Q. In the response to CA-2.0-NP (Total Revenue From Rates 1996 – 2005), there is an indication that the data was normalized. Please explain what normalization was applied to the data. Re-file the response to this RFI without any normalization (i.e., the actual revenue by customer class by billing period for the fiscal years 1996 to 2005, inclusive). Provide this data in hard copy and in Excel spreadsheet format.

A. Attachment A provides the actual revenue, excluding weather normalization adjustments, per billing period for each of Newfoundland Power's customer classes for the years 1996 to 2005. An Excel Spreadsheet containing the data will be provided electronically.

Attachment B provides a description of Newfoundland Power's Weather Normalization Method.

Newfoundland Power Inc.

Total Revenue From Rates For 1996-2005 - Actual

($000s)

1996		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	24,221	21,514	19,756	19,215	16,040	13,757	11,650	10,163	10,868	13,347	16,627	18,307	195,465
General Service														
0-10 kW	2.1	1,022	976	915	873	780	744	732	685	691	709	778	846	9,751
10-100 kW (110 kVA)	2.2	4,939	4,758	4,489	4,192	3,701	3,388	3,114	2,890	2,921	3,271	3,703	4,100	45,466
110-1000 kVA	2.3	5,333	5,131	4,794	4,518	4,062	3,763	3,813	3,644	3,617	3,863	4,226	4,497	51,261
1000 kVA and Over	2.4	1,822	1,782	1,762	1,631	1,361	1,371	1,430	1,315	1,403	1,420	1,390	1,431	18,118
Street & Area Lighting	4.1	880	861	894	872	881	866	878	875	879	868	873	875	10,502
Forfeited Discounts		256	246	228	204	216	164	157	141	117	143	169	199	2,240
Revenue From Rates		**38,473**	**35,268**	**32,838**	**31,505**	**27,041**	**24,053**	**21,774**	**19,713**	**20,496**	**23,621**	**27,766**	**30,255**	**332,803**

1997		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	23,101	22,634	22,809	20,778	17,584	14,870	11,660	10,542	11,087	13,345	16,173	20,120	204,703
General Service														
0-10 kW	2.1	986	1,000	1,027	961	837	789	717	710	702	728	788	908	10,153
10-100 kW (110 kVA)	2.2	4,652	4,753	4,781	4,311	3,855	3,510	3,089	2,874	2,899	3,261	3,662	4,278	45,925
110-1000 kVA	2.3	5,092	5,157	5,149	4,640	4,184	3,883	3,613	3,325	3,493	3,856	4,126	4,661	51,179
1000 kVA and Over	2.4	1,559	1,662	1,570	1,518	1,406	1,345	1,353	1,301	1,409	1,419	1,471	1,624	17,637
Street & Area Lighting	4.1	870	864	879	865	862	863	861	859	859	862	840	869	10,353
Forfeited Discounts		232	245	251	233	210	168	179	125	132	149	180	210	2,314
Revenue From Rates		**36,492**	**36,315**	**36,466**	**33,306**	**28,938**	**25,428**	**21,472**	**19,736**	**20,581**	**23,620**	**27,240**	**32,670**	**342,264**

1998		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	24,257	21,836	20,141	19,100	15,636	9,111	11,071	11,804	10,765	13,054	16,274	19,404	192,453
General Service														
0-10 kW	2.1	1,036	974	936	896	790	703	711	567	679	736	812	913	9,753
10-100 kW (110 kVA)	2.2	4,695	4,614	4,473	4,100	3,607	3,293	2,962	2,243	2,772	3,209	3,583	4,226	43,777
110-1000 kVA	2.3	5,314	4,893	4,862	4,458	3,975	3,793	3,590	2,750	3,238	3,697	4,177	4,667	49,414
1000 kVA and Over	2.4	1,651	1,574	1,491	1,397	1,313	1,540	1,556	1,290	1,475	1,592	1,662	1,578	18,119
Street & Area Lighting	4.1	860	859	866	865	826	881	819	749	815	909	845	846	10,140
Forfeited Discounts		280	256	253	225	192	165	151	135	128	136	149	192	2,262
Revenue From Rates		**38,093**	**35,006**	**33,022**	**31,041**	**26,339**	**19,486**	**20,860**	**19,538**	**19,872**	**23,333**	**27,502**	**31,826**	**325,918**

Newfoundland Power Inc.

Total Revenue From Rates For 1996-2005 - Actual

($000s)

1999		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	23,644	20,668	20,202	18,690	15,226	14,155	9,264	9,991	10,569	12,236	17,338	18,934	190,917
General Service														
0-10 kW	2.1	1,025	1,001	948	894	788	745	673	698	693	761	860	908	9,994
10-100 kW (110 kVA)	2.2	4,572	4,464	4,316	3,988	3,593	3,330	2,828	2,790	2,753	3,253	3,808	4,098	43,793
110-1000 kVA	2.3	5,043	4,823	4,695	4,366	3,855	3,796	3,539	3,425	3,318	3,987	4,365	4,611	49,823
1000 kVA and Over	2.4	1,632	1,613	1,580	1,497	1,505	1,604	1,712	1,551	1,575	1,665	1,727	1,727	19,388
Street & Area Lighting	4.1	849	853	859	860	860	851	861	861	858	883	854	862	10,311
Forfeited Discounts		238	234	232	230	184	175	138	141	130	136	151	191	2,180
Revenue From Rates		**37,003**	**33,656**	**32,832**	**30,525**	**26,011**	**24,656**	**19,015**	**19,457**	**19,896**	**22,921**	**29,103**	**31,331**	**326,406**

2000		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	23,657	22,400	20,528	18,349	17,033	13,815	11,411	10,374	10,920	12,955	16,660	15,467	193,569
General Service														
0-10 kW	2.1	1,060	1,045	974	890	859	782	748	714	739	761	856	726	10,154
10-100 kW (110 kVA)	2.2	4,689	4,726	4,433	3,983	3,833	3,325	3,230	2,898	2,923	3,214	3,694	3,271	44,219
110-1000 kVA	2.3	5,181	5,128	4,911	4,372	4,235	3,883	4,003	3,519	3,552	3,827	4,260	3,639	50,510
1000 kVA and Over	2.4	1,666	1,676	1,490	1,411	1,452	1,634	1,704	1,550	1,526	1,550	1,596	1,298	18,553
Street & Area Lighting	4.1	871	871	871	871	863	869	869	888	873	874	877	673	10,270
Forfeited Discounts		246	233	260	179	191	180	123	144	118	128	151	148	2,101
Revenue From Rates		**37,370**	**36,079**	**33,467**	**30,055**	**28,466**	**24,488**	**22,088**	**20,087**	**20,651**	**23,309**	**28,094**	**25,222**	**329,376**

2001		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	25,546	23,562	21,696	20,151	18,451	14,735	11,795	10,788	11,026	12,733	16,273	18,258	205,014
General Service														
0-10 kW	2.1	1,124	1,074	1,026	974	892	802	766	758	756	741	839	875	10,627
10-100 kW (110 kVA)	2.2	4,802	4,695	4,584	4,225	3,902	3,499	3,151	3,005	2,931	3,159	3,658	3,925	45,536
110-1000 kVA	2.3	5,368	5,160	5,092	4,625	4,289	4,030	3,881	3,646	3,520	3,861	4,271	4,360	52,103
1000 kVA and Over	2.4	1,818	1,843	1,843	1,692	1,800	1,791	1,748	1,639	1,639	1,523	1,645	1,595	20,576
Street & Area Lighting	4.1	859	876	876	877	876	877	877	878	879	876	878	854	10,483
Forfeited Discounts		243	242	252	209	214	167	139	138	131	117	144	162	2,158
Revenue From Rates		**39,760**	**37,452**	**35,369**	**32,753**	**30,424**	**25,901**	**22,357**	**20,852**	**20,882**	**23,010**	**27,708**	**30,029**	**346,497**

Newfoundland Power Inc.

Total Revenue From Rates For 1996-2005 - Actual

($000s)

2002		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	24,716	24,397	21,620	21,937	17,944	14,314	12,128	11,181	11,655	14,352	18,723	22,080	215,047
General Service														
0-10 kW	2.1	1,078	1,091	1,026	1,006	873	778	768	750	746	783	890	1,006	10,795
10-100 kW (110 kVA)	2.2	4,658	4,890	4,578	4,366	4,062	3,424	3,254	3,004	3,089	3,472	4,032	4,530	47,359
110-1000 kVA	2.3	5,137	5,347	5,056	4,799	4,404	4,030	3,996	3,664	3,814	4,171	4,636	5,221	54,275
1000 kVA and Over	2.4	1,750	1,868	1,672	1,773	1,638	1,736	1,712	1,749	1,679	1,746	1,724	1,885	20,932
Street & Area Lighting	4.1	877	879	878	879	880	877	877	880	911	923	865	987	10,713
Forfeited Discounts		250	226	232	222	208	125	130	130	82	132	165	193	2,095
Revenue From Rates		**38,466**	**38,698**	**35,062**	**34,982**	**30,009**	**25,284**	**22,865**	**21,358**	**21,976**	**25,579**	**31,035**	**35,902**	**361,216**

2003		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	27,945	24,759	26,258	22,505	19,042	14,216	12,188	11,437	11,709	12,714	16,712	20,697	220,182
General Service														
0-10 kW	2.1	1,171	1,082	1,130	1,012	894	727	700	767	744	744	817	992	10,780
10-100 kW (110 kVA)	2.2	5,167	4,994	5,229	4,589	4,134	3,268	3,424	3,178	3,126	3,245	3,757	4,311	48,422
110-1000 kVA	2.3	5,657	5,513	5,820	5,092	4,725	3,847	4,152	3,943	3,978	4,150	4,482	4,981	56,340
1000 kVA and Over	2.4	1,926	1,859	1,943	1,769	1,818	1,698	1,914	1,890	1,848	1,828	1,779	1,881	22,153
Street & Area Lighting	4.1	922	945	869	922	950	847	923	918	925	918	926	930	10,995
Forfeited Discounts		265	261	268	257	218	167	157	137	132	133	141	183	2,319
Revenue From Rates		**43,053**	**39,413**	**41,517**	**36,146**	**31,781**	**24,770**	**23,458**	**22,270**	**22,462**	**23,732**	**28,614**	**33,975**	**371,191**

2004		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	25,031	25,539	24,716	21,397	18,336	16,241	14,055	11,806	12,627	15,174	19,499	24,184	228,605
General Service														
0-10 kW	2.1	1,045	1,098	1,086	976	878	826	830	777	796	826	918	1,052	11,108
10-100 kW (110 kVA)	2.2	4,767	5,027	4,986	4,420	4,013	3,741	3,687	3,402	3,478	3,700	4,246	4,998	50,465
110-1000 kVA	2.3	5,462	5,683	5,593	4,993	4,574	4,528	4,499	4,176	4,186	4,632	4,991	5,692	59,009
1000 kVA and Over	2.4	1,868	1,999	1,890	1,761	1,765	1,887	2,061	2,062	2,012	2,002	2,064	2,126	23,497
Street & Area Lighting	4.1	930	929	925	938	931	932	966	955	953	957	964	963	11,343
Forfeited Discounts		271	228	258	254	197	176	160	160	151	147	187	221	2,410
Revenue From Rates		**39,374**	**40,503**	**39,454**	**34,739**	**30,694**	**28,331**	**26,258**	**23,338**	**24,203**	**27,438**	**32,869**	**39,236**	**386,437**

Newfoundland Power Inc.

Total Revenue From Rates For 1996-2005 - Actual

($000s)

2005		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Domestic	1.1	28,360	28,265	25,480	23,195	19,373	16,652	13,580	12,314	12,405	14,345	18,821	22,488	235,278
General Service														
0-10 kW	2.1	1,156	1,185	1,101	1,019	907	850	820	799	781	778	874	986	11,256
10-100 kW (110 kVA)	2.2	5,312	5,501	5,180	4,785	4,289	3,935	3,693	3,465	3,423	3,628	4,121	4,695	52,027
110-1000 kVA	2.3	5,976	6,106	5,760	5,351	4,792	4,647	4,559	4,211	4,144	4,405	4,875	5,360	60,186
1000 kVA and Over	2.4	2,101	2,103	2,049	1,841	1,886	2,017	2,167	2,199	1,989	1,832	1,949	2,059	24,192
Street & Area Lighting	4.1	952	954	956	947	982	963	965	960	960	957	962	966	11,524
Forfeited Discounts		305	271	299	260	223	189	160	163	151	146	187	187	2,541
Revenue From Rates		**44,162**	**44,385**	**40,825**	**37,398**	**32,452**	**29,253**	**25,944**	**24,111**	**23,853**	**26,091**	**31,789**	**36,741**	**397,004**

Weather Normalization Method

1.0 Background

Newfoundland Power's Weather Normalization Reserve consists of the following two components:

1. the Hydro Production Equalization Reserve established by the Board in Order No. P.U. 32 (1968) to normalize Newfoundland Power's purchased power costs for variations in Newfoundland Power's hydroelectric production due to stream-flows that are either above or below normal in any given year; and,
2. the Degree Day Normalization Reserve established by the Board in Order No. P.U. 1 (1974) to normalize Newfoundland Power's revenue and purchased power costs for the effects of abnormal weather conditions.

The purpose of the Weather Normalization Reserve is to stabilize rates for customers. Newfoundland Power's annual revenue and purchased power expense on its financial statements are reflective of normal weather and normal stream-flows to its hydro plants.

The calculations supporting transfers to, or from, the Weather Normalization Reserve are reviewed annually by the Board. The Board has issued orders approving the balance in the reserve for each year from 1974 to present.

A summary of the mechanics to determine the monthly adjustment for each reserve component is provided below:

1.1 Mechanics of Hydro Production Equalization Adjustment

The Hydro Production Equalization Reserve enables Newfoundland Power to normalize its purchased power expense for annual variations in normal stream-flows to its hydro plants. If cumulative stream-flows are below normal for the year, the Reserve is debited in an amount equal to the cost of increased purchases from Hydro. Conversely, if cumulative stream-flows are above normal for the year, the Reserve is credited with an amount equal to the savings from reduced purchases from Hydro.

The calculation for the 2005 year-end adjustment to the Hydro Production Equalization Reserve is provided below:

Calculation of Hydro Production Equalization Reserve Transfer

2005

Average Natural Flow (GWh)		426.1
Less: Actual Natural Flow (GWh)		449.1
Equals: Gross Variation (GWh)		(23.0)
Times the End block Purchased Power Rate (in mills)	x 47.00	
Equals: Variation in Purchased Power Expense		$1,079,000
Less: Income Tax @ 35%		$ 377,650
Net Transfer (To) From Reserve		($ 701,350)

Therefore, because stream-flows were 23.0 GWh above normal in 2001, Newfoundland Power purchased 23.0 GWh less from Hydro. To offset the impact on earnings, the after-tax effect of the reduced purchased power expense was credited to the Hydro Production Equalization Reserve.

1.2 Mechanics of Degree-Day Normalization Adjustment

The Degree-Day Normalization Reserve enables Newfoundland Power to normalize its sales and purchases for annual variations in weather (i.e., specifically temperature and wind). In general, if the weather is colder than normal in a particular year, Newfoundland Power deposits the

additional earnings to the Degree Day Normalization Reserve. And, if the weather is warmer than normal in a particular year, Newfoundland Power recovers the lost earnings from the Degree Day Normalization Reserve.

Econometric modelling is used to determine the change in customer's usage resulting from a unit variation in normal monthly weather[1]. The factors derived for each rate class are referred to as normalization coefficients. The equations below provide a summary of the math used in calculating the monthly adjustments for each rate class:

Monthly Adjustment (MWh) = (Normal Weather – Actual Weather) x Normalization Coefficient

Weather Normalized Sales = Actual Sales + Monthly Sales Adjustment

Weather Normalized Purchases = Actual Purchases + Monthly Purchases Adjustment

The monthly energy adjustments are then converted to revenue and purchased power expense adjustments. The revenue adjustment equals the sales adjustment times the end block energy rate for the class. The revenue adjustments by class are then totalled to determine the total revenue adjustment for the month. The purchased power expense adjustment equals the total of the purchase adjustments for each class multiplied by the purchased power end block mill rate. The net adjustment for the month equals the total revenue adjustment less the total purchased power expense adjustment. The net adjustment less income taxes is transferred to (or from) the Degree Day Normalization Reserve.

The Board approved an updated Degree Day Normalization methodology in 1995. The coefficients and normals used in calculating adjustments are adjusted annually and provided to the Board in January of each year.

[1] The Company uses a degree-day variable to measure temperature and average daily wind speed to measure wind speed.