3.1 RATE BASE SUMMARY

Schedule 3.1 shows monthly rate base balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year, including the following specific information:

- "Additions" (line 2) reflects the facilities transferred to the rate base each month from Gas Plant Under Construction (see Schedule 3.3);
- "Retirements" (line 3) reflects the removal from Gas Plant In Service of the cost of assets that are retired because they are obsolete or have no remaining useful life;
- "Gas Plant In Service" (line 4) reflects the cost of all assets that are in service;
- "Depreciation Expense" (line 6) reflects the monthly addition to accumulated depreciation;
- "Retirements" (line 7) reflects the removal from Gas Plant In Service of the accumulated depreciation of assets that are retired. As well, it reflects the costs of removal and the salvage proceeds related to the retired assets;
- "Accumulated Depreciation" (line 8) is the total of the depreciation expense recorded to date. It is deducted from Gas Plant In Service to determine Net Gas Plant In Service (line 9);
- "Cash Working Capital" (line 10) reflects the net cash balance required by NGTL to fund its utility operations as a result of the timing of receipts and disbursements of operating funds;
- "Materials and Supply Inventory" (line 11) includes the cost of inventory that is maintained in support of operations and the construction program;
- "Linepack Gas" (line 12) reflects that value of the system gas that NGTL requires to ensure safe, reliable and optimal operation of its system;
- "Unamortized Capital Assets" (line 13) reflects the unamortized balance of debt issue costs and retirements in progress;

- "Reserve Accounts" (line 14) reflects the balance of the Foreign Exchange and Regulatory Hearing Costs Reserve Accounts; and
- "Prefunded/Unfunded Pension and Other Post Employment Benefits Liability" (line 15) reflects the net balance of pension and other post employment benefit costs collected through revenue requirement and costs externally funded by NGTL.

RATE BASE SUMMARY [1]

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	REF. SCHEDULE	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	Opening Gas Plant In Service			7,250,200	7,265,016	7,265,448	7,294,488	7,302,902	7,324,183	7,327,022	7,328,206	7,332,755	7,353,104	7,396,924	7,406,177		
2	Additions			14,816	5,356	32,822	15,862	21,951	3,476	3,297	8,673	19,976	47,145	9,663	13,757		196,792
3	Retirements			-	(4,924)	(3,782)	(7,447)	(670)	(637)	(2,114)	(4,124)	373	(3,324)	(410)	(79,814)		(106,872)
4	Gas Plant In Service	3.2	7,250,200	7,265,016	7,265,448	7,294,488	7,302,902	7,324,183	7,327,022	7,328,206	7,332,755	7,353,104	7,396,924	7,406,177	7,340,119	7,322,043	
5	Opening Accumulated Depreciation			2,277,661	2,301,782	2,320,213	2,340,173	2,361,571	2,385,249	2,409,427	2,431,627	2,453,250	2,480,295	2,502,396	2,526,642		
6	Depreciation Expense			24,121	24,170	24,191	24,296	24,350	24,423	24,435	24,445	24,474	24,542	24,700	24,735		292,882
7	Retirements			-	(5,739)	(4,231)	(2,898)	(671)	(246)	(2,235)	(2,823)	2,571	(2,441)	(454)	(80,143)		(99,310)
8	Accumulated Depreciation	3.5	2,277,661	2,301,782	2,320,213	2,340,173	2,361,571	2,385,249	2,409,427	2,431,627	2,453,250	2,480,295	2,502,396	2,526,642	2,471,233	2,404,731	
9	Net Gas Plant In Service		4,972,539	4,963,234	4,945,234	4,954,315	4,941,332	4,938,934	4,917,596	4,896,579	4,879,505	4,872,809	4,894,529	4,879,535	4,868,886	4,917,310	
10	Cash Working Capital		59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	59,675	
11	Materials and Supply Inventory	3.7	28,308	27,970	27,906	28,015	28,210	28,506	28,744	28,945	29,201	29,433	29,769	30,228	30,591	28,909	
12	Linepack Gas	3.8	25,670	25,670	25,670	25,670	25,670	24,721	24,721	24,721	24,721	24,721	24,721	24,721	25,889	25,176	
13	Unamortized Capital Assets	3.9	8,452	8,225	7,223	6,495	10,948	10,859	11,444	10,971	12,404	14,793	15,776	15,037	10,528	11,012	
14	**Rate Base**		5,094,644	5,084,774	5,065,708	5,074,170	5,065,835	5,062,694	5,042,179	5,020,891	5,005,506	5,001,430	5,024,469	5,009,195	4,995,569	5,042,082	

[1] Includes Capital Pipeline Integrity Rate Base

RATE BASE SUMMARY[1]

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	REF. SCHEDULE	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	Opening Gas Plant In Service			7,340,119	7,339,426	7,341,761	7,348,400	7,352,536	7,349,463	7,354,070	7,354,156	7,356,514	7,357,123	7,356,420	7,354,552		
2	Additions			1,159	4,391	6,698	5,243	6,602	4,956	371	6,166	2,234	2,663	2,560	3,764		46,808
3	Retirements			(1,852)	(2,056)	(59)	(1,107)	(9,675)	(350)	(284)	(3,808)	(1,626)	(3,366)	(4,428)	(81,897)		(110,508)
4	Gas Plant In Service	3.2	7,340,119	7,339,426	7,341,761	7,348,400	7,352,536	7,349,463	7,354,070	7,354,156	7,356,514	7,357,123	7,356,420	7,354,552	7,276,419	7,344,689	
5	Opening Accumulated Depreciation			2,471,233	2,494,263	2,522,415	2,546,102	2,569,075	2,585,281	2,610,266	2,634,656	2,656,642	2,680,178	2,703,211	2,723,294		
6	Depreciation Expense			24,429	24,441	24,450	24,465	24,482	24,489	24,499	24,498	24,499	24,505	24,514	24,522		293,791
7	Retirements			(1,399)	3,711	(763)	(1,492)	(8,276)	496	(108)	(2,512)	(963)	(1,472)	(4,431)	(80,110)		(97,319)
8	Accumulated Depreciation	3.5	2,471,233	2,494,263	2,522,415	2,546,102	2,569,075	2,585,281	2,610,266	2,634,656	2,656,642	2,680,178	2,703,211	2,723,294	2,667,705	2,604,948	
9	Net Gas Plant In Service		4,868,886	4,845,163	4,819,346	4,802,297	4,783,461	4,764,183	4,743,803	4,719,499	4,699,872	4,676,943	4,653,208	4,631,258	4,608,713	4,739,741	
10	Cash Working Capital		61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	61,344	
11	Materials and Supply Inventory	3.7	30,591	30,934	31,023	30,948	30,253	30,106	30,031	29,963	29,879	29,762	29,546	29,312	29,168	30,116	
12	Linepack Gas	3.8	25,889	27,076	27,076	27,076	27,076	27,076	24,549	24,549	24,549	24,549	24,549	24,549	24,535	25,623	
13	Unamortized Capital Assets	3.9	10,528	10,366	16,577	15,001	13,629	14,825	14,784	13,814	15,267	15,489	17,753	17,516	17,277	14,833	
14	**Rate Base**		4,997,238	4,974,883	4,955,366	4,936,666	4,915,764	4,897,534	4,874,512	4,849,170	4,830,912	4,808,087	4,786,400	4,763,979	4,741,037	4,871,658	

[1] Includes Capital Pipeline Integrity Rate Base

RATE BASE SUMMARY[1]

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	REF. SCHEDULE	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
1	Opening Gas Plant In Service			7,276,419	7,281,342	7,285,949	7,303,561	7,325,613	7,328,318	7,328,045	7,313,525	7,314,929	7,317,010	7,321,063	7,342,508		
2	Additions			5,674	5,357	18,362	27,694	3,456	477	2,426	2,155	2,831	4,803	22,854	5,652		101,740
3	Retirements			(750)	(750)	(750)	(5,643)	(750)	(750)	(16,947)	(750)	(750)	(750)	(1,409)	(9,365)		(39,363)
4	Gas Plant In Service	3.2	7,276,419	7,281,342	7,285,949	7,303,561	7,325,613	7,328,318	7,328,045	7,313,525	7,314,929	7,317,010	7,321,063	7,342,508	7,338,795	7,313,621	
5	Opening Accumulated Depreciation			2,667,705	2,691,938	2,716,051	2,740,227	2,760,644	2,784,727	2,808,724	2,816,613	2,840,813	2,864,816	2,888,839	2,912,231		
6	Depreciation Expense			25,027	25,055	25,083	25,142	25,201	25,223	25,238	25,183	25,203	25,224	25,259	25,366		302,203
7	Retirements			(794)	(942)	(907)	(4,725)	(1,119)	(1,225)	(17,349)	(983)	(1,200)	(1,200)	(1,867)	(8,644)		(40,955)
8	Accumulated Depreciation	3.5	2,667,705	2,691,938	2,716,051	2,740,227	2,760,644	2,784,727	2,808,724	2,816,613	2,840,813	2,864,816	2,888,839	2,912,231	2,928,953	2,801,714	
9	Net Gas Plant In Service		4,608,713	4,589,404	4,569,899	4,563,335	4,564,969	4,543,592	4,519,321	4,496,912	4,474,117	4,452,195	4,432,223	4,430,276	4,409,842	4,511,908	
10	Cash Working Capital	3.6	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	19,856	
11	Materials and Supply Inventory	3.7	29,168	29,042	26,582	26,525	26,992	26,836	26,697	26,559	26,428	26,342	26,306	26,262	26,237	26,921	
12	Linepack Gas	3.8	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	24,535	
13	Unamortized Capital Assets	3.9	17,277	13,386	13,696	14,012	13,144	13,535	13,926	14,297	14,667	14,978	15,289	15,600	15,916	14,594	
14	Reserve Accounts	3.10	37,938	37,754	37,570	37,386	37,202	37,018	36,834	36,650	36,466	36,282	36,098	35,914	35,730	36,834	`
15	Prefunded Pension / Other Post Employment Benefits	3.11	25,516	24,531	23,545	27,116	26,130	25,145	28,690	27,581	26,223	29,420	28,062	26,704	29,901	26,813	
16	**Rate Base**		4,763,003	4,738,509	4,715,683	4,712,764	4,712,827	4,690,516	4,669,860	4,646,389	4,622,292	4,603,608	4,582,369	4,579,147	4,562,017	4,661,460	

[1] Includes Capital Pipeline Integrity Rate Base

3.2 GAS PLANT IN SERVICE

Gas Plant In Service represents the historical costs of items categorized as Transmission Plant and General Plant.

Schedule 3.2 shows the 13-month average Gas Plant In Service balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year.

GAS PLANT IN SERVICE

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	470,088	470,171	470,340	474,685	473,724	474,437	475,069	475,591	475,643	476,973	477,302	478,120	478,090	474,633
2	Compressor Stations	1,489,139	1,490,040	1,486,789	1,486,878	1,488,570	1,507,610	1,507,864	1,506,384	1,511,267	1,511,944	1,516,251	1,518,088	1,517,306	1,502,933
3	Pipelines	4,810,380	4,824,168	4,825,633	4,847,640	4,852,004	4,852,850	4,852,876	4,854,910	4,855,708	4,873,151	4,911,154	4,913,386	4,921,573	4,861,187
	General Plant														
4	Structures and Improvements	127,647	127,634	127,659	127,667	127,686	127,683	127,695	127,697	125,058	125,058	125,106	125,158	97,576	124,563
5	Furniture and Office Equipment	32,576	32,576	32,576	32,576	32,576	32,576	32,576	32,576	32,576	32,576	32,576	32,576	31,570	32,499
6	Tools and Work Equipment	34,927	34,996	35,195	35,234	35,246	35,271	35,308	33,351	33,362	33,455	33,511	33,564	34,093	34,424
7	Aircraft	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597
8	Transportation Equipment	25,966	25,968	25,968	25,959	25,850	25,856	25,862	25,864	25,865	25,865	24,798	27,537	28,431	26,138
9	Heavy Work Equipment	9,907	9,907	9,907	9,907	9,907	9,907	9,907	9,907	10,182	10,182	10,157	10,157	10,156	10,007
10	Computer Equipment	240,167	240,151	241,976	244,538	247,934	248,590	250,462	252,522	253,691	254,497	256,665	258,188	211,922	246,254
11	Intangibles	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678
12	Unallocated AFUDC	128	128	128	128	128	128	128	128	128	128	128	128	128	128
13	**Total Gas Plant In Service**	7,250,200	7,265,016	7,265,448	7,294,488	7,302,902	7,324,183	7,327,022	7,328,206	7,332,755	7,353,104	7,396,925	7,406,177	7,340,119	7,322,043

GAS PLANT IN SERVICE

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	478,090	478,535	478,548	478,607	478,538	480,570	482,728	483,407	483,116	482,264	482,533	482,645	482,913	480,961
2	Compressor Stations	1,517,306	1,515,985	1,515,663	1,516,041	1,516,017	1,511,228	1,511,591	1,512,503	1,512,031	1,512,488	1,510,162	1,505,722	1,506,909	1,512,588
3	Pipelines	4,921,573	4,923,711	4,925,009	4,927,807	4,930,458	4,928,952	4,929,415	4,927,714	4,932,684	4,932,874	4,932,295	4,933,967	4,934,132	4,929,276
	General Plant														
4	Structures and Improvements	97,576	94,724	94,725	94,726	94,729	94,729	94,723	94,723	94,741	94,743	94,742	94,742	82,014	93,972
5	Furniture and Office Equipment	31,570	31,570	31,570	31,570	31,569	31,569	31,569	31,569	31,569	31,569	31,569	31,569	30,929	31,520
6	Tools and Work Equipment	34,093	33,745	33,752	33,771	33,794	33,802	33,819	33,827	33,832	33,881	33,887	33,905	33,965	33,852
7	Aircraft	2,597	2,597	2,597	2,597	2,597	2,597	2,597	2,597	-	-	-	-	-	1,598
8	Transportation Equipment	28,431	28,431	28,425	30,135	30,171	30,183	30,186	30,186	30,186	30,186	31,727	32,016	30,427	30,053
9	Heavy Work Equipment	10,156	10,157	10,157	10,157	10,157	10,157	10,157	10,157	10,157	10,157	10,157	10,157	9,333	10,094
10	Computer Equipment	211,922	213,164	214,508	216,181	217,700	218,870	220,476	220,664	221,389	222,151	222,539	223,020	158,987	213,967
11	Intangibles	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678
12	Unallocated AFUDC	128	128	128	128	128	129	131	131	132	132	132	132	132	130
13	**Total Gas Plant In Service**	7,340,119	7,339,427	7,341,761	7,348,400	7,352,536	7,349,463	7,354,070	7,354,157	7,356,514	7,357,123	7,356,420	7,354,552	7,276,419	7,344,689

GAS PLANT IN SERVICE

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	482,913	482,993	483,336	483,822	484,205	484,633	484,828	484,754	484,697	484,871	485,066	485,309	485,386	484,370
2	Compressor Stations	1,506,909	1,507,679	1,508,274	1,509,127	1,504,589	1,505,097	1,505,694	1,490,008	1,490,616	1,491,174	1,491,729	1,508,755	1,512,211	1,502,451
3	Pipelines	4,934,132	4,937,475	4,940,410	4,955,949	4,981,428	4,982,465	4,980,680	4,981,195	4,981,322	4,981,943	4,982,097	4,985,534	4,986,163	4,970,061
	General Plant														
4	Structures and Improvements	82,014	82,064	82,114	82,164	82,180	82,180	82,180	82,200	82,225	82,249	82,309	82,369	82,428	82,206
5	Furniture and Office Equipment	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929	30,929	28,051	30,708
6	Tools and Work Equipment	33,965	33,642	33,647	33,679	33,732	33,773	33,797	33,819	33,841	33,852	33,852	33,852	33,848	33,792
7	Aircraft	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Transportation Equipment	30,427	30,427	30,427	30,427	30,427	30,427	30,427	30,427	30,427	30,427	32,827	32,827	32,827	30,981
9	Heavy Work Equipment	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333	9,333
10	Computer Equipment	158,987	159,989	160,669	161,321	161,980	162,672	163,368	164,050	164,730	165,421	166,111	166,791	161,737	162,910
11	Intangibles	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678	6,678
12	Unallocated AFUDC	132	132	132	132	132	132	132	132	132	132	132	132	132	132
13	**Total Gas Plant In Service**	7,276,419	7,281,342	7,285,949	7,303,561	7,325,613	7,328,318	7,328,045	7,313,525	7,314,929	7,317,010	7,321,063	7,342,508	7,338,795	7,313,621

3.3 GAS PLANT UNDER CONSTRUCTION

Gas Plant Under Construction (GPUC) represents the ongoing cumulative cost of assets being planned and constructed to provide service to Alberta System customers. When these assets are completed and ready for service, the costs are transferred from GPUC to Gas Plant In Service (GPIS).

Many of the asset costs transferred to GPIS in 2004 represent capital costs that NGTL incurred in 2003. Similarly, NGTL will incur a significant portion of projected 2004 capital expenditures in planning, designing, and procuring materials for the initial construction phases of assets, which will be placed in service in 2005 and later years.

Schedule 3.3 shows the monthly GPUC balances for the 2002 base year, the 2003 ~~forecast~~actual year, and the 2004 test year. These schedules also provide the following specific information:

- "Opening GPUC" (line 1) reflects amounts expended to date on facilities that are not yet in service;
- "Capital Expenditures" (line 2) reflects NGTL's monthly capital expenditures;
- "AFUDC" (line 3) represents the amount that compensates NGTL for financing costs incurred during the construction of new facilities before those facilities are transferred to Alberta System's rate base; and
- "Transfers to GPIS" (line 5) reflects costs of facilities that have been completed and are being put into service.

3.3.1 Construction Work in Progress

In Decision U96001, the Board accepted NGTL's method of scheduling and transferring GPUC to GPIS upon substantial completion of facilities or when the facilities are capable

of providing service as intended. However, notwithstanding this finding, the Board stated at page 43 of Decision U96001 that it:

> ... expects NGTL to maintain efficient scheduling and urges all parties involved in the development of facilities to minimize delays between completion of construction, transfer of completed project costs to rate base and commencement of firm service. The Board directs NGTL to demonstrate the continued efficiency of its scheduling in its general rate applications.

NGTL believes that it continues to efficiently schedule and transfer asset costs from GPUC to GPIS. NGTL has procedures to ensure timely project in-service notification and timely accounting transfer of in-service projects to rate base. Once a project is constructed and tested, the responsible project manager will identify the facility as "ready for service," meaning that construction is complete and the facility is ready for use. NGTL establishes the targeted ready for service date based on customer requirements, facility delivery lead times, and project considerations. Once facilities are ready for service, gas flow will commence as soon as associated gas volumes are available. Service may be firm or interruptible, depending on the status of upstream or downstream facilities. For example, service may be interruptible if associated downstream facilities such as compression or pipeline loop are required. The lead-time on such downstream facilities is generally considerably longer than metering facilities; therefore, NGTL would allow interruptible volumes to flow until such time as all facilities are fully available.

Once gas flows, NGTL considers a project to be in-service and the project manager will issue a formal in-service notification to the accounting group, triggering a transfer of project costs from GPUC to GPIS. Once all associated facilities are ready for service, NGTL will declare billing commencement for firm service.

Table 3.3-1 shows the results of a timing analysis of new pipeline facilities that NGTL placed into service during 2002. The results include average timing differences, measured in days, between construction completion (ready for service) and each of:

- gas flow (interruptible or firm service);
- firm service commencement; and
- Gas Plant In Service Transfer (GPIST).

Table 3.3-1
Average Timing Variance Between Construction Completion and each of Gas Flow, Firm Service, and Gas Plant In Service Transfer

	2002 GPIST ($millions)	Gas Flow (days)	Firm Service (days)	GPIST (days)
Mainline Facilities	132.6	6	n/a	11
Receipt and Delivery Meter Stations and Lateral Loop Pipelines	11.4	6	5	21

Individual project results vary from the average however, approximately 80% of these projects were transferred to rate base within one month of completion of construction.

Mainline Facilities

When planning and constructing mainline facilities, NGTL focuses on completing construction in time to meet the planned firm service requirements. However, project-specific timing of construction varies, depending on factors such as environmental and seasonal conditions, project management considerations, regulatory approvals and aggregate customer requirements.

Additionally, the timing of completion of mainline construction is generally not directly tied to firm service gas flow at a particular receipt or delivery point. Rather, NGTL designs mainline facilities to transport gas from and to an aggregate of receipt and delivery points which may have different completion dates related to firm service

contract requirements at those points. Accordingly, the timing from completion of construction to firm service is not an appropriate measure of scheduling efficiency for mainline facilities. A more appropriate measure is the difference in timing between the completion of construction and gas flow through these facilities.

Receipt and Delivery Meter Stations

When planning and constructing receipt and delivery meter stations and lateral loop pipeline, NGTL focuses on completing construction on time to meet the Project Expenditure Authorization (PEA) dates agreed to by NGTL and its customers. NGTL strives to deliver service on or shortly before this date to avoid delays to the customer.

After completion of construction, the timing of gas flow, firm service commencement, and transfer to rate base for these facilities varies due to the dynamic nature of construction schedules of both NGTL and its customers. Issues such as the readiness of the customer to commence service and the availability of downstream facilities may result in delays.

GAS PLANT UNDER CONSTRUCTION (GPUC)

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1	Opening GPUC		32,702	36,966	51,990	37,176	36,500	22,977	28,027	44,902	57,403	52,066	19,008	12,383		
2	Capital Expenditures		18,843	20,126	17,671	14,932	8,220	8,311	20,060	20,897	14,333	13,896	2,968	6,191		166,448
3	AFUDC		237	254	336	254	208	215	112	277	305	191	69	(288)		2,170
4	Transfers to GPIS		(14,816)	(5,356)	(32,822)	(15,862)	(21,951)	(3,476)	(3,297)	(8,673)	(19,976)	(47,145)	(9,663)	(13,757)		(196,792)
5	Closing GPUC	32,702	36,966	51,990	37,176	36,500	22,977	28,027	44,902	57,403	52,066	19,008	12,383	4,529	33,587	

GAS PLANT UNDER CONSTRUCTION (GPUC)

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1	Opening GPUC		4,529	(1,159)	1,881	3,405	3,982	3,816	9,293	9,593	5,686	5,794	6,907	10,226		
2	Capital Expenditures		(4,576)	7,387	8,159	5,747	6,779	10,938	634	2,418	2,445	3,884	5,854	6,946		56,614
3	AFUDC		48	44	64	73	62	37	64	50	(13)	84	45	61		618
4	Transfers to GPIS		(1,159)	(4,391)	(6,698)	(5,243)	(7,007)	(5,498)	(399)	(6,374)	(2,323)	(2,855)	(2,579)	(3,854)		(48,382)
5	Closing GPUC	4,529	(1,159)	1,881	3,405	3,982	3,816	9,293	9,593	5,686	5,794	6,907	10,226	13,379	5,949	

GAS PLANT UNDER CONSTRUCTION (GPUC)

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
1	Opening GPUC		13,379	12,508	12,738	1,505	816	1,972	3,102	4,260	6,464	8,609	14,287	1,073		
2	Capital Expenditures		4,755	5,531	7,071	26,997	4,617	1,608	3,580	4,345	4,956	10,443	9,567	6,592		90,062
3	AFUDC		105	98	100	12	6	15	24	33	51	67	112	8		631
4	Transfers to GPIS		(5,731)	(5,399)	(18,403)	(27,698)	(3,468)	(493)	(2,446)	(2,175)	(2,861)	(4,833)	(22,893)	(5,721)		(102,120)
5	Closing GPUC	13,379	12,508	12,738	1,505	816	1,972	3,102	4,260	6,464	8,609	14,287	1,073	1,952	6,359	

3.4 CAPITAL EXPENDITURES

Schedule 3.4 shows the capital expenditures for the 2002 base year, the 2003 ~~forecast~~actual year and the 2004 test year. The amount is divided into the four main categories discussed below.

Capacity Capital: These are costs associated with the construction or acquisition of facilities required to meet the Alberta System's contractual requirements, including pipeline, compression and measurement facilities.

Maintenance Capital: These are costs associated with capital replacement, repair or upgrade of existing metering, compression and pipeline facilities undertaken to maintain or enhance system operational efficiency, safety and reliability.

General Plant Capital: These are costs for buildings (including leasehold improvements), tools and work equipment (including vehicles), office equipment, computer and telecommunications equipment.

Capital Retirement Spending: These are costs, net of salvage, associated with the removal of transmission and general plant facilities from service when the facilities are no longer required.

Forecast capital expenditures for the 2004 test year are ~~$92~~ $95 million, consisting of $66 million of capacity capital spending, ~~$10~~ $13 million for maintenance capital projects, $11 million of general plant, and $5 million of capital retirement spending.

Capacity capital spending is based on NGTL's current outlook for 2004 volumes and includes facilities identified in the December ~~2002~~ 2003 Annual Plan. ~~, facilities identified since the December 2002 Annual Plan was published and~~

~~facilities currently being considered for inclusion in the December 2003 Annual Plan.~~ The major projects included in the capacity capital amount are:

- Simmons pipeline system purchase, including transition costs: $22.6 million (as discussed in Section 8 of this Application).
- North Central Corridor (Peerless Lake Section) Phase 1: $7.1 million (as discussed in Section 8 of this Application). This represents the portion of the total cost of $12.4 million that is forecast to be spent in 2004.
- Chancellor Extension rebate to EnCana: $3.6 million
- North Central Corridor Loop (Godin Lake Section): $2.0 million
- North Central Corridor (Peerless Lake Section) Phase 2 pre-spending: $2.0 million
- Woodenhouse Compressor Station Unit #1: $18.5 million
- Bens Lake D Compressor Station reversal: $0.8 million
- Meter station projects: $8.4 million

Capital Cost Management: NGTL has made significant efforts to reduce capital costs since the last GRA was filed in 1995, balanced against the need to maintain safety and reliability of service. In addition to conventional cost management techniques, such as competitive bidding, project cost controls and regular management cost reviews, NGTL has made considerable investments in technology and improvements in business processes in order to reduce overall capital project costs. A few examples of recent successes include:

- Use of high strength pipe, mechanized welding and ultrasonic testing. For example, in 2002 NGTL put in place the world's first production installation of grade X-100 steel line pipe (reduced material cost);
- Use of advanced welding techniques (known as "buttering") to install pipeline branch connections without need to take lines out of service (reduced installation

costs, reduced outage impacts, reduced gas losses and green-house gas emissions);

- Meter Station re-use program whereby retired facilities are refurbished and re-used at new installations (reduced material costs);
- Use of ultrasonic flow metering. NGTL was instrumental in gaining industry and regulatory acceptance for the use of ultrasonic flow measurement for custody transfer purposes (reduced material costs); and
- Development of project management instruction manuals and standard playbooks (creating efficiencies in project execution).

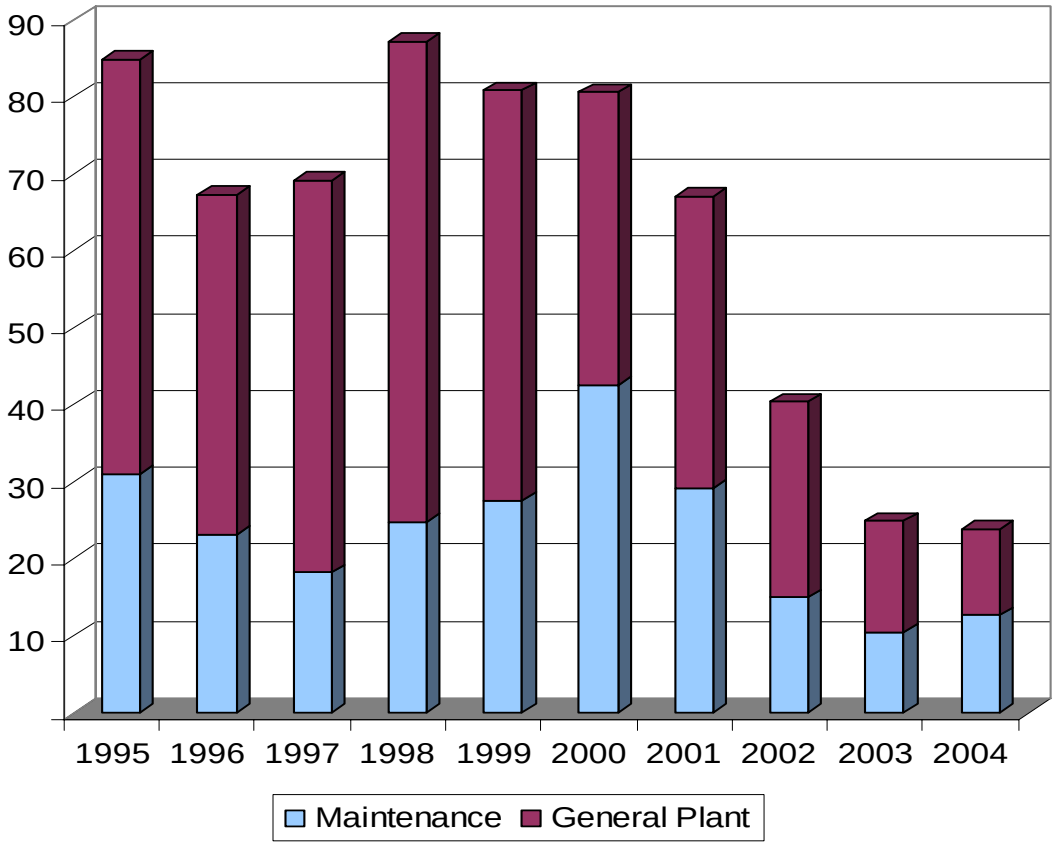
NGTL evaluates all General Plant and Maintenance Capital (GPMC) costs using an investment valuation process that allows NGTL to ensure the highest value projects are completed first. The first step in this process involves defining existing risks to which NGTL and/or its stakeholders are exposed. Once the risks have been defined, alternatives to manage these risks are identified. The value of each alternative in reducing risks is calculated using a net present value analysis to ensure the most cost effective solution is chosen. Cost control measures are in place during the execution of the project to ensure the value identified during the evaluation process is realized. A combination of year to year trending and benchmarking (where possible) along with performance measures related to safety, reliability and customer service allow NGTL to gauge its success at managing GPMC.

The following graph reflects NGTL's recent success in reducing maintenance and general plant capital.

Revised Figure 3.4-1

General Plant and Maintenance Capital Expenditures

($ millions)



The recent decline in spending in GPMC is primarily due to:

- Completion of one time projects in 2000 and 2001 related to the installation of pipeline inspection tool launchers and receivers; and
- Implementation of the investment valuation process for each project.

Capital Cost Budget Process

All GPMC projects are evaluated on the basis of the safety, customer, and environmental impacts, regulatory requirements, and costs. The various potential projects are prioritized with the higher value projects being incorporated into the GPMC budget. The GPMC budget also includes provisions for unplanned maintenance activities required to cover the immediate repair or replacement of critical equipment or systems that may fail throughout the year. The amount included in the budget for such activities is based on historical experience. General plant spending related to Information Systems includes projects driven by the requirements of various departments and by planned enterprise initiatives required to maintain or enhance the functionality of business systems. This portion of the general plant capital budget is developed in conjunction with the Information Systems Operating Costs budget in order to ensure that the overall level of Information Systems spending is considered and evaluated.

Capacity capital covers capital expenditures for the addition or removal of transmission facilities. Such expenditures often relate to projects that are carried out over more than one year. The facility planning process forecasts volumetric requirements for the NGTL system, incorporating specific customer requests for service, and then identifies facility requirements that provide the most economical and long term orderly expansion of the system to meet those transportation requirements. NGTL seeks and receives authorization for construction and operation of pipeline and related facilities from the Board pursuant to the provisions of the *Pipeline Act*. NGTL follows the Board Informational Letter IL 90-8 in seeking authorization to construct and operate pipeline and related facilities. A requirement of IL 90-8, as outlined below, is that NGTL follows a two-stage application process:

> The first stage is the filing with the Board of an annual preliminary overall system plan (Annual Plan) containing all planned facility additions and major modifications. The second stage is the filing of the final technical, cost, routing/siting, land, environmental and other information required to complete the application for each facility contained in the Annual Plan.

NGTL also presents the key messages from the Annual Plan to the Facilities Liaison Committee, typically in November. This includes the design forecast, design flow, facility plans, and budgeted capital costs for the next design cycle.

The multi-year capacity capital retirement program is also budgeted annually following a senior management review of the overall completion schedule and scope of work.

CAPITAL EXPENDITURES

FOR THE BASE YEAR ENDED DECEMBER 31, 2002,
THE ACTUAL YEAR ENDED DECEMBER 31, 2003,
AND THE TEST YEAR ENDING DECEMBER 31, 2004
($ Thousands)

LINE NO.	DESCRIPTION	BASE YEAR 2002	ACTUAL YEAR 2003	TEST YEAR 2004
	(a)	(b)	(c)	(d)
	Capacity Capital			
1	Pipeline	84,679	17,731	38,066
2	Compression	32,094	4,245	19,384
3	Measurement	9,255	8,035	8,395
4		126,028	30,011	65,845
	Maintenance Capital			
5	Pipeline Integrity	7,408	4,619	5,437
6	Compression	5,286	4,477	6,957
7	Measurement and Automation	2,228	1,342	267
8	CO_2 Management Service	52	1,757	372
9		14,974	12,195	13,033
	General Plant			
10	Information Technology	20,127	10,480	8,157
11	Other	5,319	3,928	3,027
12		25,446	14,408	11,184
13	**AFUDC**	2,170	618	631
14	**Capital Addition Spending**	168,618	57,232	90,693
15	**Capital Retirement Spending (Net of Salvage)**	(3,395)	(4,570)	4,497
16	**Net Capital Expenditures**	165,223	52,662	95,190

3.5 ACCUMULATED DEPRECIATION AND AMORTIZATION

Schedule 3.5, sheets 1-3, shows the monthly Accumulated Depreciation balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year.

ACCUMULATED DEPRECIATION

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	95,894	97,306	97,577	97,678	97,391	98,814	100,078	101,355	101,918	104,068	103,499	104,522	105,939	100,465
2	Compressor Stations	412,565	419,218	422,100	427,318	428,647	435,288	441,483	446,140	452,842	461,503	468,065	474,837	478,933	443,764
3	Pipelines	1,607,003	1,619,052	1,630,655	1,641,258	1,657,673	1,669,176	1,681,792	1,693,953	1,705,937	1,718,049	1,730,197	1,742,458	1,754,768	1,680,921
	General Plant														
4	Structures and Improvements	28,633	28,993	29,015	29,375	29,735	30,095	30,456	30,817	29,442	29,800	30,155	30,512	3,284	27,716
5	Furniture and Office Equipment	20,277	20,340	20,403	20,465	20,528	20,591	20,653	20,716	20,779	20,841	20,904	20,967	20,017	20,576
6	Tools and Work Equipment	15,637	15,768	15,898	16,029	16,160	16,292	16,423	16,554	16,679	16,803	16,928	17,052	17,177	16,415
7	Aircraft	1,080	1,086	1,092	1,098	1,104	1,110	1,116	1,121	1,127	1,133	1,139	1,145	1,151	1,116
8	Transportation Equipment	11,964	12,175	12,386	12,597	12,673	12,883	13,093	13,303	13,513	13,722	13,710	13,911	14,134	13,082
9	Heavy Work Equipment	7,814	7,814	7,814	7,814	7,814	7,814	7,814	7,814	7,814	7,814	7,786	7,786	7,786	7,808
10	Computer Equipment	72,439	75,650	78,867	82,110	85,388	88,703	92,009	95,319	98,640	101,976	105,403	108,817	63,382	88,361
11	Intangibles	4,346	4,372	4,397	4,422	4,447	4,472	4,497	4,522	4,547	4,572	4,597	4,622	4,647	4,497
12	Unallocated AFUDC	9	9	10	10	11	11	12	12	13	14	13	13	13	12
13	**Total Accumulated Depreciation**	2,277,661	2,301,782	2,320,213	2,340,173	2,361,571	2,385,249	2,409,427	2,431,627	2,453,250	2,480,295	2,502,396	2,526,642	2,471,233	2,404,731

ACCUMULATED DEPRECIATION

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	105,939	107,300	108,791	110,116	110,743	112,169	113,326	114,491	115,961	115,870	117,314	118,471	119,462	113,073
2	Compressor Stations	478,933	486,248	495,683	501,854	508,210	507,074	514,428	521,188	528,017	534,802	541,064	542,562	549,264	516,102
3	Pipelines	1,754,768	1,765,302	1,778,692	1,791,024	1,803,111	1,815,095	1,827,615	1,842,937	1,855,652	1,868,925	1,880,670	1,894,678	1,907,756	1,829,710
	General Plant														
4	Structures and Improvements	3,284	3,478	3,672	3,866	4,061	4,255	4,449	4,643	4,837	5,032	5,226	5,240	(7,109)	3,457
5	Furniture and Office Equipment	20,017	20,077	20,138	20,198	20,258	20,319	20,379	20,440	20,500	20,560	20,621	20,681	20,100	20,330
6	Tools and Work Equipment	17,177	17,304	17,430	17,556	17,682	17,808	17,933	18,060	18,186	18,312	18,438	18,564	18,611	17,928
7	Aircraft	1,151	1,157	1,163	1,169	1,175	1,181	1,187	1,193	(1,397)	(1,397)	(1,397)	(1,397)	(1,407)	183
8	Transportation Equipment	14,134	14,365	14,596	14,827	15,071	15,316	15,561	15,806	16,051	16,296	16,541	16,799	16,184	15,504
9	Heavy Work Equipment	7,786	7,786	7,786	7,786	7,786	7,786	7,786	7,786	7,786	7,786	7,786	7,786	6,962	7,723
10	Computer Equipment	63,382	66,560	69,753	72,970	76,217	79,491	82,787	83,274	86,185	89,103	92,033	94,969	32,913	76,126
11	Intangibles	4,647	4,672	4,697	4,722	4,747	4,772	4,797	4,822	4,847	4,872	4,897	4,922	4,948	4,797
12	Unallocated AFUDC	13	14	14	15	15	16	16	16	17	17	18	18	20	16
13	**Total Accumulated Depreciation**	2,471,233	2,494,263	2,522,415	2,546,102	2,569,075	2,585,281	2,610,266	2,634,656	2,656,642	2,680,178	2,703,211	2,723,294	2,667,705	2,604,948

ACCUMULATED DEPRECIATION

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
	Transmission Plant														
1	Meter Stations	119,462	120,444	121,666	122,884	124,126	125,352	126,529	127,737	128,874	129,976	131,079	132,183	134,461	126,521
2	Compressor Stations	549,264	556,319	563,241	570,210	573,369	580,133	586,848	577,378	584,271	590,979	597,689	603,736	610,529	580,305
3	Pipelines	1,907,756	1,919,911	1,931,824	1,943,739	1,955,697	1,967,714	1,979,729	1,991,744	2,003,758	2,015,778	2,027,802	2,039,823	2,051,853	1,979,779
	General Plant														
4	Structures and Improvements	(7,109)	(6,805)	(6,500)	(6,196)	(5,921)	(5,647)	(5,372)	(5,067)	(4,760)	(4,452)	(4,144)	(3,836)	(3,528)	(5,334)
5	Furniture and Office Equipment	20,100	20,223	20,346	20,469	20,592	20,714	20,837	20,960	21,083	21,206	21,329	21,451	18,697	20,616
6	Tools and Work Equipment	18,611	18,677	18,732	18,788	18,843	18,899	18,955	19,010	19,066	19,122	19,178	19,234	19,287	18,954
7	Aircraft	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)	(1,407)
8	Transportation Equipment	16,184	16,377	16,570	16,764	16,957	17,150	17,343	17,536	17,730	17,923	18,116	18,324	18,533	17,347
9	Heavy Work Equipment	6,962	6,978	6,994	7,010	7,027	7,043	7,059	7,075	7,091	7,107	7,123	7,139	7,155	7,059
10	Computer Equipment	32,913	36,222	39,557	42,908	46,275	49,656	53,054	56,469	59,899	63,346	66,808	70,287	68,047	52,726
11	Intangibles	4,948	4,977	5,006	5,036	5,065	5,095	5,124	5,154	5,183	5,212	5,242	5,271	5,301	5,124
12	Unallocated AFUDC	20	21	21	22	22	22	23	23	24	24	25	25	26	23
13	**Total Accumulated Depreciation**	2,667,705	2,691,938	2,716,051	2,740,227	2,760,644	2,784,727	2,808,724	2,816,613	2,840,813	2,864,816	2,888,839	2,912,231	2,928,953	2,801,714

3.6 CASH WORKING CAPITAL

Schedules 3.6 show the forecast of NGTL's average Cash Working Capital requirement for the 2004 test year.

In the 1995 GRA, NGTL applied for $35.6 million in Necessary Working Capital (NWC) for operating expenses, based on one-eighth of the forecast 1995 operating expenses. The EUB approved NWC using a one-twelfth rule based on sample transactions provided by NGTL. In addition, the Board noted that the one-eighth rule was appropriate for smaller utilities subject to the Board's jurisdiction as a reasonable approximation in the absence of the resources to undertake a lead/lag study. The Board noted that its preferred method of determining the NWC requirements is by means of a lead/lag study, which should include not only the lag of operating expenses but financial cash flow, such as debt repayments and dividends and non-cash items, such as depreciation.

In Decision U96001, the Board directed NGTL "to perform a lead/lag study on actual cash flows and to file the results of that study with its next general rate application." This directive has been held in abeyance under the terms of the settlement agreements in place since 1996. In Appendix 4 to Decision 2003-051, the Board has directed NGTL to respond to the directive in this Application. Accordingly, NGTL conducted a lead/lag study and has included the study as Appendix A to Section 3 of this Application.

The Cash Working Capital Amount requested for the test year 2004 is based on the results of the lead/lag study. The study was completed based primarily on NGTL's 2001 transactions. The 2001 information has been updated to reflect the introduction of new long-term incentive compensation plans. In all other aspects, NGTL believes that the 2001 information is representative of that expected in 2004.

The appropriate number of lead or lag days, as determined by this study, has been applied to NGTL's forecast cash flows for 2004. In addition, for the purposes of the calculation of the average cash working capital requirement, NGTL has assumed that 64% of its common equity return for 2004 will be paid out in dividends. This reflects TCPL's actual dividend payout ratio for 2002, the last complete year for which this information is available. The resulting average cash working capital requirement is included in the 2004 test year rate base.

CASH WORKING CAPITAL SUMMARY

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	ESTIMATED NET (LEAD)/LAG DAYS	TEST YEAR REVENUE REQUIREMENT	CASH WORKING CAPITAL
	(a)	(b)	(c)	(d)
	Operating Return			
1	Common Equity Return	44	205,104	24,444
2	Debt Interest - Funded	(46)	224,311	(28,300)
3	Debt Interest - Unfunded	28	7,708	597
4	Common Dividends	(46)	131,267	(16,410)
5	Operating Costs	7	208,327	3,893
6	Depreciation and Amortization	44	302,203	36,016
7	Income Taxes	20	164,797	9,144
8	Large Corporation Taxes	20	3,697	205
9	Property Taxes	(10)	72,300	(2,068)
10	Foreign Exchange on Interest Payments	(44)	3,420	(411)
11	Transportation by Others	1	83,886	241
12	GST Remittances			(8,461)
13	GST Input Tax Credits			966
14	**Total**			19,856

3.7 MATERIALS AND SUPPLY INVENTORY

Schedule 3.7 shows monthly materials and supply inventory balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year.

The balances are calculated as one-twelfth of the average balance for the prior twelve months. Materials and supply inventory includes items for both operating and capital uses. This approach is consistent with the method NGTL used and explained in its 1995 GRA.

NGTL's methodology is based on the following considerations:

Single Inventory: Materials are managed in a single inventory.

Accounting Practice: Under NGTL's accounting practices, no inventory items collect an Allowance For Funds Used During Construction (AFUDC). NGTL manages all items in inventory collectively until they are withdrawn for operations or construction purposes. When the item is assigned to a construction project Authority for Expenditure, the cost is removed from the inventory balance and transferred to GPUC. Only then does it begin to accumulate AFUDC through the project account. There is therefore no duplication of return on inventory.

Cost Management: NGTL continuously reviews and optimizes inventory levels to achieve the lowest overall cost of inventory. The value of materials is maximized by returning surplus construction project items to inventory where feasible. Any AFUDC related to the construction materials returned is removed as part of the process involved in returning the item to inventory.

In disposing of any inventory, NGTL's goal is to obtain fair market value for the assets, minimize write-downs and maximize revenue.

System Access: Based on a forecast of upcoming system requirements, NGTL ensures assemblies are available to enable a quick response to customer requests for service. Having the appropriate materials (skid mounted buildings, meter run assemblies, valve assemblies, drip tanks) available from the inventory system allows NGTL to react to customer needs within reduced time frames.

System Reliability: All materials in inventory are available for use in the operation of the system, which enhances NGTL's ability to respond to system problems.

MATERIALS AND SUPPLY INVENTORY

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	Total of Prior 12 Months	339,694	335,634	334,867	336,179	338,521	342,068	344,926	347,340	350,410	353,190	357,222	362,730	367,091	
2	One-twelfth of total	28,308	27,970	27,906	28,015	28,210	28,506	28,744	28,945	29,201	29,433	29,769	30,227	30,591	
3	**Materials & Supply Inventory**	28,308	27,970	27,906	28,015	28,210	28,506	28,744	28,945	29,201	29,433	29,769	30,227	30,591	28,909

MATERIALS AND SUPPLY INVENTORY

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	Total of Prior 12 Months	367,091	371,202	372,275	371,377	363,037	361,267	360,373	359,559	358,549	357,139	354,548	351,742	350,013	
2	One-twelfth of total	30,591	30,934	31,023	30,948	30,253	30,106	30,031	29,963	29,879	29,762	29,546	29,312	29,168	
3	**Materials & Supply Inventory**	30,591	30,934	31,023	30,948	30,253	30,106	30,031	29,963	29,879	29,762	29,546	29,312	29,168	30,116

MATERIALS AND SUPPLY INVENTORY

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)
1	Total of Prior 12 Months	350,013	348,509	318,982	318,300	323,900	322,029	320,369	318,704	317,139	316,109	315,673	315,145	314,845	
2	One-twelfth of total	29,168	29,042	26,582	26,525	26,992	26,836	26,697	26,559	26,428	26,342	26,306	26,262	26,237	
3	**Materials & Supply Inventory**	29,168	29,042	26,582	26,525	26,992	26,836	26,697	26,559	26,428	26,342	26,306	26,262	26,237	26,921

3.8 LINEPACK

Schedule 3.8, sheets 1-3, shows the monthly and average linepack balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year.

NGTL determines the value of linepack based on a weighted average price of gas, which is adjusted with each incremental purchase or sale of linepack gas. The requirement for linepack gas increases as new facilities are connected to the system and as the aggregate volume of system gas increases. Decreases in linepack largely result from outages on the system or changes in flows because of market demand or seasonal variations.

LINEPACK
FOR THE BASE YEAR ENDING DECEMBER 31, 2002

LINE NO.		TARGET LINEPACK (GJ)	PURCHASE/ (SALE) (GJ)	FIELD GATE PRICE ($/GJ)	INCREMENTAL VALUE ($'000)	VALUE OF TARGET LINEPACK ($'000)
	(a)	(b)	(c)	(d)	(e)	(f)
1	Opening	14,371,500				25,670
2	January 31	14,371,500				25,670
3	February 28	14,371,500				25,670
4	March 31	14,371,500				25,670
5	April 30	14,371,500				25,670
6	May 31	14,136,500	(235,000)	$4.04	(949)	24,721
7	June 30	14,136,500				24,721
8	July 31	14,136,500				24,721
9	August 31	14,136,500				24,721
10	September 30	14,136,500				24,721
11	October 31	14,136,500				24,721
12	November 30	14,136,500				24,721
13	December 31	14,371,500	235,000	$4.98	1,169	25,889
14	13 Month Average					25,176

LINEPACK
FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003

LINE NO.		TARGET LINEPACK (GJ)	PURCHASE/ (SALE) (GJ)	FIELD GATE PRICE ($/GJ)	INCREMENTAL VALUE ($'000)	VALUE OF TARGET LINEPACK ($'000)
	(a)	(b)	(c)	(d)	(e)	(f)
1	Opening	14,371,500				25,889
2	January 31	14,566,500	195,000	$6.08	1,187	27,076
3	February 28	14,566,500				27,076
4	March 31	14,566,500				27,076
5	April 30	14,566,500				27,076
6	May 31	14,566,500				27,076
7	June 30	14,176,500	(390,000)	$6.48	(2,527)	24,549
8	July 31	14,176,500				24,549
9	August 31	14,176,500				24,549
10	September 30	14,176,500				24,549
11	October 31	14,176,500				24,549
12	November 30	14,176,500				24,549
13	December 31	14,176,500			(14)	24,535
14	13 Month Average					25,623

LINEPACK
FOR THE TEST YEAR ENDING DECEMBER 31, 2004

LINE NO.		TARGET LINEPACK (GJ)	PURCHASE/ (SALE) (GJ)	FIELD GATE PRICE ($/GJ)	INCREMENTAL VALUE ($'000)	VALUE OF TARGET LINEPACK ($'000)
	(a)	(b)	(c)	(d)	(e)	(f)
1	Opening	14,176,500				24,535
2	January 31	14,176,500				24,535
3	February 28	14,176,500				24,535
4	March 31	14,176,500				24,535
5	April 30	14,176,500				24,535
6	May 31	14,176,500				24,535
7	June 30	14,176,500				24,535
8	July 31	14,176,500				24,535
9	August 31	14,176,500				24,535
10	September 30	14,176,500				24,535
11	October 31	14,176,500				24,535
12	November 30	14,176,500				24,535
13	December 31	14,176,500				24,535
14	13 Month Average					24,535

3.9 UNAMORTIZED CAPITAL ASSETS

Schedule 3.9 shows the monthly Unamortized Capital Asset balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year.

Unamortized Capital Assets includes unamortized debt issue costs and retirements in progress. Unamortized debt issues costs are the unamortized portion of long term debt issue expenses. Retirements in progress are the net of removal costs incurred and salvage costs received on retirements that have not yet been completed.

UNAMORTIZED CAPITAL ASSETS

FOR THE BASE YEAR ENDED DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Unamortized Issue Costs															
1	Opening Balance	-	21,066	20,892	20,718	20,544	20,369	20,195	20,021	19,847	19,673	19,499	19,324	19,150		
2	Amortization		(174)	(174)	(174)	(174)	(174)	(174)	(174)	(174)	(174)	(174)	(174)	(174)		(2,090)
3	New Issue Costs		-	-	-	-	-	-	-	-	-	-	-	-		-
4	Closing Balance	21,066	20,892	20,718	20,544	20,369	20,195	20,021	19,847	19,673	19,499	19,324	19,150	18,976		
5	Retirements in Progress	(12,615)	(12,663)	(13,497)	(14,054)	(9,428)	(9,338)	(8,582)	(8,877)	(7,267)	(4,705)	(3,545)	(4,111)	(8,448)		
6	**Total**	8,452	8,229	7,221	6,490	10,941	10,857	11,439	10,970	12,406	14,794	15,779	15,039	10,528	11,012	

UNAMORTIZED CAPITAL ASSETS

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Unamortized Issue Costs															
1	Opening Balance		18,976	18,814	18,652	18,490	18,328	18,166	18,004	17,842	17,693	17,544	17,395	17,246		
2	Amortization		(162)	(162)	(162)	(162)	(162)	(162)	(162)	(149)	(149)	(149)	(149)	(141)		(1,871)
3	New Issue Costs		-	-	-	-	-	-	-	-	-	-	-	-		-
4	Closing Balance	18,976	18,814	18,652	18,490	18,328	18,166	18,004	17,842	17,693	17,544	17,395	17,246	17,105		
5	Retirements in Progress	(8,448)	(8,448)	(2,075)	(3,489)	(4,699)	(3,341)	(3,220)	(4,028)	(2,426)	(2,055)	358	270	172		
6	**Total**	10,528	10,366	16,577	15,001	13,629	14,825	14,784	13,814	15,267	15,489	17,753	17,516	17,277	14,833	

UNAMORTIZED CAPITAL ASSETS

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Unamortized Issue Costs															
1	Opening Balance		17,105	16,964	16,823	16,682	16,540	16,399	16,258	16,117	15,976	15,835	15,694	15,553		
2	Amortization		(141)	(141)	(141)	(141)	(141)	(141)	(141)	(141)	(141)	(141)	(141)	(135)		(1,688)
3	New Issue Costs		-	-	-	-	-	-	-	-	-	-	-	-		-
4	Closing Balance	17,105	16,964	16,823	16,682	16,540	16,399	16,258	16,117	15,976	15,835	15,694	15,553	15,417		
5	Retirements in Progress	172	(3,578)	(3,127)	(2,669)	(3,397)	(2,865)	(2,332)	(1,820)	(1,308)	(857)	(405)	47	499		
6	**Total**	17,277	13,386	13,696	14,012	13,144	13,535	13,926	14,297	14,667	14,978	15,289	15,600	15,916	14,594	

3.10 RESERVE ACCOUNTS

Schedule 3.10 shows the monthly reserve account balances for the 2002 base year, the 2003 ~~forecast~~ actual year, and the 2004 test year. For 2002 and 2003, the Foreign Exchange reserve account is included in Schedule 3.10, but is not included in rate base. The Regulatory Hearing Costs reserve account did not exist in 2002 and 2003 and is not included in Schedule 3.10 for these years. Additional details on these reserve accounts are provided in Section 7, Deferrals and Reserve Accounts.

Foreign Exchange Reserve Account

This account reflects the actual foreign exchange losses incurred on debt repayments less the total Annual Foreign Exchange Amortization Amounts collected.

~~The monthly balances in this reserve account reflect NGTL's estimate of the average exchange rate for the last four months of 2003. To the extent that the actual exchange rate realized on the November debt maturity varies from this forecast, the January 1, 2004 balance in the Foreign Exchange reserve account could vary from what is currently estimated.~~

Regulatory Hearing Costs Reserve Account

This account reflects the actual regulatory hearing costs incurred less the amounts collected through revenue requirement.

The monthly balances in this reserve account for 2004 assume that NGTL's costs will be incurred evenly over the year. The result is that, for forecast purposes, the balance in this account throughout 2004 is zero.

RESERVE ACCOUNTS

FOR THE BASE YEAR ENDING DECEMBER 31, 2002
($Thousands)

LINE NO.	DESCRIPTION	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	12 Month Totals
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	FOREIGN EXCHANGE [1]													
1	Opening balance	43,424	42,535	41,647	40,758	39,869	38,981	38,092	37,203	36,314	35,426	34,537	33,648	
2	Amortization Amount	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(889)	(10,664)
3	Realized (Gains)/Losses	-	-	-	-	-	-	-	-	-	-	-	-	
4	Closing balance	42,535	41,647	40,758	39,869	38,981	38,092	37,203	36,314	35,426	34,537	33,648	32,759	

[1] In 2002, the foreign exchange reserve account was not included in Rate Base.

RESERVE ACCOUNTS

FOR THE ACTUAL YEAR ENDED DECEMBER 31, 2003
($Thousands)

LINE NO.	DESCRIPTION	Jan 31	Feb 28	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	12 Month Totals
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	FOREIGN EXCHANGE [1]													
1	Opening balance	32,759	31,930	31,101	30,272	29,443	28,614	27,785	26,956	26,127	25,298	24,469	38,767	
2	Amortization Amount	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(829)	(9,948)
3	Realized (Gains)/Losses	-	-	-	-	-	-	-	-	-	-	15,127 [2]	-	
4	Closing balance	31,930	31,101	30,272	29,443	28,614	27,785	26,956	26,127	25,298	24,469	38,767	37,938	

[1] In 2003, the foreign exchange reserve account was not included in Rate Base.
[2] Realized FX loss at 1.3038 on November 14, 2003 for $32.5 MM Floating Term Note and 8.95% $150MM US Credit Suisse/Citibank debt maturities.

RESERVE ACCOUNTS

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 29	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	FOREIGN EXCHANGE															
1	Opening Balance		37,938	37,754	37,570	37,386	37,202	37,018	36,834	36,650	36,466	36,282	36,098	35,914		
2	Amortization Amount		(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)	(184)		(2,208)
3	Realized Losses		-	-	-	-	-	-	-	-	-	-	-	-		-
4	Closing Balance	37,938	37,754	37,570	37,386	37,202	37,018	36,834	36,650	36,466	36,282	36,098	35,914	35,730	36,834	
	REGULATORY HEARING COSTS															
5	Opening Balance		-	-	-	-	-	-	-	-	-	-	-	-		
6	Amortization Amount		(486)	(486)	(486)	(486)	(486)	(486)	(486)	(486)	(486)	(486)	(486)	(486)		(5,834)
7	Actual Costs Incurred		486	486	486	486	486	486	486	486	486	486	486	486		5,834
8	Closing Balance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	TOTAL	37,938	37,754	37,570	37,386	37,202	37,018	36,834	36,650	36,466	36,282	36,098	35,914	35,730	36,834	

3.11 PREFUNDED / (UNFUNDED) PENSION AND OTHER POST EMPLOYMENT BENEFITS LIABILITY

Schedule 3.11 shows the Prefunded/(Unfunded) Pension and Other Post Employment Benefits (OPEB) liability for the 2004 test year. This account reflects the cumulative pension and OPEB amount funded by NGTL less the cumulative pension and OPEB amounts collected through revenue requirement. In addition, because only actual funding of pension and OPEB liabilities is deductible for tax purposes, this account reflects the tax benefit or cost to NGTL of differences between funding and expense. NGTL is requesting Board approval to begin including this account in rate base in order to more accurately reflect the cost of timing differences between pension and OPEB expense and funding.

The pension and OPEB amounts expensed and collected through revenue requirement in a particular year are determined under the provisions of Generally Accepted Accounting Principles. NGTL funds OPEBs on a pay-as-you-go basis. The funding requirement for pension is based on company policy, determined within a minimum and maximum amount. Minimum funding requirements are prescribed under the Regulation to the Pension Benefits Standards Act, 1985 (Federal), while the maximum amount is limited by the Canada Customs and Revenue Agency. The net difference between the expense and funding amounts results in NGTL either paying out amounts not yet recovered through tolls or recovering more through tolls than has been funded. This difference is a timing difference and, as a result, is included in rate base to appropriately capture the cost of this difference in operating return.

Schedule 3.11.1 shows the calculation of the opening balance in the Prefunded/(Unfunded) Pension and OPEBs liability account. The opening balance has been calculated as the cumulative difference between funding and expense since 1999, the first full calendar year

since the merger of NOVA Corporation and TCPL.

Shortly after the merger, NGTL employees became TCPL employees and, as such, the employee benefit program, including pension and OPEBs, was managed by TCPL at the corporate level. Pension expense and corresponding pension funding requirements are determined based on an allocation using FTEs. Schedule 3.11.1 details the cumulative balance of the portion of the difference between pension expense and funding from 1999 to 2003 incurred by TCPL and attributed to NGTL.

Prior to 2000, NGTL expensed OPEBs as they were paid, thus there was no difference between funding and expense as of December 31, 1999. Since the year 2000, in accordance with a new accounting standard of the Canadian Institute of Chartered Accountants, TCPL has been recording its OPEB expense on an accrual basis. Schedule 3.11.1 details the cumulative balance of the difference between OPEB expense and funding from January 1, 2000, to January 1, 2004 attributed to NGTL's operations.

Pension expense in 2004 is forecast to be $~~14.2~~ 15.2 million. Total pension funding for the year is expected to be $~~19.1~~ 27.9 million, paid in quarterly installments. OPEB expense for 2004 is forecast to be $~~4.2~~ 4.8 million, while actual OPEB payments are expected to be approximately $~~2.0~~1.9 million. For 2004, in addition to the forecasted pension expense and funding, this account includes applicable income taxes and the pension top-up amounts related to employees whose employment was terminated during the term of the ASRS. Further details on these pension top-up amounts can be found in Section 2.13.3. The net effect of all these changes is to ~~reduce~~ increase the balance in the Prefunded/(Unfunded) Pension and OPEB Liability account by $~~0.1~~4.4 million, to $~~25.6~~29.9 million at December 31, 2004.

PREFUNDED/(UNFUNDED) PENSION AND OTHER POST EMPLOYMENT BENEFITS LIABILITY

FOR THE TEST YEAR ENDING DECEMBER 31, 2004
($Thousands)

LINE NO.	DESCRIPTION	Jan 1	Jan 31	Feb 29	Mar 31	Apr 30	May 31	June 30	July 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31	13 MONTH AVERAGE	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Prefunded/(Unfunded) Pension Liability															
1	Opening Balance (Schedule 3.11.1)	48,967	30,104	29,275	28,446	32,173	31,344	30,515	34,241	33,412	32,583	36,310	35,481	34,652		
2	Expense		(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)	(1,268)		(15,215)
3	Actual Funding		-	-	6,968	-	-	6,968	-	-	6,968	-	-	6,968		27,872
3	Income Taxes	(18,863)	439	439	(1,973)	439	439	(1,973)	439	439	(1,973)	439	439	(1,973)		(4,382)
4	Closing Balance	30,104	29,275	28,446	32,173	31,344	30,515	34,241	33,412	32,583	36,310	35,481	34,652	38,379	32,840	
	Prefunded/(Unfunded) Other Post Employment Benefits Liability															
5	Opening Balance (Schedule 3.11.1)	(7,631)	(4,588)	(4,744)	(4,901)	(5,057)	(5,213)	(5,370)	(5,526)	(5,683)	(5,839)	(5,996)	(6,152)	(6,308)		
6	Expense		(396)	(396)	(396)	(396)	(396)	(396)	(396)	(396)	(396)	(396)	(396)	(396)		(4,754)
7	Actual Funding		157	157	157	157	157	157	157	157	157	157	157	157		1,883
8	Income Taxes	3,043	83	83	83	83	83	83	83	83	83	83	83	83		994
9	Closing Balance	(4,588)	(4,744)	(4,901)	(5,057)	(5,213)	(5,370)	(5,526)	(5,683)	(5,839)	(5,996)	(6,152)	(6,308)	(6,465)	(5,526)	
	Severance Related Pension Top-Up															
10	Opening Balance	-	-	-	-	-	-	-	(25)	(148)	(521)	(894)	(1,267)	(1,640)		
11	Severance Amortization - Operating (Schedule 2.13.2.1)		-	-	-	-	-	-	(122)	(504)	(504)	(504)	(503)	(504)		(2,641)
12	Severance Amortization - Capital (Schedule 2.13.2.1)		-	-	-	-	-	(38)	(67)	(66)	(67)	(66)	(67)	(67)		(438)
13	Income Taxes	-	-	-	-	-	-	13	65	197	198	197	197	198		1,066
14	Closing Balance	-	-	-	-	-	-	(25)	(148)	(521)	(894)	(1,267)	(1,640)	(2,013)	(501)	
15	**Total Prefunded/(Unfunded) Pension & Other Post Employment Benefits Liability**	25,516	24,531	23,545	27,116	26,130	25,145	28,690	27,581	26,223	29,420	28,062	26,704	29,901	26,813	

PREFUNDED/(UNFUNDED) PENSION AND OTHER POST EMPLOYMENT BENEFITS LIABILITY
CONTINUITY SCHEDULE (1999 - 2003)

($Thousands)

LINE NO.	DESCRIPTION	1999	2000	2001	2002	2003	TOTAL
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Prefunded/(Unfunded) Pension Liability						
1	Opening Balance	-	(694)	1,663	4,802	13,123	
2	Expense	(2,253)	(2,800)	(4,292)	(4,077)	(13,131)	(29,296)
3	Actual Funding	1,000	7,055	9,716	17,773	39,976	78,263
4	Income Taxes [1]	559	(1,899)	(2,285)	(5,375)	(9,864)	(18,863)
5	Closing Balance	(694)	1,663	4,802	13,123	30,104	30,104
	Prefunded/(Unfunded) Other Post Employment Benefits Liability						
6	Opening Balance		-	(783)	(1,775)	(2,645)	
7	Expense		(2,363)	(2,798)	(3,029)	(4,476)	(12,666)
8	Actual Funding		949	1,084	1,598	1,404	5,035
9	Income Taxes [1]		631	722	562	1,129	3,043
10	Closing Balance	n/a	(783)	(1,775)	(2,645)	(4,588)	(4,588)
11	**Total Prefunded/(Unfunded) Pension & Other Post Employment Benefits Liability**	(694)	879	3,027	10,478	25,516	25,516
[1]	Income Taxes are calculated using the following rates:	44.620%	44.620%	42.119%	39.245%	36.745%	

APPENDIX A: LEAD/LAG STUDY

Written Evidence of
Raj Retnanandan
On Behalf of NOVA Gas Transmission Ltd.

Q. Please state your name, educational background and employment experience

A. My name is Raj Retnanandan. In 1974 I received the Chartered Accountant designation (Sri Lanka) after articling with Ernst & Young. In 1979 I received a Master of Science degree in Management Studies from Durham University, England and in 1989 I received the Certified Public Accountant designation from Colorado USA.

Since September 1993 I have been practicing as a Utilities Consultant specializing in rates, regulation and utilities policy. Prior to September 1993 I was Assistant Director of Technical Services with the Alberta Public Utilities Board. A statement of my educational background and employment can be found in the Appendix to this evidence.

Q. What is the purpose of your evidence in this proceeding?

A. I was asked by NOVA Gas Transmission Ltd. (NGTL) to prepare a lead lag study that would form the basis of its working capital calculations for the 2004 test year General Rate Application.

Q. Have you previously testified before the Alberta Energy and Utilities Board?

A. I have testified before the Alberta Energy and Utilities Board and its predecessor the Alberta Public Utilities Board in several proceedings.

Q. How is the lead lag study organized?

The study is organized under the following headings:

1. Introduction
2. Revenue Lag
3. Operating Costs
4. Property Taxes
5. Transportation by Others
6. Debt Interest
7. Common Equity and Dividends
8. Depreciation
9. Income Taxes
10. Goods and Services Tax

Current Lead Lag Study

1. Introduction

A lead lag study is used to determine the average cash working capital requirement arising from the timing differences of operating cash inflows and outflows. A single average lag related to revenues or cash inflows is calculated, in days, by reviewing the time lag between the point of service and receipt of payment for the service. Payments or cash outflow lags are then calculated for the various components of revenue requirement. The net lag for each component of revenue requirement is the difference between the revenue lag and the expense lag. The net lag days are expressed as a percentage of 365 days and applied to the components of revenue requirement. The results of the lead lag study are shown in Table 1.

For the purposes of the lead lag study a number of recorded transactions in 2001 were examined and analyzed by NGTL. The lead lag estimates from this analysis were used to estimate the weighted average lead or lag days for the 2004 test year.

2. Revenue Lag

The average revenue lag is calculated as the lag period between the provision of service and receipt of payment for the service. NGTL renders monthly bills to its customers. Accordingly, the provision of service is considered the middle of the month.

Bills for all services during a given month are issued on or about the 20th day of the following month. Payments for bills rendered are received on or about the end of the month following month of service.

In order to determine the average revenue lag, accounts representing the highest 59% by revenue, were analyzed over a twelve month period. Based on this analysis the average revenue lag is estimated at 43.50 days. The data and calculations used in estimating revenue lag are set out in Table 2.

3. Operating Costs

For the purpose of estimating the lag on operating costs, each major component of operating costs was sampled.

TCPL, NGTL's parent, operates as a functional organization maintaining centralized support services for all of its lines of business. These support service departments allocate their costs to NGTL monthly in accordance with TCPL's Operating Cost Allocation Policy. Settlement of costs incurred by TCPL on behalf of NGTL occur at the end of each month.

As original operating cost transactions are incurred by TCPL and not NGTL, it was necessary to examine TCPL's operating cost cash flows in order to identify the appropriate lead/lag of individual operating cost components. The lead or lag days so determined were then weighted by the corresponding proportion of that expense component in NGTL's operating costs total to arrive at the weighted average lag for operating costs.

The weighted average lag on operating costs was calculated by applying the leads and lags estimated from recorded transactions in 2001 to the forecast operating cost components in 2004. The calculation of the weighted average lag on operating costs is shown in Table 3.

The weighted average lag on operating costs is estimated at 36.68 days. The following is a description of the methods used to estimate the leads or lags associated with various components of operating costs.

Salaries and Benefits

The components of salaries and benefits for 2004 are as follows:

	$ Millions	% of Total	Lag Days	Wtd Lag
Salaries & Wages	66.4	51.8%	7.74	4.01
Severance	5.9	4.6%	7.74	0.36
Benefits	30.1	23.5%	8.50	2.00
Incentives	12.3	9.6%	239.50	22.98
Long term Incentive payments	13.5	10.5%	251.03	26.43
	128.2	100.0%		55.78

Net salaries are paid semi monthly on the 14th and 30th of each month. If these dates coincide with a weekend or holiday, payment is made on the last working day preceding the date. Payments to employees are by direct bank transfer. Accordingly, there is no lag between payment date and date cash is withdrawn from the Bank. Overtime earned during a period is paid when net salaries are paid. Therefore the payment lag on overtime is the same as that for net salaries

The average lag from provision of service to payment of net salaries and wages is estimated at 6.15 days. The majority of payroll related remittances are required to be made 3 days after each payroll run. Based on an analysis of 2001 net salaries and payroll remittances, the weighted average lag for salaries, wages and payroll remittances is estimated at 7.74 days. Severance payments are estimated to have the same average lag of 7.74 days as salaries and wages.

The benefits category includes pension and other post employment benefits (OPEB), employer's contributions to Canada Pension Plan (CPP), Employment Insurance (EI) and stock savings plan contributions on behalf of employees. The company proposes to

maintain a liability account for Supplementary and Registered Pension Plans and Other Post Employment Benefits (OPEB). The Pension and OPEB expense is credited to this account. Since this account would be a component of capital structure, pension expense is considered to have a zero lag for purposes of the lead lag study. The overall weighted average lag for benefits is estimated at 8.5 days.

Incentive payments are generally made on the 26th of February following the end of each fiscal year. Since incentive payments relate to the prior fiscal year the corresponding lag is estimated at 239.5 days.

Long term incentive payments include stock options, payments under the Performance Units Plan, the Restricted Share Unit Program and the Executive Share Unit Plan. Each plan has a different associated payment pattern. Based on an analysis of the payment patterns for each of these plans the weighted average lag on long term incentive payments is estimated at 251.03 days.

The overall weighted average lag on salaries and benefits is estimated at 55.78 days.

Employee Expenses and Transportation

These expenses relate to employee use of company credit cards for the purchase of required goods and services. Payments for expenses incurred in a given month are made in the following month. Based on a review of the payment pattern in 2001 the average expense lag related to this item is estimated at 35.03 days.

Office and Occupancy Costs

This category includes rent, utilities and other office expenses.

Rent is payable in advance at the beginning of each month. This results in a lead in rent payments of 15.2 days.

Utilities are payable approximately 21 days after month end. Analysis of 2001 payments shows a net lag of 36.62 days for this item.

Analysis of 2001 payments shows a net lag of 68.75 days for office expenses.

The weighted average lag on office and occupancy costs is estimated at 8.13 days.

Consulting and Contractor Costs

This category includes expenses related to services and materials. Based on an analysis of a representative sample of vendor accounts the average expense lag related to this item is estimated at 38.64 days.

Materials and Supplies

This category includes expenses related to materials and supplies. Based on an analysis of a representative sample of vendor accounts the average expense lag related to this item is estimated at 34.13 days.

Computer and Communications Costs

This category includes expenses related to services and materials. Based on an analysis of a representative sample of vendor accounts the average expense lag related to this item is estimated at 44.80 days.

Insurance

Insurance premiums are payable in advance. Accordingly the lead associated with this item is calculated at 105.25 days.

Land Expenses

Land expenses represent payments to land owners for easements. These annual payments are made in advance, each year. Accordingly the lead associated with land expenses is estimated at 185.25 days.

Other

This category is comprised of special services, stock and debt and miscellaneous expenses.

The overall average expense lag for the Other category is estimated at 45.60 days.

4. Property Taxes

Property taxes are incurred for the calendar year and are paid at various dates throughout the year. Based on an analysis of 2001 property tax payments, the weighted average payment lag on property taxes is estimated at 53.94 days.

5. Transportation by Others

Based on an analysis of payments for transportation by others in 2001 the average lag on transportation by others is estimated at 42.45 days.

6. Debt Interest

Long term debt issues have a mix of semi annual and quarterly coupons. The weighted average lag on US and Canadian long term debt interest is estimated at 89.55 days, based on an analysis of the payment pattern in 2001.

Foreign exchange on interest payments relates to exchange losses on interest payments applicable to US securities. The lag on interest payments on US securities and the corresponding foreign exchange losses is estimated at 87.42 days.

Short term debt consists primarily of inter-company borrowing. Interest due on inter company borrowing is payable at each month end. Accordingly the average payment lag on short term debt is estimated at 15.2 days.

7. Return on Common Equity and Dividends

As a component of revenue requirement common equity return has a revenue lag of 43.50 days. The payment lag associated with return on common equity is considered to be zero since return is deemed to be earned on the average rate base which has no associated leads or lags.

For purposes of the lead lag study, common dividends are deemed to be paid quarterly. Since quarterly payments result in the company having use of the cash associated with dividends from the point of earning to point of payment, the payment lag on common dividends is estimated at 45.63 days.

8. Depreciation

As a component of revenue requirement this item has a revenue lag of 43.50 days. The payment lag associated with depreciation is considered to be zero since depreciation impacts the average rate base which has no associated leads or lags.

9. Income and Large Corporation Taxes

Income tax installments are payable at each month end. Accordingly the income tax lag for installments payable during the test year are estimated at 15.21 days.

If a final income tax installment is payable due to current year taxes being higher than previous year's, the lag on the final installment is calculated at 241.5 days. Details of this calculation are shown in Table 4.

10. Goods and Services Tax

The calculation of GST payable lag and GST Disbursements lag is shown in Table 5.

GST on billings for services in a given month is payable at the end of the following month. Accordingly the GST payable lag is calculated at 2.5 months or 76.04 days from point of consumption, consisting of one half month consumption lag and two months lag for billing and filing of GST payable. The revenue or collection lag applicable to GST payable is estimated at 43.50 days. Accordingly the net lead on GST payable is estimated at 32.54 days. In other words, the company has use of GST payable for 32.54 days; this results in a reduction in the working capital requirements with respect to this item.

Input tax credits on vendor invoices are claimed at the end of the month following the month invoices are paid. Accordingly the average input tax credit lag is calculated at 1.5 months or 45.62 days. Since the payment of GST to vendors precedes the input tax credit claim by 45.62 days the working capital requirements are increased by this item.

The component of working capital applicable to GST input tax credits is calculated on revenue requirement items subject to GST. GST input tax credits on capital items are not included since the working capital calculation applies to operating cash flows and not capital related cash flows.

NOVA Gas Transmission Ltd-Lead Lag Study
Table 1
Results of the 2004 Lead Lag Study

	Average Lag in Revenue Days	Average Lag in Payment Days	Net (Lead) Lag	Percent of 365 Days
Operating Costs	43.50	36.68	6.82	1.9%
Property Taxes	43.50	53.94	(10.44)	-2.9%
Transportation by Others	43.50	42.45	1.05	0.3%
Long Term Debt Interest	43.50	89.55	(46.05)	-12.6%
Foreign Exchange on Interest Payments	43.50	87.42	(43.91)	-12.0%
Short Term Debt Interest	43.50	15.21	28.29	7.8%
Common Equity	43.50	0.00	43.50	11.9%
Common Dividends		45.63	(45.63)	-12.5%
Depreciation	43.50	0.00	43.50	11.9%
Income and Large Corporation Taxes Monthly Instalmer	43.50	15.21	28.29	7.8%
Income and Large Corporation Taxes Final Payment	43.50	241.50	(198.00)	-54.2%
GST Remittances	43.50	76.04	(32.54)	-8.9%
GST Input Tax Credits		-45.63	45.63	12.5%

NOVA Gas Transmission Ltd. - Lead Lag Study
Table 2
Calculation of Revenue Lag
2001 Revenue Analysis

Description	Amount	% of Total	(Lead)Lag Days	Weighted # of Days (Lead)Lag
Sampled Accounts				
Customer 1	125,248,075	15.28%	45.27	6.92
Customer 2	84,053,727	10.25%	45.30	4.65
Customer 3	79,013,612	9.64%	45.21	4.36
Customer 4	72,807,650	8.88%	45.37	4.03
Customer 5	62,281,873	7.60%	45.29	3.44
Customer 6	61,152,561	7.46%	45.41	3.39
Customer 7	54,542,534	6.65%	44.64	2.97
Customer 8	52,617,330	6.42%	45.17	2.90
Customer 9	34,866,673	4.25%	44.82	1.91
Customer 10	35,711,164	4.36%	45.28	1.97
Customer 11	33,001,356	4.03%	45.23	1.82
Customer 12	31,595,658	3.85%	44.29	1.71
Customer 13	20,888,397	2.55%	45.78	1.17
Customer 14	16,847,680	2.06%	43.38	0.89
Customer 15	15,573,401	1.90%	42.06	0.80
Customer 16	12,194,293	1.49%	43.91	0.65
Customer 17	9,860,622	1.20%	45.19	0.54
Customer 18	7,065,453	0.86%	44.98	0.39
Customer 19	5,581,104	0.68%	45.29	0.31
Customer 20	4,825,830	0.59%	45.07	0.27
	819,728,995	100.00%		45.07
Summary				
All Other Accounts	1380798149	97.25%	45.07	43.83
Customer 21	39046869	2.75%	-11.91	(0.33)
2001 Revenue & Revenue Lag	1419845018	100.00%		43.50

NOVA Gas Transmission Ltd. - Lead Lag Study
Table 3
2004 Operating Costs Analysis

	Amount $ million	Percent	Lead/Lag Days	Wtd Lag Days
Salaries & Benefits	128.2	59.0%	55.78	32.89
Employee Expenses	7.2	3.3%	35.03	1.16
Office & Occupancy	15.5	7.1%	8.13	0.58
Consultants & Contractors	20.0	9.2%	38.64	3.55
Materials & Supplies	19.1	8.8%	34.13	3.00
Computer & Communications	11.6	5.3%	44.80	2.39
Insurance	4.0	1.8%	-105.25	-1.94
Land Expenses	7.0	3.2%	-185.25	-5.96
Other	4.8	2.2%	45.60	1.01
Total Operating Costs	217.4	100.0%		36.68
Charge outs-salaries	-11.4			
Charge outs-other	-1.3			
Net Operating Costs	204.7			

NOVA Gas Transmission Ltd. - Lead Lag Study

Table 4

Income Tax Final Payment Lag

Final Income Tax Payment Lag Calculation			
If NGTL is in a payable position the expense lag for the final income tax instalment is			
calculated as the mid point of the year plus January and February days. The final payment is due			
and paid the last day of February in the following year.			
	365/2	Mid Year	
	+59	February 28 following year	
	241.5	Total lag days	
	43.50	Revenue lag days	
	241.5	Income tax payment lag	
-	198.00	Net lag	
	-54.2%	Percent payment lag	

NOVA Gas Transmission Ltd. - Lead Lag Study
Table 5
GST Lead Lag

GST Remittances

GST on customer bills would be remitted on the last day of the month following the month the bill is issued. Since GST is paid after it is collected from customers there is a negative working capital associated with GST on revenues

Lag Between mid point of consumption and Remittance to Government (2.5 Months)	76.04
Less Revenue lag	(43.50)
Lead Between GST Being Received by NGTL and Being Remitted to the Government	(32.54)
Working Capital Ratio : GST Lead divided by 365 days in the year	**(0.089)**

GST Input Tax Credits

Recoveries from the Government are made on the last day of the month following the month the invoice is paid. Assuming invoice is paid on average at the mid point of the previous month:

Lag Between GST being paid by NGTL and being claimed from Government	45.63
Working Capital Ratio : GST Lag divided by 365 days in the year	**0.125**

Curriculum Vitae of Raj Retnanandan

Position

Principal
Energy Management & Regulatory Consulting Ltd

Responsibilities

Regulatory Support, Regulatory Policy, Financial and Economic Analysis, Tariff design

Education

- **Certified Public Accountant (Colorado U.S.A)-** Obtained professional designation in 1989 after completing CPA Uniform Final Exam in 1988.
- **Master of Science in Management Studies, Durham University England-**Obtained degree in 1979. Dissertation topic: Development Banks & Industrial Financing in the Third World.
- **Chartered Accountant (Sri Lanka)**- Obtained professional designation in 1974. Served four years of articleship with Ernst & Young, Colombo, Sri Lanka.

Memberships

- Member of the American Institute of Certified Public Accountants
- Member of the Colorado Society of Certified Public Accountants
- Member of the Institute of Chartered Accountants Sri Lanka

Employment History

1993, August to Date	Principal, Energy Management & Regulatory Consulting Ltd.
1989 to 1993	Assistant Director, Alberta Public Utilities Board
1982 to 1993	Regulatory Analyst, Alberta Public Utilities Board
1980 to 1981	Chief Accountant, Richard Pieries & Co Sri Lanka

Appearances as Witness

Alberta Energy & Utilities Board	1995 NUL/CWNG Core Market Proceedings 1996 Electric Proceedings 2000/01 ATCO Pipelines South GRA 2001 GCRR Methodology and Gas Rate Unbundling