



OPPORTUNITIES FOR THE NORTHEAST: IMPACT OF ROCKIES EXPRESS

A Multi-Client Study

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1 Appendix

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ziff

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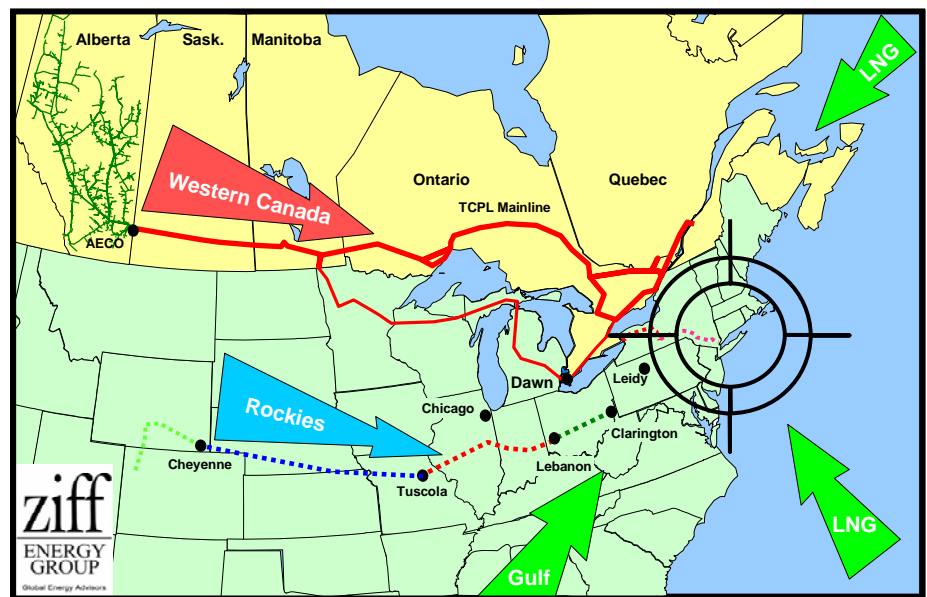
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Opportunities for the Northeast – Impact of Rockies Express

a multi-client study

Ziff Energy will analyse gas supply from **Western Canada** and the **Rockies**, the eastern gas market sectors, changes in gas transportation flows, the impact at market hubs (**Dawn**), and the outlook for **LNG** growth for the Northeast. With traditional gas supply basins maturing, coupled with increasing gas demand, opportunities exist for the **Northeast** to optimize existing regional transportation infrastructure. The objective of this new multi-client study is to analyze the impact of several major natural gas industry events on the North American marketplace and issue the report by mid summer. Key questions:

- Is too much of the **Rockies gas** supply being shifted East? If so, what will be the effect on gas pricing Hubs such as **Opal, AECO, and Dawn**? How does it impact current gas movements across North America and the amount of gas flowing through key hubs?
- How do **Rockies gas** supplies, delivered to the footstep of Northeast actually make their way to the Northeast gas markets? How does new short-haul pipeline capacity develop and who would make necessary commitments? Which current or proposed eastern supplies could be pushed out?



- Are **LNG projects** in the Northeast compromised? Will even more LNG imports be required to offset risks such as **LNG delays** in the Gulf with the Katrina experience or the delay of **Mackenzie Delta**?
- What are the potential combinations of gas supply sources to serve the U.S. Northeast by 2010? What is the impact of the major influx of new sources of supplies: on Northeast gas prices; on use of existing infrastructure; on tolling and current services? Will a new gas pricing hub develop in Northeast? Is the **Dawn Hub** enhanced by Rockies and LNG supplies in East?
- Are **Rockies gas** producers taking a loss on gas shifted East via a major new long-haul to improve pricing of remaining gas supplies? Reinforcing West to East continental link may make sense in view of concentration of supply in Gulf plus North America's increased reliance on imported LNG, however, what is the cost and who pays?
- Will the construction of a major new West to East continental link influences **Alaska gas** supplies flow from the West? How much **Western Canadian supply** is likely to flow East? Can the Northeast attract greater share of available supplies?
- Does North America need an **alternative reference pricing point** in view of increasing role of imported LNG and impact of Katrina on **Henry Hub** pricing (and lack of price liquidity)? If so, how/where will this point evolve? What is current pricing reference for non Gulf LNG related LNG imports?

Project Team

Ziff Energy's July 2004 'Evolution of the Dawn Trading Hub' examined the development of Dawn as it became the Midwest's market preferred point which to source gas supply. With delays in Alaska gas and the Mackenzie Delta, substantial Rockies growth, coupled with new transportation proposals, and with new LNG projects, there is a key need to re-visit regional issues and strategic options. Ziff Energy Group, a leading North American gas consultant, provides independent research, analytical support, insight, advice, and expert testimony for our clients. Our ability to cohesively intertwine specialty knowledge of the gas industry (natural gas markets, traditional supply, LNG, Mackenzie Delta, Alaska gas, transport, storage, regulatory, and gas pricing), coupled with our insight and opinions, adds immediate value to your gas group. Our project team at Ziff Energy provides our blue-chip clients the benefits of many years of strategic and tactical experience in the gas industry, which allow us to identify critical drivers and provide our opinion on the fundamentals.



Bernie Otis, B.A.Sc. – Senior Associate, has over three decades of Midwest and US Northeast gas experience with Hydro Quebec, Iroquois, GMI, and TCPL. Mr. Otis provides insight and analysis for Ziff Energy's Midwest and U.S. Northeast North American natural gas strategy retainer clients. His executive level experience in the gas pipeline and gas utility industry include: detailed gas supply planning and analysis, daily gas supply operations, tolls and tariff development, and analysis for major North American pipeline companies, and gas supply planning and gas purchasing/contracting. Mr. Otis is well versed in the natural gas and power markets, gas transportation alternatives, and the key players in the U.S. Northeast and Eastern Canada. He was the lead author of the Evolution of Dawn Trading Hub and he will lead the analysis for this multi-client study.



Cameron Gingrich, B.Sc., BA – Lead Project Analyst, has seven years analysis experience in the natural gas, financial, and transportation industries. Mr. Gingrich is responsible for analytical support, in-depth customized data analysis, and trending analysis for the Gas Services team, bringing a wealth of insight, creativity, and economic modeling knowledge. He provides detailed analysis for the North American Gas Strategies Retainer Service, multi-client studies, and custom consulting projects such as: analysis of pipeline tolls, gas supply/storage load duration modeling, and gas price/basis differential modeling. Mr. Gingrich will support all phases of the assessment.



Dennis Elias – Director, Gas Consulting, has over fifteen years of experience in the natural gas gathering and processing, transportation, and distribution industry. Mr. Elias has experience in gas commodity risk management, strategic planning, transportation design, and regulatory affairs. He has testified before regulatory agencies, developed gas transmission rate applications, and negotiated agreements with First Nation communities. He will assess transportation issues from the supply regions.



Bill Gwozd, P.Eng. – Vice President, Gas Services, has a quarter century of natural gas experience. In addition to leading the natural gas consulting practice, Mr. Gwozd provided key insight and analysis for five previous multiclient assessments: Natural Gas Marketing and Transportation Contracting, Northern Gas Flowing South, Beyond the Midwest, Midwest, and Western Canadian Gas Deliverability. He will provide gas price and basis differential analysis, and assess incremental gas demand, Western Canada gas supply for this study, and gas supply from Alaska and Canadian Mackenzie Delta.

Supported by Managers and Analysts, who will provide independent review and insight on the assessment.

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