

1 **Volume 2: Tab 3, Customer, Energy and Demand Forecast Report**

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3 **Q. Volume 2, Tab 3. Please provide the historic dataset and the programming code**
4 **used to estimate the econometric models for each of the customer classes.**

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6 A. See Attachment A for the requested datasets. Newfoundland Power performs regression
7 analyses on the datasets using Microsoft Excel.¹

¹ For additional detail on the econometric models used in the sales forecast, see the response to Request for Information PUB-NP-080.

Requested Information

Newfoundland Power Inc.
Requested Data
Domestic Class 1.1

Year	Avg Use	Market Share (t)	Marginal Price Index (t)	Marginal Price Index (t-1)	CDM Impact	Dum - 2022+	Income /Customer (t)	Dum - 2020
1980	11,753	34.9%	90.05	90.70	1.00	0	97.77	0
1981	12,084	36.9%	86.51	90.05	1.00	0	100.40	0
1982	12,062	38.6%	99.64	86.51	1.00	0	100.24	0
1983	12,288	40.4%	101.19	99.64	1.00	0	94.81	0
1984	12,501	42.3%	106.08	101.19	1.00	0	94.35	0
1985	12,588	44.2%	120.93	106.08	1.00	0	96.24	0
1986	12,860	46.0%	113.56	120.93	1.00	0	97.61	0
1987	13,143	47.5%	110.01	113.56	1.00	0	103.52	0
1988	13,671	49.2%	106.28	110.01	1.00	0	107.72	0
1989	14,206	50.6%	99.74	106.28	1.00	0	108.76	0
1990	14,930	51.7%	97.20	99.74	1.00	0	107.06	0
1991	15,147	52.6%	103.90	97.20	1.00	0	103.81	0
1992	15,065	53.2%	104.36	103.90	1.00	0	104.01	0
1993	15,010	53.6%	103.19	104.36	1.24	0	101.93	0
1994	14,923	53.8%	102.38	103.19	1.38	0	102.28	0
1995	14,753	53.7%	100.94	102.38	1.52	0	98.66	0
1996	14,797	54.0%	99.30	100.94	1.79	0	95.53	0
1997	14,814	54.3%	104.51	99.30	2.05	0	92.26	0
1998	14,640	54.7%	105.51	104.51	2.22	0	92.82	0
1999	14,609	54.6%	106.08	105.51	2.34	0	95.77	0
2000	14,721	55.1%	104.12	106.08	2.40	0	95.83	0
2001	14,927	55.8%	102.03	104.12	2.52	0	99.71	0
2002	15,144	56.6%	100.00	102.03	2.61	0	100.00	0
2003	15,322	57.6%	100.75	100.00	2.67	0	98.37	0
2004	15,443	58.6%	105.62	100.75	2.79	0	97.02	0
2005	15,309	59.6%	111.85	105.62	3.16	0	95.39	0
2006	15,096	60.4%	115.77	111.85	3.48	0	100.44	0
2007	15,211	61.3%	116.03	115.77	4.03	0	106.58	0
2008	15,416	62.5%	117.31	116.03	4.28	0	110.59	0
2009	15,574	63.6%	118.22	117.31	4.48	0	116.72	0
2010	15,801	64.8%	116.05	118.22	5.05	0	118.03	0
2011	15,978	65.8%	116.03	116.05	6.35	0	120.03	0
2012	15,876	66.9%	116.11	116.03	7.83	0	123.30	0
2013	16,010	68.0%	118.41	116.11	8.90	0	125.02	0
2014	16,206	68.9%	115.60	118.41	10.37	0	125.07	0
2015	16,157	69.7%	117.34	115.60	12.52	0	126.18	0
2016	15,986	70.4%	112.71	117.34	15.25	0	119.51	0
2017	15,866	71.1%	108.98	112.71	18.36	0	116.91	0
2018	15,531	71.7%	116.32	108.98	21.25	0	116.16	0
2019	15,284	72.2%	121.19	116.32	24.65	0	115.41	0
2020	15,172	72.7%	125.23	121.19	27.22	0	115.76	1
2021	14,846	73.1%	123.94	125.23	29.21	0	121.25	0
2022	14,945	73.6%	122.36	123.94	31.00	1	113.63	0

- Column B Domestic average annual usage in kWh.
- Column C Market share of electric heat.
- Column D Indexed electricity price in current year.
- Column E Indexed electricity price in prior year.
- Column F Indexed energy conservation CDM program impact.
- Column G Dummy variable for 2022 base year.
- Column H Indexed household disposable income per customer.
- Column I Dummy variable for 2020 pandemic year.

Newfoundland Power Inc.
Requested Data
General Service Class 2.1

Year	Sales MWh	GDP-SS (t)	Unit price (t)	CDM Impact	Dum - 2022+	Customers (t)	Dum - 2020
1985	520,704	9,224	118.71	100.0	0	17,311	0
1986	536,728	9,510	115.28	100.0	0	17,546	0
1987	550,938	9,889	111.28	100.0	0	17,858	0
1988	575,880	10,264	109.39	100.0	0	18,171	0
1989	605,489	10,440	102.41	100.0	0	18,680	0
1990	634,764	10,600	102.84	100.0	0	18,780	0
1991	636,974	10,495	107.47	100.0	0	18,954	0
1992	632,676	10,595	110.46	100.0	0	18,963	0
1993	631,529	10,610	109.34	100.0	0	18,994	0
1994	632,193	10,781	108.59	100.0	0	19,137	0
1995	632,321	10,921	107.31	100.0	0	19,073	0
1996	627,500	10,609	105.88	100.0	0	19,175	0
1997	638,341	10,861	107.07	100.0	0	19,381	0
1998	642,535	11,093	107.65	100.0	0	19,573	0
1999	653,132	11,371	107.92	100.0	0	19,495	0
2000	662,615	11,656	105.02	100.0	0	19,640	0
2001	669,835	11,856	101.80	100.0	0	19,660	0
2002	681,428	12,318	100.00	100.0	0	19,663	0
2003	690,974	12,589	99.02	100.0	0	19,747	0
2004	701,161	12,688	103.51	100.0	0	19,901	0
2005	707,832	13,053	107.18	100.0	0	20,160	0
2006	710,050	13,359	109.88	100.0	0	20,176	0
2007	719,173	13,433	108.86	100.0	0	20,335	0
2008	727,522	13,832	104.99	100.0	0	20,546	0
2009	731,927	13,984	106.11	100.0	0	20,806	0
2010	741,176	14,415	102.69	100.0	0	21,025	0
2011	759,384	14,917	103.40	100.0	0	21,182	0
2012	767,907	15,268	107.98	100.0	0	21,590	0
2013	776,221	15,482	106.47	100.0	0	21,798	0
2014	784,754	15,767	99.46	100.1	0	22,013	0
2015	794,534	15,876	98.34	100.1	0	22,148	0
2016	797,115	15,978	91.67	100.1	0	22,334	0
2017	795,059	16,092	87.63	100.2	0	22,522	0
2018	805,555	16,227	93.07	100.3	0	22,724	0
2019	799,329	16,353	95.93	100.5	0	22,796	0
2020	752,061	15,419	99.58	100.6	0	22,871	1
2021	768,742	16,144	99.08	100.8	0	23,036	0
2022	784,133	16,530	97.14	101.0	1	23,069	0

Variables:

- Column B Rate #2.1 sales MWh.
- Column C Service-sector real GDP.
- Column D Indexed unit electricity price.
- Column E Indexed energy conservation CDM program impact.
- Column F Dummy variable for 2022 base year.
- Column G Count of Rate #2.1 customers.
- Column H Dummy variable for 2020 pandemic year.