

Schedule No. 1  
**Schematic Representation of Ultimate Potential Terminology**

Terminology		Relative Level of Uncertainty
Ultimate Potential	Undiscovered Resources	High
	Discovered Resources	<div> <div>Medium</div> <div>↕</div> <div>None</div> </div>
	Reserves	
	Cumulative Production	

Source: NEB, "Canada's Conventional Natural Gas Resources, A Status Report" (2004, p7)

Schedule No. 2

**Comparison of Estimates of Ultimate Potential by Area (TCF)**

Area	NEB 1994	NEB 1999 Case 1	NEB 1999 Case 2	NEB 2003 Supply Push	NEB 2003 Techo-Vert	NEB 2004	EUB/NEB 2005	NEB/BC 2006	CGPC 1997	CGPC 2001
<b>WCSB Conventional</b>										
Alberta	195	270	214	206	217	207	223	223	193	203
British Columbia	51	50	37	33	50	51	51	52	38	34
Saskatchewan	8	9	9	9	9	9	9	9	6	9
Southern Territories	1	6	4	2	2	7	7	7	7	2
<b>WCSB Conventional Total</b>	<b>255</b>	<b>335</b>	<b>264</b>	<b>250</b>	<b>278</b>	<b>274</b>	<b>290</b>	<b>291</b>	<b>263*</b>	<b>249</b>
<b>Other Conventional</b>										
Ontario/Gulf St. Lawrence	1	2	2	3	3	3	3	3	3	3
Mackenzie/Beaufort**	79	75	75	75	75	70	NA	70	59	35
Scotian Shelf	18	18	18	23	23	23	NA	23	13	11
Other Regions	230	228	228	139	139	131	NA	131	35	43
<b>Other Conventional Total</b>	<b>328</b>	<b>323</b>	<b>323</b>	<b>240</b>	<b>240</b>	<b>227</b>	<b>227</b>	<b>227</b>	<b>110</b>	<b>93</b>
<b>Total Conventional</b>	<b>583</b>	<b>658</b>	<b>587</b>	<b>490</b>	<b>518</b>	<b>501</b>	<b>517</b>	<b>517</b>	<b>373</b>	<b>342</b>
<b>WCSB Unconventional</b>	NA	75	75	60	80	NA	NA	NA	NA	NA
<b>Total Canada</b>	<b>583</b>	<b>733</b>	<b>662</b>	<b>550</b>	<b>598</b>	<b>501</b>	<b>517</b>	<b>517</b>	<b>373</b>	<b>342 ;</b>

\*Note: The CGPC 1997 WCSB Conventional Total includes 25 TCF of gas in conceptual plays that has not been allocated to individual regions.

\*\* Includes Yukon and NWT outside of WCSB.

Sources:

NEB 1994: Canadian Energy--Supply and Demand 1993 - 2010; Appendix to Technical Report, (Table A6-17).  
NEB 1999: Canadian Energy--Supply and Demand to 2025, (Table 5.1, p. 43).  
NEB 2003: Canada's Energy Future, Scenarios for Supply and Demand to 2025 (2003, Table A6.1).  
NEB 2004: Canada's Conventional Natural Gas Resources, A Status Report, (April 2004, p. 4).  
EUB/NEB 2005: Alberta's Ultimate Potential for Conventional Natural Gas (March 2005, p. 13).  
NEB/BC 2006: Northeast British Columbia's ultimate Potential for Conventional Natural Gas (March 2006, p. 14).  
CGPC 2001: Canadian Gas Potential Committee, Natural Gas Potential in Canada 1997 (Figure 1.2 and 1.3).  
CGPC 2001: Canadian Gas Potential Committee, Natural Gas Potential in Canada 2001 (Ch. 1, p. 1 & 10).  
CGPC 2005: Canadian Gas Potential Committee, Natural Gas Potential in Canada 2005 (4 Volumes).

Schedule No. 3

**Remaining Conventional Ultimate Resource Potential (TCF)**

Region	Ultimate Resource Potential	Cumulative Prod. to Dec. 31, 2005	Remaining Potential
<b>WCSB Conventional</b>	<b>291</b>	<b>150</b>	<b>141</b>
Alberta	223	124	99
British Columbia	52	20	32
Saskatchewan	9	6	3
Southern Territories	7	1	6
<b>Other Producing</b>	<b>14</b>	<b>2</b>	<b>12</b>
Ontario	3	1	2
Scotian Shelf	11	1	10
<b>Frontier</b>	<b>79</b>	<b>0</b>	<b>79</b>
Mackenzie/Beaufort	35	0	35
Other Frontier	44	0	44
<b>Total</b>	<b>384</b>	<b>152</b>	<b>232</b>

Schedule No. 4

**Estimates of Coalbed Methane for the WCSB**

Agency/organization	Year	Gas in place		Marketable gas	
		TCF		TCF	
Alberta EUB	1992	250+			
TCPL/Sproule	1998	214			
National Petroleum Council	1992			129	
CGPC	1997	304-543		135-261	
NEB	1997			75	
CGPC*	2005	528		11-45	

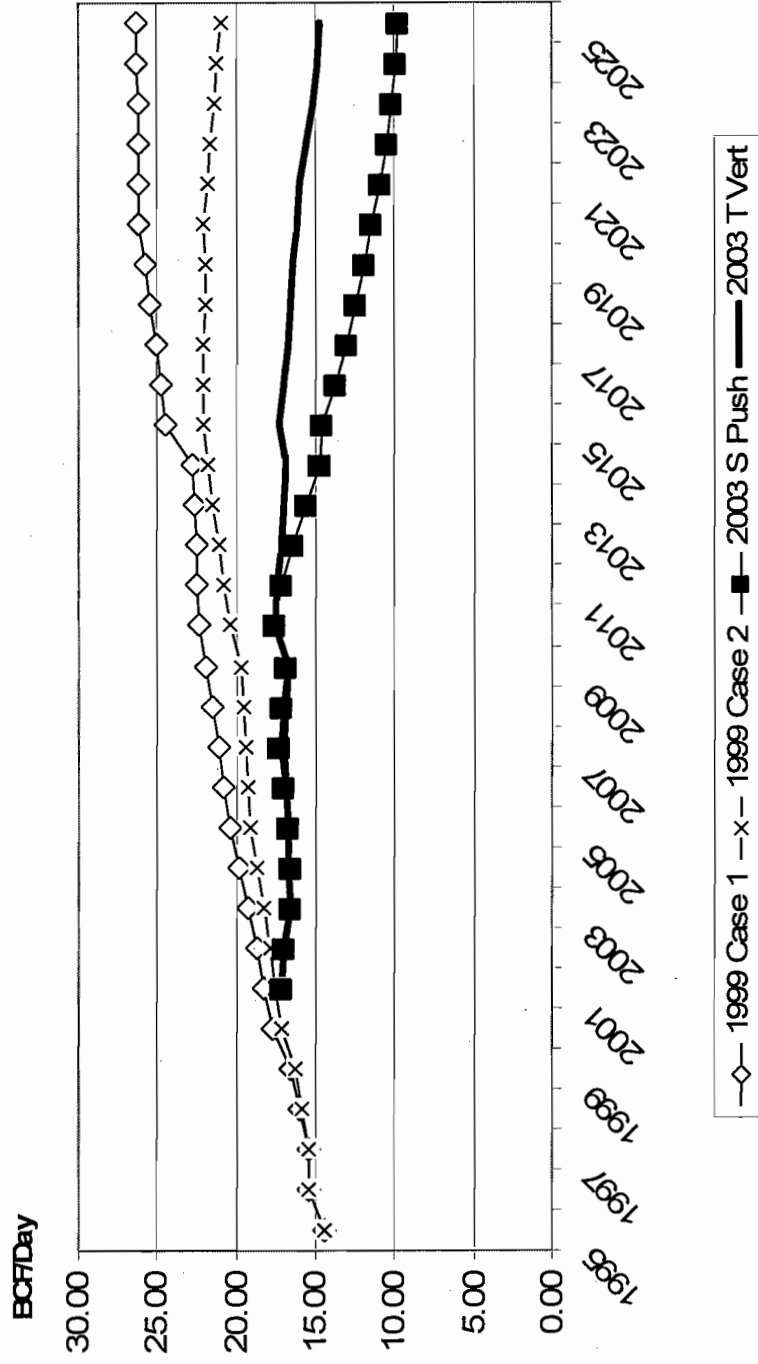
\* The CGPC 2005 estimate of gas in place is for all known coal deposits in Canada but the estimated marketable gas is for the WCSB only  
Source: NEB, Canadian Energy Supply and Demand to 2025 (1999, p. 42).

NEB, Canadian Energy Supply and Demand to 2025 (1999, p. 42).

CGPC 2005: Natural Gas Potential in Canada 2005 (4 Volumes).

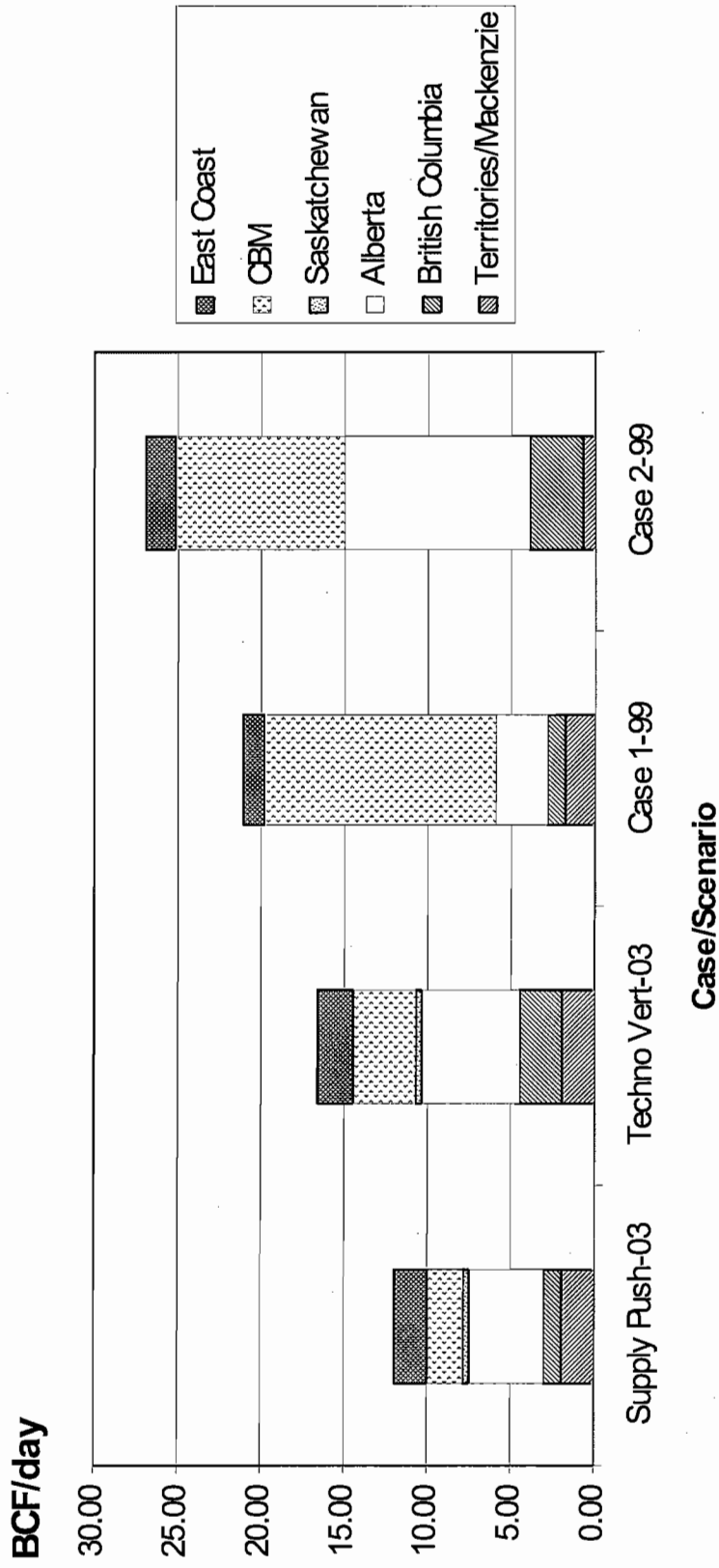
Schedule No. 5

**Comparison of NEB Canadian Production Forecasts/Scenarios  
1999 and 2003**



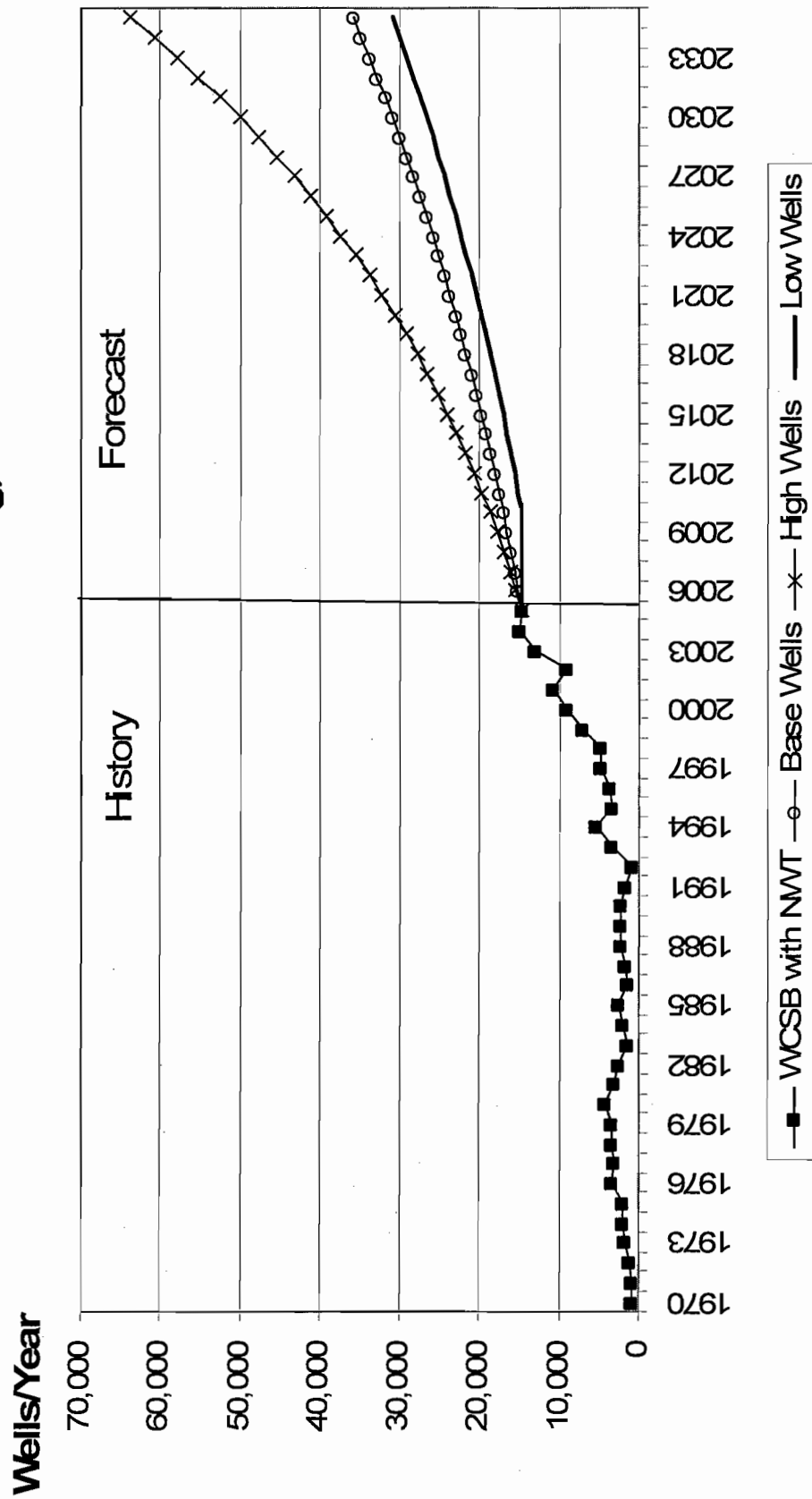
Schedule No. 6

# Contributions to NEB Gas Production Forecasts for 2025



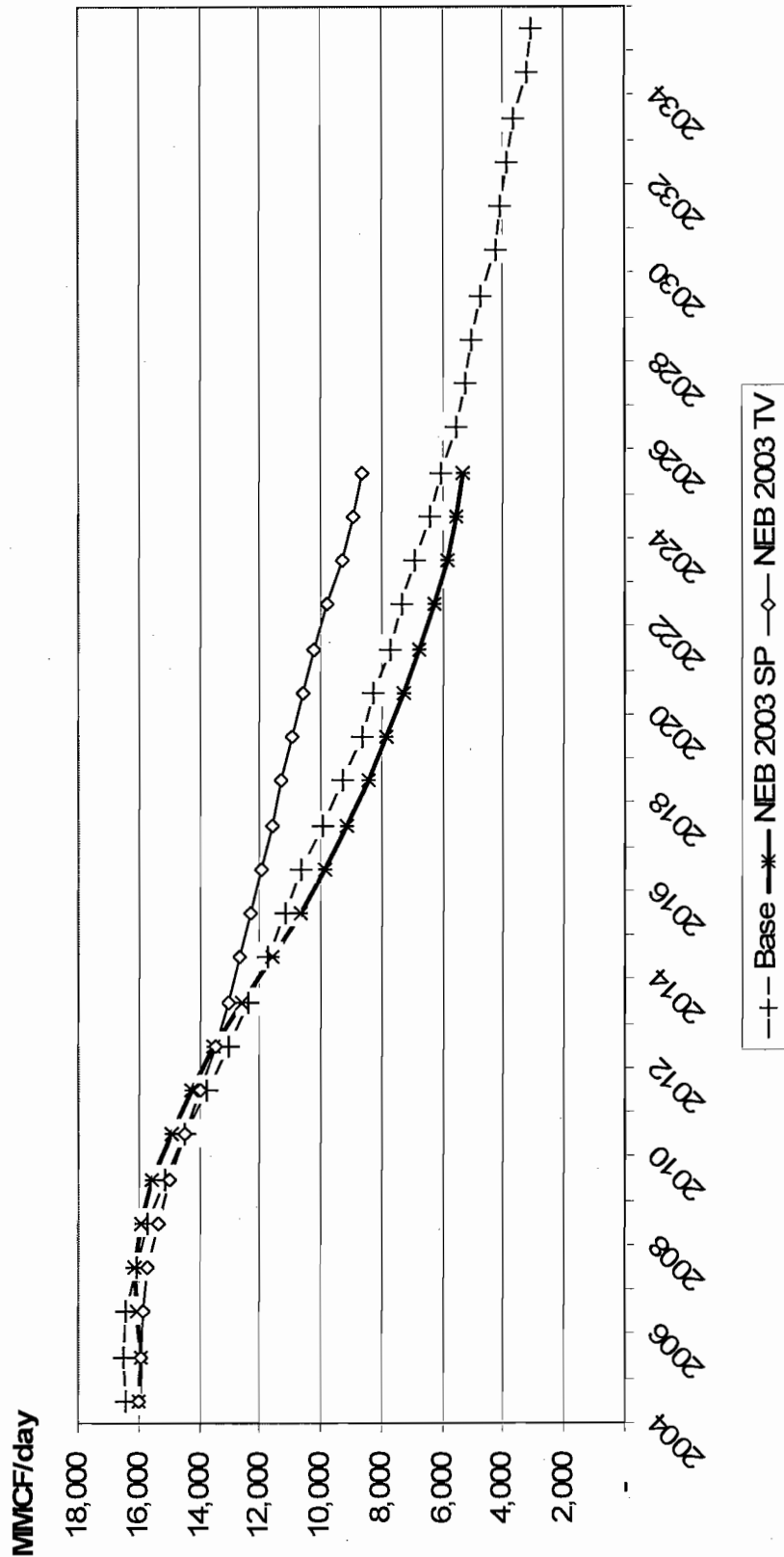
Schedule No. 7

# Historic and Forecast Gas Well Drilling, WCSB



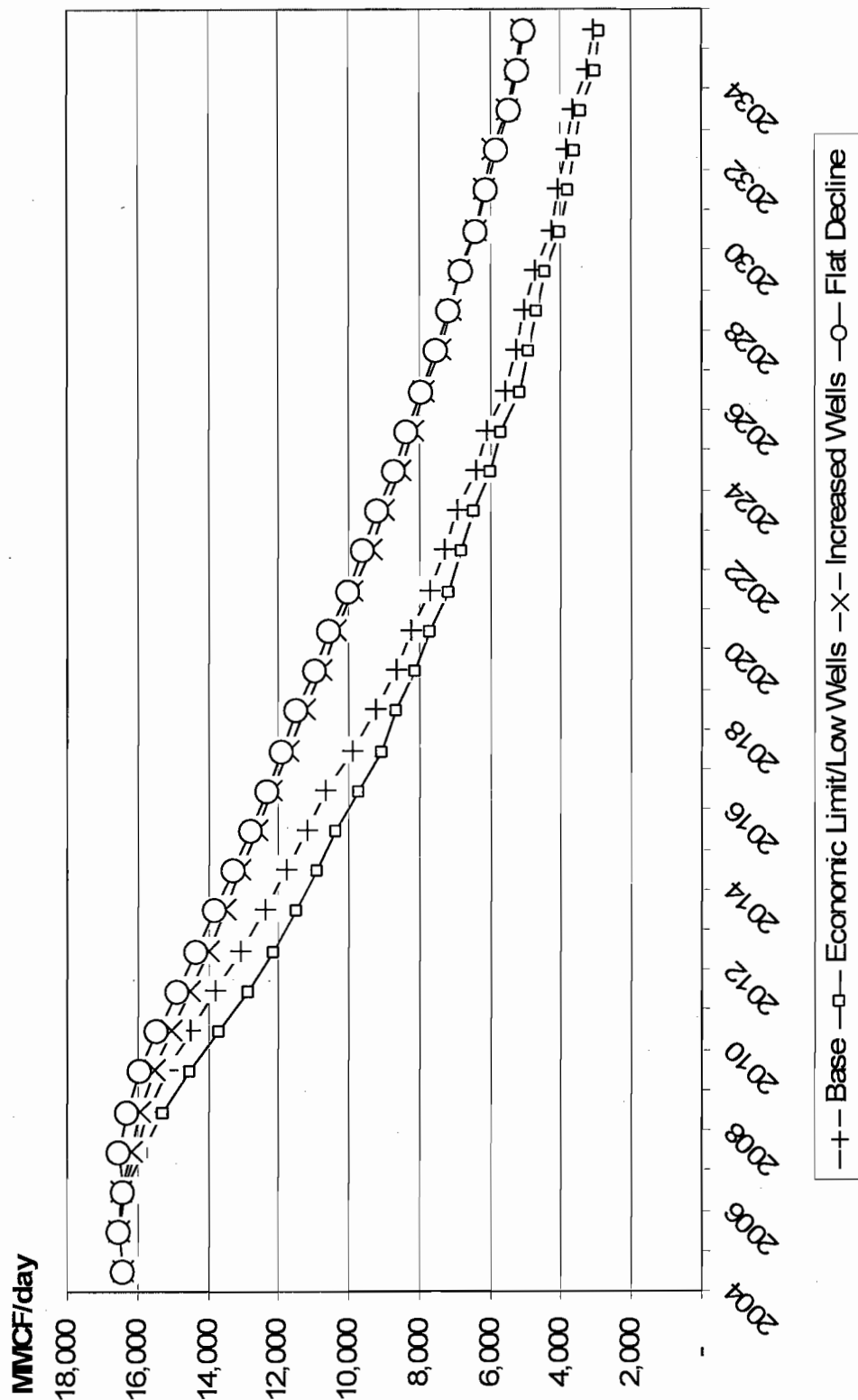
Schedule No. 8

WCSB Base Conventional Production and NEB 2003 Forecasts



Schedule No. 9

# Comparison of WCSB Conventional Production Scenarios



## Schedule No. 10

**WCSB Conventional Gas Production Forecasts and Remaining Undiscovered Potential**  
(MMCF/DAY)

Year	Base	Economic Limit/Low Wells	Flat Decline	Increased Wells	NEB 2003 SP	NEB 2003 TV	NEB 1999 Case 1	NEB 1999 Case 2
2004	16,404	16,404	16,404	16,404	15,987	15,987	19,211	18,027
2005	16,520	16,520	16,520	16,520	15,944	15,944	19,726	18,384
2006	16,428	16,366	16,428	16,469	16,041	15,851	20,022	18,438
2007	16,049	15,848	16,507	16,185	16,120	15,677	20,318	18,493
2008	15,675	15,266	16,312	15,913	15,927	15,323	20,614	18,548
2009	15,150	14,521	15,928	15,516	15,543	14,943	20,910	18,603
2010	14,496	13,680	15,426	15,029	14,897	14,451	21,205	18,658
2011	13,782	12,851	14,864	14,503	14,280	13,977	21,288	18,186
2012	13,058	12,116	14,312	13,996	13,513	13,483	21,370	17,715
2013	12,381	11,466	13,790	13,519	12,608	13,035	21,452	17,244
2014	11,759	10,877	13,291	13,060	11,620	12,690	21,534	16,773
2015	11,178	10,334	12,810	12,613	10,669	12,317	21,616	16,301
2016	10,632	9,709	12,345	12,175	9,894	11,924	21,293	15,008
2017	9,905	9,077	11,896	11,747	9,149	11,572	20,970	13,715
2018	9,257	8,624	11,461	11,265	8,402	11,288	20,647	12,422
2019	8,662	8,089	10,983	10,752	7,819	10,925	20,323	11,129
2020	8,245	7,689	10,528	10,335	7,307	10,562	20,000	9,836
2021	7,692	7,173	10,026	9,859	6,736	10,259	19,008	8,751
2022	7,312	6,807	9,601	9,376	6,244	9,780	18,016	7,666
2023	6,943	6,455	9,186	8,999	5,855	9,297	17,025	6,581
2024	6,413	5,964	8,708	8,522	5,559	8,949	16,033	5,496
2025	6,083	5,655	8,320	8,179	5,329	8,623	15,041	4,411
2026	5,550	5,173	7,948	7,851				
2027	5,271	4,914	7,499	7,403				
2028	5,010	4,672	7,160	7,114				
2029	4,764	4,443	6,834	6,840				
2030	4,284	4,011	6,410	6,410				
2031	4,076	3,817	6,114	6,165				
2032	3,878	3,633	5,832	5,931				
2033	3,690	3,458	5,437	5,493				
2034	3,239	3,038	5,185	5,287				
2035	3,104	2,894	5,028	5,089				
Total (TCF)	108.4	102.8	127.4	125.8	89.6	101.1	159.7	113.3
2035 production (TCF)	1.13	1.06	1.84	1.86	1.95	3.15	5.49	1.61
2035 reserves @ R/P=5	5.66	5.28	9.18	9.29	9.73	15.74	27.45	8.05
Total discovered	114.03	108.05	136.59	135.04	99.31	116.79	187.18	121.34
Undiscovered Potential	32.97	37.95	9.41	10.96	46.69	29.21	(41.18)	24.66

Schedule No. 11

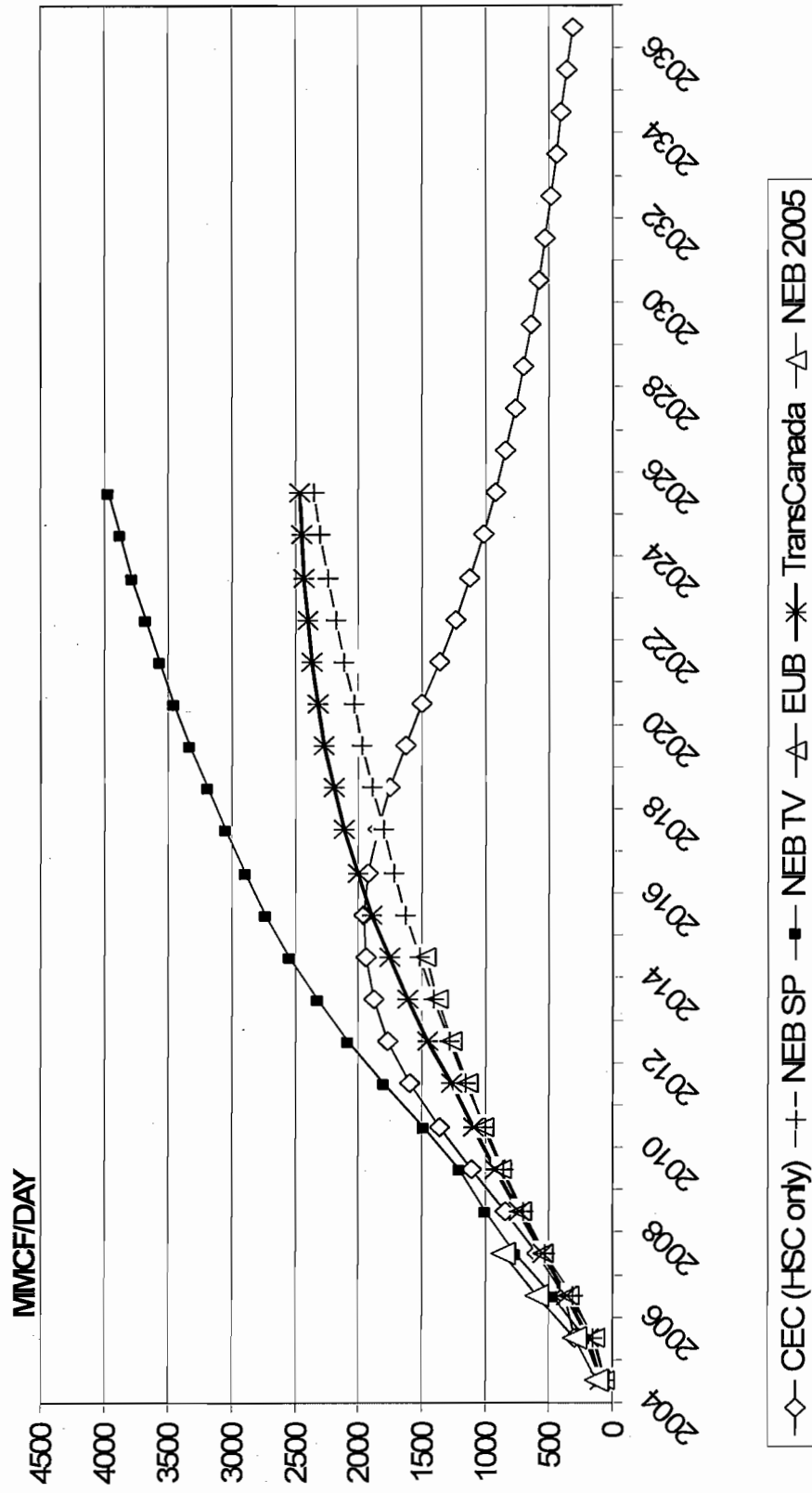
**Characteristics of Coalbed Methane Resources in Alberta**

Formation	Coal Seam	Gas in Place (TCF)	Net Coal Thickness	BCF/Sec	Comments
Scollard	Ardley	53	5-20	2-10	Limited permeability but seems to be variable; two small areas with favorable potential focus of exploration
Horseshoe Canyon	Carbon Thompson	14	2-5	0.5-1.5	Discontinuous, thin, little interest
Horseshoe Canyon	Daly-Weaver	14			Discontinuous, variable thickness, little interest
Horseshoe Canyon	Drumheller	38	2-18	2-6	Main CBM target to date, Large area with > 4m thickness and some over 10 m thick; discontinuous, under-pressured, moderate permeability; low water
Belly River Group	Lethbridge	18	2-4	0.5-1.25	Shallow, low pressure, thin, discontinuous, a few areas of interest with 3-4 m thickness but less than 0.75 BCF/sec; limited potential
Belly River Group	Taber	20	2-4	0.5-1.25	Thin, shallow, limited area with >2m thickness
Belly River Group	MacKay	28	2-4	< 0.5	Discontinuous, small areas with > 3m thickness but < 0.75 BCF/section
Mannville Group	Mannville	320-400	4-12		Several large areas with > 4m thickness and > 8 m common, areas shallower than 1,500 m attractive targets; areas with 4 m at least 5 BCF/section and areas with 8 m up to 10 BCF/sec. Little public data but seems to have low permeability but variable over small distances in same seam; may have potential in pockets with higher permeability; produces lots of saline water.

Source: A. Beaton, Production potential of coalbed methane resources in Alberta; Alberta Energy and Utilities Board, EUB/AGS Earth Sciences Report 2003-03.

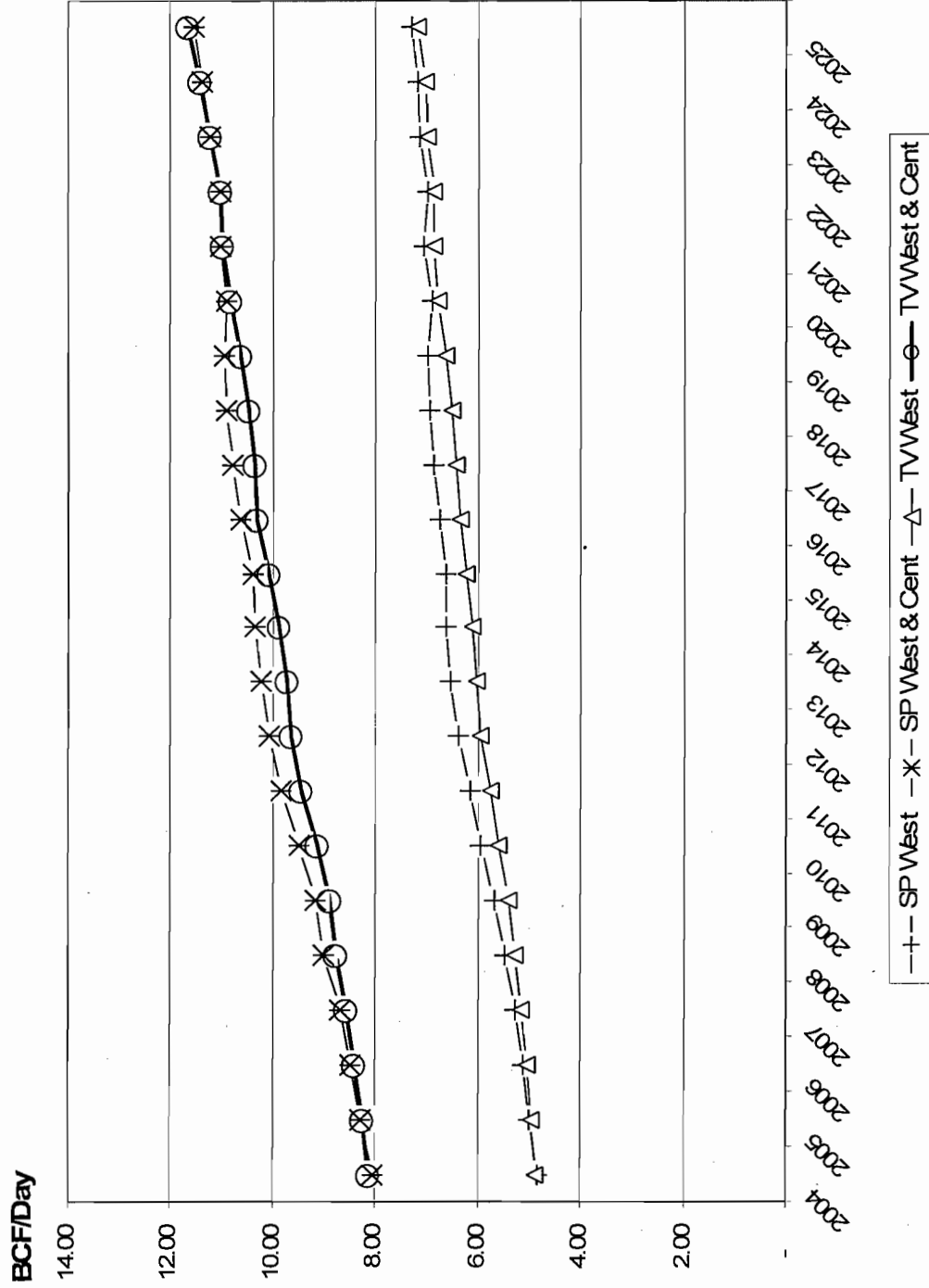
Schedule No. 12

# Comparison of WCSB CBM Forecasts



Schedule No. 13

NEB Supply Push and Techo Vert Demand Forecasts For Western and Central Canada



Schedule No. 14

Comparison of NEB Gas Demand Forecast by Province/Region to Statistics Canada Actual Data, 2000-2004

		BC & Territories		Saskatchewan		Manitoba		Ontario		Quebec		Atlantic		Canada		WCSB		Canada		Other CDA	
		T Btu	Alberta	T Btu	ewan	T Btu		T Btu		T Btu		T Btu		T Btu		T Btu	BCF/d	T Btu	BCF/d	T Btu	BCF/d
NEB Supply Push Forecast																					
NEB	2000	342.75	975.03	211.43	93.32	1038.14	231.93	0.00	2892.61	4.45	7.92	3.48									
NEB	2001	331.09	1028.58	198.41	97.01	971.44	230.91	18.86	2876.31	4.53	7.88	3.35									
NEB	2002	327.25	991.69	196.37	97.18	953.16	226.32	19.38	2811.34	4.42	7.70	3.28									
NEB	2003	338.21	1049.85	197.82	97.95	953.14	227.41	20.43	2884.81	4.61	7.90	3.29									
NEB	2004	342.43	1125.88	197.89	98.87	950.86	227.79	21.92	2965.62	4.84	8.12	3.29									
Actuals																					
CEC (see below)	2001	343.98	1077.04	191.80	84.11	968.68	194.02	6.22	2865.86	4.65	7.85	3.20									
CEC	2002	297.17	1095.32	199.25	94.58	1023.16	217.06	38.78	2965.32	4.62	8.12	3.50									
CEC	2003	274.43	1160.14	212.99	88.54	1056.67	209.89	25.78	3028.43	4.76	8.30	3.54									
CEC	2004	283.16	1204.13	205.83	88.61	1013.18	213.04	27.55	3035.49	4.88	8.32	3.43									
Ave Difference CEC-NEB		-35.06	85.15	4.85	-8.79	58.27	-19.61	4.44	89.26	0.13	0.24	0.12									
NEB Techno Vert Forecast																					
NEB	2001	335.13	1035.62	200.77	96.41	977.63	230.52	19.39	2895.47	4.57	7.93	3.36									
NEB	2002	332.37	1004.50	198.66	96.62	961.92	228.10	20.09	2842.27	4.47	7.79	3.32									
NEB	2003	338.12	1065.87	200.35	97.00	961.22	230.94	21.38	2914.88	4.66	7.99	3.32									
NEB	2004	340.90	1139.37	200.17	97.39	956.65	232.80	23.15	2990.44	4.87	8.19	3.32									
Actuals																					
CEC	2001	343.98	1077.04	191.80	84.11	968.68	194.02	6.22	2865.86	4.65	7.85	3.20									
CEC	2002	297.17	1095.32	199.25	94.58	1023.16	217.06	38.78	2965.32	4.62	8.12	3.50									
CEC	2003	274.43	1160.14	212.99	88.54	1056.67	209.89	25.78	3028.43	4.76	8.30	3.54									
CEC	2004	283.16	1204.13	205.83	88.61	1013.18	213.04	27.55	3035.49	4.88	8.32	3.43									
Ave Difference CEC-NEB		-36.95	72.81	2.48	-7.89	51.07	-22.09	3.58	63.01	0.08	0.17	0.09									

Sources:

NEB, "Canada's Energy Future: Scenarios for Supply and Demand to 2025", (2003, Appendix A.3)

Actuals are based on an analysis of data from Statistics Canada, Alberta Energy Utilities Board, Provincial Agencies, and discussions with Statistics Canada, NEB and AEUB staff as well as participants in the industry.

Data downloaded from Statistics Canada's CANSIM Energy databases

<http://cansim2.statcan.ca/cgi-win/cnsmcgi.exe#Here>

EUB ST98-2005 Appendix

Schedule No. 15  
**Analysis of Incremental Gas Requirements to Retire Ontario Coal-Fired Electric Generation**

	Incremental Capacity MW	Capacity MW	Assumed Utilization Rate %	Electricity Generated TWh	SP Heat Rate PJ/TWh	TV Heat Rate PJ/TWh	Gas Required Heate Rate PJ	Gas Required TV Heate Rate PJ	NEB SP Gas Requirement PJ	NEB TV Gas Requirement PJ	SP Incremental Requirement PJ	TV Incremental Requirement PJ
2005		4,976	25	11	8.3	8.3	90.6	90.71	50.41	56.86	40.17	33.85
2006		117	26	12	8.3	8.3	96.4	96.25	47.92	46.70	48.47	49.55
2007		155	27	12	8.0	8.3	99.0	102.74	50.84	43.77	48.18	58.97
2008		3,720	22	17	8.0	7.7	138.9	132.93	58.01	54.40	80.85	78.53
2009		794	22	19	7.8	7.7	146.9	144.56	64.27	54.71	82.59	89.85
2010		1,040	22	21	7.9	7.3	164.2	152.61	72.74	64.93	91.46	87.68
2011		200	22	21	7.8	7.4	165.6	156.99	87.25	71.74	78.31	85.25
2012		40	22	21	7.8	7.2	166.9	152.27	91.01	80.59	75.86	71.68
2013		40	22	21	7.5	6.8	160.4	146.17	77.63	64.89	82.81	81.28
2014		60	22	21	7.5	6.7	161.8	142.94	79.87	72.74	81.91	70.20
2015		11,142	22	21	7.6	6.6	162.6	141.99	83.82	67.41	78.83	74.58
2016	250	11,392	22	22	7.7	6.7	169.5	146.17	99.14	73.37	70.35	72.80
2017	330	11,722	22	23	7.9	6.6	179.4	149.97	127.57	70.90	51.80	79.07
2018	250	11,972	22	23	8.0	6.7	184.6	153.51	136.65	74.07	47.91	79.44
2019	350	12,322	22	24	8.0	6.6	190.1	157.57	138.61	71.57	51.52	86.00
2020		12,322	22	24	7.9	6.6	186.9	157.34	119.66	67.59	67.22	89.75
2021		12,322	22	24	7.7	6.6	183.0	157.27	100.29	67.56	82.75	89.71
2022		12,322	22	24	7.8	6.6	185.0	157.22	110.07	70.24	74.93	86.98
2023		12,322	22	24	7.9	6.6	187.0	157.27	121.26	73.09	65.78	84.18
2024	140	12,462	22	24	8.0	6.7	191.2	159.73	133.26	81.75	57.95	77.98
2025		12,462	22	24	8.0	6.7	191.9	161.09	137.97	90.15	53.91	70.94

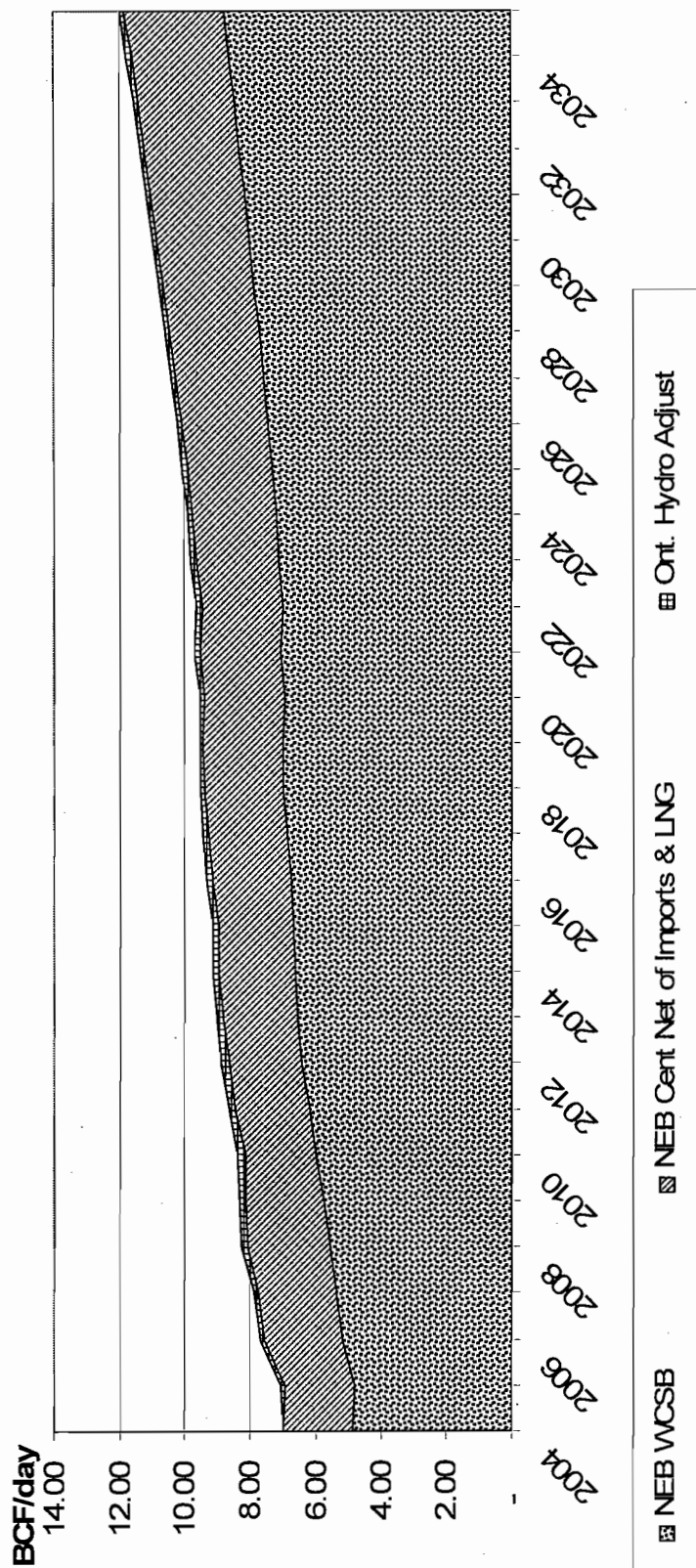
Source:

Ontario Power Authority, "Supply Mix Advice", (December 9, 2005, pp. 6 and 258)  
[http://powerauthority.on.ca/Storage/18/1338\\_Part\\_1-1\\_Supply\\_Mix\\_Summary.pdf](http://powerauthority.on.ca/Storage/18/1338_Part_1-1_Supply_Mix_Summary.pdf)

NEB, "Canada's Energy future: Scenarios for Supply and Demand to 2025", (2003, Appendix Tables A3.4, A3.14, A4.1.6, A4.2.6, and A4.3.6).  
[http://www.neb-one.gc.ca/energy/SupplyDemand/2003/SupplyDemandAppendices2003\\_e.pdf](http://www.neb-one.gc.ca/energy/SupplyDemand/2003/SupplyDemandAppendices2003_e.pdf)

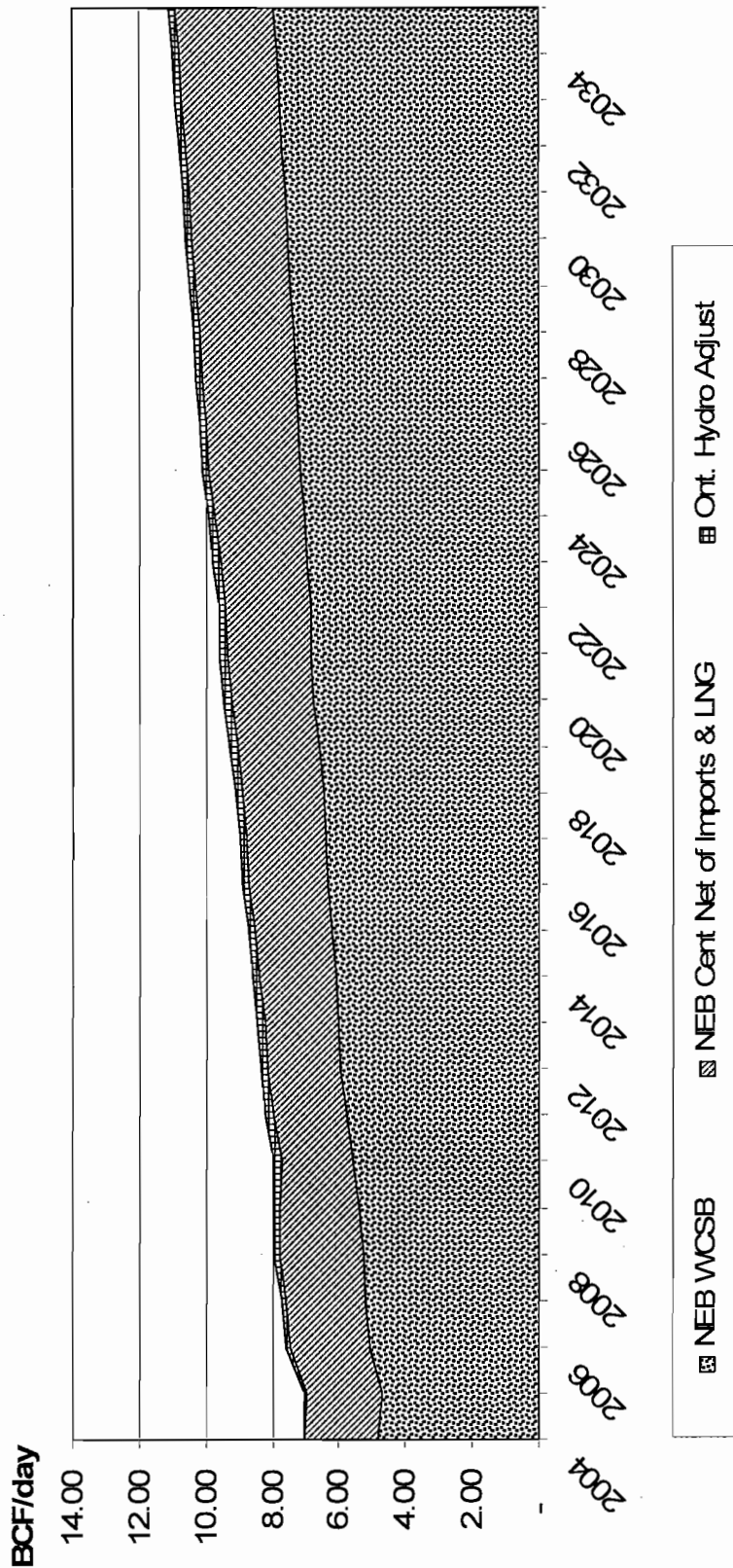
Schedule No. 16

**NEB Supply Push Demand with Adjustments for Base and Coal Retirement  
High Demand Case**



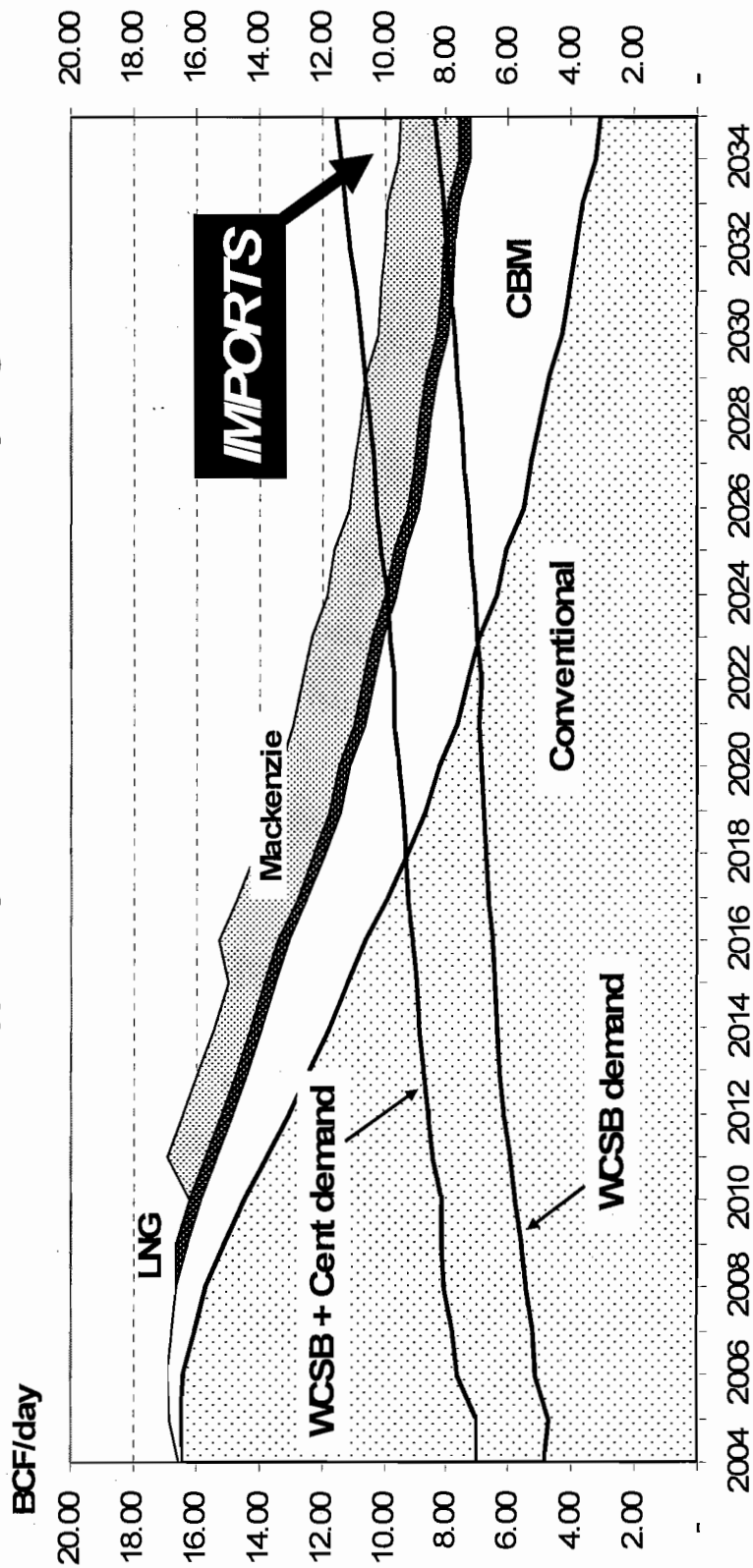
Schedule No. 17

**NEB Techno Vert Demand with Adjustments for Base and Coal Retirement  
Low Demand Case**

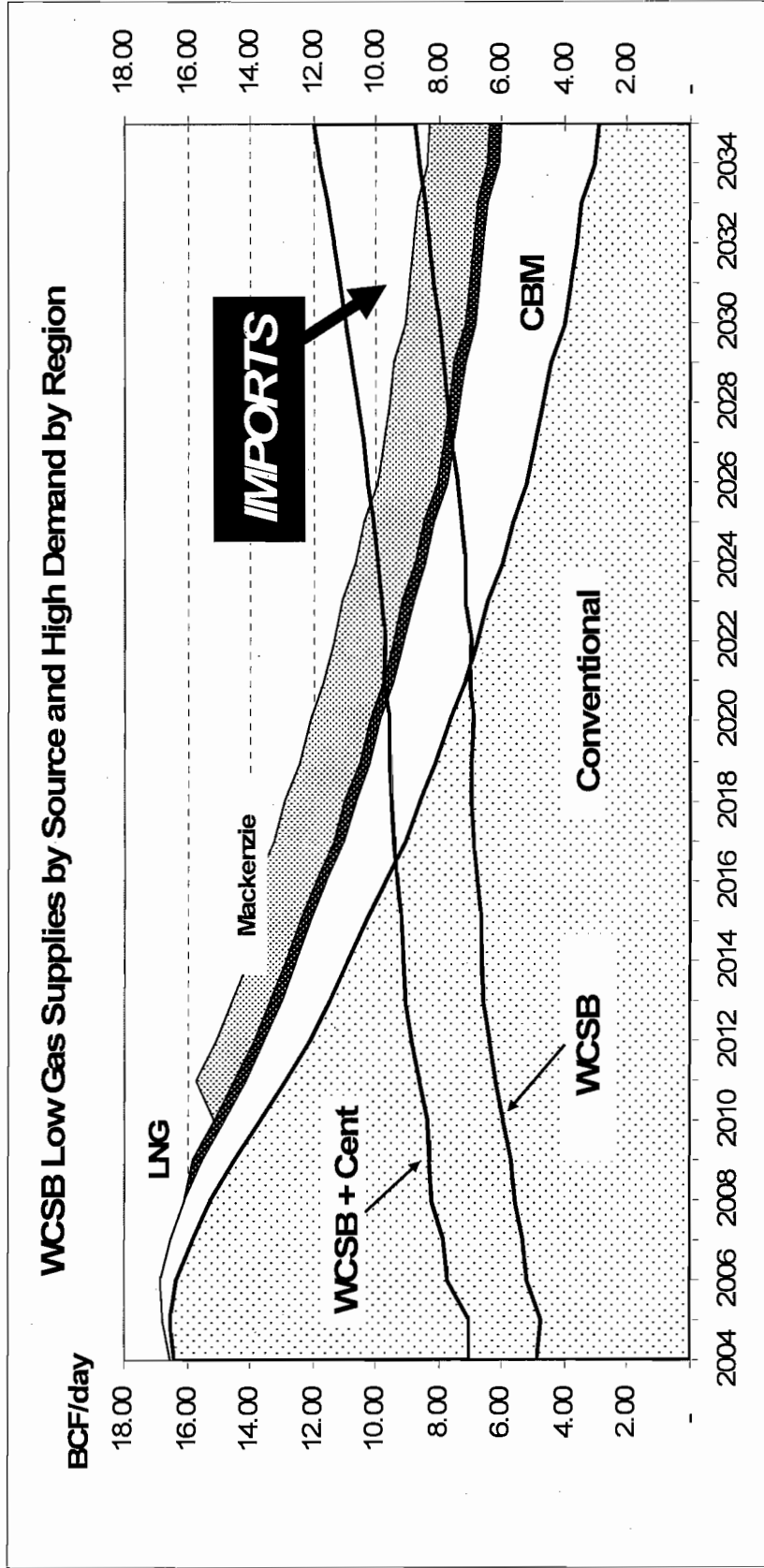


Schedule No. 18

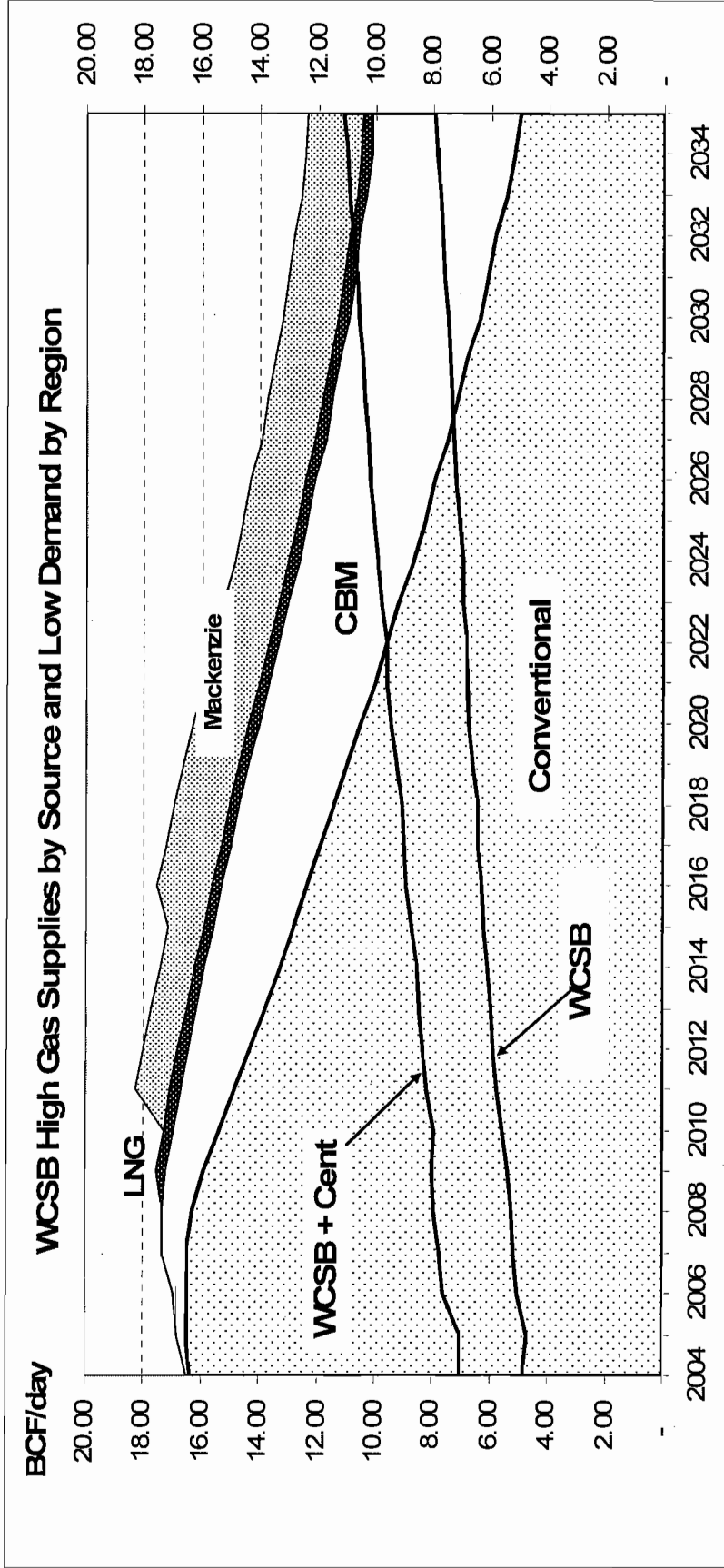
WCSB Base Gas Supplies by Source and Base Demand by Region



Schedule No. 19

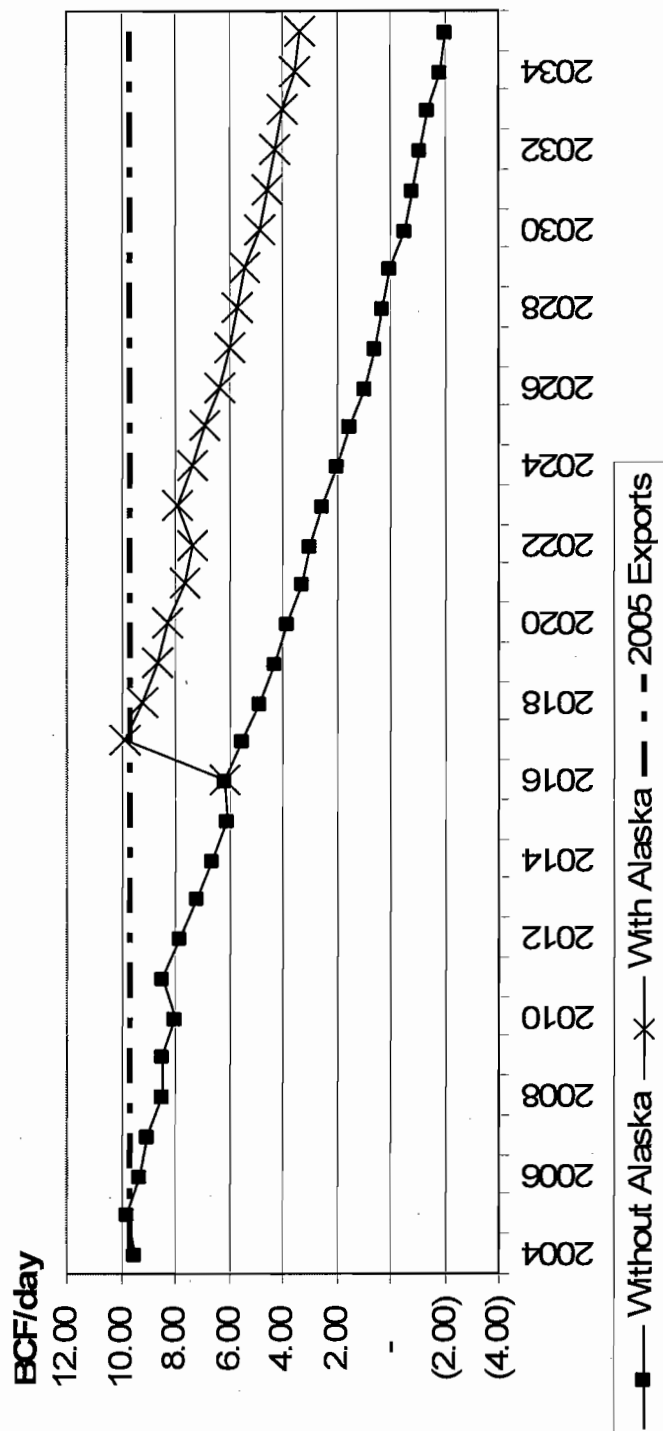


Schedule No. 20



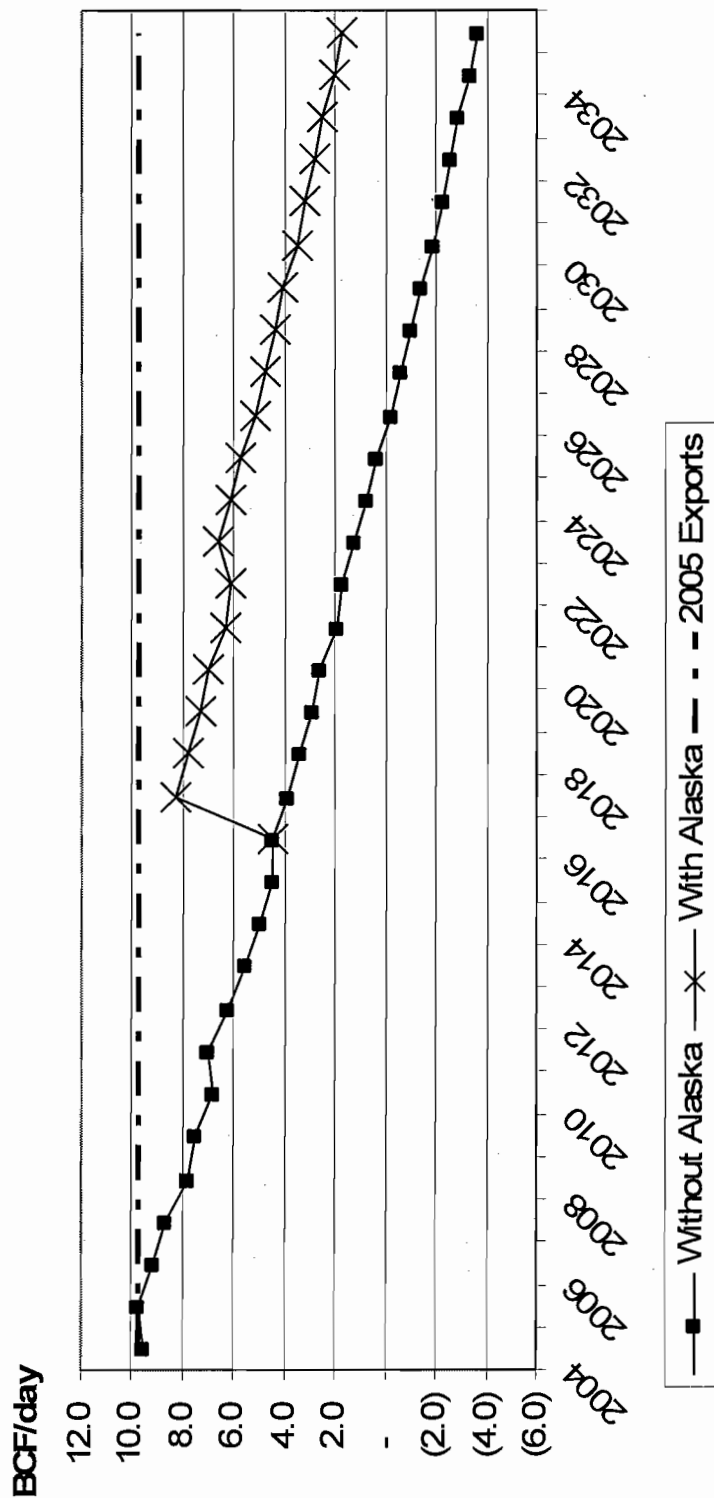
Schedule No. 21

# **Gas Available for Export With and Without Alaska** **Base Case**



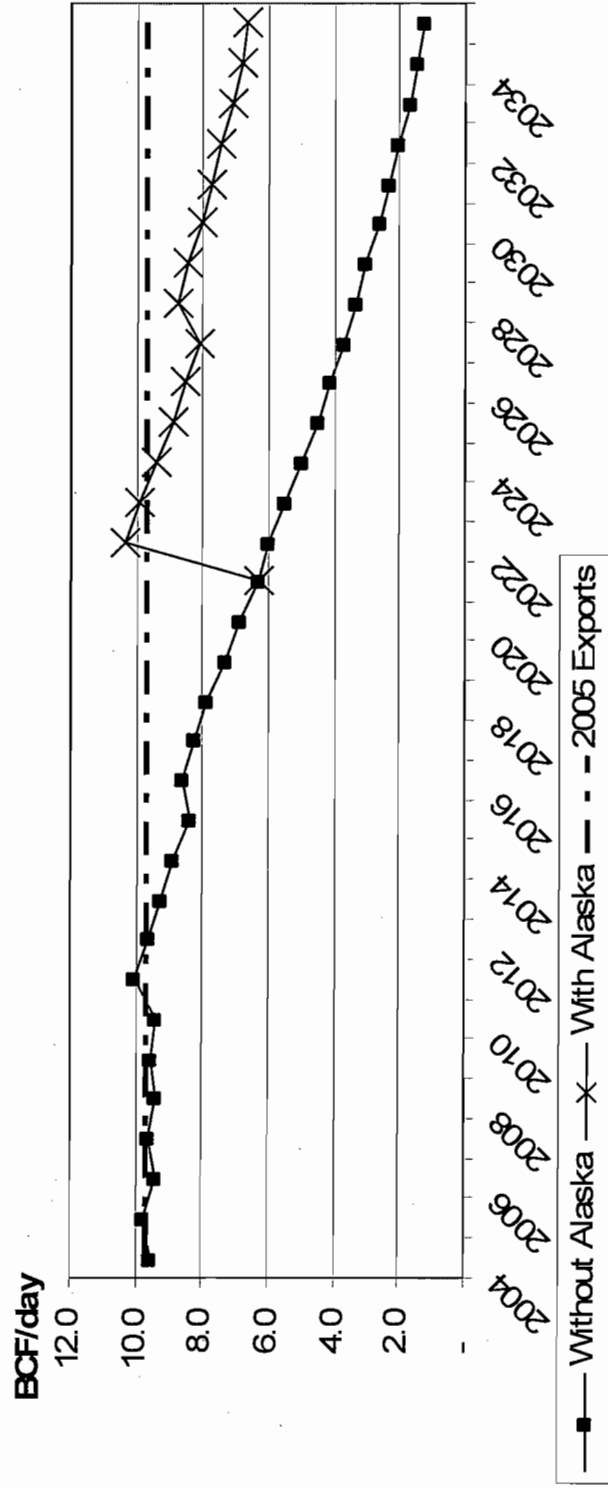
Schedule No. 22

### Gas Available for Export With and Without Alaska Low Supply-High Demand Case



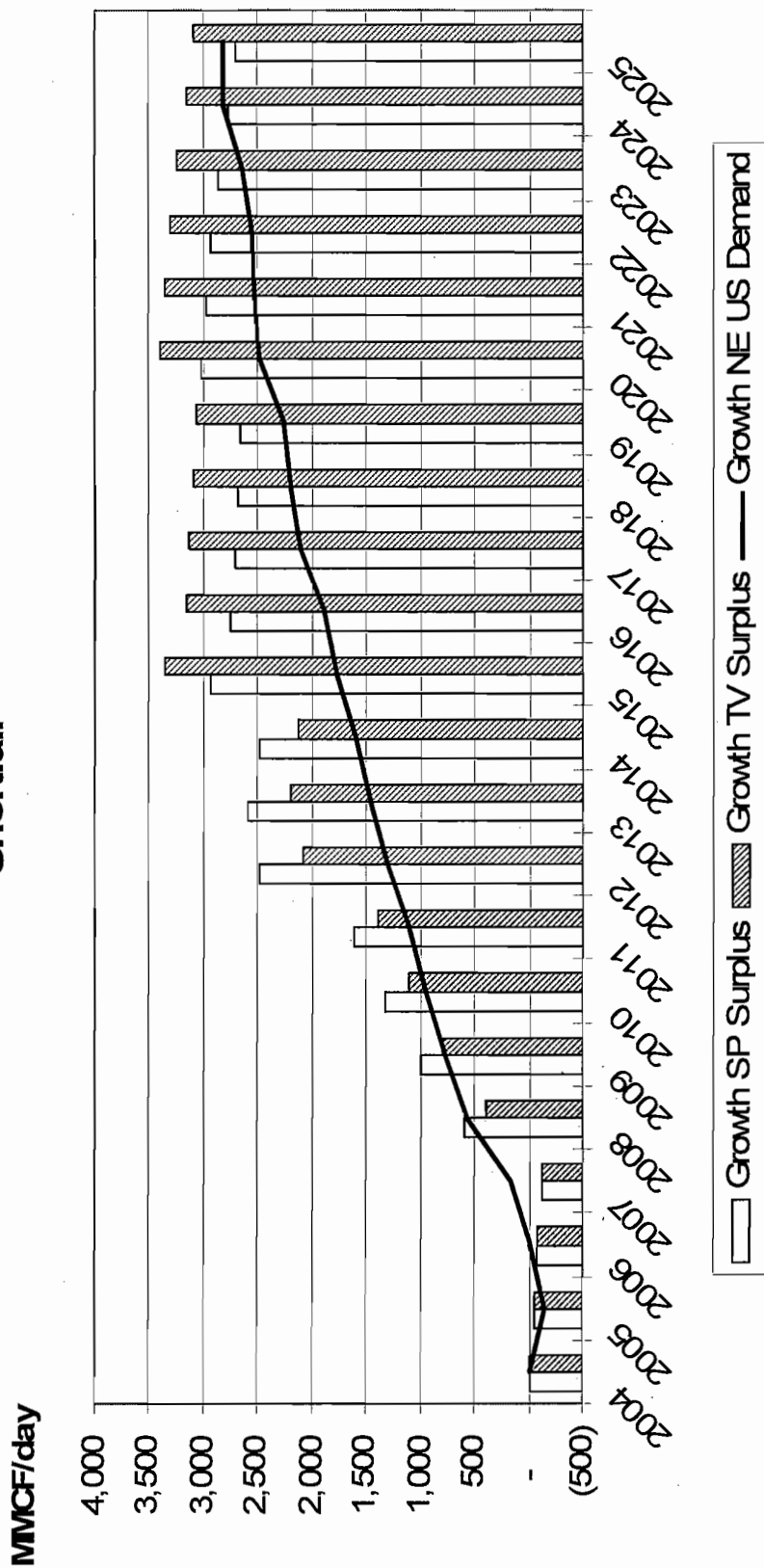
Schedule No. 23

### Gas Available for Export With and Without Alaska High Supply-Low Demand Case



Schedule No. 24

## Growth in Atlantic Canada Gas Surplus and US Northeast Demand Shortfall



Schedule No. 25  
**Northeast US LNG Proposals**

Status	Proponent	Location	Capacity (BCF/day)		
			Baseload	Peak	Startup
Approved	Hess LNG	Fall River MA	0.4	0.80	2009
Approved by FERC but local problems	BP	Logan Township NJ	1.2	1.40	2008
Rejection by FERC is being appealed	Keyspan & BP	Providence RI		0.50	
Profiled with FERC	TransCanada & Shell	Long Island Sound, NY		1.00	2010
Announced, no application yet	Somerset LNG	Somerset MA		0.65	
Announced, no application yet	PGW (Freedom Energy Center)	Philadelphia PA		0.60	2007
Announced, no application yet	Tractebel (Neptune LNG)	22 mi offshore Boston MA		0.40	2009
Announced, no application yet	Downeast LNG	South Mill Cove, Maine		0.50	
Announced, no application yet	Quoddy Bay	Split Rock, Maine		0.50	
Announced, no application yet	BP Consulting	Calais, Maine		1.00	
		Total		7.35	

Source: Gas Daily