

William W. Nelson

Nelson Ex. 7#1
Joe
Bethlehem
4-6-95
R-00943271

February 13, 1995

Joseph Uliana
State Senator
Commonwealth of Pennsylvania
2 Bethlehem Plaza
Bethlehem, PA 18016

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**DOCUMENT
FOLDER**

Dear Joe:

I am quite dismayed by the ability of the Pennsylvania Power and Light (PP&L), a regulated utility, to increase charges for electrical service at an unabated rate that approximates **25.8% annually** for each of the last **twenty-five years**. In addition, they offered inducements to build "all electric" homes that were certified to meet strict standards of construction and insulation and were awarded "**Gold Medallion**" status. As a result of this program, a number of people, such as my wife and I, have been subjected to predatory rate "adjustments" which have made the cost of maintaining a home unbelievably expensive. Even our rigorous efforts to update the house with newer technology and materials cannot overcome the apparent shortcomings built into this "Gold Medallion" structure.

There are four specific complaints associated with our situation that I wish to bring to the attention of the regulating body and the Pennsylvania Legislature.

- 1) The "**Gold Medallion**" standards were obviously not enforced as exemplified by the unreasonable cost of electricity during the winter months. We moved from Johnstown, known for more severe winter weather conditions than Bethlehem, where we owned an old "Victorian" house of some 3,600 sq. ft. with little insulation and only one room equipped with storm windows. Natural gas was used for space heating and domestic hot water heating at an annual cost of \$396. When we realized a year's cost of heating the new smaller house of only 2,220 sq. ft. and supplying domestic hot water to the same family was \$900 we recognized a definite source of financial stress.
- 2) We upgraded the new house at every opportunity to improve its thermal efficiency and altered our lifestyle when possible to reduce electrical consumption. These results were successful at reducing consumption but not costs. In 1972 and 1973 we expanded the house by some 36.7% with a two story addition. We controlled the quality of construction and took measures to improve the thermal efficiency of that part of the house. At the same time we upgraded the air conditioning to a high efficiency central unit, replacing three wall units, originally installed in the house. Several years later PP&L personnel measured our consumption during a winter day and indicated the new construction was

which were originally installed in the house. Specific items that were done to the original building to improve its thermal efficiency are:

- a) ATTIC INSULATION - was changed from blown fiberglass to fiberglass batts with 6" batts in the joist spaces covered with 6" batts of fiberglass laid perpendicular to the joists;
- b) WATER HEATER - The 4.5 KW quick recovery 40 gallons unit was replaced by a unit with 3.2 KW high efficiency elements and 80 gallons capacity;
- c) WINDOWS - most of the original windows were equipped with combination storm sash and several windows have been replaced with high efficiency thermal windows of quality manufacture;
- d) AIR CONDITIONING - ductwork was buried within the 6" fiberglass batts covering the joists and covered with 6" fiberglass batts where it was exposed;
- e) FLOOR INSULATION - the perimeter of the first floor was insulated with 12" fiberglass batts extending four (4) feet from the exterior walls and the second floor was insulated in a like manner where construction of the addition made access possible;
- f) EXTERNAL DOORS - thermal doors were used to replace several of the original doors in the house and effective seals, including vinyl sweeps, were applied to all doors;
- g) INTERIOR DOORS - additional doors were installed to allow lowering thermostats in individual rooms when not in use;
- h) ELECTRICAL PANELS - all space heating circuits were relocated to a second panel to allow for connection of timing mechanisms that restricted the use of electricity during specified time periods to take advantage of any rate offering available;
- i) KITCHEN - the kitchen was upgraded with new cabinetry and the exterior walls upgraded with new insulation and sealing materials in addition to reducing the size of the heating units and installing a new thermal efficient window;
- j) LAUNDRY - coincident with the kitchen upgrade we discontinued doing laundry in the house and began to perform all laundry at a commercial establishment.

- 3) The rate schedule that we were offered by PP&L in 1970 was the "Residential Heating" rate, designated "RH", and we operated under that rate until January of 1981 when PP&L eliminated the rate. Elimination of the "RH" rate was both discriminatory and financially damaging since installation of electrical space heating was predicated on the rate offering and retrofitting the structure with higher thermal efficiency was not feasible. When the "RH" rate was eliminated, PP&L installed a meter which measured both consumption and demand. Because of this meter installation we have statistics on our consumption and demand profiles. Associated with the installation of the demand meter, PP&L changed the rate structure to include a \$3.00 credit for each KW of demand that actual demand fell below a calculated target KW based on KWH consumption. Any month in which our consumption was above our minimum, we received the demand credit. The higher the consumption the greater was the credit we received, indicating our consumption was consistent and not prone to "peak".

- 4) The new "Residential Thermal Storage" rate, designated "RTS", has replaced the previous offering and, in spite of our requests, it has not been made available to us by PP&L. We feel that we should have been offered the "RTS" rate when it was available. Our house was prepared to allow timer control of electrical consumption by disconnecting water heating loads and all but critical space heating loads (air conditioning loads in the summer time) during periods of peak demand as the "RTS" rate requires. However, our billing history does not reflect the disconnection of load during "on-peak" hours. We have been able to calculate our KW "demand" value for our full load and found a very close correlation with that period when a demand meter was serving our house. Since the "RTS" rate charges \$5.80 per KW after the first 2 KW, which is 3.3 times the commercial rate of \$1.76 per KW after the first 4 KW, it is apparent that cost of demand is calculated to be "punitive". If we calculate billings using the full demand and consumption values at the "RTS" rate, these billings would, by all considerations, be "punitive". These "corrected" billings lower our charges for electrical service by more than \$9,000. We are due a refund from PP&L for the difference of actual billing and a calculated billing based on the "RTS" rate.

We have prepared a spreadsheet that reflects our electrical consumption and billing since we have occupied the house in Bethlehem. We are attaching the current version of the spreadsheet for your convenience and study. As you can readily discern, we have not found all of the PP&L billing statements for the evaluation but we will continue to search for them and update the spreadsheet as we uncover additional information. We reserve the right to submit a more updated copy of the spread sheet at the time our complaint is heard.

Sincerely,

William W. Nelson

WILLIAM W. NELSON
Analysis of Pennsylvania Power & Light

DATE	days	reading	KWH	base	chg	adjust	tax	energy	B	A	day	year	cost	growth	KW	RTS	change
01/01/70												55600	0.0120				
02/01/70													0.0120	1.0000	0.00	0	0
03/01/70													0.0120	1.0000	0.00	0	0
04/01/70													0.0120	1.0000	0.00	0	0
05/01/70													0.0120	1.0000	0.00	0	0
06/01/70													0.0120	1.0000	0.00	0	0
07/01/70													0.0120	1.0000	0.00	0	0
08/01/70													0.0120	1.0000	0.00	0	0
09/01/70													0.0120	1.0000	0.00	0	0
10/01/70													0.0120	1.0000	0.00	0	0
11/01/70													0.0120	1.0000	0.00	0	0
12/01/70												55600	0.0120	1.0000	0.00	0	0
01/01/71												0	0.0120	1.0000	0.00	0.00	0.00
02/01/71												0	0.0120	1.0000	0.00	0.00	0.00
03/01/71												0	0.0120	1.0000	0.00	0.00	0.00
04/01/71												0	0.0120	1.0000	0.00	0.00	0.00
05/01/71												0	0.0120	1.0000	0.00	0.00	0.00
06/01/71												0	0.0120	1.0000	0.00	0.00	0.00
07/01/71												0	0.0120	1.0000	0.00	0.00	0.00
08/01/71												0	0.0120	1.0000	0.00	0.00	0.00
09/01/71												0	0.0120	1.0000	0.00	0.00	0.00
10/01/71												0	0.0120	1.0000	0.00	0.00	0.00
11/08/71	31	96368	3490	52.02						113	3490	0.0149	1.2372	14.74	179.67	127.65	
12/08/71	30	1140	4772	88.69						159	55600	0.0144	1.1948	18.27	239.27	170.58	
01/10/72	33	9112	7972	112.48						242	16234	0.0141	1.1711	24.72	364.95	252.47	
02/07/72	28	17076	7964	114.44						284	24198	0.0144	1.1928	24.71	364.73	250.29	
03/01/72	30		8244	118.46						275	32442	0.0144	1.1928	25.16	378.48	260.02	
04/07/72	30	32920	7600	110.13						253	40042	0.0145	1.2028	24.10	354.39	244.26	
05/08/72	31	37158	4238	69.63						137	44280	0.0164	1.3638	16.88	212.51	142.88	
06/07/72	30	39572	2414	42.83						80	46694	0.0177	1.4727	11.17	131.71	88.88	
07/10/72	33	41652	2080	37.58						63	48774	0.0181	1.4997	9.92	110.62	73.04	
08/09/72	30	42544	892	19.41						30	49666	0.0218	1.8062	4.77	47.88	28.47	
09/08/72	30	44230	1686	31.98						56	51352	0.0190	1.5744	8.34	93.63	61.65	
10/10/72	32	48478	4248	67.61						133	55600	0.0159	1.3211	16.91	212.79	145.18	
11/08/72	29	53548	5070	79.07						175	57180	0.0156	1.2945	18.99	247.74	168.67	
12/08/72	30	59184	5636	86.88						188	58044	0.0154	1.2795	20.29	275.41	188.53	
01/01/73	30		8644	133.25						288	58716	0.0154	1.2795	25.78	389.84	256.59	
02/07/73	28	77730	9902	147.57						354	60654	0.0149	1.2370	27.55	437.17	289.60	
03/09/73	30	85882	7952	120.53						265	60362	0.0152	1.2581	24.69	364.39	243.86	
04/01/73			6031	91.41				0.00			58793	0.0152	1.2581	21.14	292.43	201.02	
05/01/73			6031	91.41				0.00			60586	0.0152	1.2581	21.14	292.43	201.02	
06/08/73	30	286	2522	44.06	0.00	0.00	0.00	0.00		84	60694	0.0175	1.4501	11.56	134.77	90.71	
07/10/73	32	1850	1584	31.62						50	60198	0.0200	1.6570	7.91	84.94	53.32	
08/01/73											59306	0.02	1.657	0.00	0	0	
09/01/73											57620	0.02	1.657	0.00	0	0	
10/01/73											53372	0.02	1.657	0.00	0	0	
11/01/73											48302	0.0200	1.6570	0.00	0.00	0.00	
12/01/73											42666	0.0200	1.6570	0.00	0.00	0.00	
01/01/74											34022	0.0200	1.6570	0.00	0.00	0.00	
02/01/74											24120	0.0200	1.6570	0.00	0.00	0.00	
03/01/74											16168	0.0200	1.6570	0.00	0.00	0.00	
04/01/74											10137	0.0200	1.6570	0.00	0.00	0.00	
05/01/74											4106	0.0200	1.6570	0.00	0.00	0.00	
06/01/74											1584	0.0200	1.6570	0.00	0.00	0.00	
07/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
08/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
09/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
10/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
11/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
12/01/74											0	0.0200	1.6570	0.00	0.00	0.00	
01/01/75											0	0.0200	1.6570	0.00	0.00	0.00	
02/01/75											0	0.0200	1.6570	0.00	0.00	0.00	
03/01/75											0	0.0200	1.6570	0.00	0.00	0.00	
04/01/75											0	0.0200	1.6570	0.00	0.00	0.00	

05/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
06/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
07/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
08/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
09/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
10/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
11/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
12/01/75									0 0.0200	1.6570	0.00	0.00	0.00		
01/12/76	33	87014	10696	161.20	0.00	0.00	8.62	79.79	10696	0.0225	1.8702	28.56	545.31	304.32	
02/09/76	28	78762	11748	176.13	0.00	0.00	9.42	93.28	22444	0.0229	1.9035	29.77	594.47	325.06	
03/10/76	30	86214	7452	115.13	0.00	0.00	5.16	62.52	29896	0.0238	1.9788	23.84	406.91	229.26	
04/01/76			7066	109.17				59.28	36962	0.0238	1.9788	23.16	392.71	224.26	
05/01/76			5006	77.34				42.00	41968	0.0238	1.9788	18.84	287.92	168.58	
06/01/76			2264	34.98				18.99	44232	0.0238	1.9788	10.61	140.64	86.67	
07/01/76			3588	55.43				30.10	47820	0.0238	1.9788	15.04	218.35	132.82	
08/01/76			3992	61.67				33.49	51812	0.0238	1.9788	16.20	239.01	143.85	
09/01/76			3790	58.55				31.80	55602	0.0238	1.9788	15.63	225.78	135.43	
10/01/76			1970	30.44				16.53	57572	0.0238	1.9788	9.49	124.03	77.06	
11/01/76			6888	103.30				56.09	64258	0.0238	1.9788	22.45	372.93	213.54	
12/01/76			6964	107.59				58.43	71222	0.0238	1.9788	22.97	383.15	217.14	
01/11/77	33	39166	11626	208.15	0.00	0.00	12.82	101.84	72152	0.0267	2.2132	29.83	599.57	289.58	
02/08/77	28	49750	10584	190.43	0.00	0.00	11.73	98.31	70988	0.0271	2.2488	28.42	558.65	271.91	
03/01/77			7872	141.84				71.63	71408	0.0271	2.2488	24.56	433.75	220.48	
04/11/77	32	64140	6518	121.31	0.00	0.00	7.50	64.33	70860	0.0285	2.3641	22.12	376.39	190.75	
05/10/77	29	67908	3768	74.56	0.00	0.00	4.88	38.09	69622	0.0299	2.4816	15.57	231.45	118.80	
06/09/77	30	70204	2296	49.54	0.00	0.00	3.24	23.26	69654	0.0317	2.6319	10.73	145.82	73.02	
07/11/77	32	74246	4042	79.22	0.00	0.00	5.19	41.71	70108	0.0299	2.4834	16.34	248.65	127.72	
08/10/77	30	78214	3968	77.96	0.00	0.00	5.11	39.72	70084	0.0297	2.4617	16.14	244.56	126.88	
09/09/77	30	80450	2236	48.52	0.00	0.00	3.18	22.11	68530	0.0316	2.6219	10.51	142.96	72.33	
10/11/77	32	83468	3018	61.81	0.00	0.00	4.05	31.24	69578	0.0308	2.5592	13.25	191.70	98.65	
11/01/77			87806	4338	88.84			44.90	67230	0.0308	2.5592	17.15	266.05	132.31	
12/09/77	30	96064	8258	150.89	0.00	0.00	9.88	86.87	68524	0.0288	2.3898	25.18	465.75	227.99	
01/11/78	33	6744	10680	192.06	0.00	0.00	13.53	105.73	67578	0.0279	2.3144	28.54	570.79	273.00	
02/08/78	28	17448	10704	192.47	0.00	0.00	15.49	110.36	67698	0.0283	2.3483	28.57	576.10	273.27	
03/10/78	30	28500	11052	198.39	0.00	0.00	15.97	125.66	70878	0.0293	2.4337	28.98	601.29	277.24	
04/11/78	32	32020	3520	70.34	0.00	0.00	5.54	40.02	67880	0.0314	2.6024	14.83	220.54	110.18	
05/10/78	29	37148	5128	97.68	0.00	0.00	7.33	58.31	69240	0.0304	2.5249	19.13	313.50	157.51	
06/09/78	30	39710	2562	54.06	0.00	0.00	4.05	29.13	69506	0.0325	2.6952	11.70	165.04	81.85	
07/01/78			4272	90.14				48.57	69736	0.0325	2.6952	16.97	262.05	123.33	
08/01/78			2156	45.49				24.51	67924	0.0325	2.6952	10.21	143.09	73.09	
09/01/78			2300	48.53				26.15	67988	0.0325	2.6952	10.75	148.82	74.14	
10/01/78			4234	89.34				48.14	69204	0.0325	2.6952	16.87	260.54	123.06	
11/01/78			4896	103.31				55.67	69762	0.0325	2.6952	18.57	298.46	139.49	
12/08/78	30	62822	5254	155.85	0.00	0.00	9.16	0.00	66758	0.0297	2.4622	19.42	258.76	102.91	
01/10/79	33	73000	10178	292.09	0.00	0.00	17.14	5.15	68256	0.0292	2.4241	27.91	450.16	152.92	
02/01/79			8062	231.36				4.08	63614	0.0292	2.4241	24.87	371.59	136.15	
03/09/79	30	90488	9426	271.28	0.00	0.00	15.92	17.33	61988	0.0306	2.5415	26.91	435.18	146.57	
04/09/79	31	99438	8988	259.16	0.00	0.00	15.21	24.86	67456	0.0316	2.6229	26.29	430.27	146.25	
05/09/79	30	3668	4232	127.58	0.00	0.00	8.07	14.58	66560	0.0336	2.7883	16.86	226.92	84.76	
06/08/79	30	6608	2940	91.84	0.00	0.00	5.78	11.51	98	66938	0.0352	2.9179	13.00	163.96	60.61
07/10/79	32	9484	2876	90.06	0.00	0.00	3.98	10.75	90	65542	0.0351	2.9095	12.78	161.38	60.57
08/09/79	30	13764	4280	128.91	0.00	0.00	5.62	12.71	143	67666	0.0331	2.7465	16.99	226.41	84.79
09/01/79			17734	3970	119.57			11.79	124	69336	0.0331	2.7465	16.14	216.69	85.32
10/10/79	30	20202	2468	78.77	0.00	0.00	3.44	2.40	82	67570	0.0329	2.7299	11.36	135.64	54.47
11/01/79			24548	4346	138.71			4.23	150	67020	0.0329	2.7299	17.17	225.60	82.67
12/10/79	32	30420	5872	172.96	0.00	0.00	12.15	-1.44	184	67638	0.0292	2.4246	20.80	280.67	109.15
01/01/80			8670	255.38				-2.13	280	66130	0.0292	2.4246	25.82	388.45	135.20
02/01/80			8884	261.68				-2.18		66952	0.0292	2.4246	26.14	400.28	140.78
03/01/80			9826	289.43				-2.41	307	67352	0.0292	2.4246	27.45	432.60	145.58
04/01/80		64966	7166	211.07				-1.76	239	65530	0.0292	2.4246	23.34	334.51	125.19
05/08/80	29	68914	3948	119.72	0.00	0.00	8.96	13.12	136	65246	0.0336	2.7929	16.08	217.39	84.55
06/09/80	32	72008	3094	96.10	0.00	0.00	7.20	10.40	97	65400	0.0344	2.8571	13.50	173.02	66.52
07/09/80	30	75320	3312	102.13	0.00	0.00	7.63	13.99	110	65836	0.0351	2.9102	14.19	188.60	72.48
08/08/80	30	80312	4992	148.61	0.00	0.00	11.11	24.72	166	66548	0.0347	2.8821	18.80	270.24	96.91
09/09/80	32	84428	4116	124.37	0.00	0.00	9.30	19.06	129	66694	0.0348	2.8925	16.55	228.10	84.67
10/09/80	30	86994	2566	81.49	0.00	0.00	6.11	9.19	86	66792	0.0353	2.9333	11.71	145.21	54.53
11/10/80	32	91292	4298	129.41	0.00	0.00	9.68	9.80	134	66744	0.0324	2.6885	17.04	229.81	90.60
12/10/80	30	98840	7548	219.32	0.00	0.00	16.47	21.04	252	68420	0.0318	2.6432	24.01	373.95	133.59
01/12/81	33	9244	10404	298.34	0.00	0.00	22.39	28.19	315	70154	0.0312	2.5892	28.20	483.41	158.88

02/01/81	28	17288	8044	230.67				20.25		287	6931	0.0312	2.5892	24.84	387.25	136.33	
03/11/81	30	23735	6447	217.91	0.00	0.00	16.15	24.41		215	65935	0.0376	3.1199	21.98	328.65	86.33	
04/09/81	29	30669	6934	233.51	0.00	0.00	17.31	33.73		239	65703	0.0385	3.1991	22.91	357.61	90.37	
05/08/81	29	34596	3927	137.15	0.00	0.00	10.71	26.94		135	65682	0.0418	3.4684	16.02	230.62	66.53	
06/09/81	32	38636	4040	140.77	0.00	0.00	10.99	26.64		126	66628	0.0414	3.4396	16.34	233.53	66.12	
07/09/81	30	42837	4201	145.93	0.00	0.00	11.39	26.98		140	67517	0.0412	3.4164	16.78	238.44	65.53	
08/10/81	32	47607	4770	164.16	0.00	0.00	12.81	30.63		149	67295	0.0408	3.3896	18.26	269.85	75.06	
09/09/81	30	51749	4142	144.04	0.00	0.00	11.25	26.60		138	67321	0.0412	3.4196	16.62	236.38	65.74	
10/09/81	30	1178	2725	97.78	0.00	0.00	7.71	17.50		91	67321	0.0423	3.5115	12.27	163.84	48.56	
11/10/81	32	4757	3579	122.25	0.00	-3.00	9.56	22.98	15	14	112	66761	0.0397	3.2986	15.01	210.97	68.74
12/10/81	30	9854	5097	169.31	0.00	-9.00	11.24	32.73	19	18	170	64310	0.0379	3.1437	19.06	287.03	93.99
01/12/82	33	18192	8338	286.30	0.00	-18.00	18.77	114.65	28	22	253	62244	0.0459	3.8123	25.31	495.80	112.85
02/10/82	29	26379	8187	310.09	0.00	-9.00	20.99	112.57	28	25	282	62387	0.0505	4.1939	25.07	489.43	75.77
03/12/82	30	33746	7367	279.75	0.00	-15.00	18.45	101.30	26	21	246	63307	0.0497	4.1243	23.70	443.27	77.22
04/13/82	32	40027	6281	283.71	0.00	-12.00	17.34	40.34	23	19	196	62654	0.0497	4.1238	21.65	339.87	27.82
05/12/82	29	43068	3041	141.06	0.00	-3.00	9.32	19.53	14	13	105	61768	0.0518	4.3015	13.33	180.64	23.05
06/11/82	30	46036	2968	137.85	0.00	0.00	9.30	19.06	14	14	98	60696	0.0529	4.3882	13.09	178.10	21.19
07/13/82	32	50239	4203	192.22	0.00	-6.00	12.57	26.99	17	15	131	60698	0.0507	4.2107	16.79	238.51	25.30
08/11/82	29	54527	4288	195.96	0.00	0.00	13.23	27.54	17	17	148	60216	0.0521	4.3264	17.02	247.27	23.77
09/10/82	30	58031	3504	161.44	0.00	0.00	10.90	22.50	15	16	117	59578	0.0525	4.3573	14.78	202.56	18.62
10/01/82			3904	179.85				25.07				59578	0.0525	4.3573	15.96	222.28	17.36
11/09/82			3904	179.85				25.07		127	60888	0.0525	4.3573	15.96	222.28	17.36	
12/01/82			3904	179.85				25.07		172	59889	0.0525	4.3573	15.96	222.28	17.36	
01/11/83	33	78689	6946	312.99	0.00	-15.00	20.11	44.61	24	19	210	58497	0.0493	4.0941	22.94	368.83	26.23
02/09/83	29	84546	7857	353.10	0.00	-15.00	22.82	50.46	27	22	271	58167	0.0495	4.1049	24.53	412.15	23.59
03/01/83		91848	7302	314.22				46.90			243	58102	0.0495	4.1049	23.58	387.02	25.91
04/12/83	32	98231	6383	288.20	0.00	-18.00	18.26	36.09	23	17	199	58204	0.0480	3.9830	21.85	338.52	32.23
05/11/83	29	2300	4069	186.32	0.00	0.00	12.69	17.91	17	18	140	59232	0.0502	4.1662	16.42	225.62	21.39
06/10/83	30	5156	2856	132.91	0.00	0.00	9.05	12.57	13	13	95	59120	0.0509	4.2281	12.71	162.63	17.15
07/01/83			4361	202.95				19.19			136	59278	0.0509	4.2281	17.21	241.00	18.85
08/10/83	29	14159	4642	211.55	0.00	-6.00	14.00	20.43	18	16	160	59632	0.0487	4.0408	17.94	250.21	24.23
09/09/83	30	18714	4555	242.85	0.00	-6.00	15.67	7.42	18	16	152	60683	0.0536	4.4513	17.72	234.73	-9.54
10/01/83			2873	149.39				4.68			90	60681	0.0536	4.4513	12.77	155.22	1.15
11/09/83	29	25274	3687	214.87	0.00	0.00	14.03	0.00	16	17	127	60688	0.0583	4.8373	15.33	191.06	-23.81
12/09/83	30	31126	5852	336.11	0.00	-12.00	21.00	0.00	22	18	195	61383	0.0554	4.5972	20.76	281.55	-42.56
01/11/84	33	40620	9494	540.06	0.00	-15.00	34.29	-5.08	31	26	288	63931	0.0548	4.5461	27.00	420.50	-99.48
02/09/84	29	49037	8417	479.75	0.00	-18.00	30.15	-13.64	28	22	290	64491	0.0532	4.4191	25.43	369.75	-78.36
03/12/84	32	56658	7621	435.18	0.00	-15.00	27.44	-12.35	26	21	238	64810	0.0535	4.4419	24.14	342.64	-65.19
04/10/84	29	62707	6049	347.14	0.00	-6.00	22.42	-9.80	22	20	209	64476	0.0548	4.5467	21.17	283.14	-48.20
05/10/84	30	66603	3896	226.58	0.00	-3.00	17.62	-6.31	16	15	130	64303	0.0558	4.6290	15.93	190.69	-26.58
06/11/84	32	69939	3336	195.22	0.00	0.00	15.38	-5.40	15	16	104	64783	0.0569	4.7230	14.27	169.89	-19.93
07/11/84	30	74020	4081	236.94	0.00	0.00	18.67	-6.61	17	17	136	64503	0.0564	4.6848	16.45	201.44	-28.89
08/09/84	29	78957	4937	284.87	0.00	0.00	22.45	-8.00	19	19	170	64798	0.0561	4.6550	18.67	235.96	-40.91
09/10/84	32	83549	4592	265.55	0.00	0.00	20.93	-7.44	18	18	144	64835	0.0562	4.6656	17.81	220.92	-37.19
10/10/84	30	86544	2995	176.12	0.00	0.00	13.88	-4.85	14	15	100	64957	0.0572	4.7467	13.18	154.96	-16.31
11/07/84	28	89131	2587	153.27	0.00	-3.00	11.84	-4.19	13	12	92	63857	0.0565	4.6870	11.79	132.43	-13.65
12/07/84	30	94930	5799	333.14	0.00	-6.00	25.78	-9.39			193	63804	0.0548	4.5482	20.64	270.65	-47.10
01/09/85	33	1950	7020	401.52	0.00	0.00	31.46	-11.37			213	61330	0.0556	4.6132	23.07	320.75	-69.40
02/07/85	29	10002	8052	459.31	0.00	0.00	35.41	-13.04			278	60965	0.0554	4.6004	24.85	354.19	-92.08
03/11/85	32	16825	6823	390.49	0.00	0.00	30.11	-11.05			213	60167	0.0556	4.6161	22.71	309.67	-69.77
04/10/85	30	22114	5289	304.58	0.00	0.00	23.48	-8.57			176	59407	0.0560	4.6455	19.51	251.19	-44.82
05/09/85	29	25002	2888	180.63	0.00	0.00	13.58	-2.43			100	58399	0.0617	5.1217	12.82	148.54	-29.66
06/10/85	32	28407	3405	224.84	0.00	0.00	16.48	0.00			106	58468	0.0660	5.4810	14.48	177.25	-47.59
07/11/85	31	31926	3519	232.08	0.00	0.00	17.01	0.00			114	57906	0.0660	5.4742	14.83	180.49	-51.59
08/08/85	28	35717	3791	249.35	0.00	0.00	18.28	0.00			135	56760	0.0658	5.4596	15.63	194.01	-55.34
09/10/85	33	40396	4679	305.74	0.00	0.00	22.41	0.00			142	56847	0.0653	5.4238	18.03	236.63	-69.11
10/09/85	29	42383	1967	135.52	0.00	0.00	9.79	0.00			68	55819	0.0689	5.7188	9.47	107.41	-28.11
11/07/85	29	45622	3259	215.57	0.00	0.00	15.80	0.00			112	56491	0.0661	5.4904	14.03	173.11	-42.46
12/10/85	33	51545	5923	384.73	0.00	0.00	28.20	0.00			179	56615	0.0650	5.3916	20.91	283.56	-101.17
01/09/86	30	59215	7670	495.87	0.00	0.00	36.33	0.00			256	57265	0.0646	5.3642	24.22	356.38	-139.29
02/07/86	29	65998	6783	439.34	0.00	0.00	32.20	0.00			234	55996	0.0648	5.3763	22.63	319.59	-119.75
03/10/86	31	73335	7337	474.52	0.00	0.00	34.78	0.00			237	56510	0.0647	5.3683	23.64	341.12	-133.40
04/09/86	30	77523	4188	274.56	0.00	0.00	20.13	4.41			140	55409	0.0666	5.5291	16.75	215.50	-63.47
05/09/86	30	53871	3212	212.58	0.00	0.00	13.39	11.28			107	55733	0.0697	5.7850	13.88	177.25	-46.61
06/10/86	32	56807	2936	195.06	0.00	0.00	12.29	10.31			92	55264	0.0699	5.8061	12.98	162.64	-42.73
07/01/86			2568	170.81				9.02			86	54313	0.0699	5.8061	11.72	145.10	-34.53
08/11/86	32	62318	2943	195.50	0.00	0.00	12.32	10.33			92	53465	0.0699	5.8053	13.01	168.66	-37.17
09/10/86	30	64946	2628	175.50	0.00	0.00	11.06	9.23			88	51414	0.0703	5.8347	11.93	147.02	-37.71
10/09/86	29	67021	2075	140.38	0.00	0.00	8.84	7.29			72	51522	0.0712	5.9071	9.90	117.77	-29.90

11/10/86	32	71382	4361	285.54	0.00	0.00	17.99	15.31	136	5262	0.0690	5.7262	17.21	237.11	-63.74
12/10/86	30	77581	6199	402.26	0.00	0.00	25.34	21.76	207	52900	0.0684	5.6776	21.48	318.96	-105.06
01/12/87	33	85196	7615	502.11	0.00	0.00	13.05	31.34	231	52845	0.0701	5.8147	24.13	386.16	-147.29
02/09/87	28	91572	6376	436.69	0.00	0.00	-15.85	33.10	228	52438	0.0737	6.1159	21.84	335.33	-134.46
03/11/87	30	99194	7622	520.25	0.00	0.00	-18.88	39.57	254	52723	0.0734	6.0965	24.14	394.58	-165.24
04/08/87	28	3716	4522	312.36	0.00	0.00	-11.34	23.47	162	53057	0.0743	6.1644	17.63	249.84	-85.99
05/07/87	29	7030	3314	231.35	0.00	0.00	-8.40	17.20	114	53159	0.0750	6.2254	14.20	191.87	-56.68
06/08/87	32	9619	2589	182.73	0.00	0.00	-6.63	13.44	81	52812	0.0758	6.2893	11.79	150.12	-46.05
07/08/87	30	12505	2886	202.64	0.00	0.00	-7.35	14.98	96	53130	0.0754	6.2590	12.82	165.89	-51.73
08/07/87	30	16214	3709	252.77	5.07	0.00	-9.55	19.25	124	53896	0.0747	6.2011	15.39	210.94	-66.15
09/09/87	32	19799	3585	244.45	5.07	0.00	-9.85	18.81	112	54853	0.0748	6.2081	15.03	206.77	-61.36
10/08/87	30	22764	2965	202.87	0.00	0.00	-8.22	15.39	99	55743	0.0736	6.1102	13.08	174.35	-43.91
11/09/87	32	26656	3892	265.04	5.07	0.00	-10.87	20.20	122	55274	0.0748	6.1915	15.92	217.08	-73.23
12/10/87			5216	362.00				27.07	174	54291	0.0746	6.1915	19.34	284.76	-104.31
01/11/88	33	39375	7503	507.20	5.07	0.00	-26.24	41.41	227	54179	0.0738	6.1253	23.93	387.25	-166.43
02/01/88	28		7976	544.56				44.02	266	55779	0.0738	6.1253	24.73	409.09	-179.50
03/10/88	29	54028	6677	451.81	5.07	0.00	-34.27	41.29	230	54834	0.0746	6.1930	22.43	357.87	-140.30
04/12/88	33	59201	5173	350.95	5.07	0.00	-26.71	31.99	157	55485	0.0750	6.2259	19.24	288.45	-99.56
05/11/88	29	62688	3487	237.88	5.07	0.00	-18.22	21.56	120	55658	0.0759	6.2964	14.73	201.14	-63.37
06/01/88	30	65412	2724	186.71	5.07	0.00	-14.38	16.85	91	55793	0.0766	6.3573	12.26	163.16	-45.47
07/12/88	32	69320	3908	266.11	5.07	0.00	-20.34	24.17	122	56815	0.0756	6.2732	15.97	221.51	-73.84
08/10/88	29	72905	3585	244.45	5.07	0.00	-18.71	22.17	124	56891	0.0758	6.2905	15.03	210.33	-61.36
09/08/88	29	78356	3451	235.46	5.07	0.00	-18.04	21.34	119	56557	0.0759	6.2986	14.82	199.90	-61.97
10/07/88	29	79024	2848	195.03	5.07	0.00	-15.01	17.61	98	56440	0.0764	6.3452	12.69	167.44	-50.27
11/08/88	32	83875	4871	317.28	5.07	0.00	-24.16	28.89	146	57219	0.0752	6.2416	18.01	265.30	-85.94
12/09/88	31	88990	5115	347.06	5.07	0.00	-25.85	31.63	165	57118	0.0750	6.2276	19.10	286.45	-97.31
01/11/89	33	96629	7639	504.23	4.95	0.00	-26.22	47.24	231	57254	0.0728	6.0460	24.17	402.74	-153.68
02/08/89	28	2399	5770	363.23	4.71	0.00	-4.45	35.68	206	55048	0.0700	5.8063	20.58	314.90	-88.72
03/09/89	29	8993	6594	414.57	4.71	0.00	-5.07	40.78	227	54965	0.0698	5.7912	22.27	355.00	-105.06
04/10/89	32	14146	5153	324.79	4.71	0.00	-3.99	31.87	161	54945	0.0701	5.8210	19.19	287.77	-73.60
05/10/89	30	17638	3492	221.31	4.71	0.00	-2.73	21.59	116	54950	0.0709	5.8857	14.75	201.31	-46.30
06/12/89	33	20544	2906	184.80	4.71	0.00	-2.29	17.97	88	55132	0.0714	5.9263	12.88	169.45	-38.03
07/12/89	30	24141	3597	227.85	4.71	0.00	-2.81	22.24	120	54821	0.0708	5.8798	15.06	210.74	-44.06
08/01/89			3376	218.24				20.87		54612	0.0708	5.8798	14.39	197.28	-41.82
09/01/89			3376	218.24				20.87	108	54536	0.0708	5.8798	14.39	197.28	-41.82
10/09/89	28	33864	2972	188.92	4.71	0.00	-2.34	18.38	106	54660	0.0713	5.9212	13.10	177.53	-34.48
11/01/89			6124	399.00				37.87	133	53848	0.0713	5.9212	21.33	332.95	-103.92
12/09/89	31		6124	399.00				37.87	189	54394	0.0713	5.9212	21.33	332.95	-103.92
01/01/90		52255	6124	399.00				37.87		54394	0.0713	5.9212	21.33	332.95	-103.92
02/06/90	28	57868	5613	353.45	4.71	0.00	0.00	34.71	200	55469	0.0700	5.8098	20.24	309.47	-83.40
03/01/90			4132	263.69				25.55	207	55074	0.0700	5.8098	16.59	235.07	-54.18
04/01/90			4132	263.69				25.55		55074	0.0700	5.8098	16.59	235.07	-54.18
05/01/90			4132	263.69				25.55		55074	0.0700	5.8098	16.59	235.07	-54.18
06/01/90			4132	263.69				25.55	88	54033	0.0700	5.8098	16.59	235.07	-54.18
07/01/90			4132	263.69				25.55	115	54124	0.0700	5.8098	16.59	235.07	-54.18
08/01/90		82658	4132	263.69				25.55		54124	0.0700	5.8098	16.59	235.07	-54.18
09/10/90	33	87081	4423	279.31	4.71	0.00	0.00	36.31	134	56189	0.0724	6.0115	17.37	259.87	-60.46
10/09/90	29	89913	2832	180.19	4.71	0.00	0.00	23.25	98	56049	0.0735	6.1008	12.63	172.63	-35.52
11/08/90	30	93004	3091	196.33	4.71	0.00	0.00	25.38	103	55281	0.0733	6.0802	13.49	187.91	-38.51
12/10/90	32	98071	5087	319.43	4.71	0.00	0.00	41.60	158	54687	0.0722	5.9914	18.98	289.25	-76.49
01/01/91			7350	470.19				60.34		54687	0.0722	5.9914	23.67	401.83	-128.70
02/07/91	28	10415	4994	314.89	4.71	0.00	0.00	41.00	178	52547	0.0722	5.9935	18.81	286.58	-74.02
03/08/91	29	15900	5485	345.48	4.71	0.00	0.00	45.03	189	51833	0.0721	5.9809	19.95	310.35	-84.87
04/01/91			4078	260.36				33.48		51833	0.0721	5.9809	16.44	241.44	-52.39
05/01/91			4078	260.36				33.48		51833	0.0721	5.9809	16.44	241.44	-52.39
06/10/81	32	27057	3001	190.72	4.71	-2.72		30.42	94	52480	0.0744	6.1716	13.20	190.40	-32.73
07/10/81	30	30427	3370	213.71	4.71	-3.04		34.16	112	52162	0.0740	6.1463	14.37	210.42	-39.12
08/01/81	31	33713	3286	213.19		-2.96		33.31	113	52162	0.0741	6.1519	14.11	207.18	-36.36
09/09/81	32	37102	3389	214.89	4.71	-3.05	4.09	34.35	106	52162	0.0740	6.1452	14.43	211.15	-39.75
10/09/81	30		2690	171.89				27.27	90	52162	0.0740	6.1452	12.15	172.61	-26.54
11/07/81	29	43433	3641	230.59	4.71	-3.27	8.26	36.91	126	52162	0.0739	6.1311	15.19	226.66	-42.28
12/10/81	33	49754	6321	397.56	4.71	-5.59	14.12	64.08	192	52162	0.0729	6.0505	21.73	364.75	-96.01
01/09/82	30		5900	370.26				59.81	197	52162	0.0729	6.0505	20.86	342.72	-87.35
02/07/82	29	62076	6422	403.85	4.71	-5.68	14.34	65.10	221	52162	0.0729	6.0487	21.93	368.63	-99.35
03/10/82	32	68051	5975	378.00	4.71	-5.29	13.36	60.57	187	52162	0.0730	6.0568	21.02	351.41	-84.58
04/08/82	29		5752	361.41				58.31	198	52162	0.0730	6.0568	20.54	337.02	-82.70
05/11/82	33		4100	257.81				41.56	124	51877	0.0730	6.0568	16.50	250.15	-49.02
06/09/82	29		2468	155.07				25.02	85	53314	0.0730	6.0568	11.36	158.28	-21.83
07/10/82	31		2189	138.28				21.99	70	52113	0.0730	6.0568	10.26	140.94	-17.33

08/10/92	31	85738	3198	203.00	4.71	-4.78	4.20	36.00	103	52025	0.0747	6.2015	13.83	201.57	-37.36
09/09/92	30	88532	2794	177.83	4.71	-4.20	3.69	31.45	93	51430	0.0751	6.2325	12.50	179.75	-30.04
10/08/92	29	90294	1762	113.33	4.71	-2.72	2.39	19.84	61	50502	0.0767	6.3672	8.65	115.63	-19.53
11/09/92	32	93628	3334	211.47	4.71	-4.97	4.37	37.53	104	50195	0.0746	6.1928	14.26	212.77	-35.97
12/09/92	30		4608	291.92				51.87	154	48482	0.0748	6.1928	17.85	280.69	-63.10
01/12/93	34	4636	6400	402.48	4.71	-9.37	8.23	72.15	188	48982	0.0734	6.0953	21.89	375.06	-94.91
02/09/93	28	10213	5577	351.21	4.71	-8.19	7.20	62.79	199	48137	0.0736	6.1099	20.16	336.53	-73.99
03/11/93	30	16467	6254	393.38	4.71	-9.16	8.05	70.41	208	48416	0.0734	6.0965	21.59	369.17	-90.17
04/12/93	32	21764	5297	336.35	4.75	-7.84	4.47	59.63	166	47961	0.0742	6.1567	19.52	319.61	-73.28
05/11/93	29	24318	2554	166.31	4.80	-3.94	0.22	27.91	88	46415	0.0764	6.3401	11.67	163.59	-31.49
06/10/93	30	26211	1893	124.27	4.80	-2.97	0.16	20.69	63	45840	0.0775	6.4365	9.18	126.00	-20.79
07/13/93	33	28686	2475	161.29	4.80	-3.82	0.21	27.05	75	46146	0.0765	6.3493	11.39	160.49	-28.83
08/11/93	29	31833	3147	204.03	4.80	-4.80	0.27	34.39	109	46095	0.0758	6.2885	13.67	198.51	-39.91
09/13/93	33	34763	2930	190.23	4.80	-4.49	0.25	32.02	89	46231	0.0760	6.3050	12.96	184.18	-38.38
10/11/93	28	37110	2347	153.15	4.80	-3.63	0.20	25.65	84	46816	0.0767	6.3649	10.92	149.65	-30.32
11/08/93	28	40950	3840	248.10	4.80	-5.82	0.32	41.96	137	47322	0.0753	6.2478	15.77	237.37	-51.67
12/09/93	31	46559	5609	360.61	4.80	-8.40	0.46	61.30	181	48323	0.0746	6.1904	20.23	335.95	-82.36
01/11/94	33	55077	8518	545.62	4.80	-12.66	0.70	93.08	258	50441	0.0741	6.1473	25.59	479.34	-151.50
02/10/94	29	62985	7908	506.83	4.80	-11.77	0.65	86.42	273	52772	0.0741	6.1538	24.62	449.56	-136.72
03/14/94	33		7597	480.20				83.02	230	54115	0.0741	6.1538	24.10	437.33	-125.90
04/12/94	29	75333	4751	306.04	4.80	-7.15	0.23	51.69	164	53569	0.0746	6.2089	18.21	290.37	-65.01
05/11/94	29	77939	2608	169.62	4.80	-4.01		27.88	90	53621	0.0761	6.3158	11.85	165.04	-33.25
06/09/94	29	79678	1739	114.48	4.80	-2.74		18.80	60	53487	0.0777	6.4504	8.56	113.74	-21.40
07/11/94	32		2704	181.21				28.92	85	53698	0.0777	6.4504	12.20	174.67	-35.47
08/09/94	29	84743	2361	154.04	4.80	-3.65	-0.31	25.26	81	52910	0.0764	6.3440	10.97	149.66	-30.79
09/09/94	31	86806	2063	135.09	4.80	-3.22	-0.27	22.07	67	52043	0.0769	6.3869	9.85	132.21	-26.53
10/11/94	32	88657	1851	121.60	4.80	-2.91	-0.25	19.80	58	51547	0.0774	6.4256	9.01	123.92	-19.37
11/09/94	29	91046	2389	155.82	4.80	-3.69	-0.31	25.56	82	50096	0.0764	6.3405	11.08	156.56	-25.93
12/09/94	30	95158	4112	265.40	4.80	-6.21	-0.53	43.99	137	48599	0.0749	6.2169	16.54	252.92	-55.06
01/11/95	33	1562	6404	411.17	4.80	-9.57	-0.81	68.51	194	46485	0.0742	6.1555	21.90	371.53	-103.38
02/08/95	28	6885	5323	342.42	4.80	-7.99	-0.68	56.95	190	43900	0.0744	6.1779	19.58	317.67	-78.51
03/09/95	29	12518	5633	362.14	4.80	-8.44	-0.72	60.26	194		0.0743	6.1706	20.28	335.59	-83.17
04/12/95											0.0743	6.1706	0.00	0.00	0.00
05/11/95											0.0743	6.1706	0.00	0.00	0.00
06/09/95											0.0743	6.1706	0.00	0.00	0.00
07/11/95											0.0743	6.1706	0.00	0.00	0.00
08/09/95											0.0743	6.1706	0.00	0.00	0.00
09/09/95											0.0743	6.1706	0.00	0.00	0.00
10/11/95											0.0743	6.1706	0.00	0.00	0.00
11/09/95											0.0743	6.1706	0.00	0.00	0.00
12/09/95											0.0743	6.1706	0.00	0.00	0.00

Effect of applying RTS rate from February 1982.....revised billing and net change (savings)															39850.47
Effect of applying RS rate from February 1982actual billings															48208.97
Difference of the RTS and RS rates (savings)															-8358.49 -8358.49
Difference of the RTS demand and RS demand (calculated), estimated at 75%															-10065.90
Refund due owing to effects of RTS rate being applied															-18424.39
Ratio of cents per KWH (1994 vs 1970 ...effective 4/2/70)											6.4504				
AVERAGE ANNUAL RATE INCREASE SINCE FEBRUARY 1970															21.80%
Average demand for period February 1982 thru November 1984							18							18.32	

WILLIAM W. NELSON
Analysis of Pennsylvania Power & Light

AVERAGES
(monthly for the 25 year period)

Date	days	reading	KWH	base	chg	adjust	tax	energy	B	A	day	year	cost	growth	KW	RTS	change	billing
Jan	23	29365	7015	295.62	0.78	-2.80	7.40	36.11	3	3	147	49830	0.0444	3.6489	21.09	ERR	24.60	329.71
Feb	22	31662	6633	274.44	1.13	-2.71	7.20	34.45	3	3	162	47535	0.0441	3.6616	20.41	337.82	30.50	307.32
Mar	21	33987	6202	264.49	0.96	-1.78	5.09	33.21	2	2	159	48138	0.0450	3.7338	19.74	320.63	23.75	296.88
Apr	20	31957	4835	208.81	0.77	-2.04	4.39	23.96	3	2	106	48304	0.0454	3.7688	17.05	257.47	25.96	231.50
May	20	25194	3246	142.01	0.78	-0.56	3.10	17.99	2	2	71	48372	0.0467	3.8754	13.19	183.40	23.18	160.22
Jun	23	28075	2363	113.70	0.96	-0.34	2.82	13.00	2	2	65	48501	0.0477	3.9553	10.48	137.81	10.48	127.33
Jul	20	22666	2797	132.79	0.77	-0.51	1.85	16.79	1	1	74	48609	0.0475	3.9397	11.82	161.57	11.74	149.84
Aug	19	36637	2898	141.47	0.98	-0.89	3.63	17.32	2	2	74	48707	0.0474	3.9354	11.91	165.91	7.03	158.88
Sep	20	38987	2728	136.89	1.35	-0.84	3.38	15.45	2	2	77	48872	0.0478	3.9640	11.44	156.21	3.36	152.85
Oct	19	35115	2212	104.62	1.15	-0.37	1.22	12.97	1	1	57	48939	0.0480	3.9864	9.81	129.81	11.43	118.38
Nov	18	42493	3419	155.59	1.35	-0.95	2.27	19.37	2	2	89	49060	0.0477	3.9559	13.62	192.95	17.60	175.36
Dec	22	39682	4770	220.42	0.98	-1.89	5.90	23.78	2	1	130	53257	0.0468	3.8817	16.99	254.75	11.47	243.28

WILLIAM W. NELSON
Analysis of Pennsylvania Power & Light

AVERAGES
(monthly by year)

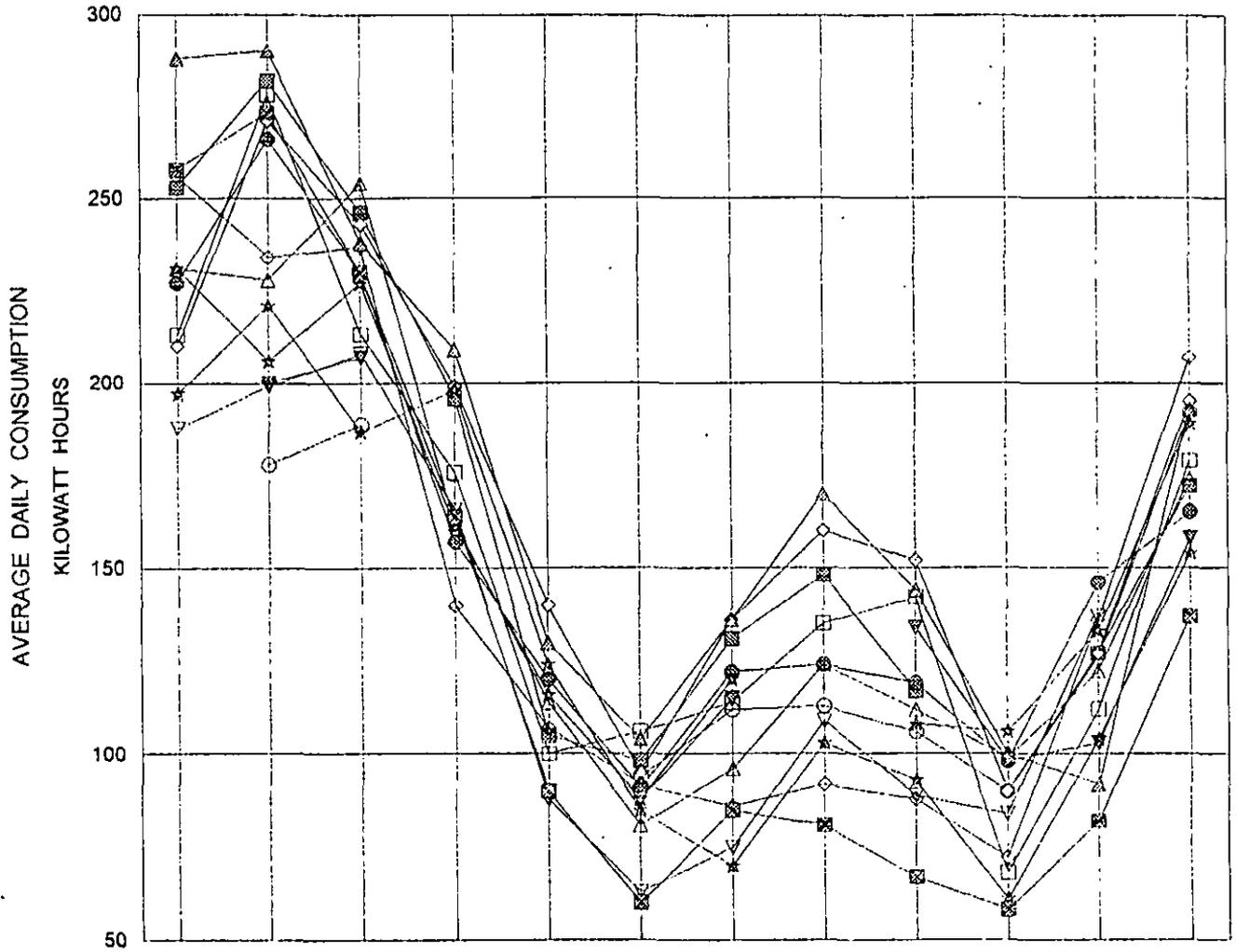
Date	days	reading	KWH	base	chg	adjust	tax	energy	B	A	day	year	cost	growth	KW	RTS	change	A N N U A L		CPI		ALL ENERGY				
																		BILLING	ENERGY	December	Maximum	annual	index	annual	index	
'70	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	55600	0.0120	1.0000	0.00			0.00	0.00	55600	55600	0.032	1.000	0.028	1.000	
'71	31	48754	4131	60.36	ERR	ERR	ERR	ERR	ERR	ERR	136	4924	0.0149	1.2372	2.75			120.71	0.00	55600	55600	0.066	1.066	0.039	1.039	
'72	31	38679	4837	74.21	ERR	ERR	ERR	ERR	ERR	ERR	160	43709	0.0218	1.8062	17.16			890.50	0.00	58044	58044	0.050	1.119	0.026	1.066	
'73	30	41382	6095	94.26	0.00	0.00	0.00	0.00	ERR	ERR	208	56772	0.0200	1.6570	11.85			659.85	0.00	42866	60694	0.051	1.176	0.081	1.152	
'74	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	7511	0.0200	1.6570	0.00			0.00	0.00	0	34022	0.179	1.387	0.296	1.493	
'75	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	ERR	0	0.0200	1.6570	0.00			0.00	0.00	0	0	0.134	1.573	0.105	1.650	
'76	30	77330	5935	90.91	0.00	0.00	7.73	48.53	ERR	ERR	ERR	44540	0.0238	1.9788	19.71			1673.23	582.30	71222	71222	0.076	1.692	0.071	1.767	
'77	31	71947	5710	107.74	0.00	0.00	6.76	55.17	ERR	ERR	130	69895	0.0317	2.6319	19.13			1954.88	662.02	68524	72152	0.050	1.777	0.075	1.900	
'78	30	32056	5563	111.47	0.00	0.00	10.15	56.02	ERR	ERR	ERR	68679	0.0325	2.6952	18.71			2009.92	672.26	66758	70878	0.078	1.916	0.083	2.058	
'79	31	35396	5637	166.86	0.00	0.00	9.70	9.83	ERR	ERR	124	66465	0.0352	2.9179	19.26			2120.24	117.94	67638	69336	0.077	2.063	0.252	2.576	
'80	31	80342	5702	169.89	0.00	0.00	9.56	9.40	ERR	ERR	176	66470	0.0353	2.9333	19.55			2151.55	112.85	68420	68420	0.155	2.383	0.309	3.372	
'81	30	26013	5359	175.15	0.00	-1.09	12.86	26.30	17	15	176	66995	0.0423	3.5115	19.02	285.63	85.18	2405.39	315.58	64310	70154	0.160	2.764	0.136	3.831	
'82	30	41138	4991	210.66	0.00	-7.00	14.54	46.64	20	18	170	61142	0.0529	4.3882	18.22	290.19	38.14	3024.61	559.68	59889	63307	0.098	3.035	0.015	3.888	
'83	30	44804	5115	245.45	0.00	-8.00	16.40	21.69	20	17	168	59472	0.0583	4.8373	18.65	270.71	9.57	3133.72	260.26	61383	61383	0.032	3.132	0.007	3.916	
'84	30	71058	5317	306.15	0.00	-5.50	21.74	-7.76	20	18	175	64462	0.0572	4.7467	18.87	249.41	-43.48	3514.76	-93.06	63804	64957	0.065	3.336	0.010	3.955	
'85	31	29322	4718	290.36	0.00	0.00	21.83	-3.87	ERR	ERR	153	58265	0.0689	5.7188	17.53	228.07	-58.42	3437.90	-46.46	56615	61330	0.034	3.449	0.007	3.982	
'86	30	66363	4408	288.46	0.00	0.00	20.42	8.24	ERR	ERR	146	54368	0.0712	5.9071	16.61	225.59	-71.11	3560.46	98.94	52900	57265	0.014	3.497	-0.132	3.457	
'87	28	32855	4524	309.60	1.27	0.00	-7.81	22.80	ERR	ERR	150	53685	0.0758	6.2893	17.11	247.31	-86.37	4004.09	273.62	54291	55743	-0.004	3.483	0.005	3.474	
'88	30	68289	4760	323.71	5.07	0.00	-21.99	28.58	ERR	ERR	155	56047	0.0766	6.3573	17.73	263.16	-93.78	4283.20	342.93	57118	57219	0.014	3.532	0.008	3.502	
'89	30	27294	4760	305.35	4.74	0.00	-8.24	29.44	ERR	ERR	153	54930	0.0728	6.0460	17.79	264.99	-72.95	4055.34	353.24	54394	57254	0.020	3.603	0.056	3.698	
'90	30	80121	4329	275.82	4.71	0.00	0.00	29.37	ERR	ERR	138	54964	0.0735	6.1008	16.97	246.87	-60.28	3685.86	352.45	54687	56189	0.024	3.689	0.083	4.005	
'91	30	30975	4307	273.65	4.71	-2.58	5.29	39.49	ERR	ERR	133	52349	0.0744	6.1716	16.71	255.40	-58.76	3769.99	473.83	52162	54687	0.037	3.826	0.004	4.021	
'92	30	81387	4040	254.84	4.71	-4.61	7.06	42.42	ERR	ERR	133	51549	0.0767	6.3672	15.80	244.96	-52.35	3567.70	509.05	48482	53314	0.020	3.902	0.005	4.041	
'93	30	26959	4027	257.62	4.77	-6.04	2.50	44.66	ERR	ERR	132	47224	0.0775	6.4365	15.75	246.34	-54.67	3612.21	535.95	48323	48982	0.020	3.980	0.012	4.089	
'94	30	79742	4050	261.33	4.80	-5.80	-0.01	43.86	ERR	ERR	132	52240	0.0777	6.4504	15.21	243.78	-60.58	3652.23	526.29	48599	54115		3.980		4.089	
'95																										

Totals for the years 1982 through 1994

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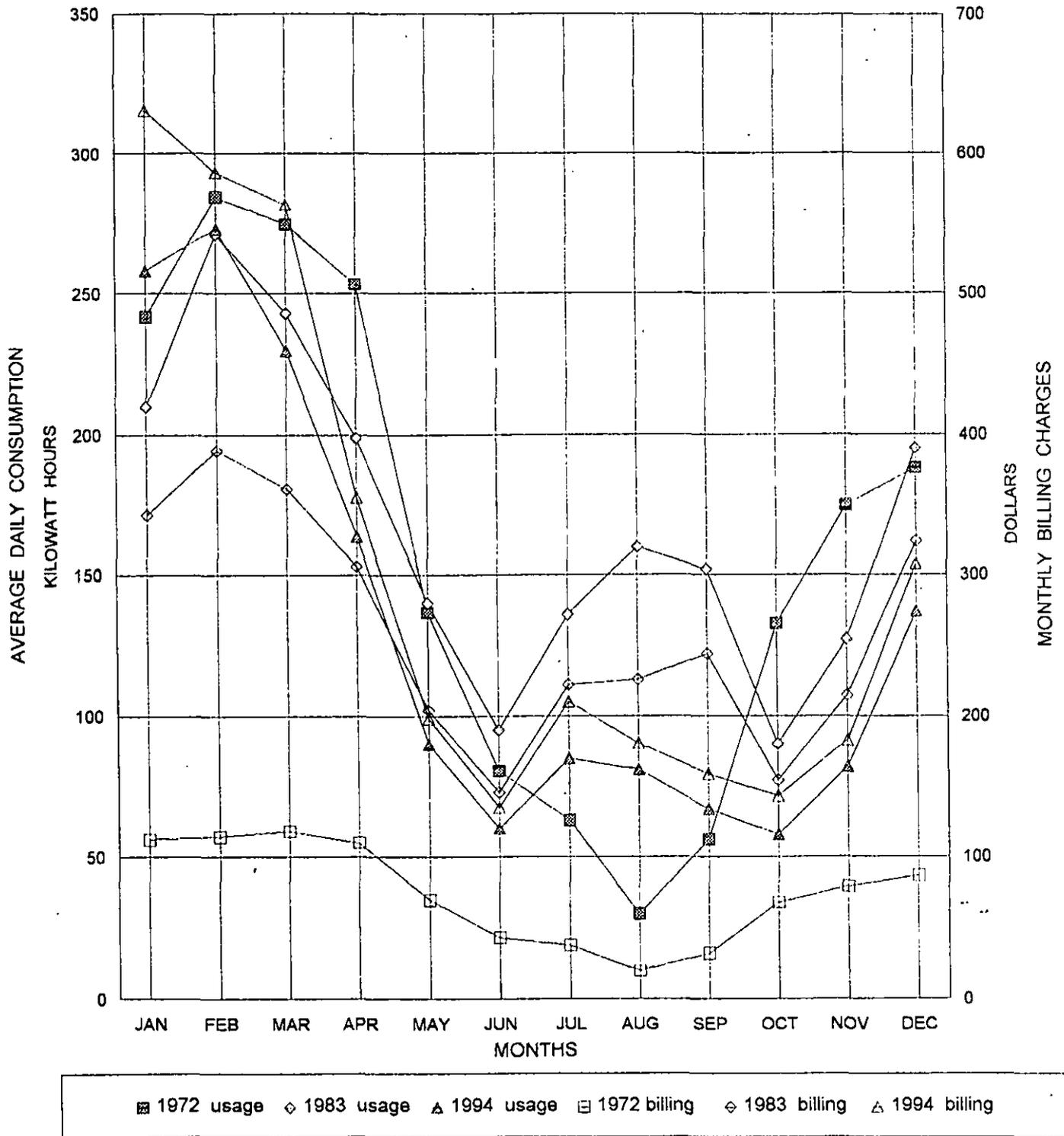
William W. Nelson

daily consumption in KW

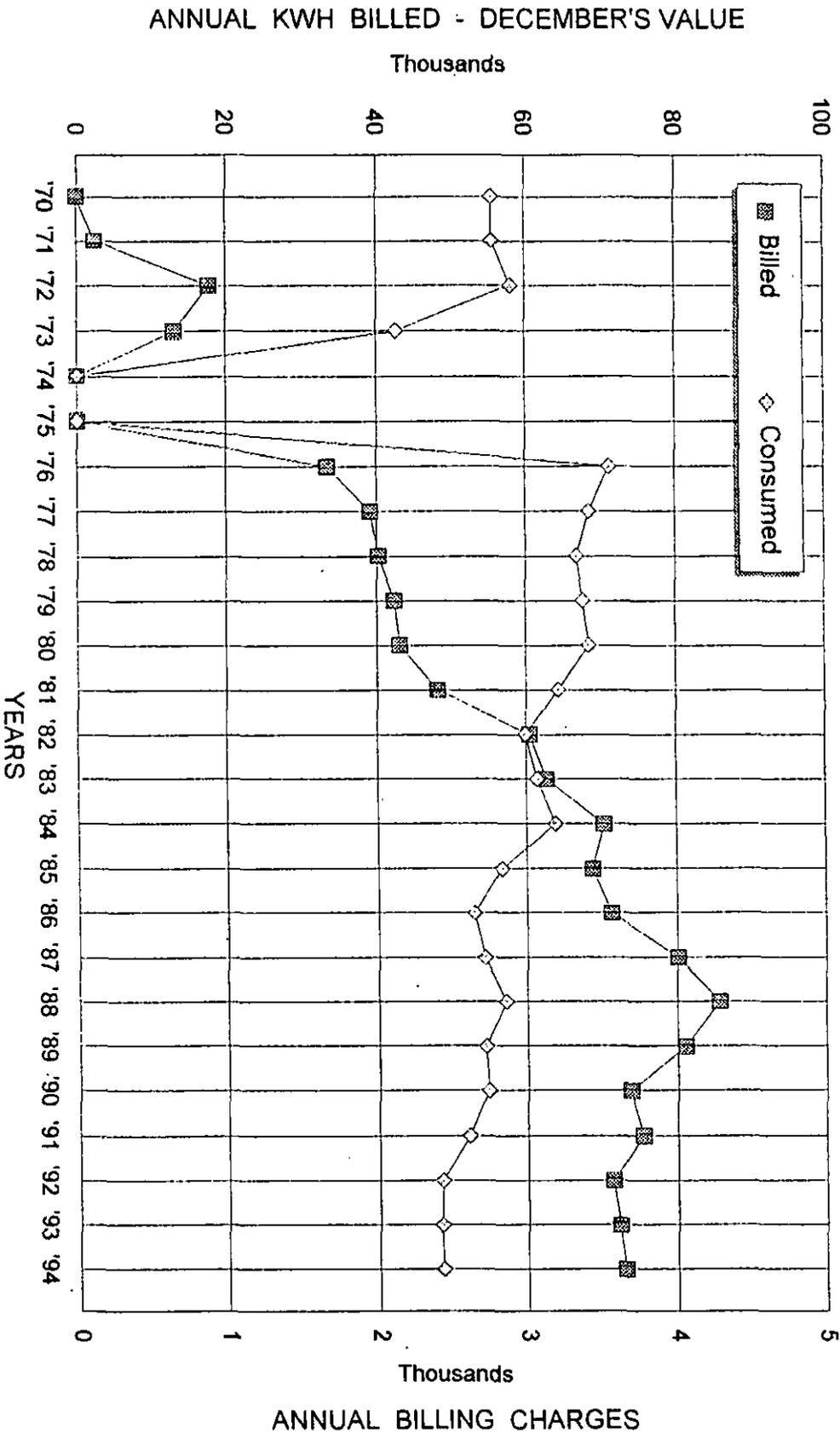


Date	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
■'82	253	282	246	196	105	98	131	148	117		127	172
◇'83	210	271	243	199	140	95	136	160	152	90	127	195
▲'84	288	290	238	209	130	104	136	170	144	100	92	193
□'85	213	278	213	176	100	106	114	135	142	68	112	179
◇'86	256	234	237	140	107	92	86	92	88	72	136	207
△'87	231	228	254	162	114	81	96	124	112	99	122	174
⊙'88	227	266	230	157	120	91	122	124	119	98	146	165
★'89	231	206	227	161	116	88	120		108	106	133	189
▽'90		200	207			88	115		134	98	103	158
○'91		178	189			94	112	113	106	90	126	192
★'92	197	221	187	198	124	85	70	103	93	61	104	154
▽'93	188	199	208	166	88	63	75	109	89	84	137	
⊗'94	258	273	230	164	90	60	85	81	67	58	82	137

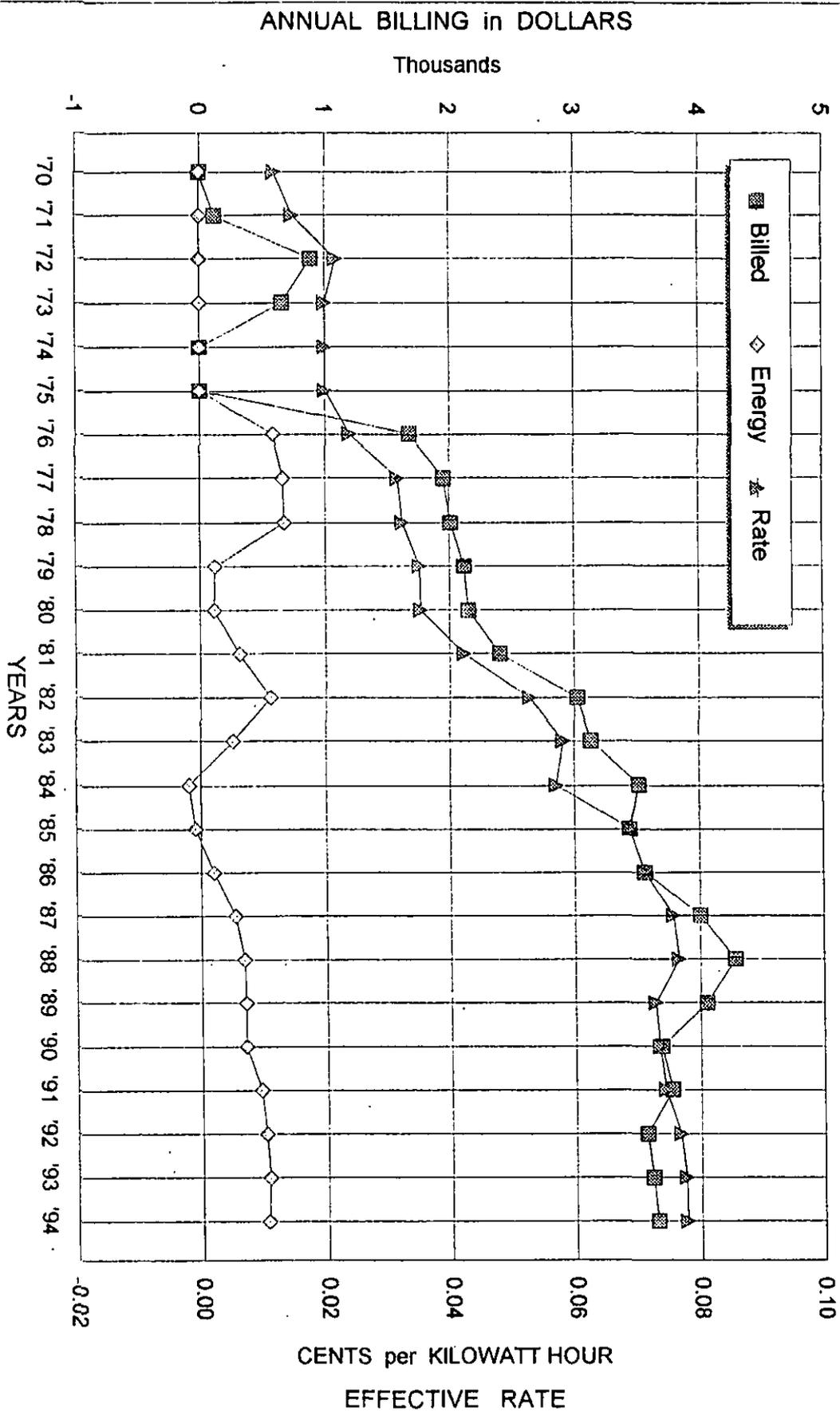
William W. Nelson
 daily consumption and monthly billing



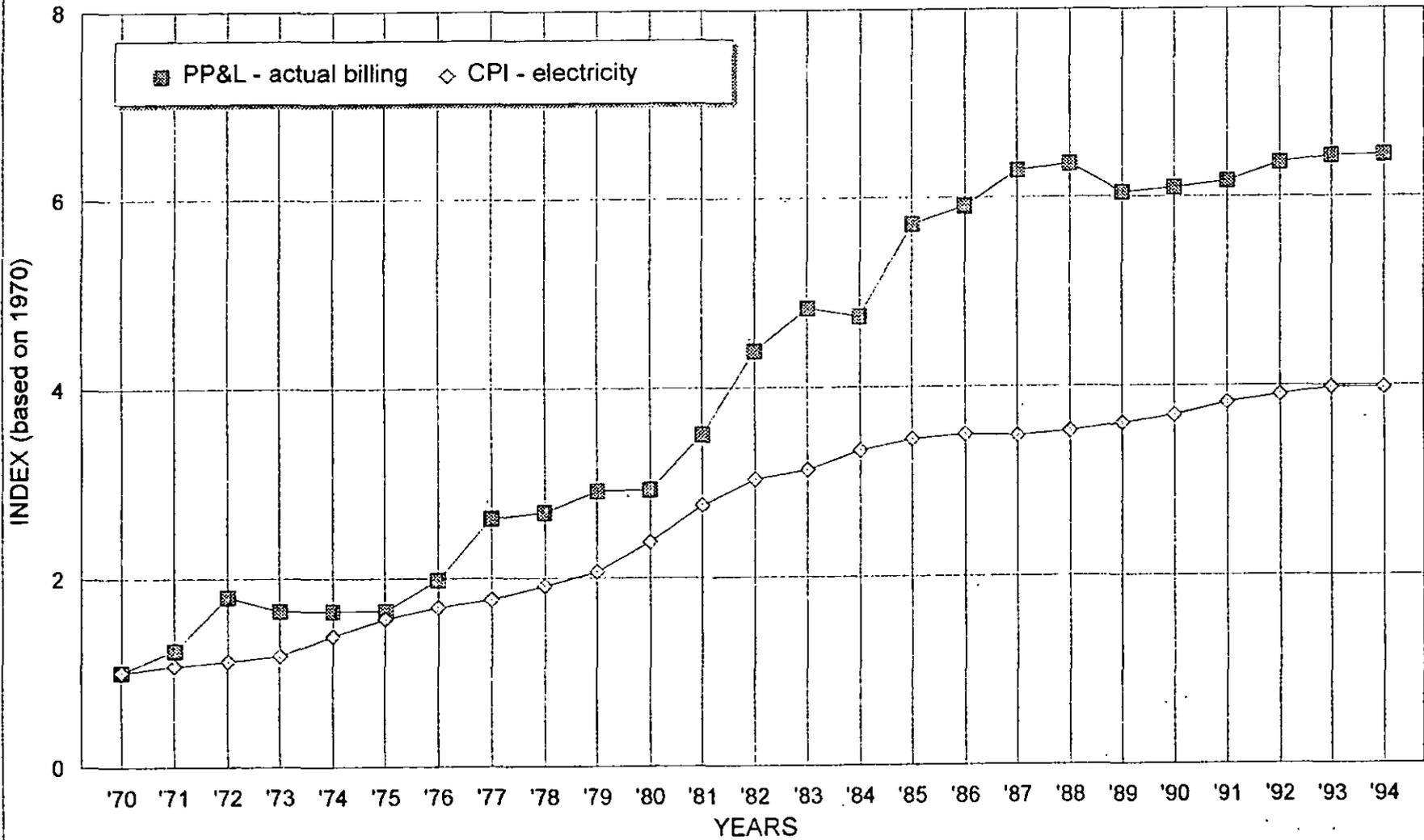
William W. Nelson
 annual consumption / annual billing



William W. Nelson
 annual billing / annual energy

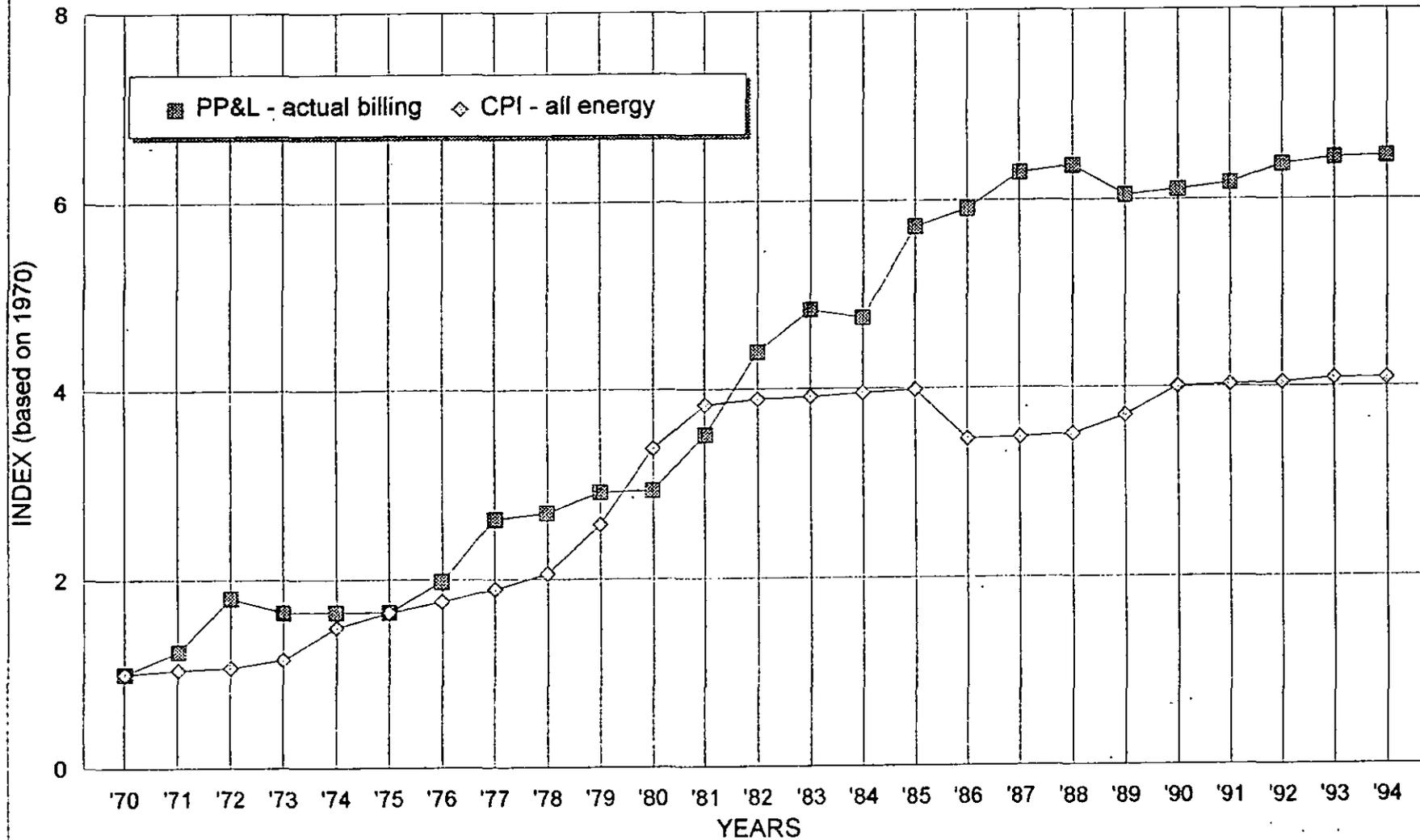


William W. Nelson
PP&L / CPI

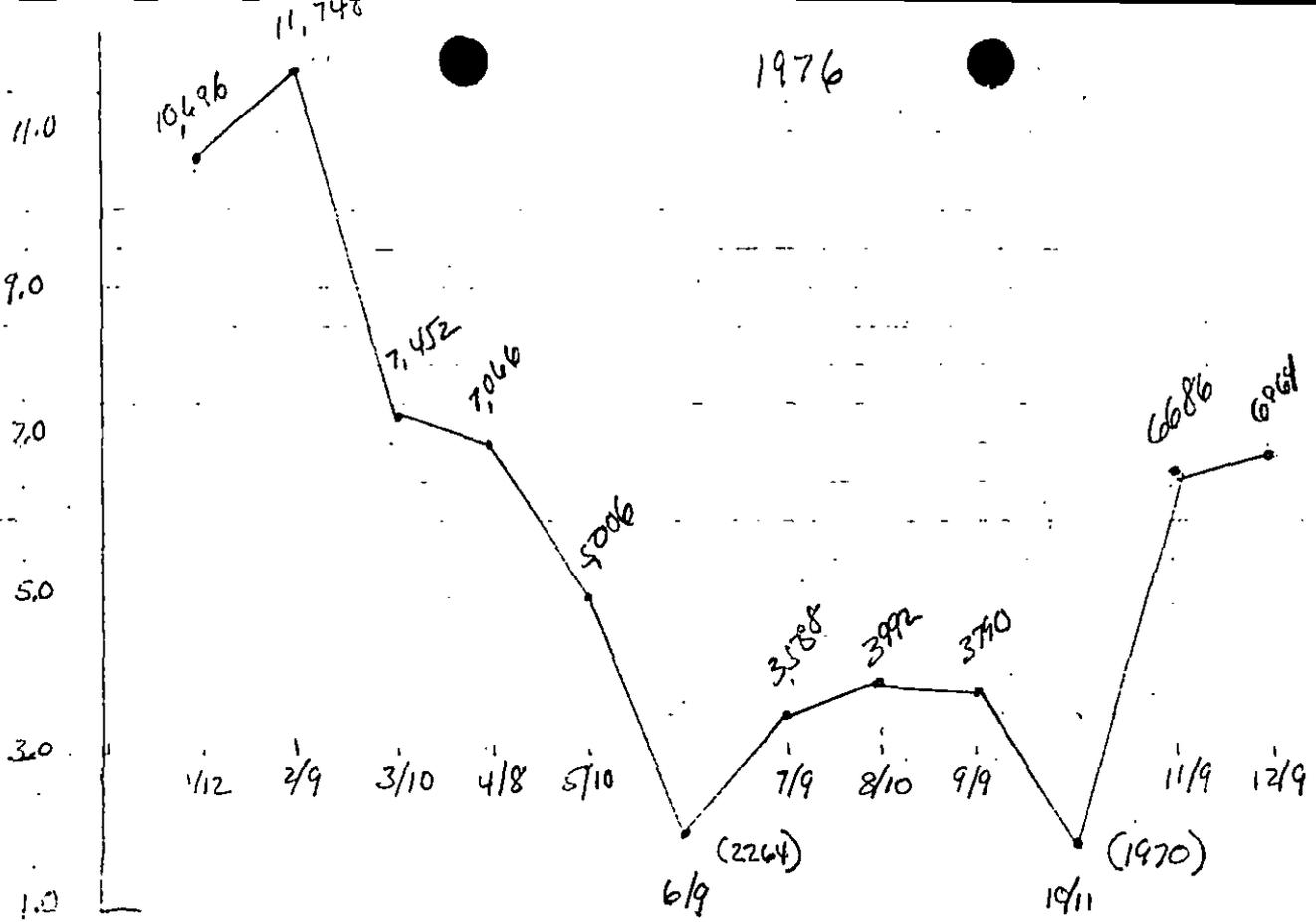


William W. Nelson

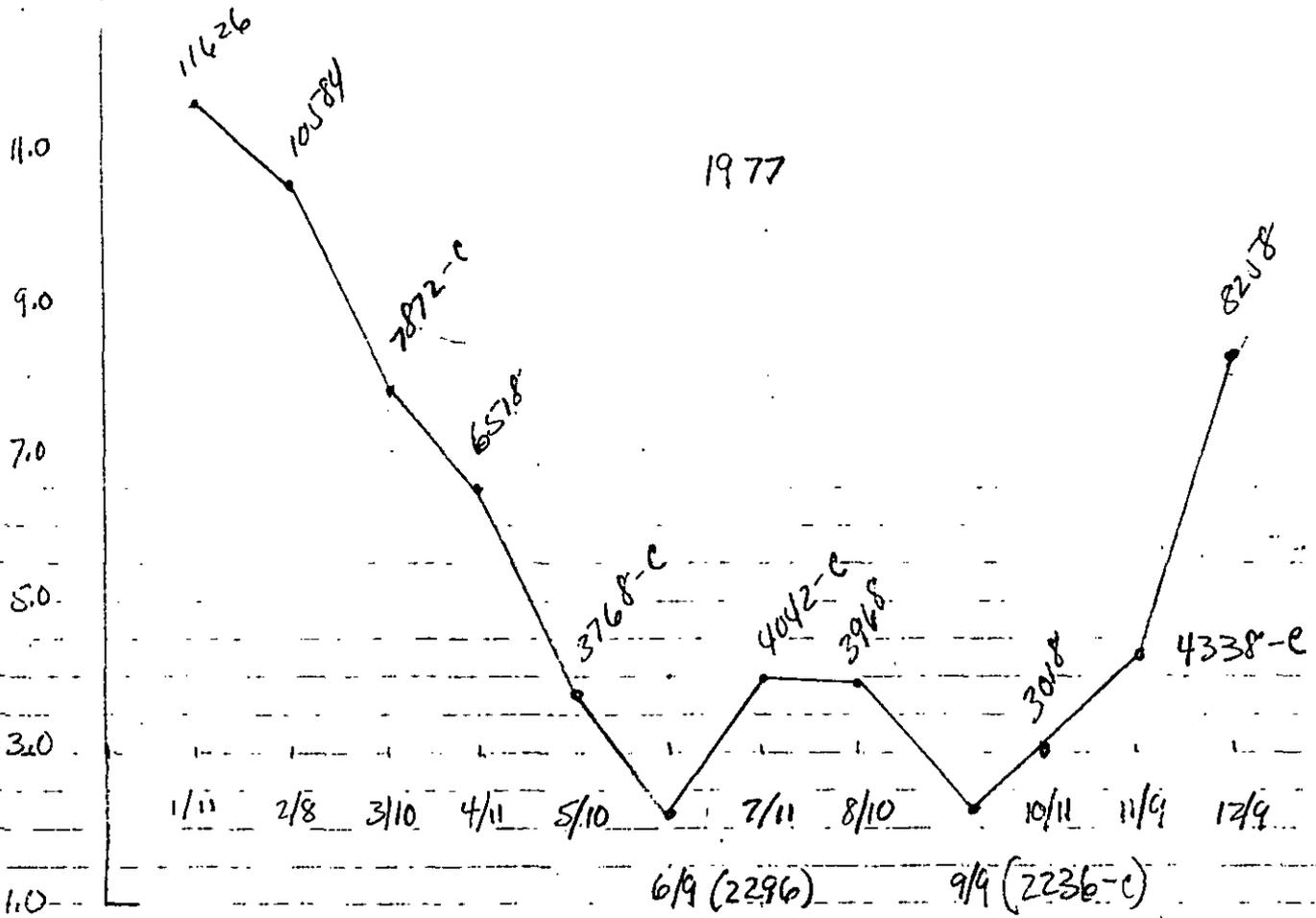
PP&L / CPI

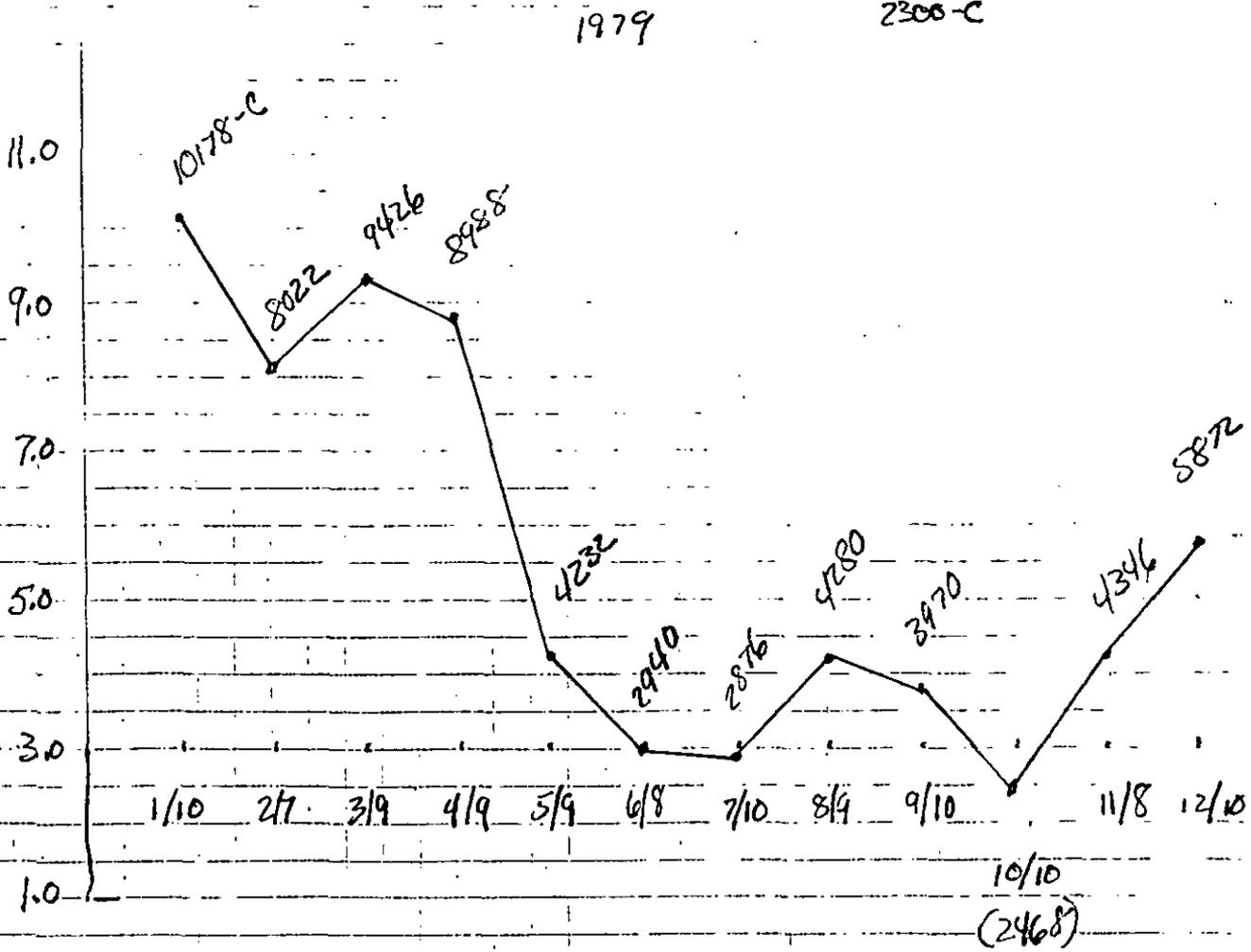
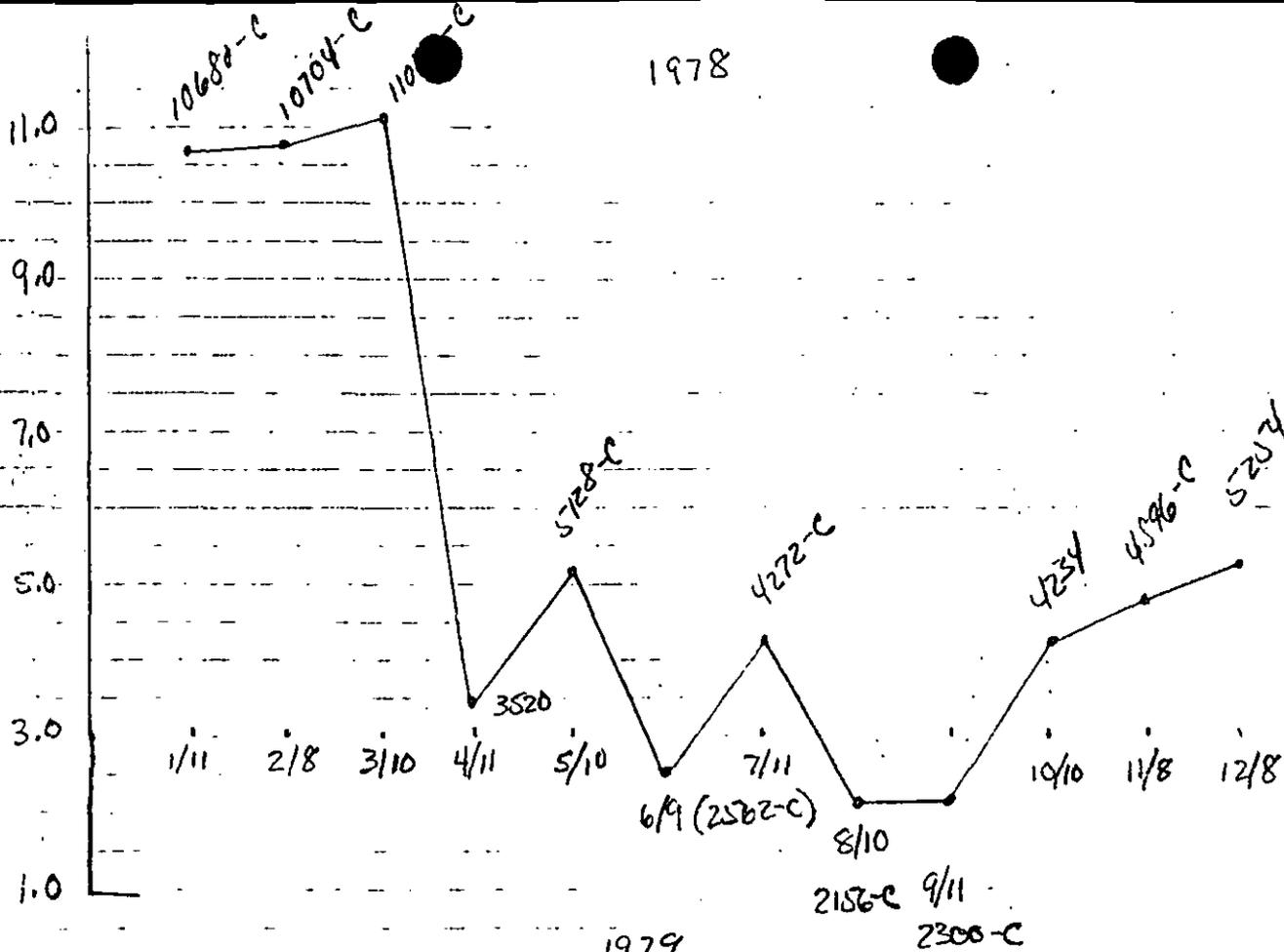


1976

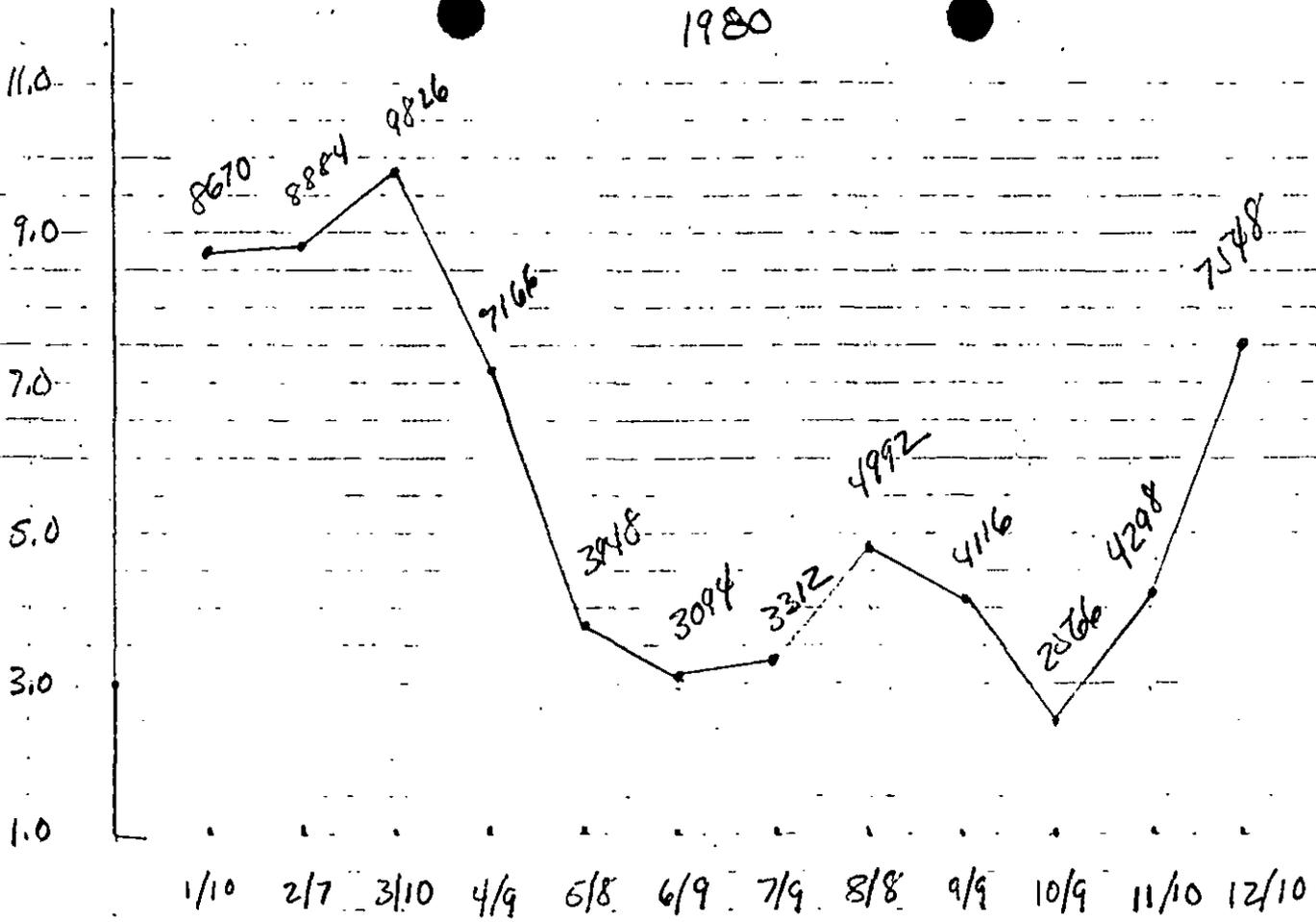


1977

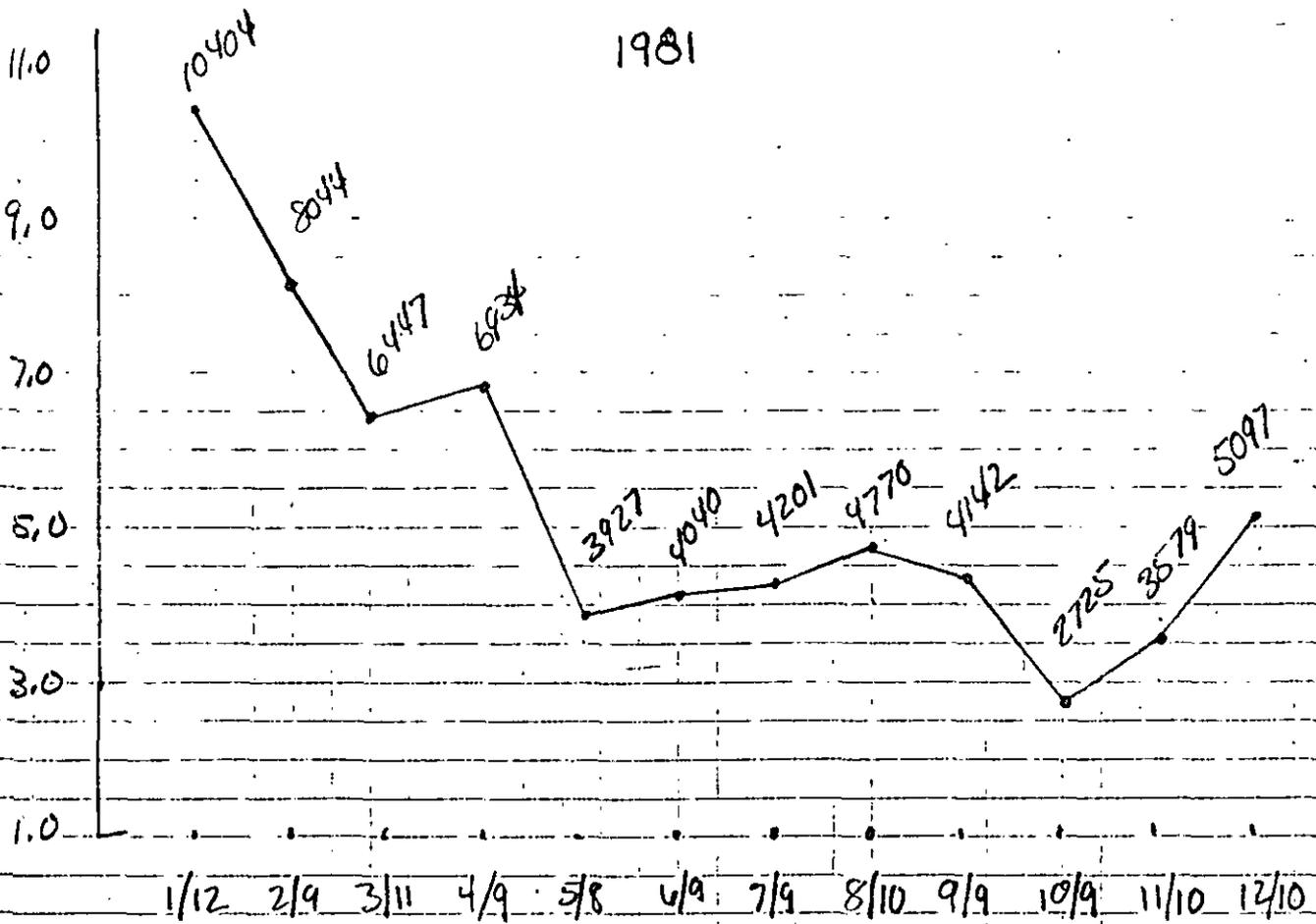




1980



1981



1982

