



National Energy
Board

Office national
de l'énergie

Energy Briefing Note

Update to Short-term Canadian Natural Gas Deliverability 2009-2011

gas

September 2009

Canada 

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Foreword

The National Energy Board (NEB or the Board) is an independent federal agency that regulates several aspects of Canada's energy industry. Its purpose is to promote safety and security, environmental protection and efficient energy infrastructure and markets in the Canadian public interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade. The Board's main responsibilities include regulating the construction and operation of interprovincial and international oil and gas pipelines as well as international power lines and designated interprovincial power lines. The Board regulates pipeline tolls and tariffs for pipelines under its jurisdiction. In terms of specific energy commodities, the Board regulates the exports and imports of natural gas as well as exports of oil, natural gas liquids (NGLs) and electricity. Additionally, the Board regulates oil and gas exploration, development and production in Frontier lands and offshore areas not covered by provincial or federal management agreements. The Board's advisory function requires keeping under review matters over which Parliament has jurisdiction relating to all aspects of energy supply, transmission and disposal of energy in and outside Canada.

The NEB monitors energy markets to objectively analyze energy commodities and inform Canadians about trends, events, and issues. The Board releases numerous research reports. This report is a briefing note – a brief report covering one aspect of energy commodities. Specifically, this report examines the factors that affect natural gas supply in the short-term and presents an outlook for deliverability through 2011. The main objective of this report is to advance public understanding of the short-term gas supply situation in Canada. This report is an update to the Board's October 2008 Energy Market Assessment (EMA), *Short-term Canadian Natural Gas Deliverability, 2008-2010*.

While preparing this report, NEB staff conducted a series of informal meetings and discussions with drilling companies, natural gas producers, pipeline companies, investment analysts and industry associations. The NEB appreciates the information and comments provided and would like to thank all participants for their time and expertise.

If a party wishes to rely on material from this report in any regulatory proceeding before the NEB, it may submit the material, just as it may submit any public document. Under these circumstances, the submitting party in effect adopts the material and that party could be required to answer questions pertaining to the material.

Information about the NEB, including its publications, can be found by accessing the Board's website at www.neb-one.gc.ca.

Overview

This report provides an outlook for Canadian gas deliverability (the ability to produce gas from new and existing wells) to the end of 2011. A key factor influencing deliverability over this period is the significant reduction in North American natural gas prices since mid-2008 due to reduced demand and increased supply. In response to lower prices, drilling activity in Canada and the U.S. has slowed to less than half the levels of early 2008. As a result, Canadian natural gas deliverability is expected to decline over the projection period. Despite the decline, projected Canadian natural gas deliverability will be more than sufficient to serve Canadian markets.

The level of natural gas demand is dependent on a number of unpredictable factors such as the pace of global economic recovery and weather conditions. The relative trends in natural gas supply and demand will influence the natural gas price, and natural gas drilling activity and deliverability will respond to industry revenues, price expectations and input costs. The rate of decline in deliverability could slow or reverse if the natural gas market eventually begins to experience a closer balance between demand and available supply that causes prices to move upward. The Board intends to release its next annual outlook for short-term Canadian natural gas deliverability around March, 2010.

Key Drivers

North American natural gas prices have declined significantly since mid-2008 in response to market fundamentals of reduced demand and increased supply. Economic conditions have caused industrial gas demand to decline, while U.S. unconventional gas supply has increased. This is indicated by the storage refill in North America being roughly one full month ahead of schedule at the end of July 2009.

In response to lower prices, drilling activity in conventional natural gas and coalbed methane (CBM) in Canada and the U.S. has slowed to roughly half the levels of previous years. Since conventional gas represents a substantial majority of North American supply, the decline in drilling is likely to begin to reduce deliverability.

Shale gas activity in the U.S. has declined the least of all natural gas categories as some areas continue to provide positive returns despite lower prices, and in some cases new wells must be drilled and brought on production to retain drilling rights. U.S. shale gas production has been the prime contributor to natural gas production growth in North America. Tight gas and shale gas drilling in Northeast B.C., Quebec and Atlantic Canada could also continue at modest levels as the industry gains knowledge and refines techniques.

Upstream natural gas investment in Canada may be challenged by competition with higher valued crude oil, natural gas basins in other regions with cost advantages such as being closer to specific markets, or regions where more restrictive term limits on drilling rights require accelerated drilling activity and production. Overall industry revenues available for reinvestment may be reduced by the expiry of price hedges that were signed when prices were higher.

Natural gas supply costs in Canada are reported as having declined by at least 8 to 20 per cent from peak levels in 2008 as a consequence of severely reduced activity levels and lower costs for some inputs. However, the reduction in costs has been outpaced by the decline in prices.

Additional factors may contribute to keeping North American natural gas prices below the \$6 to \$7 per gigajoule (GJ) level that is thought by many as being necessary for a recovery in conventional natural gas drilling in Canada. These factors are outside the scope of this analysis, but may include:

- The potential for considerable amounts of additional U.S. natural gas that could be brought onto the market relatively quickly, such as in the Rocky Mountains and shale gas areas in the south. This includes wells that are currently shut-in for economic reasons, awaiting increases to pipeline capacity, or where completion and tie-in operations have been delayed to preserve company finances. The introduction of this deliverability in response to strengthening prices could moderate any upswing in prices.
- Global liquefied natural gas (LNG) supplies may increase in 2009 and 2010 as several new liquefaction projects begin operations and some existing projects return to service following maintenance outages. Should global natural gas demand not increase from current levels, any potential increase in LNG delivered to North America would further add to the supply/demand imbalance.

Analysis

To reflect the short-term uncertainty of the North American natural gas market, three cases have been developed to represent a high, mid-range and low view of Canadian deliverability for the period to 2011. These cases are different primarily in terms of North American natural gas price as indicated by varying levels of capital investment. The cases also vary in terms of CBM activity and drilling levels of the emerging Montney and Horn River prospects in northeast B.C. A summary of the key assumptions used in the cases is provided in Table 1.

Western Canada is Canada's main source of marketable gas production and currently accounts for 97 per cent of total Canadian production. Atlantic Canada provides most of the remaining gas production with smaller amounts from central Canada and more northerly areas of the Northwest Territories .

Natural gas production in Western Canada is broadly split into conventional, CBM and shale gas categories. Within the conventional gas category, a sub-category of tight gas is used in this analysis. Due to large regional differences in physical and producing characteristics, these categories are further subdivided into smaller areas with similar characteristics for production decline analysis. Within each region the producing formations are also grouped on a geological basis. This characterization of the resource is identical to that used in the Board's October 2008 EMA, *Short-term Canadian Natural Gas Deliverability, 2008-2010* and additional details on the characterization are provided there.

Table 1: Summary of Case Assumptions

	2008	Mid-Range Case			High Case			Low Case		
		2009	2010	2011	2009	2010	2011	2009	2010	2011
Alberta Reference Price (\$/GJ)	\$7.47	\$3.45	\$4.40	\$5.65	\$3.75	\$5.25	\$6.95	\$3.25	\$3.35	\$4.10
Natural Gas Drilling Investment (\$millions)	12885	5759	6841	8514	6368	8679	11776	5351	4548	5812
Natural Gas-intent Drill Days	75576	45045	56317	65189	49808	71453	91306	41852	37443	47851
Natural Gas-intent Wells Drilled	10179	4170	4678	6495	4744	6125	9706	3979	3182	4628
Montney Tight Gas Wells	240	245	255	278	250	265	290	160	200	220
Horn River Shale Gas Wells	15	40	65	145	85	125	200	40	60	100
CBM Wells Drilled	1411	564	706	817	930	1302	1675	423	486	549

Deliverability Outlook

The Board’s deliverability outlook by area and resource for the Mid-range Case is shown in Table 2. Similar tables for the High Case and Low Case are available in Appendix 1. Canadian annual average deliverability in the Mid-range Case is expected to decrease from 459 million m³/d (16.2 Bcf/d) in 2008 to 382 million m³/d (13.5 Bcf/d) in 2011.

Total western Canada deliverability in the Mid-range Case is projected to decrease as overall declines in conventional gas deliverability more than offset projected increases in deliverability from shale gas and tight gas in northeast B.C. The projection of CBM deliverability is shown in Figure 1.

Overall Alberta deliverability is projected to decline at an average of about nine per cent per year as gas drilling activity drops by almost half in 2009 and gradually recovers to 73 per cent of 2008 levels by 2011 (measured in drill days). British Columbia deliverability is projected to rise almost 16 million m³/d (0.6 Bcf/d) on the strength of growing Montney output that adds to deliverability over the period. The contribution from Horn River shale gas deliverability is projected to be modest over the period, averaging 4.7 million m³/d (0.2 Bcf/d) in 2011 as development of the play scales up (Figure 2).

Saskatchewan natural gas deliverability is projected to slip by an average of ten per cent a year and ends up 5.8 million m³/d (0.2 Bcf/d) lower in 2011 than in 2008 as attention in the province continues to focus on the Bakken oil play.

Natural gas deliverability in Atlantic Canada is projected to experience natural declines from the offshore Sable project and modest growth from the onshore McCully field before receiving a boost as the offshore Deep Panuke project is expected to ramp up to full operations in 2011. Projected deliverability from the five fields comprising the Sable project, Deep Panuke and onshore is indicated in Figure 3. Note that deliverability from the Sable project dips in August 2009 due to a shut down for maintenance.

Deliverability in the remainder of Canada (Ontario, Quebec and northern portions of the Northwest Territories) is projected to remain relatively constant to 2011 with the exception of an

assumption that an estimated 0.1 million m³/d (0.005 Bcf/d) of shale gas production will be added in Quebec by 2011.

Table 2: Canadian Gas Deliverability Outlook by Area/Resource – MID-RANGE CASE

Area/Resource	Historical		Projected					
	2008		2009		2010		2011	
	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d
00 - Alberta CBM	21.10	745	20.15	711	18.84	665	18.26	645
<i>HSC Portion</i>	17.38	614	17.29	610	16.33	576	15.93	562
<i>Mannville Portion</i>	3.01	106	2.25	79	1.99	70	1.85	65
<i>Other CBM Portion</i>	0.71	25	0.61	21	0.53	19	0.47	17
01 - Southern Alberta	45.96	1,622	42.45	1,499	36.90	1,302	33.97	1,199
<i>Tight Portion</i>	30.51	1,077	28.92	1,021	25.53	901	23.56	832
02 - Southwest Alberta	10.51	371	9.03	319	7.88	278	7.07	250
<i>Tight Portion</i>	2.85	101	2.46	87	2.14	76	1.88	66
03 - Southern Foothills	3.17	112	4.44	157	4.05	143	3.71	131
04 - Eastern Alberta	23.34	824	19.66	694	17.04	602	15.28	539
<i>Tight Portion</i>	0.50	18	0.46	16	0.41	15	0.37	13
05 - Central Alberta	29.76	1,050	27.34	965	24.54	866	22.68	801
<i>Tight Portion</i>	2.12	75	2.02	71	1.87	66	1.77	62
06 - West Central Alberta	48.88	1,726	43.01	1,518	38.62	1,363	35.47	1,252
<i>Tight Portion</i>	12.49	441	11.51	406	10.32	364	9.51	336
07 - Central Foothills	32.37	1,143	29.05	1,026	26.02	918	23.78	839
<i>Tight Portion</i>	1.67	59	1.05	37	0.79	28	0.63	22
08 - Kaybob	24.85	877	21.40	755	19.01	671	17.36	613
<i>Tight Portion</i>	7.53	266	6.78	239	5.97	211	5.38	190
09 - Alberta Deep Basin	60.73	2,144	56.71	2,002	54.72	1,931	52.59	1,856
<i>Tight Portion</i>	47.17	1,665	45.84	1,618	44.77	1,580	43.28	1,528
10 - Northeast Alberta	17.14	605	13.72	484	11.65	411	9.97	352
11 - Peace River	20.23	714	17.66	623	15.52	548	14.12	498
12 - Northwest Alberta	15.10	533	12.62	445	11.17	394	10.02	354
13 - BC Deep Basin	11.21	396	10.35	365	10.67	377	11.16	394
<i>Montney Portion</i>	0.58	21	1.77	62	2.42	85	3.06	108
<i>Other Tight Portion</i>	7.53	266	4.19	148	3.45	122	2.83	100
14 - Fort St. John	29.77	1,051	39.50	1,394	45.31	1,600	51.40	1,814
<i>Montney Portion</i>	3.84	136	15.51	548	23.77	839	31.47	1,111
15 - Northeast BC	18.69	660	17.66	623	17.94	633	19.97	705
<i>Horn River Shale Portion</i>	0.54	19	1.05	37	2.19	77	4.72	167
<i>Tight Portion</i>	11.47	405	10.49	370	10.23	361	10.23	361
16 - BC Foothills	15.38	543	10.14	358	9.15	323	8.45	298
17 - Southwest Saskatchewan	9.97	352	9.19	325	8.11	286	7.35	259
<i>Tight Portion</i>	9.39	332	8.60	304	7.53	266	6.79	240
18 - West Saskatchewan	5.49	194	4.70	166	4.08	144	3.64	128
19 - East Saskatchewan	1.46	52	1.22	43	1.18	42	1.14	40
22 - Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
Total Conventional	424.11	14,971	389.27	13,741	361.68	12,767	344.64	12,166
Total Tight Portion	137.66	4,859	139.61	4,928	139.20	4,914	140.76	4,969
Total CBM	21.10	745	20.15	711	18.84	665	18.26	645
Total Shale	0.54	19	1.05	37	2.19	77	4.72	167
Total Western Canada	445.74	15,735	410.46	14,489	382.72	13,510	367.62	12,977
British Columbia	75.05	2,649	77.65	2,741	83.08	2,933	90.98	3,212
Alberta	353.13	12,466	317.26	11,199	285.94	10,094	264.27	9,329
Saskatchewan	16.92	597	15.11	533	13.37	472	12.13	428
Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
Atlantic Canada	12.47	440	9.77	345	9.06	320	13.84	489
Other Canada	0.53	19	0.63	22	0.61	22	0.73	26
Total Canada	458.75	16,194	420.87	14,857	392.39	13,851	382.19	13,491

Figure 1: CBM Deliverability by Formation– MID-RANGE CASE

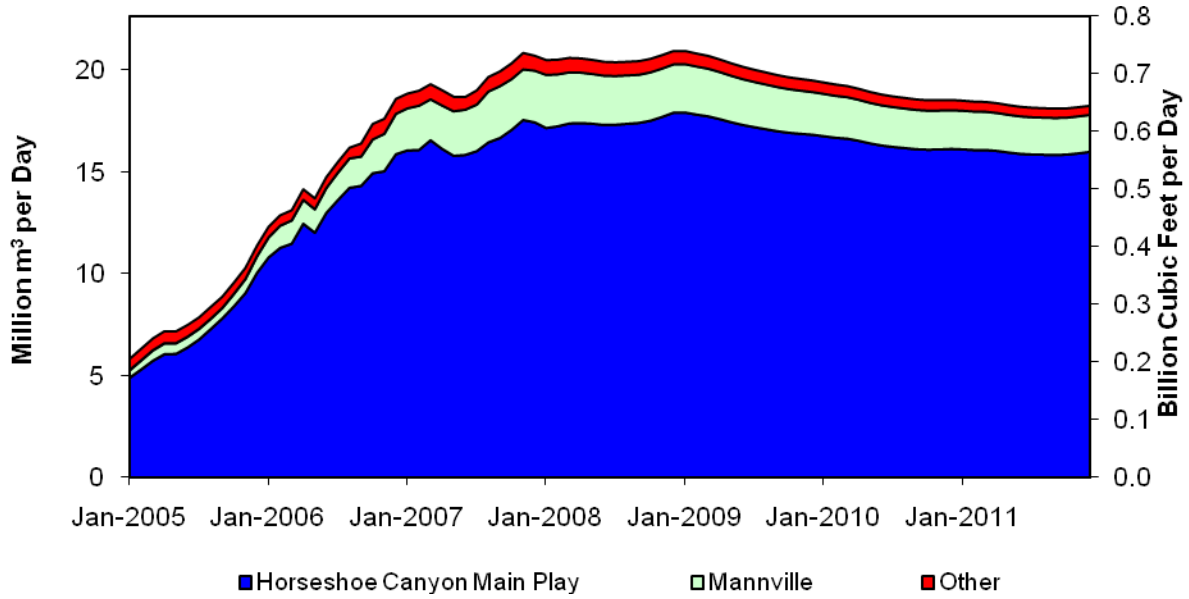


Figure 2: Montney and Horn River Deliverability – MID-RANGE CASE

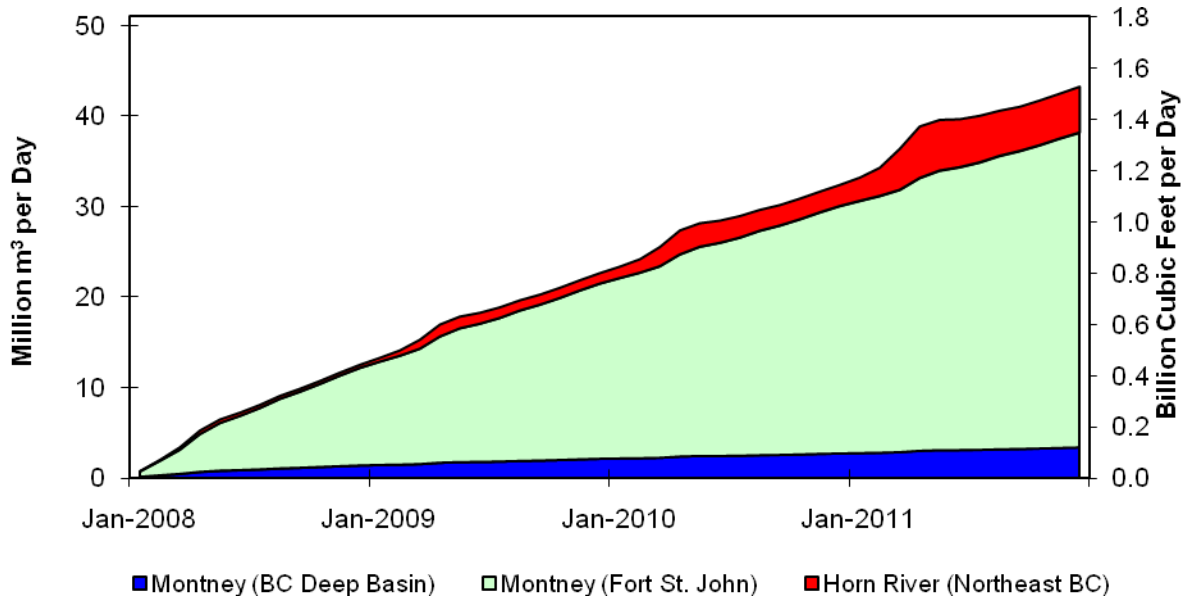


Figure 3: Atlantic Canada Deliverability – MID-RANGE CASE

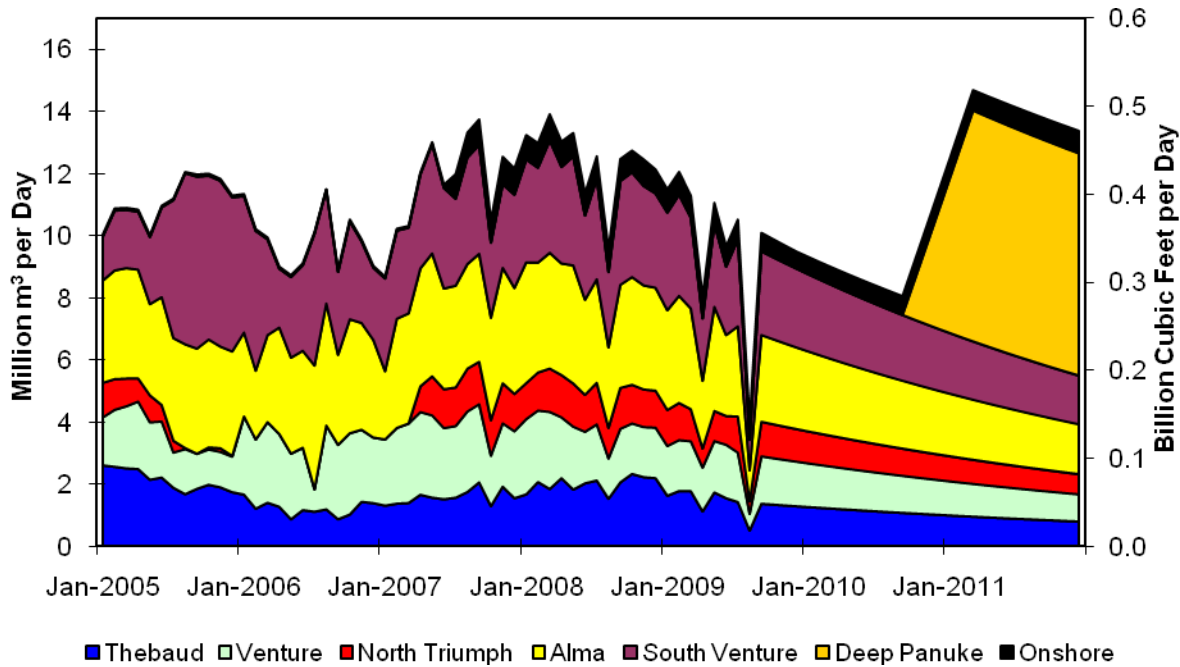


Figure 4 portrays the Mid-range Case outlook for total Canadian gas deliverability split into major segments of gas supply over the projection period. Total Canadian deliverability is expected to decrease throughout the period, albeit at a slower rate in 2011.

Figure 5 provides a comparison of the three cases and historical production. In the Mid-range Case, average annual deliverability is projected to slip from 459 million m³/d (16.2 Bcf/d) in 2008 to 382 million m³/d (13.5 Bcf/d) in 2011. Under the reduced drilling of the Low Case, deliverability is projected to decline to 358 million m³/d (12.7 Bcf/d). After falling in 2009 and 2010, deliverability is projected to stabilize in 2011 in the High Case and would average 405 million m³/d (14.3 Bcf/d) by 2011.

The Board's outlooks for gas deliverability and Canadian gas demand over the projection period are included in Table 3 to provide market context for the relative changes in gas deliverability. Total Canadian annual gas demand is expected to grow by 20 million m³/d (0.7 Bcf/d) between 2008 and 2011, with most of the increase coming from increased usage for oil sands development in Western Canada. As indicated above, natural gas deliverability in the Mid-range Case is projected to decrease by 77 million m³/d (2.7 Bcf/d) over the same period.

Figure 4: Outlook for Canadian Gas Deliverability – MID-RANGE CASE

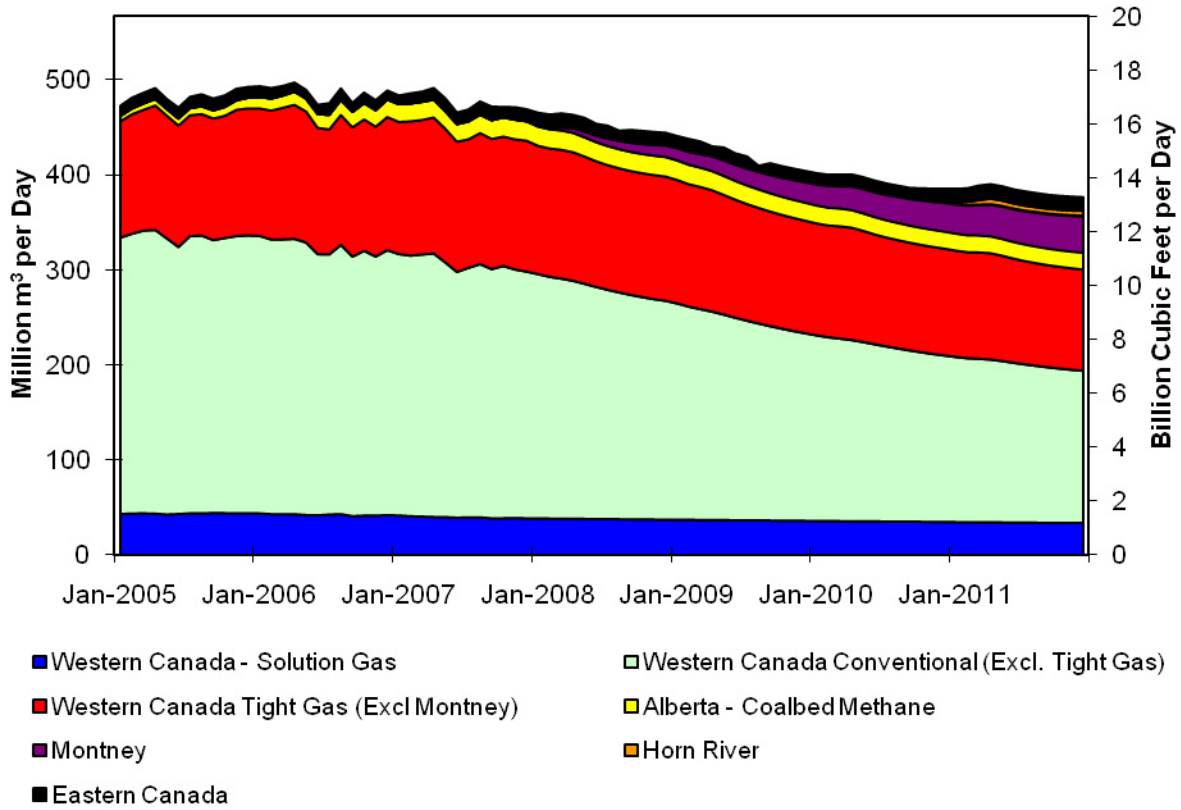


Figure 5: Outlook for Canadian Gas Deliverability – Comparison of Cases

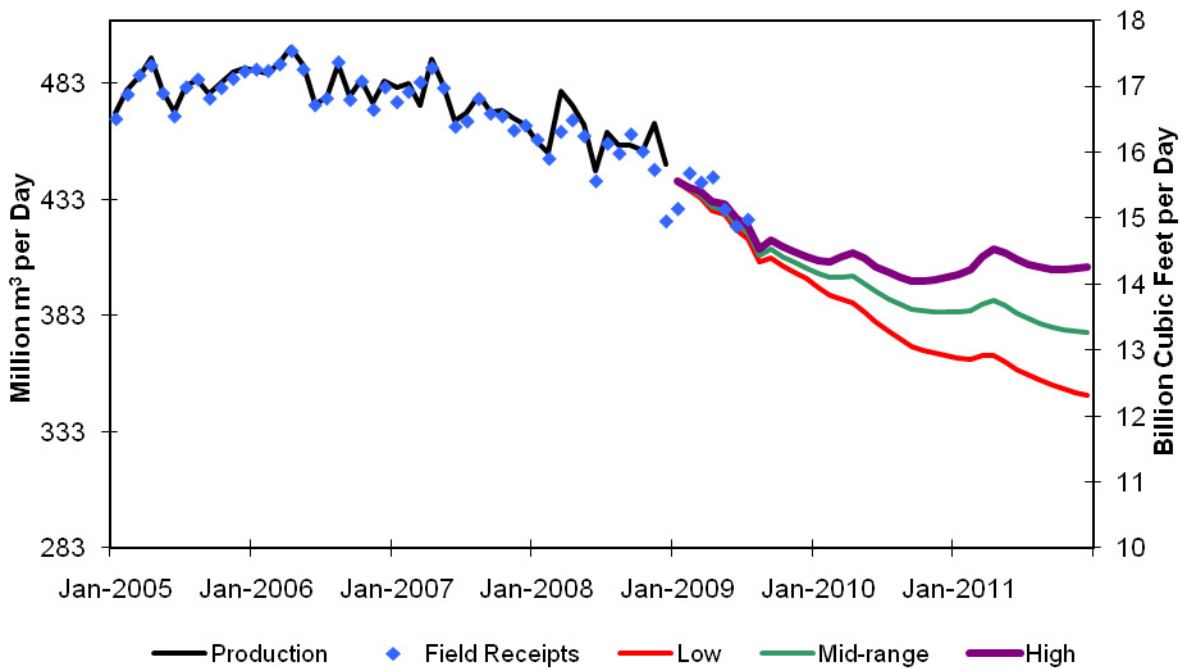


Table 3: Average Annual Canadian Deliverability and Demand

	2008		2009		2010		2011	
	10 ⁶ m ³ /d	Bcf/d	10 ⁶ m ³ /d	Bcf/d	10 ⁶ m ³ /d	Bcf/d	10 ⁶ m ³ /d	Bcf/d
Canadian Deliverability, Mid-range Case	458.7	16.19	420.9	14.86	392.4	13.85	382.2	13.49
Western Canada Demand	138.5	4.89	144.7	5.11	148.1	5.23	151.4	5.34
Eastern Canada Demand	99.1	3.50	99.7	3.52	102.1	3.60	106.8	3.77

Key Differences from Previous Projection

Since the Board's 2008 report, natural gas prices have decreased and drilling activity has slowed. While industry costs have declined, reductions in costs have not kept pace with the fall in prices. Lower production volumes and prices mean less revenue available for reinvestment. These conditions are responsible for lower expectations of natural gas deliverability over the projection period.

Assessment and development of tight gas and shale gas prospects in Canada is expected to continue at modest levels in anticipation of a possible future price increase. Since the overall amount of capital available to the industry for reinvestment is likely to be lower than previously projected, this tight gas and shale gas activity is likely to divert a greater share of funds from other conventional and CBM developments and could accelerate the potential decline of those resources.

Observations

- Canadian natural gas deliverability is expected to continue to decline over the projection period, although the pace of decline is projected to slow in 2011 as the market begins to stabilize.
- Projected Canadian natural gas deliverability will be more than sufficient to serve Canadian markets.
- The level of natural gas demand is dependent on a number of unpredictable factors such as the pace of global economic recovery and weather conditions. A recovery in North American industrial gas demand (space heating, industrial processes and indirectly through increased need for power generation) would accelerate a return to more typical market conditions.
- The relative trends in natural gas deliverability and demand influence the natural gas price. Natural gas drilling activity and deliverability are responsive to price expectations, industry revenues, and input costs.
- The rate of decline in deliverability could slow or reverse if the natural gas market eventually begins to experience a closer balance between demand and available supply that causes prices to move upward.
- In response to lower prices, drilling activity in conventional natural gas and CBM in Canada and the U.S. has slowed to roughly half the levels of previous years. Conventional gas represents a substantial majority of North American supply, and

previous levels of drilling were generally just offsetting natural declines to hold deliverability relatively flat. The reduction in gas drilling makes it unlikely that natural declines can be fully offset and could cause deliverability in North America to gradually erode and eventually begin to put upward pressure on prices.

- Tight gas and shale gas drilling in Northeast B.C., Quebec and the Maritimes could continue at modest levels into 2010 as the industry seeks to gain knowledge and refine its techniques. Activity levels in Northeast B.C. could begin to increase over the 2010 to 2011 winter period should proposed increases in pipeline takeaway capacity be approved and developed.
- Natural gas deliverability in Atlantic Canada is projected to experience natural declines from the offshore Sable project and modest growth from the onshore McCully field before receiving a boost as the offshore Deep Panuke project is expected to ramp up to full operations in 2011. Note that deliverability from the Sable project dips in August 2009 due to a shut down for maintenance.
- Upstream natural gas investment in Canada may be challenged by competition with higher valued crude oil, natural gas basins in other regions with cost advantages such as being closer to specific markets, or regions where more restrictive term limits on drilling rights require accelerated drilling activity and production. Overall industry revenues available for reinvestment may be reduced in 2010 by the expiry of price hedges that were signed when prices were higher.
- Natural gas supply costs in Canada have declined from peak levels in 2008 as a consequence of severely reduced activity levels and lower costs for some inputs. The amount of trained drilling and service personnel and capacity that is permanently lost during the downturn could influence future supply costs should activity levels increase.
- Additional factors may contribute to keeping North American natural gas prices below the \$6 to \$7 per GJ level that is thought by many as being necessary for a recovery in conventional natural gas drilling in Canada. These factors may include higher LNG imports into North America and the possibility of additional U.S. natural gas that is currently shut-in for economic reasons, awaiting increases to pipeline capacity, or where completion and tie-in operations have been delayed to preserve company finances.
- The Board intends to release its next annual outlook for short-term Canadian natural gas deliverability around March, 2010.

Appendix 1

Table A.1: Canadian Natural Gas Deliverability by Area/Resource - HIGH CASE

Area/Resource	Historical		Projected					
	2008		2009		2010		2011	
	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d
00 - Alberta CBM	21.10	745	20.59	727	20.54	725	21.78	769
<i>HSC Portion</i>	17.38	614	17.68	624	17.78	628	18.84	665
<i>Mannville Portion</i>	3.01	106	2.29	81	2.20	78	2.43	86
<i>Other CBM Portion</i>	0.71	25	0.62	22	0.55	19	0.50	18
01 - Southern Alberta	45.96	1,622	42.45	1,499	36.90	1,302	34.74	1,226
<i>Tight Portion</i>	30.51	1,077	28.92	1,021	25.53	901	24.00	847
02 - Southwest Alberta	10.51	371	9.05	319	7.98	282	7.31	258
<i>Tight Portion</i>	2.85	101	2.47	87	2.15	76	1.91	67
03 - Southern Foothills	3.17	112	4.44	157	4.06	143	3.74	132
04 - Eastern Alberta	23.34	824	19.66	694	17.04	602	15.40	544
<i>Tight Portion</i>	0.50	18	0.46	16	0.41	15	0.37	13
05 - Central Alberta	29.76	1,050	27.39	967	24.81	876	23.43	827
<i>Tight Portion</i>	2.12	75	2.03	72	1.90	67	1.85	65
06 - West Central Alberta	48.88	1,726	43.07	1,520	38.99	1,376	36.46	1,287
<i>Tight Portion</i>	12.49	441	11.53	407	10.44	369	9.85	348
07 - Central Foothills	32.37	1,143	29.10	1,027	26.28	928	24.50	865
<i>Tight Portion</i>	1.67	59	1.05	37	0.79	28	0.65	23
08 - Kaybob	24.85	877	21.44	757	19.27	680	18.07	638
<i>Tight Portion</i>	7.53	266	6.79	240	6.04	213	5.57	196
09 - Alberta Deep Basin	60.73	2,144	57.11	2,016	57.19	2,019	57.55	2,031
<i>Tight Portion</i>	47.17	1,665	46.22	1,631	47.11	1,663	47.87	1,690
10 - Northeast Alberta	17.14	605	13.73	485	11.70	413	10.09	356
11 - Peace River	20.23	714	17.69	625	15.71	555	14.64	517
12 - Northwest Alberta	15.10	533	12.63	446	11.22	396	10.15	358
13 - BC Deep Basin	11.21	396	10.40	367	10.96	387	11.94	421
<i>Montney Portion</i>	0.58	21	1.77	62	2.42	85	3.11	110
<i>Other Tight Portion</i>	7.53	266	4.22	149	3.67	129	3.33	118
14 - Fort St. John	29.77	1,051	39.72	1,402	46.28	1,634	53.45	1,887
<i>Montney Portion</i>	3.84	136	15.67	553	24.32	859	32.45	1,145
15 - Northeast BC	18.69	660	18.63	658	20.42	721	24.06	849
<i>Horn River Shale Portion</i>	0.54	19	1.93	68	4.15	146	7.48	264
<i>Tight Portion</i>	11.47	405	10.56	373	10.66	376	11.34	400
16 - BC Foothills	15.38	543	10.18	359	9.39	331	9.09	321
17 - Southwest Saskatchewan	9.97	352	9.21	325	8.20	289	7.60	268
<i>Tight Portion</i>	9.39	332	8.61	304	7.62	269	7.04	249
18 - West Saskatchewan	5.49	194	4.70	166	4.11	145	3.70	131
19 - East Saskatchewan	1.46	52	1.22	43	1.18	42	1.14	40
22 - Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
Total Conventional	424.11	14,971	390.34	13,779	367.84	12,985	359.81	12,701
Total Tight Portion	137.66	4,859	140.30	4,953	143.07	5,050	149.32	5,271
Total CBM	21.10	745	20.59	727	20.54	725	21.78	769
Total Shale	0.54	19	1.93	68	4.15	146	7.48	264
Total WCSB	445.74	15,735	412.86	14,574	392.52	13,856	389.06	13,734
British Columbia	75.05	2,649	78.93	2,786	87.04	3,073	98.54	3,478
Alberta	353.13	12,466	318.35	11,238	291.68	10,296	277.86	9,808
Saskatchewan	16.92	597	15.13	534	13.48	476	12.44	439
Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
Atlantic Canada	12.47	440	10.21	360	10.03	354	15.29	540
Other Canada	0.53	19	0.63	22	0.62	22	0.88	31
Total Canada	458.75	16,194	423.70	14,956	403.17	14,232	405.23	14,305

Table A.2: Canadian Natural Gas Deliverability by Area/Resource - LOW CASE

Area/Resource		Historical		Projected					
		2008		2009		2010		2011	
		10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d	10 ⁶ m ³ /d	MMcf/d
00 -	Alberta CBM	21.10	745	19.98	705	18.23	643	17.13	605
	<i>HSC Portion</i>	17.38	614	17.14	605	15.77	557	14.86	525
	<i>Mannville Portion</i>	3.01	106	2.24	79	1.94	68	1.81	64
	<i>Other CBM Portion</i>	0.71	25	0.61	21	0.52	18	0.46	16
01 -	Southern Alberta	45.96	1,622	42.45	1,499	36.90	1,302	33.46	1,181
	<i>Tight Portion</i>	30.51	1,077	28.92	1,021	25.53	901	23.28	822
02 -	Southwest Alberta	10.51	371	9.03	319	7.78	275	6.84	241
	<i>Tight Portion</i>	2.85	101	2.46	87	2.13	75	1.86	66
03 -	Southern Foothills	3.17	112	4.44	157	4.04	142	3.69	130
04 -	Eastern Alberta	23.34	824	19.66	694	17.04	602	15.19	536
	<i>Tight Portion</i>	0.50	18	0.46	16	0.41	15	0.37	13
05 -	Central Alberta	29.76	1,050	27.35	966	24.22	855	21.95	775
	<i>Tight Portion</i>	2.12	75	2.02	71	1.83	65	1.68	59
06 -	West Central Alberta	48.88	1,726	43.02	1,519	38.20	1,348	34.51	1,218
	<i>Tight Portion</i>	12.49	441	11.51	406	10.18	359	9.18	324
07 -	Central Foothills	32.37	1,143	29.06	1,026	25.72	908	23.07	814
	<i>Tight Portion</i>	1.67	59	1.05	37	0.78	28	0.62	22
08 -	Kaybob	24.85	877	21.41	756	18.69	660	16.70	589
	<i>Tight Portion</i>	7.53	266	6.78	239	5.89	208	5.20	184
09 -	Alberta Deep Basin	60.73	2,144	56.80	2,005	51.77	1,828	47.34	1,671
	<i>Tight Portion</i>	47.17	1,665	45.93	1,621	41.98	1,482	38.39	1,355
10 -	Northeast Alberta	17.14	605	13.72	484	11.59	409	9.86	348
11 -	Peace River	20.23	714	17.67	624	15.29	540	13.61	481
12 -	Northwest Alberta	15.10	533	12.62	446	11.10	392	9.91	350
13 -	BC Deep Basin	11.21	396	10.08	356	9.92	350	10.12	357
	<i>Montney Portion</i>	0.58	21	1.49	53	2.02	71	2.69	95
	<i>Other Tight Portion</i>	7.53	266	4.47	158	3.58	126	2.69	95
14 -	Fort St. John	29.77	1,051	37.32	1,317	39.92	1,409	43.58	1,538
	<i>Montney Portion</i>	3.84	136	13.32	470	18.89	667	24.64	870
15 -	Northeast BC	18.69	660	17.68	624	17.18	607	17.80	628
	<i>Horn River Shale Portion</i>	0.54	19	1.05	37	2.09	74	3.76	133
	<i>Tight Portion</i>	11.47	405	10.50	371	9.68	342	9.22	325
16 -	BC Foothills	15.38	543	10.15	358	8.88	314	7.82	276
17 -	Southwest Saskatchewan	9.97	352	9.20	325	8.02	283	7.10	251
	<i>Tight Portion</i>	9.39	332	8.60	304	7.44	263	6.54	231
18 -	West Saskatchewan	5.49	194	4.70	166	4.06	143	3.58	126
19 -	East Saskatchewan	1.46	52	1.22	43	1.18	42	1.14	40
22 -	Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
Total Conventional		424.11	14,971	387.00	13,661	349.71	12,345	323.73	11,428
Total Tight Portion		137.66	4,859	137.53	4,855	130.34	4,601	126.37	4,461
Total CBM		21.10	745	19.98	705	18.23	643	17.13	605
Total Shale		0.54	19	1.05	37	2.09	74	3.76	133
Total WCSB		445.74	15,735	408.03	14,403	370.03	13,062	344.63	12,165
	British Columbia	75.05	2,649	75.23	2,656	75.90	2,679	79.31	2,800
	Alberta	353.13	12,466	317.23	11,198	280.55	9,903	253.27	8,940
	Saskatchewan	16.92	597	15.11	533	13.26	468	11.82	417
	Yukon and Northwest Territories	0.64	23	0.45	16	0.32	11	0.23	8
	Atlantic Canada	12.47	440	9.59	339	8.62	304	13.16	464
	Other Canada	0.53	19	0.63	22	0.61	22	0.59	21
Total Canada		458.75	16,194	418.25	14,764	379.26	13,388	358.38	12,651