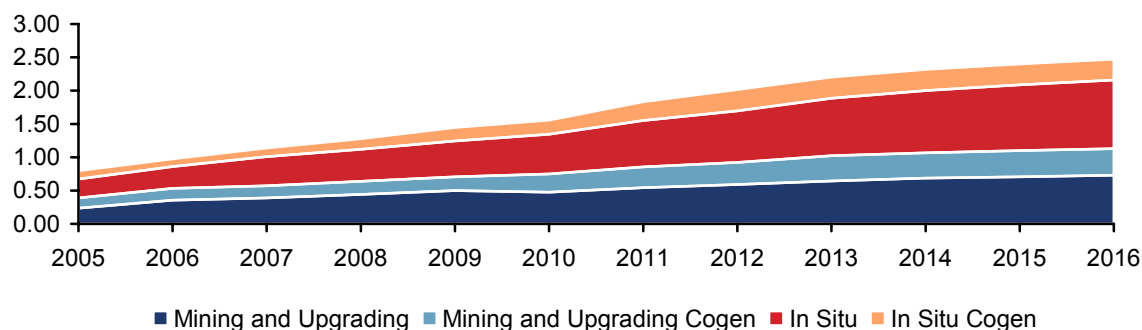
(bcf/day)



Source: TransCanada Public Presentations

**Figure 14: Historical and Projected Purchased Natural Gas Demand for Oil Sands Operations**

(bcf/day)



Source: Alberta Energy and Utilities Board, Alberta's Energy Reserves 2006 and Supply Demand/Outlook 2007-2016

### TransCanada's Public Statements About Alaska Natural Gas

TransCanada has over the last several years clearly communicated its desire to be the owner and operator of the Alaska natural gas pipeline. Examples include the following excerpts.

- "While our Pipeline business is complex, our strategy is simple. Firstly, we will use the tools that we have in place today to maximize the value of our existing pipeline asset base. Secondly, we will grow our footprint through extensions and expansions of our system, deeper into the marketplace and deeper into supply zones. We will successfully execute the capacity addition initiatives that we have underway today, and finally, we will continue to build a high quality platform of new opportunities that will benefit both TransCanada, and its customers in the years ahead."

— Hal Kvisle – President & CEO, TransCanada Corporation – Q4 2007 Earnings Call, 29-Jan-2008

- “TransCanada remains, as it has for the past three decades, committed to building an Alaska natural gas transportation system.”  
— *TransCanada, Application for License – Alaska Gasline Inducement Act, 30-Nov-2007*
- “In Alaska we are encouraged by the Governor's recent introduction of the Alaska Gas Line Inducement Act. We continue to work with the state of Alaska, Alaska North Slope producers, and other stakeholders. Our objective continues to be to participate constructively in the advancement of the Alaska project.”  
— *Hal Kvisle – President & CEO, TransCanada Corporation – Q1 2007 Earnings Call, 27-April - 2007*
- “I think we'd rely more on our credibilities as a premium pipe builder and as the operator of a very big system serving Western Canada and the integration opportunities that we can offer to tie Alaska gas into the Alberta trading hub and connect to a few U.S. markets by expanding our existing pipes. That is really the essence of our value proposition to the Alaska producers.”  
— *Hal Kvisle – President & CEO, TransCanada Corporation – ANR System Acquisition Call, 22-Dec-2006*

### **Wall Street Research Analysts' Statements About TransCanada and Alaska Natural Gas**

Unlike for the producers, given the sheer size of the Alaska gas project, the fact that the State of Alaska stated that TransCanada provided the only conforming bid during the AGIA application process and that TransCanada has held an open dialogue about its goals for the pipeline, research analysts have felt compelled to comment on the project:

- “This news is quite positive for TRP as it reinforces its perceived role as a major player in the quest to build an Alaskan gas pipeline. However, it is premature to award the “winner” status to TRP just because it is the last one standing after the first phase of the AGIA process. Even if it is granted an exclusive AGIA license, the ball will still be in the court of the major Alaskan gas producers with which TRP will have to negotiate long-term shipping contracts.”  
— *National Bank 07-Jan-2008*
- “From a TransCanada perspective, we believe the future potential natural gas flows from Northern pipelines are critical. Such natural gas flows would aid to fill the company's existing pipeline network flows on the Alberta System and on the Canadian Mainline.”  
— *Credit Suisse 07-Jan-2008*
- “Ultimately, the benefit to TRP is tying Alaskan gas into its existing systems. As the dominant operator of pipelines leaving Alberta, the key for TRP is to tie additional volumes (i.e., northern gas) into its existing pipeline systems to enhance long-term throughput. Some other parties' proposals have contemplated partially, or fully, bypassing TransCanada's systems through a bullet-line into Chicago or liquefaction of Alaskan gas for export.”  
— *RBC 07-Jan-2008*
- “Repeating the double-digit growth of recent years will be challenging. It was driven by unusually lucrative investments that were exceptionally well-timed.”  
— *CIBC 22-Nov-2007*

Additionally, discussions with Goldman Sachs research analysts reveal that the inherent risk and extremely long lead time associated with the Alaska natural gas pipeline tend to point to its exclusion from any near term financial analysis or estimates for TransCanada. Accordingly, the Alaska gas pipeline will not likely begin to impact research analysts' earnings and share estimates until the fate of the project, and any potential role that TransCanada may ultimately play, becomes more certain.