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ANALYSIS AND SIMULATION OF PERFORMANCE DATA FOR RESIDENTIAL SOLAR HEATING AND HEAT PUMP SYSTEM IN SEATTLE, WASHINGTON

Final Report, Volume II

MASTER

By
Robert Taussig
James Lockett
Michael Storie
John Isakson
Benjamin Levy

June 15, 1978

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Mathematical Sciences Northwest, Inc.
Bellevue, Washington

U.S. Department of Energy

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VOLUME II
FINAL REPORT

Prepared by

Robert Taussig
James Lockett John Isakson
Michael Storie Benjamin Levy

MATHEMATICAL SCIENCES NORTHWEST, INC.
P.O. Box 1887
Bellevue, Washington 98009

For

Division of Solar Applications
Office For Conservation and Solar Applications
The U.S. Department of Energy
On Subcontract With the Solar Environmental Engineering Company
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DATE
(09/01/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	320	.1	59.0	0.									1	0	0
1	120	.7	58.0	0.									1	0	0
2	150	2.5	58.0	0.									1	0	0
3	150	2.5	58.0	0.									1	0	0
4	150	1.5	56.0	0.									1	0	0
5	150	2.0	55.0	0.									0	0	0
6	160	4.2	54.0	1.7									1	0	0
7	160	4.5	53.0	18.5									1	0	0
8	210	4.4	53.0	36.7									0	0	0
9	210	5.0	53.0	52.8									2	0	0
10	200	5.2	53.0	65.4									1	0	0
11	200	6.5	53.0	92.4									1	0	0
12	190	7.8	55.0	96.6									1	0	0
13	190	9.0	57.0	94.3									1	0	0
14	190	7.4	59.0	99.3									1	0	0
15	210	7.0	62.0	91.3									1	0	0
16	240	8.0	65.0	74.7									1	0	0
17	270	6.5	66.0	44.8	30.50	22.00	56.00	29.00	28.50	28.75	55.00	54.50	3	0	0
18	180	3.5	65.0	11.3	31.00	22.25	55.75	29.00	29.00	29.25	44.00	41.00	1	0	0
19	240	5.0	65.0	0.	30.25	22.75	55.75	29.50	29.00	29.25	35.75	35.50	1	0	0
20	180	3.0	60.0	0.	30.25	22.50	55.50	29.50	29.00	29.25	33.00	45.00	2	0	0
21	150	3.8	56.0	0.	30.00	22.25	55.50	29.25	29.00	29.25	30.50	48.50	2	0	0
22	170	4.5	54.0	0.	29.50	22.00	55.25	29.00	28.75	29.00	26.50	48.25	3	0	0
23	180	4.0	53.0	0.	29.25	22.00	55.50	28.50	28.25	28.50	24.75	47.00	3	0	0
TOT.				779.8									29	0	0
AVG.	190	4.5	57.5	32.5	30.11	22.25	55.61	29.11	28.79	29.04	35.64	45.68	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	3.5	53.0	0.	29.00	22.00	55.00	28.25	28.50	28.50	24.25	46.50	3	0	0
1	180	4.0	53.0	0.	29.00	22.00	55.00	28.00	28.00	28.00	24.00	46.00	1	0	0
2	180	3.0	53.0	0.	28.75	22.00	54.75	28.00	28.00	28.00	24.00	45.50	1	0	0
3	180	4.0	52.0	0.	28.50	21.50	54.50	28.00	28.00	28.00	24.00	45.00	1	0	0
4	180	4.6	52.0	0.	28.25	21.50	54.25	27.75	28.00	28.00	23.75	44.75	1	0	0
5	180	3.0	51.0	0.	28.00	21.25	54.25	27.50	27.75	27.75	23.75	44.50	1	0	0
6	150	2.2	50.0	2.3	28.00	21.00	54.00	27.50	27.50	27.50	23.50	44.25	1	0	0
7	140	2.2	51.0	33.5	28.00	21.00	54.00	27.25	27.50	27.25	23.25	43.75	0	0	0
8	150	2.8	51.0	74.1	28.00	21.50	53.50	27.50	27.50	27.50	23.50	42.50	1	0	0
9	160	3.0	53.0	114.0	27.75	20.50	53.50	27.25	27.25	27.25	24.00	40.75	0	0	0
10	150	3.6	58.0	141.4	28.00	20.50	53.50	27.50	27.25	27.25	25.00	33.00	1	0	0
11	150	3.2	60.0	159.3	28.00	20.25	53.00	27.50	27.50	27.25	25.50	25.50	1	0	0
12	180	2.2	64.0	156.1	28.25	21.00	53.00	27.75	27.50	27.50	42.50	52.00	1	0	0
13	60	2.6	66.0	152.4	28.25	21.00	53.25	28.50	28.00	28.00	53.00	53.75	1	0	0
14	60	3.0	68.0	138.4	30.00	21.25	53.50	29.00	28.75	28.75	54.50	65.50	1	0	0
15	30	3.1	68.0	122.8	31.00	22.00	55.00	29.50	29.25	29.50	55.75	66.00	3	0	0
16	30	2.8	68.0	93.7	31.50	22.25	55.75	30.00	30.00	30.00	56.25	64.25	8	0	0
17	30	3.0	68.0	55.6	32.00	22.75	55.75	30.50	30.25	30.50	55.75	58.00	5	0	0
18	270	3.7	69.0	13.1	32.25	23.25	55.75	31.00	30.50	30.75	54.50	52.00	6	0	0
19	300	3.0	68.0	0.	32.25	23.25	55.50	31.25	31.00	31.00	48.75	48.00	4	0	0
20	360	1.6	63.0	0.	31.75	23.50	55.50	31.00	30.50	31.00	38.75	42.00	2	0	0
21	360	.6	60.0	0.	31.50	23.50	55.00	30.50	30.00	30.25	33.25	47.00	2	0	0
22	360	.6	58.0	0.	31.75	23.00	55.00	30.00	29.75	30.00	29.00	47.00	2	0	0
23	50	1.8	57.0	0.	31.50	23.00	54.75	30.00	29.75	30.00	27.50	46.00	1	0	0
TOT.				1256.7									47	0	0
AVG.	170	2.8	58.9	52.4	29.64	21.86	54.46	28.79	28.67	28.73	34.92	47.65	2	0	0

DATE
(09/03/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	2.8	56.0	0.	30.00	22.50	54.50	29.75	29.25	29.75	26.25	44.75	1	0	0
1	60	1.5	54.0	0.	29.50	22.25	54.50	29.25	29.00	29.00	26.00	43.50	2	0	0
2	310	.6	52.0	0.	29.50	22.00	54.25	28.75	28.50	29.00	25.75	42.25	1	0	0
3	360	.3	51.0	0.	29.00	21.75	54.00	28.50	28.25	28.75	25.25	41.50	1	0	0
4	90	.6	50.0	0.	28.75	21.50	64.00	28.00	28.00	28.25	24.75	40.75	1	0	0
5	150	.6	49.0	0.	28.50	21.00	53.50	27.75	27.50	27.75	24.50	39.75	0	0	0
6	150	0.	48.0	4.1	28.00	21.25	53.50	27.50	27.50	27.50	24.50	38.50	1	0	0
7	150	.6	48.0	58.9	28.00	20.75	53.25	27.50	27.50	27.75	24.50	37.00	0	0	0
8	150	.7	51.0	107.5	27.75	20.75	53.25	27.50	27.25	27.50	25.00	33.00	1	0	0
9	150	1.1	55.0	141.1	27.75	20.50	53.00	27.50	27.25	27.50	25.50	18.00	1	0	0
10	330	2.5	60.0	175.3	28.25	20.25	53.00	27.75	27.50	27.50	46.00	48.50	1	0	0
11	330	2.0	65.0	217.9	29.25	21.00	53.50	28.75	28.25	28.25	54.50	63.50	1	0	0
12	330	2.8	68.0	253.5	30.50	21.00	54.75	29.25	29.00	29.00	55.50	62.50	1	0	0
13	330	3.0	68.0	247.3	31.75	22.00	55.50	30.00	29.75	29.75	56.75	68.00	2	0	0
14	330	3.8	70.0	224.4	32.25	23.00	57.00	30.50	30.25	30.25	58.00	70.50	2	0	0
15	330	4.2	70.0	186.2	33.00	23.75	58.50	31.25	30.75	31.00	59.25	70.00	2	0	0
16	330	5.0	71.0	135.6	33.75	24.50	59.25	31.75	31.50	31.50	60.00	67.00	2	0	0
17	330	6.0	71.0	78.4	34.00	25.00	60.00	32.00	31.75	32.00	60.00	62.00	1	0	0
18	330	3.8	71.0	16.8	34.25	25.25	59.75	32.50	32.00	32.25	58.25	56.00	1	0	0
19	330	2.0	70.0	0.	34.50	25.25	59.50	32.75	32.50	32.50	55.50	51.50	1	0	0
20	330	1.0	65.0	0.	34.00	25.50	59.50	32.50	32.00	32.25	42.75	49.00	2	0	0
21	330	2.5	61.0	0.	33.00	25.50	59.25	32.00	31.75	32.00	31.00	55.00	2	0	0
22	330	1.4	61.0	0.	32.75	25.25	59.00	31.50	31.25	31.50	27.00	54.50	2	0	0
23	330	1.5	59.0	0.	32.00	25.00	59.00	31.00	30.75	31.00	28.25	50.00	2	0	0
TOT.				1847.0									30	0	0
AVG.	260	2.1	60.2	77.0	30.83	22.77	56.05	29.81	29.54	29.73	39.36	50.29	1	0	0

DATE
(09/04/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	1.9	58.0	0.	31.50	25.00	58.75	30.50	30.50	30.75	28.00	47.75	1	0	0
1	330	1.3	55.0	0.	31.25	24.75	58.75	30.25	30.00	30.25	27.50	46.25	1	0	0
2	360	.5	54.0	0.	30.50	24.25	58.50	30.00	29.75	30.00	27.25	45.50	1	0	0
3	70	.8	53.0	0.	30.50	23.75	58.25	29.50	29.75	29.75	26.75	45.00	0	0	0
4	130	.7	52.0	0.	30.00	23.00	58.00	29.50	29.25	29.50	26.50	44.00	1	0	0
5	150	1.7	51.0	0.	29.75	22.50	58.00	29.25	29.00	29.25	26.00	43.00	1	0	0
6	150	3.2	51.0	3.1	29.50	22.00	57.75	29.00	28.75	29.00	26.00	41.25	0	0	0
7	150	5.4	51.0	51.9	29.25	21.25	57.75	29.00	28.50	29.00	26.00	40.50	1	0	0
8	150	5.8	51.0	99.8	29.00	20.75	57.50	28.75	28.50	28.50	26.50	35.25	1	0	0
9	150	6.2	53.0	131.5	29.00	20.50	57.25	28.75	28.50	28.50	26.75	20.00	1	0	0
10	150	8.0	60.0	163.7	29.25	20.75	57.25	29.00	28.50	28.75	52.50	52.00	1	0	0
11	150	9.0	60.0	184.6	29.50	20.75	57.00	29.00	28.50	28.75	48.00	47.50	1	0	0
12	160	8.6	62.0	193.0	30.25	21.25	57.50	29.50	29.25	29.50	58.50	67.50	1	0	0
13	190	8.2	66.0	162.5	31.50	21.50	58.50	30.00	30.00	30.00	59.25	68.75	1	0	0
14	190	6.4	69.0	147.3	32.50	22.50	59.50	31.00	29.75	31.00	60.25	70.75	1	0	0
15	190	8.0	72.0	121.9	33.25	23.00	60.25	31.75	31.25	31.50	60.25	61.25	1	0	0
16	190	9.0	70.0	88.4	33.75	23.50	60.00	31.75	31.50	31.50	59.25	58.00	1	0	0
17	190	9.0	69.0	49.1	34.00	23.50	60.00	32.25	31.75	31.75	57.00	54.75	1	0	0
18	190	10.0	67.0	11.2	33.75	23.75	59.75	32.25	32.00	31.75	44.50	41.50	0	0	0
19	190	9.5	65.0	0.	33.00	23.50	59.75	32.00	31.50	31.50	37.75	40.25	3	0	0
20	190	9.5	64.0	0.	32.50	23.50	59.50	31.50	31.25	31.25	32.75	51.00	2	0	0
21	190	9.5	62.0	0.	32.00	23.75	59.25	31.25	31.00	31.00	28.75	51.25	2	0	0
22	170	7.5	62.0	0.	31.75	24.00	59.00	31.00	30.75	30.75	27.50	50.50	2	0	0
23	150	5.5	61.0	0.	31.50	24.00	59.00	30.75	30.50	30.50	27.00	49.75	1	0	0
TOT.				1408.0									27	0	0
AVG.	186	6.0	59.9	58.7	31.20	22.79	58.61	30.31	30.00	30.17	38.35	48.89	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	6.6	60.0	0.	31.25	24.00	58.75	30.50	30.25	30.50	26.75	48.75	1	0	0
1	170	8.0	62.0	0.	31.00	23.75	58.75	30.50	30.25	30.25	26.75	48.00	1	0	0
2	170	7.5	62.0	0.	30.75	23.50	58.25	30.25	30.00	30.00	26.75	47.00	1	0	0
3	170	7.0	61.0	0.	30.50	23.25	58.00	30.00	29.75	30.00	27.00	46.25	1	0	0
4	170	7.0	61.0	0.	30.50	23.00	58.00	30.00	29.50	29.50	26.75	45.50	1	0	0
5	170	8.0	61.0	0.	30.25	22.75	58.00	30.00	29.50	29.50	26.75	45.00	1	0	0
6	170	8.0	60.0	.2	30.00	22.50	57.75	29.75	29.50	29.50	26.75	44.75	1	0	0
7	170	6.5	60.0	4.0	30.25	22.25	57.75	29.75	29.25	29.25	26.75	44.25	1	0	0
8	170	7.5	60.0	8.3	30.00	22.00	57.50	29.50	29.50	29.50	26.75	43.25	1	0	0
9	210	4.0	60.0	12.1	30.00	22.00	57.25	29.50	29.25	29.25	27.00	41.00	1	0	0
10	220	5.0	60.0	15.1	30.00	21.75	57.25	29.50	29.25	29.25	28.00	34.50	3	0	0
11	210	3.0	60.0	17.1	29.75	22.25	57.00	29.50	29.25	29.25	28.00	28.50	4	0	0
12	210	3.5	60.0	17.8	29.75	23.00	57.00	29.25	29.00	29.00	28.00	28.75	2	0	0
13	350	2.5	58.0	17.4	29.25	23.00	56.75	29.25	29.00	29.00	28.00	28.25	1	0	0
14	60	3.5	58.0	15.7	29.25	23.00	56.50	29.25	29.00	29.00	28.00	28.00	1	0	0
15	60	4.2	57.0	13.0	29.25	22.50	56.00	29.00	29.00	29.00	28.00	28.25	1	0	0
16	360	3.0	54.0	9.4	29.00	22.25	56.00	29.00	29.00	29.00	28.00	30.00	2	0	0
17	360	2.5	52.0	5.1	29.00	21.75	56.00	28.50	28.50	28.50	28.00	35.00	3	0	0
18	60	3.2	52.0	.9	28.75	22.00	55.50	28.50	28.25	28.50	27.25	41.00	6	0	0
19	60	2.0	51.0	0.	28.75	22.00	55.25	28.00	28.00	28.25	26.00	42.00	2	0	0
20	90	.8	52.0	0.	28.50	22.00	55.25	28.00	28.00	28.25	25.25	42.50	2	0	0
21	150	2.6	52.0	0.	28.50	22.25	55.00	28.25	28.00	28.00	24.75	43.75	2	0	0
22	120	3.0	52.0	0.	28.50	22.25	55.00	28.25	28.00	28.00	24.25	43.25	2	0	0
23	90	2.8	52.0	0.	28.25	22.00	54.75	28.00	27.75	28.00	23.00	42.50	2	0	0
TOT.				136.1									40	0	0
AVG.	172	4.7	57.4	5.7	29.62	22.54	56.80	29.25	29.03	29.09	26.77	39.58	2	0	0

DATE
(09/06/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	70	3.5	52.0	0.	28.00	22.00	54.50	27.75	27.75	27.50	24.00	41.75	2	0	0
1	80	4.6	50.0	0.	28.00	21.75	54.25	27.50	27.50	27.50	24.00	41.50	1	0	0
2	120	3.6	50.0	0.	27.75	21.50	54.00	27.50	27.25	27.25	23.50	41.50	1	0	0
3	120	2.4	51.0	0.	27.50	21.25	54.00	27.25	27.00	27.00	23.00	41.00	1	0	0
4	140	3.0	48.0	0.	27.25	21.00	54.00	27.00	26.75	27.00	23.00	40.25	0	0	0
5	150	4.8	48.0	0.	27.25	20.75	43.75	26.75	26.50	26.75	23.00	40.00	1	0	0
6	150	4.0	48.0	1.7	27.00	20.25	53.00	26.50	26.50	26.50	23.00	39.00	1	0	0
7	150	4.8	48.0	47.4	27.00	20.25	53.50	26.75	26.50	26.75	23.00	37.50	1	0	0
8	150	3.2	48.0	99.8	27.00	20.00	53.50	26.50	26.25	26.75	23.25	34.50	1	0	0
9	180	5.0	50.0	146.2	26.25	20.75	53.25	44.00	26.00	48.00	23.50	18.75	1	0	0
10	200	6.5	52.0	179.8	26.25	21.50	52.75	47.00	26.00	49.50	23.75	20.25	1	0	0
11	150	6.5	55.0	197.9	27.00	21.50	52.50	38.25	26.50	41.00	52.25	55.50	1	0	0
12	150	6.5	58.0	185.9	28.25	21.25	53.00	31.75	27.75	32.75	54.25	63.50	2	0	0
13	210	5.5	62.0	181.1	29.75	21.75	54.25	30.00	28.50	30.75	54.50	58.25	1	0	0
14	210	6.0	63.0	148.4	30.00	22.25	55.00	30.00	29.25	30.00	56.25	68.25	1	0	0
15	210	5.6	64.0	122.3	31.00	22.75	56.00	30.00	29.75	30.00	55.00	52.50	1	0	0
16	360	2.5	60.0	87.8	31.25	22.75	55.75	30.00	29.75	30.00	54.50	53.50	1	0	0
17	50	3.5	60.0	47.5	31.25	22.75	55.50	30.25	30.00	30.00	55.00	55.50	1	0	0
18	60	5.0	60.0	7.6	31.25	23.00	55.50	30.50	30.00	30.25	53.50	51.00	1	0	0
19	70	4.5	58.0	0.	31.50	22.75	55.25	30.25	30.00	30.00	39.75	39.75	1	0	0
20	60	3.0	57.0	0.	30.75	22.75	55.25	30.00	29.75	30.00	34.00	46.00	3	0	0
21	60	3.2	53.0	0.	30.00	22.75	55.00	29.50	29.25	29.25	29.75	47.00	3	0	0
22	360	2.5	54.0	0.	29.75	23.00	55.00	29.00	29.00	29.00	27.25	45.50	2	0	0
23	130	3.0	52.0	0.	29.25	23.00	55.00	28.75	28.50	28.75	26.00	44.00	2	0	0
TOT.				1453.4									30	0	1
AVG.	150	4.3	54.2	60.6	28.76	21.60	53.90	30.53	28.00	30.93	35.37	44.84	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	100	2.8	50.0	0.	29.00	22.75	54.50	28.50	28.25	28.25	25.50	42.75	2	0	0
1	120	2.0	50.0	0.	29.00	22.75	54.50	28.25	28.00	28.25	25.25	41.75	1	0	0
2	120	2.0	50.0	0.	28.75	22.50	54.25	28.00	28.00	28.00	25.00	40.00	1	0	0
3	100	1.5	50.0	0.	28.50	22.25	54.00	28.00	27.50	27.50	25.25	38.75	1	0	0
4	150	1.6	50.0	0.	28.25	22.00	54.00	27.75	27.50	27.50	25.25	37.50	1	0	0
5	150	1.5	49.0	0.	28.00	21.75	54.00	27.50	27.25	27.25	25.00	36.00	0	0	0
6	150	3.0	48.0	1.6	27.75	21.50	53.50	27.50	27.00	27.00	25.00	35.50	0	0	0
7	150	4.7	47.0	56.8	27.50	21.00	53.50	27.25	27.00	27.00	25.00	36.00	1	0	0
8	150	1.0	49.0	120.4	27.25	20.75	53.50	27.00	26.75	26.75	24.75	34.00	4	0	0
9	240	1.0	55.0	174.5	27.25	20.75	53.25	27.00	26.75	26.75	25.00	20.25	6	0	0
10	270	2.6	55.0	218.1	27.25	20.75	53.00	27.00	27.00	27.00	48.00	47.00	6	0	0
11	330	2.7	60.0	250.1	27.50	21.25	53.00	27.75	27.50	27.50	54.00	64.00	1	0	0
12	30	3.5	60.0	263.5	29.75	21.75	54.50	28.50	28.25	28.50	55.75	68.50	1	0	0
13	360	3.5	62.0	257.8	31.00	22.50	56.00	29.50	29.25	29.25	57.25	71.00	1	0	0
14	30	3.5	62.0	234.3	31.50	23.50	58.00	29.50	29.25	29.50	59.00	72.00	1	0	0
15	330	4.2	63.0	192.6	32.00	24.00	59.25	30.00	29.50	30.00	60.00	69.75	1	0	0
16	30	5.0	62.0	137.5	32.75	24.00	60.00	30.75	30.50	30.75	60.50	66.00	1	0	0
17	360	2.8	66.0	73.3	33.25	24.00	60.25	31.25	31.00	31.25	60.00	61.00	2	0	0
18	340	2.8	66.0	10.5	33.75	24.00	60.00	31.75	31.50	31.75	57.75	54.50	1	0	0
19	330	2.6	64.0	0.	33.50	24.00	60.00	31.75	31.50	31.75	47.50	43.25	2	0	0
20	30	2.5	58.0	0.	33.00	24.00	60.00	31.75	31.50	31.50	37.00	55.50	6	0	0
21	360	1.2	56.0	0.	32.00	23.75	59.50	31.25	30.75	31.00	28.75	52.00	3	0	0
22	60	1.4	55.0	0.	31.75	23.50	59.25	30.50	30.00	30.50	27.00	50.50	2	0	0
23	60	2.0	52.0	0.	30.75	23.50	59.00	29.75	29.75	30.00	26.25	49.75	1	0	0
TOT.				1991.0									44	0	0
AVG.	181	2.8	55.8	83.0	30.04	22.60	56.28	29.07	28.80	28.94	38.74	49.47	2	0	0

DATE
(09/06/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	3.0	52.0	0.	30.25	23.25	59.00	29.00	29.00	29.25	25.00	48.00	1	0	0
1	360	1.1	52.0	0.	30.00	23.00	58.50	29.00	28.50	29.00	25.00	46.00	0	0	0
2	330	2.4	50.0	0.	29.25	22.75	58.50	28.50	28.25	28.50	24.25	46.00	0	0	0
3	340	3.0	48.0	0.	29.00	22.00	58.50	28.25	28.00	28.00	23.75	45.50	1	0	0
4	340	3.5	48.0	0.	28.75	21.75	58.25	28.00	27.50	28.00	23.50	44.75	0	0	0
5	360	2.5	48.0	0.	28.50	21.50	58.00	27.75	27.50	27.75	23.50	43.50	0	0	0
6	360	2.0	47.0	1.2	28.25	21.25	57.75	27.50	27.25	27.50	23.25	42.50	1	0	0
7	360	2.0	46.0	57.0	28.00	21.00	57.50	27.50	27.25	27.25	23.50	41.25	2	0	0
8	330	1.2	48.0	123.5	28.00	21.00	57.25	27.25	27.00	27.25	24.00	35.00	2	0	0
9	330	5.0	55.0	182.3	28.00	21.00	57.25	27.50	27.25	27.25	25.00	19.00	2	0	0
10	330	5.1	54.0	228.2	28.25	21.25	57.00	28.00	27.75	27.75	55.00	58.00	1	0	0
11	330	5.5	58.0	259.5	29.75	21.50	57.25	28.75	28.50	28.75	58.00	67.00	2	0	0
12	330	5.0	61.0	271.2	31.00	21.75	58.75	29.75	29.50	25.50	59.25	71.25	1	0	0
13	330	6.5	66.0	263.8	32.25	22.00	60.00	30.50	30.25	30.25	61.25	74.50	1	0	0
14	330	7.0	67.0	239.4	33.25	22.75	61.75	31.25	31.00	31.00	62.75	74.75	1	0	0
15	330	6.5	70.0	196.3	32.75	23.50	63.00	29.00	29.00	29.25	63.50	73.00	1	0	0
16	330	8.0	70.0	139.4	32.00	24.00	63.75	28.00	28.00	28.25	64.00	69.25	1	0	0
17	330	7.5	69.0	73.2	33.00	24.50	64.00	29.75	29.50	30.00	63.75	64.00	1	0	0
18	330	6.3	68.0	9.1	34.00	24.75	63.75	31.00	31.00	31.25	61.00	57.75	1	0	0
19	330	5.8	67.0	0.	34.00	24.75	63.50	31.75	31.50	31.75	51.25	46.00	1	0	0
20	330	3.2	61.0	0.	33.50	24.75	63.25	31.75	31.50	31.75	38.25	56.00	3	0	0
21	330	2.8	59.0	0.	32.75	24.75	63.00	31.25	31.00	31.25	31.00	54.75	3	0	0
22	330	3.5	57.0	0.	32.00	25.00	62.75	30.75	30.50	30.75	29.75	56.00	1	0	0
23	330	2.0	55.0	0.	31.50	25.00	62.75	30.25	30.00	30.50	25.25	55.00	1	0	0
TOT.				2044.1									30	0	0
AVG.	325	4.2	57.3	85.2	30.75	22.86	60.21	29.25	29.02	29.07	40.20	53.70	1	0	0

DATE
(09/09/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	2.5	52.0	0.	31.25	24.50	62.25	30.00	29.50	30.00	24.50	54.00	0	0	0
1	330	2.7	52.0	0.	30.75	24.00	62.25	29.50	29.25	30.00	24.00	53.25	1	0	0
2	330	2.2	52.0	0.	30.50	24.00	62.00	29.50	29.00	29.50	24.00	52.75	1	0	0
3	330	3.6	51.0	0.	30.00	23.25	62.00	29.00	29.00	29.25	23.25	52.00	0	0	0
4	330	2.7	50.0	0.	30.00	22.75	61.75	28.75	28.50	29.00	23.00	51.75	1	0	0
5	330	3.0	49.0	0.	29.75	22.25	61.50	28.50	28.25	28.50	23.00	51.50	1	0	0
6	330	2.0	48.0	.8	29.25	22.00	61.25	28.25	28.00	28.50	22.75	51.00	1	0	0
7	330	2.5	48.0	57.0	29.00	21.75	61.25	28.25	28.00	28.25	22.50	50.50	1	0	0
8	330	2.5	50.0	125.4	29.00	21.25	61.00	28.25	28.00	28.25	22.75	49.00	0	0	0
9	330	3.5	53.0	185.8	29.00	21.00	61.00	28.25	28.00	28.25	24.75	38.00	1	0	0
10	330	6.0	58.0	233.0	29.25	21.25	60.75	28.75	28.50	28.75	60.75	59.50	3	0	0
11	330	5.0	62.0	263.7	30.75	21.50	61.00	28.75	28.25	28.50	61.50	70.75	3	0	0
12	330	5.0	68.0	275.6	32.00	22.00	62.00	30.75	30.25	30.50	63.00	75.00	2	0	0
13	330	6.0	70.0	267.9	33.25	23.00	63.25	31.50	31.25	31.25	64.25	77.00	1	0	0
14	330	5.7	73.0	241.2	34.25	23.75	64.75	32.00	32.00	32.00	65.50	77.00	1	0	0
15	330	6.7	73.0	197.3	35.00	24.25	65.75	33.00	32.75	32.75	66.50	75.00	4	0	0
16	310	6.2	74.0	139.3	36.00	25.00	66.00	33.50	33.25	33.50	66.50	71.25	1	0	0
17	320	5.8	75.0	72.1	36.50	25.50	66.25	34.00	33.75	34.00	66.00	66.00	1	0	0
18	340	3.0	74.0	7.7	36.25	25.75	66.00	34.25	34.00	34.00	63.75	60.25	6	0	0
19	330	3.5	71.0	0.	36.50	25.25	66.00	34.50	34.00	34.25	61.00	55.50	2	0	0
20	340	2.4	68.0	0.	36.50	25.00	65.50	34.25	34.00	34.00	44.50	57.25	1	0	0
21	340	2.0	54.0	0.	36.00	24.50	65.00	33.50	33.25	33.50	32.00	59.00	2	0	0
22	340	2.0	52.0	0.	35.00	24.25	65.00	33.75	33.50	33.75	24.00	57.25	2	0	0
23	360	1.7	50.0	0.	34.00	24.25	64.50	32.00	31.00	32.50	28.00	56.50	2	0	0
TOT.				2066.8									39	0	0
AVG.	332	3.7	59.5	86.1	32.49	23.42	63.25	30.95	30.64	30.95	41.74	59.21	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.3	58.0	0.	33.00	24.25	64.25	31.50	31.00	31.50	26.50	55.00	1	0	0
1	360	.8	56.0	0.	32.25	24.00	64.00	31.00	30.75	31.00	26.00	54.00	1	0	0
2	360	.5	53.0	0.	31.75	24.00	64.00	31.25	30.00	31.75	25.00	53.25	1	0	0
3	360	.5	52.0	0.	31.00	23.75	63.25	30.00	29.75	30.00	24.00	52.50	1	0	0
4	120	.5	51.0	0.	30.75	23.25	63.00	29.50	29.25	30.00	24.00	51.75	1	0	0
5	120	.7	51.0	0.	30.25	23.00	63.00	29.25	29.00	29.50	23.50	51.50	1	0	0
6	120	0.	49.0	.5	30.00	22.75	63.00	29.00	28.75	29.00	23.00	51.00	1	0	0
7	150	.8	49.0	37.9	30.00	22.00	62.75	29.00	28.75	28.25	23.00	49.75	1	0	0
8	150	.7	50.0	67.4	30.00	21.75	62.50	28.75	28.50	29.00	23.75	45.00	1	0	0
9	270	1.0	52.0	100.2	29.50	21.50	62.50	29.00	29.00	29.00	26.25	21.50	5	0	0
10	300	1.4	60.0	182.9	29.75	21.75	62.00	29.00	29.00	29.00	28.75	25.00	3	0	0
11	330	2.2	62.0	254.1	31.00	22.00	61.75	29.75	29.50	30.00	61.75	69.50	1	0	0
12	330	2.6	67.0	280.2	32.00	22.75	62.25	30.75	30.25	30.50	63.00	69.25	1	0	0
13	360	2.2	70.0	268.6	33.50	23.25	63.50	31.50	31.25	31.50	64.25	75.25	1	0	0
14	300	2.4	73.0	238.0	34.50	24.00	65.00	32.25	32.00	32.00	66.00	76.25	1	0	0
15	330	2.0	78.0	194.1	35.25	25.00	66.00	33.00	32.50	32.75	66.75	74.50	1	0	0
16	330	2.5	78.0	138.4	36.25	25.75	66.50	33.75	33.25	33.50	67.00	71.00	2	0	0
17	30	1.5	78.0	70.9	36.75	25.50	66.50	34.00	34.00	34.00	66.00	66.00	2	0	0
18	360	.8	78.0	6.4	36.50	25.00	66.25	34.00	33.75	34.00	64.00	60.50	1	0	0
19	330	1.0	77.0	0.	30.00	25.25	66.00	34.00	33.75	34.00	61.25	57.50	1	0	0
20	330	.5	70.0	0.	36.25	25.00	66.00	34.50	34.00	34.25	47.00	56.25	2	0	0
21	360	.3	66.0	0.	35.00	25.00	66.00	33.50	33.25	33.75	33.00	60.00	2	0	0
22	360	.8	65.0	0.	34.50	25.25	65.50	32.75	32.50	32.75	28.75	59.00	2	0	0
23	360	.8	60.0	0.	34.00	25.25	65.25	32.00	31.75	32.50	28.00	57.75	2	0	0
TOT.				1839.6									35	0	0
AVG.	282	1.2	62.6	76.6	32.66	23.79	64.20	31.37	31.06	31.40	41.27	56.79	1	0	0

DATE
(09/11/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.7	58.0	0.	33.00	25.00	65.00	31.25	31.00	31.75	26.25	57.00	2	0	0
1	200	.4	57.0	0.	32.50	25.00	65.00	31.00	30.75	31.25	26.00	55.75	2	0	0
2	120	.6	56.0	0.	32.25	24.75	64.75	30.75	30.25	31.00	25.50	54.75	2	0	0
3	160	.7	52.0	0.	31.75	24.50	64.50	30.25	30.00	30.75	25.00	54.00	3	0	0
4	150	2.2	52.0	0.	31.25	24.25	64.50	30.00	30.00	30.25	24.75	53.00	1	0	0
5	140	1.4	52.0	0.	31.00	24.00	64.00	30.00	29.75	30.00	24.50	52.50	1	0	0
6	150	4.8	52.0	0.	30.75	24.00	64.00	30.00	29.25	30.00	24.00	52.00	1	0	0
7	170	6.5	50.0	13.6	30.50	23.50	63.50	29.50	29.00	29.50	24.00	50.75	0	0	0
8	180	8.5	50.0	30.8	30.00	23.00	63.50	29.50	29.00	29.50	24.00	48.00	1	0	0
9	180	7.8	50.0	46.1	30.00	22.50	63.00	29.00	28.75	29.00	25.00	45.00	2	0	0
10	180	10.0	52.0	58.0	29.75	22.00	63.00	29.00	28.75	29.00	26.00	44.50	1	0	0
11	180	8.0	54.0	65.7	29.75	22.00	62.50	28.50	28.50	29.00	26.75	24.50	1	0	0
12	180	7.0	57.0	68.6	29.75	22.00	62.50	29.00	28.75	29.00	27.00	25.00	1	0	0
13	180	8.0	60.0	83.6	29.75	22.25	62.25	29.00	29.00	29.00	27.75	27.25	0	0	0
14	180	10.5	62.0	75.0	29.75	22.00	62.00	29.00	29.00	29.25	28.25	33.50	1	0	0
15	180	12.0	62.0	61.1	30.25	22.00	62.00	29.25	29.00	29.75	60.00	53.00	1	0	0
16	180	11.5	62.0	42.6	31.00	22.25	62.00	29.75	29.50	29.75	50.00	44.50	1	0	0
17	190	6.5	60.0	21.3	31.00	22.50	61.75	30.00	30.00	30.00	38.50	37.25	1	0	0
18	190	6.8	61.0	1.2	31.00	22.50	61.50	30.00	30.00	30.00	33.75	33.25	1	0	0
19	190	8.0	60.0	0.	30.75	22.25	61.25	30.00	29.75	30.00	31.00	52.00	3	0	0
20	180	7.5	58.0	0.	30.50	22.50	61.00	29.50	29.50	30.00	24.50	56.00	3	0	0
21	180	7.0	57.0	0.	30.25	23.00	61.00	29.50	29.50	29.75	23.50	55.00	3	0	0
22	180	7.5	55.0	0.	30.00	23.25	61.75	29.50	29.50	29.50	23.25	54.50	3	0	0
23	180	7.5	55.0	0.	30.00	22.75	61.50	29.00	29.00	29.25	23.25	54.00	2	0	0
TOT.				567.6									33	0	0
AVG.	181	6.3	56.0	23.6	30.69	23.07	62.82	29.68	29.48	29.84	28.85	46.12	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	6.0	56.0	0.	30.00	23.50	60.00	29.00	29.00	29.00	22.00	53.75	1	0	0
1	160	6.0	55.0	0.	29.75	23.75	60.00	29.00	28.75	29.00	22.25	53.00	1	0	0
2	160	5.8	55.0	0.	29.75	23.50	59.50	29.00	28.75	29.00	22.25	53.00	1	0	0
3	170	4.5	55.0	0.	29.50	23.00	59.25	28.75	28.75	29.00	22.25	52.50	1	0	0
4	180	3.5	55.0	0.	29.25	22.50	29.25	29.00	28.75	29.00	22.00	52.25	1	0	0
5	170	4.5	54.0	0.	29.00	22.00	29.00	28.75	28.50	28.75	22.25	52.00	1	0	0
6	150	4.5	53.0	0.	29.25	22.00	59.00	28.75	28.50	28.75	22.25	51.75	1	0	0
7	150	4.4	52.0	22.2	29.25	21.75	58.75	28.50	28.50	28.75	22.25	51.75	0	0	0
8	150	3.2	52.0	56.4	29.25	21.50	58.75	28.50	28.50	28.50	22.50	50.75	2	0	0
9	180	4.0	56.0	90.4	29.25	21.50	58.50	28.50	28.50	28.50	23.25	47.25	6	0	0
10	190	6.0	58.0	113.9	29.00	21.50	58.25	28.50	28.50	28.50	25.50	24.50	7	0	0
11	190	6.8	60.0	121.0	29.00	21.25	58.00	28.75	28.75	28.50	28.25	22.00	7	0	0
12	180	6.4	62.0	99.0	29.00	21.25	57.50	28.75	29.00	28.75	56.00	55.50	5	0	0
13	180	6.8	62.0	96.1	30.00	21.50	57.25	29.50	29.50	29.25	55.00	56.00	1	0	0
14	180	5.5	64.0	86.1	31.00	22.00	57.00	30.00	29.75	30.00	55.50	55.00	1	0	0
15	180	6.2	63.0	69.9	31.75	22.25	56.75	30.25	30.00	30.00	56.25	63.25	1	0	0
16	190	8.0	66.0	48.5	32.00	22.75	56.75	30.75	30.50	30.50	56.75	60.50	1	0	0
17	190	7.0	64.0	27.6	32.25	23.00	56.50	31.00	30.75	31.00	51.00	48.25	0	0	0
18	180	4.5	62.0	1.5	31.75	23.00	56.25	31.00	30.50	30.75	38.50	38.00	3	0	0
19	150	3.0	61.0	0.	31.50	23.25	56.25	30.75	30.25	30.50	33.00	52.50	5	0	0
20	180	2.8	60.0	0.	31.00	23.75	56.00	30.25	30.00	30.00	56.75	53.00	2	0	0
21	180	4.0	58.0	0.	30.75	24.00	55.75	30.00	30.00	30.00	27.50	50.00	2	0	0
22	150	3.6	56.0	0.	30.25	24.00	55.75	29.75	29.50	29.75	25.25	49.75	2	0	0
23	120	2.7	53.0	0.	30.00	24.00	55.25	29.25	29.00	29.25	24.00	49.00	2	0	0
TOT.				832.6									53	0	0
AVG.	170	5.0	58.0	34.7	30.15	22.60	55.22	29.43	29.27	29.37	33.85	49.80	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	1.2	52.0	0.	29.50	24.00	55.25	29.00	28.50	28.75	23.00	48.50	0	0	0
1	120	2.8	51.0	0.	29.25	23.50	55.00	28.50	28.25	28.50	22.50	48.25	1	0	0
2	130	2.0	50.0	0.	29.00	23.00	55.00	28.25	28.00	28.25	22.00	48.00	0	0	0
3	180	4.0	50.0	0.	28.50	22.50	55.00	28.00	28.00	28.00	21.75	48.00	1	0	0
4	160	3.5	49.0	0.	28.25	22.00	54.75	27.75	27.50	27.75	21.50	47.50	1	0	0
5	170	3.5	48.0	0.	28.00	21.75	54.50	27.25	27.25	27.25	21.25	47.00	0	0	0
6	140	2.5	48.0	0.	28.00	21.50	54.50	27.25	27.00	27.25	21.00	47.00	1	0	0
7	150	4.8	47.0	45.8	27.75	21.25	54.25	27.00	27.00	27.00	21.00	46.75	1	0	0
8	150	4.0	50.0	108.9	27.50	21.00	54.25	27.00	26.75	27.00	21.00	46.00	0	0	0
9	150	5.0	53.0	165.3	27.50	20.75	54.00	27.00	27.00	27.00	22.25	40.00	1	0	0
10	150	5.0	58.0	208.8	27.25	20.50	54.00	27.25	27.00	27.00	49.00	51.00	1	0	0
11	170	4.5	62.0	236.8	28.75	21.00	55.00	28.00	27.75	27.75	55.75	64.75	1	0	0
12	150	4.5	68.0	244.5	30.25	21.50	56.00	28.75	28.50	28.75	57.25	69.25	4	0	0
13	180	5.5	70.0	231.8	31.25	22.00	57.25	29.75	29.50	29.50	58.50	71.25	4	0	0
14	230	6.5	70.0	193.9	32.00	22.75	58.50	30.50	30.00	30.00	59.75	72.00	6	0	0
15	210	6.3	72.0	133.4	33.00	23.25	59.75	31.00	31.00	30.50	60.00	71.00	5	0	0
16	220	6.0	70.0	79.5	33.25	23.25	59.50	31.50	31.25	31.00	57.75	55.75	8	0	0
17	210	4.8	68.0	30.5	33.50	23.50	59.25	32.00	31.75	31.75	56.00	53.00	5	0	0
18	150	4.5	68.0	1.2	33.50	24.00	59.00	32.00	32.00	32.00	42.50	41.50	4	0	0
19	180	3.2	64.0	0.	33.00	24.75	59.00	32.00	31.75	32.00	37.25	48.50	7	0	0
20	180	4.2	64.0	0.	32.25	25.50	58.75	31.75	31.50	31.75	32.75	50.75	7	0	0
21	160	5.0	62.0	0.	32.00	26.25	58.25	31.00	31.00	31.00	29.75	50.00	4	0	0
22	150	5.0	60.0	0.	31.50	26.00	58.00	30.75	30.50	30.75	28.00	48.50	3	0	0
23	160	4.0	60.0	0.	31.25	25.75	57.75	30.50	30.25	30.50	27.75	46.75	4	0	0
TOT.				1680.4									70	0	0
AVG.	165	4.3	58.9	70.0	30.25	22.97	56.52	29.32	29.12	29.21	36.22	52.54	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.0	58.0	0.	30.75	25.00	57.25	30.00	30.00	30.00	27.25	45.75	3	0	0
1	210	2.0	56.0	0.	30.75	25.00	57.00	30.00	29.75	30.00	27.25	45.25	1	0	0
2	210	1.0	53.0	0.	30.25	24.75	57.00	29.75	29.50	30.00	26.50	45.00	1	0	0
3	180	2.3	52.0	0.	30.00	24.00	56.75	29.25	29.00	29.25	26.00	44.50	1	0	0
4	150	3.4	52.0	0.	30.00	24.00	56.50	29.00	29.00	29.00	25.75	43.75	0	0	0
5	150	2.7	52.0	0.	29.50	23.75	56.25	29.00	28.50	28.75	25.50	42.75	1	0	0
6	140	3.2	52.0	0.	29.25	23.25	56.00	28.50	28.50	28.50	25.75	41.75	1	0	0
7	150	2.6	53.0	4.9	29.25	23.00	55.75	28.50	28.25	28.50	25.75	41.00	1	0	0
8	150	3.5	59.0	11.8	29.00	23.00	55.50	28.25	28.25	28.50	25.75	40.00	3	0	0
9	170	4.2	57.0	17.9	29.00	23.00	55.00	28.50	28.00	28.25	26.00	36.00	7	0	0
10	210	3.5	58.0	22.6	28.75	23.25	55.00	28.50	28.00	28.00	26.75	29.00	4	0	0
11	210	3.5	58.0	25.7	28.75	23.50	55.00	28.00	28.00	28.50	26.50	26.50	1	0	0
12	230	3.0	58.0	26.8	28.50	23.50	54.75	28.00	28.00	28.25	27.00	26.00	1	0	0
13	320	5.2	56.0	26.0	28.50	23.25	54.50	28.50	28.25	28.25	27.75	25.00	1	0	0
14	330	7.5	55.0	23.2	28.75	23.00	54.25	28.00	28.00	28.00	27.75	26.00	1	0	0
15	330	7.0	55.0	18.7	28.50	23.00	54.00	28.00	28.00	28.00	27.00	25.75	0	0	0
16	330	7.0	56.0	12.9	28.50	23.00	54.00	28.25	28.00	28.00	26.75	25.75	1	0	0
17	330	4.2	56.0	6.1	28.25	23.00	54.00	28.00	28.00	28.00	27.00	26.50	1	0	0
18	330	2.5	57.0	.2	28.50	22.75	53.75	28.00	28.00	28.00	27.00	28.75	1	0	0
19	330	2.0	57.0	0.	28.50	22.50	53.50	28.25	28.00	28.00	27.25	34.00	1	0	0
20	360	1.6	56.0	0.	28.25	22.25	53.50	28.00	28.00	28.00	27.00	40.00	2	0	0
21	330	1.2	56.0	0.	28.25	22.75	53.25	28.00	28.00	27.75	25.75	42.25	2	0	0
22	330	2.2	53.0	0.	28.25	22.50	53.00	28.00	27.75	27.50	25.00	42.50	2	0	0
23	30	2.2	52.0	0.	28.00	22.75	53.00	28.00	27.50	27.50	24.00	42.75	1	0	0
TOT.				196.8									38	0	0
AVG.	236	3.3	55.3	8.2	29.00	23.32	54.94	28.51	28.34	28.44	26.42	36.19	2	0	0

DATE
(09/15/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	3.5	52.0	0.	28.00	22.25	53.00	27.50	27.25	27.25	23.50	42.00	1	0	0
1	360	.8	52.0	0.	27.75	22.00	53.00	27.50	27.00	27.00	23.50	41.75	1	0	0
2	30	1.0	49.0	0.	27.75	22.00	53.00	27.25	27.00	27.00	23.25	41.25	1	0	0
3	360	1.2	50.0	0.	27.50	21.50	52.75	27.00	27.00	27.00	23.00	40.25	1	0	0
4	330	1.3	50.0	0.	27.25	21.25	52.75	27.00	26.75	26.75	23.00	40.00	1	0	0
5	330	1.0	49.0	0.	27.00	20.75	52.50	26.75	26.75	26.50	23.00	39.25	1	0	0
6	30	.5	48.0	0.	27.00	20.75	52.50	26.75	26.50	26.50	23.00	38.00	1	0	0
7	330	.3	47.0	16.3	27.00	20.25	52.50	26.50	26.50	26.25	23.00	36.75	0	0	0
8	330	1.6	49.0	31.6	26.75	20.00	52.50	26.50	26.25	26.25	23.00	34.00	1	0	0
9	360	2.0	52.0	33.1	27.00	20.00	52.25	26.50	26.50	26.25	24.25	21.25	1	0	0
10	360	3.3	52.0	42.0	26.75	20.00	52.25	26.50	26.25	26.25	24.75	22.00	3	0	0
11	330	3.0	56.0	47.7	27.00	20.00	52.00	26.75	26.50	26.25	24.75	22.00	2	0	0
12	330	4.0	56.0	49.8	27.00	20.00	52.00	27.00	26.50	26.50	25.25	23.50	3	0	0
13	30	3.8	58.0	48.2	27.00	20.00	51.75	27.00	26.75	26.50	25.75	24.00	2	0	0
14	360	3.0	59.0	43.0	27.25	20.25	51.75	27.00	27.00	26.75	26.00	25.50	2	0	0
15	360	3.6	60.0	34.6	27.25	20.25	51.50	27.00	27.00	27.00	26.00	26.75	1	0	0
16	330	8.0	61.0	29.6	27.25	21.00	51.25	27.25	27.00	27.00	26.25	27.25	1	0	0
17	330	3.0	61.0	17.4	27.25	21.25	51.25	27.50	27.00	27.00	26.25	27.25	1	0	0
18	60	4.2	61.0	.3	27.25	21.50	51.00	27.25	27.00	27.00	26.50	27.50	1	0	0
19	60	3.6	58.0	0.	27.50	21.75	51.00	27.50	27.25	27.00	26.50	28.75	3	0	0
20	90	2.6	56.0	0.	27.50	21.75	51.00	27.50	27.00	27.00	26.50	34.25	2	0	0
21	100	1.1	53.0	0.	27.25	22.00	50.75	27.00	26.75	27.00	25.75	40.50	2	0	0
22	100	.5	53.0	0.	27.00	21.75	50.75	27.00	27.00	26.75	24.00	41.00	2	0	0
23	90	.4	52.0	0.	27.00	21.50	50.75	27.00	26.50	26.50	23.00	40.50	1	0	0
TOT.				393.6									33	0	0
AVG.	227	2.4	53.9	16.4	27.22	20.99	51.91	27.02	26.79	26.72	24.57	32.72	1	0	0

DATE
(09/16/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	0	5.2	50.0	0.	27.00	21.00	50.50	26.50	26.50	26.25	23.00	40.00	1	0	0
1	90	.7	52.0	0.	26.75	21.00	50.25	26.75	26.25	26.25	22.75	39.00	1	0	0
2	150	1.0	52.0	0.	26.50	20.75	50.25	26.25	26.00	26.00	22.75	37.75	1	0	0
3	150	.9	51.0	0.	26.50	20.25	50.00	26.00	26.00	26.00	23.00	36.00	1	0	0
4	150	.6	49.0	0.	26.00	20.00	50.00	26.00	26.00	26.00	23.25	35.25	1	0	0
5	360	.8	51.0	0.	26.25	20.00	50.00	26.25	26.00	26.00	23.50	34.75	1	0	0
6	360	.6	51.0	0.	26.25	20.00	50.00	26.00	26.00	26.00	23.75	34.00	0	0	0
7	320	.2	52.0	18.2	26.50	20.00	50.00	26.25	26.00	25.75	23.75	33.00	1	0	0
8	320	.5	52.0	45.2	26.50	20.00	50.00	26.25	26.00	25.75	24.00	30.00	1	0	0
9	330	1.5	52.0	69.2	26.50	19.75	50.00	26.25	26.00	25.50	24.25	23.50	3	0	0
10	330	1.6	52.0	110.2	26.25	19.75	50.00	26.25	26.00	26.00	24.50	22.00	6	0	0
11	330	2.0	56.0	145.0	26.25	20.00	49.75	26.25	26.00	26.00	24.75	21.75	3	0	0
12	360	2.2	60.0	167.1	26.50	21.00	49.50	26.50	26.00	26.00	24.75	21.50	2	0	0
13	360	2.2	60.0	161.7	27.50	22.00	50.00	27.00	26.50	26.50	51.50	64.00	2	0	0
14	360	2.0	62.0	144.1	28.75	22.75	52.00	27.75	27.50	27.50	52.75	62.00	3	0	0
15	360	2.1	68.0	115.6	29.50	23.50	52.00	28.25	28.25	28.00	52.00	53.00	2	0	0
16	200	2.2	71.0	78.2	30.00	23.75	52.25	29.00	28.75	29.00	52.25	53.75	1	0	0
17	180	2.6	70.0	35.3	30.75	24.00	52.25	29.50	29.25	29.25	52.25	53.50	3	0	0
18	150	3.2	68.0	.3	30.75	24.50	52.00	30.00	29.50	29.75	48.00	45.50	1	0	0
19	150	2.4	62.0	0.	30.75	24.75	52.00	30.00	29.50	29.75	37.25	38.50	3	0	0
20	150	4.2	62.0	0.	30.00	24.75	52.25	29.75	29.50	29.50	33.25	42.50	3	0	0
21	150	6.4	62.0	0.	29.75	25.00	52.00	29.25	29.00	29.00	30.50	44.75	2	0	0
22	150	6.0	61.0	0.	29.25	24.75	51.75	29.00	28.50	28.75	27.00	44.25	1	0	0
23	150	7.5	61.0	0.	29.00	24.50	51.75	28.50	28.50	28.50	26.00	43.00	2	0	0
TOT.				1090.1									43	0	0
AVG.	234	2.4	57.8	45.4	27.91	21.99	50.85	27.48	27.23	27.21	32.11	39.72	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.2	56.0	0.	28.75	24.00	51.50	28.00	28.00	28.00	26.00	41.00	6	0	0
1	180	6.5	55.0	0.	28.25	24.00	51.25	28.00	27.75	28.00	25.50	40.00	1	0	0
2	180	5.5	54.0	0.	28.25	23.75	51.00	28.00	26.00	28.00	25.25	39.75	1	0	0
3	180	5.0	54.0	0.	28.00	23.00	51.00	27.75	27.50	27.75	25.00	39.00	1	0	0
4	180	5.5	53.0	0.	28.00	22.75	51.00	27.75	27.50	27.50	25.00	38.00	0	0	0
5	180	4.3	54.0	0.	28.00	22.00	50.75	27.50	27.25	27.50	25.00	37.50	1	0	0
6	180	5.2	53.0	0.	27.75	22.00	50.50	27.50	27.00	27.50	25.00	36.50	1	0	0
7	180	5.5	53.0	6.8	27.75	21.50	50.50	27.50	27.00	27.25	25.00	35.75	1	0	0
8	160	6.0	54.0	17.1	27.75	21.25	50.25	27.25	27.00	27.25	25.00	34.75	1	0	0
9	150	3.5	57.0	26.3	27.25	21.25	50.00	27.00	27.00	27.00	25.50	30.00	1	0	0
10	160	5.0	58.0	33.4	27.25	21.00	50.00	26.75	26.75	27.00	25.75	22.75	4	0	0
11	150	5.5	59.0	38.0	27.25	21.00	50.00	27.00	26.50	26.75	25.00	22.50	1	0	0
12	120	4.5	59.0	39.7	27.00	21.00	49.75	27.00	26.50	26.75	25.75	25.25	1	0	0
13	200	3.2	58.0	38.4	27.00	20.75	49.50	27.00	26.75	27.00	26.00	27.25	1	0	0
14	200	4.0	58.0	34.2	27.50	21.00	49.50	27.00	27.00	27.00	45.25	37.25	1	0	0
15	180	4.3	60.0	27.3	28.00	21.25	49.25	27.75	27.50	27.50	35.00	33.00	1	0	0
16	180	3.8	60.0	18.4	28.00	21.00	49.25	27.50	27.25	27.25	30.50	30.50	1	0	0
17	180	3.6	61.0	8.1	27.50	21.00	49.00	27.75	27.25	27.25	28.50	29.00	0	0	0
18	150	2.5	58.0	0.	27.75	21.00	49.00	27.75	27.00	27.00	28.00	27.75	1	0	0
19	130	2.2	58.0	0.	27.50	20.75	49.00	27.00	27.00	27.00	27.25	28.00	2	0	0
20	150	2.2	57.0	0.	27.50	21.00	49.00	27.25	27.00	27.00	27.00	33.25	1	0	0
21	150	2.2	56.0	0.	27.50	20.75	48.75	27.25	27.00	27.00	26.00	38.00	2	0	0
22	180	2.5	57.0	0.	27.50	21.00	49.00	27.25	26.75	27.00	26.00	38.75	1	0	0
23	190	3.5	57.0	0.	27.25	20.50	48.75	27.00	27.00	27.00	24.25	38.50	5	0	0
TOT.				287.7									34	0	0
AVG.	170	4.3	56.6	12.0	27.68	21.60	49.90	27.40	27.14	27.26	27.19	33.50	1	0	0

DATE
(09/18/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.4	56.0	0.	27.00	21.25	48.50	27.00	26.50	26.50	24.00	38.00	1	0	0
1	180	2.2	56.0	0.	27.00	22.00	48.50	27.00	26.25	26.25	24.00	37.25	1	0	0
2	170	.5	55.0	0.	27.00	22.50	48.25	26.75	26.50	26.50	24.00	37.00	1	0	0
3	150	9.2	54.0	0.	26.75	21.25	48.00	27.00	26.25	26.25	24.00	36.00	1	0	0
4	150	1.1	54.0	0.	26.75	21.00	48.00	26.75	26.25	26.25	24.00	35.75	1	0	0
5	150	1.0	54.0	0.	26.75	21.00	48.00	26.75	26.25	26.00	24.00	35.00	1	0	0
6	150	1.8	53.0	0.	26.50	21.00	48.00	26.50	26.25	26.00	24.00	35.00	1	0	0
7	140	1.0	52.0	27.6	26.75	20.75	47.75	26.25	26.00	26.00	24.00	34.50	1	0	0
8	140	.6	54.0	61.6	26.50	20.50	47.75	26.50	26.00	26.00	24.25	32.25	1	0	0
9	360	2.4	56.0	95.2	26.50	20.75	47.50	26.50	26.00	26.00	24.50	24.00	1	0	0
10	360	3.2	60.0	121.3	26.50	20.75	47.25	26.25	26.00	26.00	25.00	21.50	0	0	0
11	360	4.0	62.0	110.1	27.00	21.00	47.50	27.00	26.50	26.50	48.00	53.00	5	0	0
12	360	4.7	63.0	115.0	28.00	21.00	47.75	27.75	27.25	27.00	48.50	55.00	6	0	0
13	360	4.2	65.0	139.4	29.00	21.50	48.25	28.00	27.75	27.75	49.50	60.75	4	0	0
14	360	3.0	67.0	143.4	29.25	22.00	48.75	28.75	28.25	28.25	50.00	55.00	1	0	0
15	330	4.0	68.0	126.0	30.00	22.50	49.50	29.00	28.75	28.75	49.50	50.25	1	0	0
16	330	4.7	68.0	93.6	30.25	22.75	49.25	29.50	29.25	29.25	49.25	51.75	1	0	0
17	330	3.5	68.0	41.8	30.75	23.00	49.50	29.75	29.25	29.25	49.50	48.25	1	0	0
18	340	2.8	63.0	0.	30.75	23.25	49.00	30.00	29.50	29.75	40.00	38.00	0	0	0
19	360	1.6	60.0	0.	30.25	23.00	49.00	29.50	29.25	29.50	34.25	35.00	2	0	0
20	30	1.2	60.0	0.	30.00	23.00	49.25	29.25	29.00	29.00	32.00	41.50	4	0	0
21	330	3.5	61.0	0.	29.50	23.50	49.00	29.00	28.50	28.50	30.50	44.75	2	0	0
22	330	2.8	60.0	0.	29.25	24.00	48.75	29.00	28.50	28.50	26.75	44.00	2	0	0
23	330	3.0	58.0	0.	29.00	24.25	48.75	28.50	28.25	28.50	25.00	43.50	2	0	0
TOT.				1075.0									47	0	0
AVG.	262	2.8	59.5	44.8	28.21	21.98	48.41	27.84	27.43	27.43	33.27	41.12	2	0	0

DATE
(09/19/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	3.0	58.0	0.	28.50	25.00	48.75	28.25	28.00	28.00	24.25	43.25	2	0	0
1	330	3.5	57.0	0.	28.50	24.75	48.50	28.00	27.75	28.00	24.00	43.00	2	0	0
2	340	2.5	55.0	0.	28.00	24.00	48.25	28.00	27.75	27.75	23.00	42.75	2	0	0
3	340	3.5	55.0	0.	28.00	23.50	48.25	27.50	27.25	27.50	22.75	42.50	2	0	0
4	340	3.5	55.0	0.	27.75	23.00	48.00	27.50	27.00	27.00	22.50	42.25	1	0	0
5	340	2.6	55.0	0.	27.50	23.00	48.00	27.00	27.00	27.00	22.50	42.00	2	0	0
6	360	3.2	54.0	0.	27.25	22.50	48.00	27.00	26.75	26.75	22.50	41.75	1	0	0
7	340	3.8	54.0	37.5	27.25	22.25	48.00	27.00	26.75	26.75	22.50	41.75	1	0	0
8	350	4.0	54.0	100.4	27.00	22.00	48.00	27.00	26.75	26.75	22.50	41.00	1	0	0
9	330	5.0	55.0	156.9	27.00	21.75	48.00	26.75	26.50	26.50	23.00	39.25	1	0	0
10	330	8.0	56.0	200.4	27.00	22.00	47.75	26.75	26.50	26.50	24.00	34.00	2	0	0
11	330	6.5	60.0	228.2	27.00	22.00	47.75	27.00	26.50	26.75	47.00	53.00	4	0	0
12	350	5.0	66.0	238.4	28.25	22.75	49.00	27.50	27.25	27.25	50.25	63.50	4	0	0
13	350	5.0	70.0	230.2	29.50	23.75	50.50	28.00	28.00	28.00	51.75	65.25	5	0	0
14	350	6.0	70.0	204.2	30.50	24.50	52.00	29.00	28.75	29.00	53.50	67.25	1	0	0
15	350	5.0	72.0	162.2	31.25	25.50	53.50	29.75	29.50	29.50	55.00	66.00	1	0	0
16	350	5.0	73.0	107.4	32.00	26.00	54.75	30.25	30.00	30.00	55.75	63.00	1	0	0
17	350	4.5	74.0	44.9	32.50	26.25	55.25	31.00	30.50	30.75	55.75	58.00	1	0	0
18	350	4.0	73.0	0.	32.75	26.25	55.00	31.25	31.00	31.00	54.25	52.00	1	0	0
19	350	3.5	68.0	0.	33.00	26.50	55.00	31.75	31.25	31.25	47.50	44.25	1	0	0
20	350	3.0	65.0	0.	32.25	26.25	55.00	31.25	31.00	31.00	38.75	45.75	2	0	0
21	350	3.7	62.0	0.	32.00	26.25	55.00	31.00	30.75	30.75	32.25	49.00	2	0	0
22	360	7.0	62.0	0.	31.25	26.00	54.75	30.25	30.00	30.25	28.50	48.25	2	0	0
23	40	1.6	62.0	0.	30.75	26.00	54.75	30.00	30.00	30.00	27.00	47.00	2	0	0
TOT.				1710.7									43	0	0
AVG.	332	4.3	61.9	71.3	29.45	24.24	50.91	28.70	28.44	28.50	35.45	49.03	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	1.8	60.0	0.	30.50	26.00	54.50	29.75	29.50	29.75	26.50	45.75	1	0	0
1	60	2.2	60.0	0.	30.00	25.75	54.25	29.50	29.25	29.50	26.50	45.00	1	0	0
2	60	3.0	59.0	0.	30.00	25.00	54.25	29.50	29.00	29.25	26.25	44.75	1	0	0
3	360	3.0	58.0	0.	29.75	24.75	54.00	29.00	28.75	29.00	25.50	44.50	1	0	0
4	350	3.5	56.0	0.	29.25	24.00	54.00	29.00	28.50	29.00	25.00	44.00	1	0	0
5	360	1.5	55.0	0.	29.25	23.75	54.00	28.75	28.50	28.75	25.00	43.25	0	0	0
6	60	1.0	54.0	0.	29.00	23.00	53.75	28.50	28.50	28.50	25.00	42.50	1	0	0
7	30	2.0	55.0	42.5	29.00	23.50	53.75	28.50	28.25	28.50	25.00	41.75	1	0	0
8	60	2.0	58.0	115.1	28.75	22.25	53.50	28.25	28.00	28.25	25.00	39.25	1	0	0
9	340	2.5	61.0	179.7	28.50	22.00	53.50	28.25	28.00	28.00	26.25	22.00	1	0	0
10	350	2.6	69.0	230.0	29.00	22.25	53.25	28.25	28.00	28.00	51.25	57.75	1	0	0
11	300	3.5	72.0	262.1	30.00	22.50	54.25	29.00	28.75	29.00	55.25	65.00	1	0	0
12	320	5.3	72.0	273.7	31.25	23.00	55.75	29.75	29.50	29.75	57.00	69.25	1	0	0
13	320	6.2	76.0	264.1	32.25	23.75	57.25	30.50	30.25	30.50	58.50	72.00	1	0	0
14	340	6.5	78.0	232.3	33.00	24.75	59.00	31.25	31.00	31.00	60.25	73.00	1	0	0
15	330	7.0	80.0	184.0	34.00	25.25	60.50	32.00	31.50	31.50	61.25	71.75	3	0	0
16	330	6.5	80.0	120.9	34.50	26.00	61.25	31.25	31.00	31.00	61.75	68.00	1	0	0
17	330	4.5	80.0	48.9	35.00	26.50	61.50	32.75	32.50	32.50	61.75	63.25	2	0	0
18	360	1.5	80.0	0.	35.00	26.75	61.50	32.75	32.50	32.50	59.75	57.25	1	0	0
19	60	1.0	78.0	0.	35.25	27.00	61.25	33.25	32.75	32.75	57.00	52.50	2	0	0
20	60	2.2	76.0	0.	34.75	27.25	61.00	33.50	33.00	33.00	44.00	48.50	3	0	0
21	130	1.2	72.0	0.	34.25	28.00	61.00	32.75	32.50	32.75	35.25	55.00	3	0	0
22	210	2.0	68.0	0.	33.75	28.00	60.75	32.50	32.00	32.25	31.00	54.00	4	0	0
23	180	3.0	66.0	0.	33.00	28.75	60.25	31.75	31.50	31.75	29.00	52.75	1	0	0
TOT.				1953.3									33	0	0
AVG.	223	3.1	67.6	81.4	31.62	24.99	57.00	30.43	30.12	30.28	40.79	53.03	1	0	0

DATE
(09/21/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.5	61.0	0.	32.25	29.00	60.00	31.25	31.00	31.25	28.25	51.50	1	0	0
1	180	7.0	60.0	0.	32.00	28.50	59.75	31.00	30.15	31.00	27.75	50.00	1	0	0
2	180	3.0	58.0	0.	31.50	27.25	59.75	31.25	31.25	31.75	27.25	48.25	1	0	0
3	180	6.3	58.0	0.	31.25	26.50	59.00	30.00	30.00	30.50	27.00	48.00	1	0	0
4	170	4.0	58.0	0.	31.00	26.00	59.00	30.00	30.00	30.25	26.25	47.00	1	0	0
5	170	3.5	58.0	0.	30.75	25.25	58.75	30.00	29.75	30.00	26.25	46.25	1	0	0
6	180	3.5	57.0	0.	30.50	25.00	58.50	29.75	29.50	30.00	26.50	45.00	1	0	0
7	210	4.5	58.0	4.5	30.25	24.75	58.25	29.75	29.75	30.00	26.75	44.00	1	0	0
8	220	4.0	59.0	12.4	30.25	24.00	58.25	29.75	29.75	30.00	27.00	42.00	2	0	0
9	210	4.0	59.0	19.5	30.00	23.75	58.00	29.75	29.50	29.75	27.75	36.75	1	0	0
10	180	5.0	60.0	25.0	30.00	23.75	58.00	29.75	29.50	29.75	28.00	27.25	3	0	0
11	180	6.0	60.0	28.5	30.00	23.25	57.50	29.50	29.50	29.50	28.25	28.00	2	0	0
12	180	5.5	61.0	29.8	29.75	23.25	57.25	29.75	29.50	29.50	28.25	27.75	2	0	0
13	180	7.0	62.0	28.7	29.75	22.75	57.00	29.50	29.25	29.25	28.00	27.25	5	0	0
14	180	7.0	61.0	25.4	30.00	22.00	57.00	29.75	29.50	29.25	28.00	28.00	1	0	0
15	180	6.0	62.0	20.0	29.75	22.00	56.75	29.75	29.50	29.50	28.50	28.50	1	0	0
16	180	5.5	62.0	13.1	30.00	22.00	56.50	29.75	29.50	29.25	28.50	29.25	1	0	0
17	180	5.0	61.0	5.1	29.75	22.00	56.25	29.75	29.25	29.25	28.50	29.75	1	0	0
18	180	5.0	60.0	0.	29.50	22.00	56.00	29.50	29.25	29.00	28.50	31.50	3	0	0
19	180	5.5	60.0	0.	29.75	22.25	56.00	29.00	29.00	29.00	28.50	33.75	2	0	0
20	180	4.5	60.0	0.	29.50	23.00	56.00	29.00	29.00	29.00	28.25	38.00	4	0	0
21	180	4.0	60.0	0.	29.50	23.50	55.75	29.00	28.50	28.75	27.00	43.50	4	0	0
22	150	4.0	60.0	0.	29.00	24.00	55.25	29.00	28.50	28.75	26.00	43.75	3	0	0
23	150	3.2	61.0	0.	29.00	24.25	55.00	28.75	28.50	28.50	25.75	43.25	1	0	0
TOT.				212.0									43	0	0
AVG.	181	5.0	59.8	8.8	30.21	24.17	57.48	29.76	29.54	29.70	27.53	38.26	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	3.5	60.0	0.	29.00	24.25	55.00	28.75	28.50	28.50	25.75	42.75	2	0	0
1	150	3.0	60.0	0.	28.75	24.25	55.00	28.75	28.50	28.50	25.75	42.00	1	0	0
2	150	3.0	59.0	0.	29.00	24.00	54.75	28.50	28.50	28.50	25.75	41.50	1	0	0
3	150	4.0	59.0	0.	29.00	24.00	54.25	28.50	28.25	28.50	25.75	41.00	1	0	0
4	150	3.5	58.0	0.	28.75	23.75	54.00	28.50	28.00	28.25	25.75	40.25	1	0	0
5	180	3.0	59.0	0.	28.50	23.50	54.00	28.50	28.00	28.25	26.00	40.00	1	0	0
6	160	2.8	58.0	0.	28.75	23.25	54.00	28.50	28.25	28.00	26.00	39.00	0	0	0
7	150	2.6	58.0	.9	28.75	23.00	53.75	28.50	28.00	28.00	26.00	38.25	1	0	0
8	170	3.5	58.0	13.5	28.50	22.75	53.50	28.50	28.25	28.00	26.25	36.50	1	0	0
9	150	3.5	59.0	26.2	28.50	22.75	53.50	28.50	28.25	28.00	26.75	34.00	1	0	0
10	140	4.5	60.0	36.0	28.50	22.50	53.50	28.50	28.00	28.25	26.75	28.50	1	0	0
11	190	5.0	61.0	42.0	28.50	22.50	53.25	28.25	28.00	28.00	26.75	25.25	1	0	0
12	210	4.2	62.0	43.8	28.50	22.25	53.00	28.25	27.75	28.00	26.75	24.75	1	0	0
13	210	3.5	64.0	41.2	28.50	22.50	53.00	28.50	28.00	28.25	26.75	25.00	1	0	0
14	270	4.0	60.0	34.4	28.25	22.50	53.00	28.00	28.00	28.00	26.50	27.00	2	0	0
15	220	7.0	62.0	23.9	28.50	22.50	52.75	28.00	28.00	28.00	26.75	27.00	3	0	0
16	240	3.0	62.0	10.9	28.50	22.75	52.75	28.25	28.00	28.00	27.00	26.50	1	0	0
17	210	1.4	60.0	0.	28.25	23.00	52.25	28.00	27.75	28.00	27.25	28.00	1	0	0
18	210	.9	60.0	0.	28.25	23.00	52.25	28.00	28.00	28.00	27.25	29.25	1	0	0
19	150	2.5	59.0	0.	28.25	23.00	52.00	28.25	28.00	28.00	27.50	32.00	2	0	0
20	180	2.8	61.0	0.	28.25	23.00	52.00	28.25	27.75	28.00	27.25	38.50	2	0	0
21	160	2.2	58.0	0.	28.00	23.00	52.00	28.00	27.50	27.75	26.00	41.25	1	0	0
22	150	2.5	58.0	0.	28.25	22.75	51.75	28.00	27.75	28.00	25.00	41.25	2	0	0
23	180	3.2	58.0	0.	28.00	22.50	51.50	28.00	27.50	27.75	24.75	40.75	1	0	0
TOT.				272.8									31	0	0
AVG.	180	3.3	59.7	11.4	28.50	23.05	53.20	28.32	28.02	28.10	26.33	34.59	1	0	0

DATE
(09/23/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	190	2.6	58.0	0.	28.00	22.75	51.50	28.00	27.50	27.50	25.00	40.00	1	0	0
1	150	2.5	58.0	0.	28.00	22.00	51.50	28.00	27.25	27.75	25.00	39.25	0	0	0
2	160	3.0	58.0	0.	28.00	22.25	51.00	28.00	27.50	27.50	25.00	38.75	1	0	0
3	140	3.5	56.0	0.	27.75	22.00	51.25	27.75	27.25	27.25	25.00	37.75	1	0	0
4	190	2.5	57.0	0.	28.00	22.00	51.00	27.50	27.25	27.50	25.00	37.25	1	0	0
5	190	3.0	58.0	0.	27.75	22.00	51.00	27.50	27.25	27.25	25.00	36.75	0	0	0
6	190	2.6	58.0	0.	27.75	21.25	51.00	27.50	27.25	27.25	25.25	36.00	1	0	0
7	180	2.5	58.0	.9	27.75	21.50	51.00	27.50	27.25	27.25	25.50	35.00	2	0	0
8	180	3.0	58.0	11.3	27.50	21.75	50.75	37.00	28.00	39.50	25.25	34.00	1	0	0
9	210	2.5	58.0	21.8	28.00	21.75	50.25	30.75	27.25	32.00	25.75	32.00	1	0	0
10	180	2.4	59.0	29.8	28.00	22.00	50.25	29.00	27.50	29.25	26.00	26.00	1	0	0
11	210	3.0	60.0	34.8	27.75	21.25	50.00	28.25	27.50	29.00	26.00	24.75	1	0	0
12	210	3.0	59.0	36.3	28.00	21.50	50.00	28.00	27.50	28.00	26.00	24.50	1	0	0
13	210	2.6	60.0	34.2	28.00	21.50	50.00	27.75	27.25	27.75	26.00	25.25	1	0	0
14	360	.9	61.0	28.6	28.00	21.50	50.00	27.75	27.50	27.50	26.25	25.75	5	0	0
15	80	1.8	62.0	20.0	28.00	21.75	49.75	28.00	27.25	27.75	26.25	26.00	5	0	0
16	180	.6	64.0	9.3	27.75	22.00	49.75	27.75	27.25	27.75	26.25	26.00	2	0	0
17	360	.6	63.0	0.	27.75	22.00	49.50	27.75	27.75	27.75	26.50	27.00	1	0	0
18	360	1.0	60.0	0.	27.50	22.25	49.00	27.75	27.25	27.50	26.75	28.00	3	0	0
19	60	1.2	60.0	0.	28.00	22.00	49.25	27.50	27.25	27.25	27.00	30.50	3	0	0
20	30	.3	60.0	0.	28.00	22.00	49.00	28.00	27.50	27.25	27.00	34.75	2	0	0
21	60	1.8	59.0	0.	28.75	22.00	48.75	27.75	27.00	27.25	26.00	38.00	2	0	0
22	60	2.8	59.0	0.	28.50	22.00	48.50	27.25	27.00	27.25	25.25	38.00	2	0	0
23	360	1.4	57.0	0.	28.50	22.00	48.50	27.00	27.00	27.00	24.75	38.25	2	0	0
TOT.				227.0									38	0	0
AVG.	189	2.1	59.2	9.5	27.96	21.87	50.10	28.29	27.34	28.29	25.74	32.48	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.0	56.0	0.	27.25	22.00	48.25	27.00	26.75	27.00	24.25	38.00	2	0	0
1	360	.6	56.0	0.	27.25	22.00	48.25	27.00	26.75	27.00	24.00	38.00	1	0	0
2	360	.5	56.0	0.	27.00	22.00	48.00	26.75	26.50	27.00	23.75	37.50	1	0	0
3	60	.8	53.0	0.	27.00	21.75	48.00	26.50	26.25	26.50	23.50	37.00	1	0	0
4	60	2.0	53.0	0.	26.75	21.50	48.00	26.50	26.25	26.50	23.25	36.50	1	0	0
5	20	1.5	53.0	0.	26.75	21.00	48.00	26.50	26.25	26.50	23.25	36.00	1	0	0
6	20	.1	51.0	0.	26.75	21.25	47.75	26.25	26.00	26.25	23.25	35.25	1	0	0
7	20	.6	51.0	9.3	26.50	20.75	47.75	26.00	26.00	26.25	23.25	35.00	2	0	0
8	330	2.5	53.0	105.2	26.50	21.00	47.75	26.25	26.00	26.25	23.25	33.00	4	0	0
9	330	3.0	56.0	200.0	26.50	21.00	47.25	26.25	26.00	26.00	24.25	21.00	5	0	0
10	360	2.6	60.0	273.2	26.50	21.00	47.25	26.25	26.00	26.00	24.50	21.00	1	0	0
11	360	3.3	63.0	318.2	27.00	21.75	47.75	27.00	26.75	26.75	49.00	59.25	1	0	0
12	360	4.0	64.0	331.7	28.25	22.00	49.25	27.25	27.00	27.00	50.75	64.00	1	0	0
13	360	3.5	68.0	269.9	29.50	23.00	51.00	28.25	28.00	28.00	52.50	66.75	2	0	0
14	360	3.8	68.0	141.5	30.25	24.00	53.00	29.25	29.00	29.00	54.25	67.75	1	0	0
15	330	4.0	69.0	99.7	31.25	24.50	54.25	29.50	29.25	29.75	55.50	66.25	1	0	0
16	320	5.3	70.0	59.3	31.75	25.00	55.50	30.00	30.00	30.00	56.00	63.00	1	0	0
17	320	5.2	68.0	1.2	32.00	25.75	56.00	30.75	30.25	30.50	56.00	57.25	1	0	0
18	320	4.2	64.0	0.	32.25	25.75	55.50	31.00	30.50	31.00	54.00	50.75	1	0	0
19	330	2.5	62.0	0.	32.25	25.50	55.75	31.00	30.75	31.00	41.25	39.25	2	0	0
20	350	1.2	60.0	0.	31.75	25.50	55.25	30.75	30.50	30.75	35.75	46.25	3	0	0
21	330	.6	58.0	0.	31.00	25.25	55.25	30.25	30.00	30.00	30.25	47.25	3	0	0
22	350	1.2	58.0	0.	30.50	25.00	55.00	30.00	29.75	30.00	28.25	46.00	2	0	0
23	350	1.0	56.0	0.	30.00	24.75	55.00	29.75	29.25	29.50	27.00	46.00	1	0	0
TOT.				1809.2									39	0	0
AVG.	290	2.3	59.4	75.4	28.85	23.04	51.03	28.17	27.91	28.10	35.46	45.33	2	0	0

DATE
(09/25/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	.3	55.0	0.	30.00	24.00	54.75	29.25	20.00	29.25	26.25	43.75	5	0	0
1	30	.6	54.0	0.	29.75	23.75	54.50	29.00	28.75	29.00	26.00	42.75	5	0	0
2	340	.8	53.0	0.	29.00	23.25	54.25	28.75	28.50	29.00	26.00	41.50	2	0	0
3	330	1.5	53.0	0.	29.00	23.00	54.00	28.50	28.25	28.50	26.00	40.25	2	0	0
4	330	1.0	53.0	0.	28.75	22.50	54.00	28.25	28.25	28.25	26.00	38.75	2	0	0
5	340	1.1	53.0	0.	28.50	22.00	54.00	28.25	28.00	28.25	26.00	36.75	1	0	0
6	340	1.3	53.0	0.	28.50	21.75	53.75	28.00	28.00	28.00	26.25	34.25	1	0	0
7	340	.8	53.0	4.2	28.25	21.50	53.75	28.00	27.75	28.00	26.50	32.00	1	0	0
8	60	1.8	52.0	42.2	28.00	21.25	53.50	28.00	27.75	28.00	26.75	30.00	1	0	0
9	360	1.9	53.0	99.6	28.00	20.75	53.25	28.00	27.75	28.00	26.50	26.25	3	0	0
10	330	2.5	53.0	173.2	28.00	21.00	53.25	28.00	28.00	28.00	26.50	24.25	2	0	0
11	360	2.9	58.0	230.1	28.00	21.25	53.00	27.75	27.75	27.75	26.75	24.00	1	0	0
12	330	2.2	64.0	248.3	28.50	21.25	53.00	28.25	28.00	28.00	53.00	61.00	1	0	0
13	330	2.5	70.0	234.3	29.50	21.75	54.75	28.75	28.25	28.25	56.00	69.00	1	0	0
14	330	2.2	72.0	197.2	30.75	22.00	56.25	29.50	29.00	29.25	57.50	70.25	1	0	0
15	330	2.6	73.0	139.9	31.75	23.00	57.75	30.25	30.00	30.00	58.75	68.75	3	0	0
16	330	3.5	75.0	67.6	32.75	24.00	58.25	31.00	30.50	30.50	59.00	65.00	1	0	0
17	330	1.8	75.0	1.6	33.25	24.75	58.75	31.25	31.00	31.00	59.00	60.00	1	0	0
18	270	1.0	75.0	0.	33.25	25.00	58.25	31.75	31.50	31.50	57.00	54.00	7	0	0
19	150	1.2	69.0	0.	33.25	25.00	58.25	32.00	31.75	32.00	46.00	43.50	5	0	0
20	270	.6	65.0	0.	33.00	25.00	58.00	31.75	31.50	31.75	39.00	47.00	13	0	0
21	270	1.0	62.0	0.	32.00	25.00	58.00	31.25	31.00	31.25	33.75	49.00	12	0	0
22	270	.5	60.0	0.	31.50	25.00	58.00	31.00	30.50	31.00	30.00	48.50	13	0	0
23	360	.8	58.0	0.	31.00	25.25	57.75	30.75	30.50	30.25	28.75	47.75	9	0	0
TOT.				1438.2									94	0	0
AVG.	282	1.5	60.9	59.9	30.18	23.04	55.54	29.47	28.84	29.36	37.22	45.76	4	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.6	58.0	0.	30.75	25.25	57.00	30.00	29.75	30.00	27.75	45.00	5	0	0
1	150	.8	57.0	0.	30.25	26.00	57.00	30.00	29.75	30.00	27.25	43.50	4	0	0
2	180	1.4	57.0	0.	30.00	25.00	56.50	29.75	29.50	29.75	27.25	42.25	1	0	0
3	150	2.0	55.0	0.	30.00	24.25	56.50	29.25	29.00	29.50	27.25	41.00	1	0	0
4	150	3.5	53.0	0.	29.75	23.75	56.00	29.00	29.00	29.00	27.00	39.25	1	0	0
5	180	2.5	53.0	0.	29.25	23.00	56.00	29.00	28.50	29.00	27.25	37.00	1	0	0
6	270	.9	53.0	0.	29.00	22.75	55.75	29.00	28.50	29.00	27.00	34.75	1	0	0
7	360	.6	53.0	3.3	29.00	22.00	55.50	28.75	28.25	28.75	27.50	32.75	1	0	0
8	350	1.0	53.0	30.0	29.00	22.00	55.50	28.75	28.50	28.50	27.50	31.00	1	0	0
9	310	2.0	55.0	56.0	29.00	21.75	55.00	28.75	28.25	28.50	27.25	29.00	1	0	0
10	320	2.2	55.0	110.4	28.75	21.25	55.00	28.25	28.00	28.25	27.25	26.75	3	0	0
11	330	2.0	56.0	161.5	28.75	21.75	54.75	28.25	28.25	28.25	27.00	25.50	1	0	0
12	360	1.2	59.0	174.3	28.75	22.00	54.50	28.00	28.00	28.25	27.00	25.00	3	0	0
13	350	2.0	61.0	163.6	28.50	22.00	54.25	28.50	28.50	28.25	27.00	25.25	1	0	0
14	310	2.8	68.0	137.3	29.25	22.75	54.25	29.00	28.50	28.75	55.00	68.00	1	0	0
15	360	2.0	71.0	97.9	30.25	23.00	55.50	29.25	29.00	29.00	56.50	66.00	1	0	0
16	300	3.1	72.0	48.2	31.00	24.00	56.25	30.00	29.75	29.75	56.75	61.25	1	0	0
17	270	2.2	72.0	1.7	32.00	24.25	56.75	30.50	30.00	30.25	56.75	57.25	1	0	0
18	240	1.6	72.0	0.	32.25	24.50	56.25	31.00	30.75	30.75	54.25	51.25	1	0	0
19	180	2.2	67.0	0.	32.25	24.75	56.25	31.25	31.00	31.00	43.00	40.25	4	0	0
20	210	1.8	61.0	0.	31.75	24.75	56.00	31.00	30.75	30.75	35.50	49.25	2	0	0
21	360	.8	60.0	0.	31.25	24.50	56.00	30.75	30.25	30.25	30.00	49.50	2	0	0
22	120	1.0	61.0	0.	31.00	24.75	55.75	30.00	30.00	30.00	27.75	48.50	4	0	0
23	150	1.0	58.0	0.	30.00	24.25	55.50	29.75	29.25	29.75	26.00	48.00	2	0	0
TOT.				984.2									42	0	0
AVG.	255	1.7	60.0	41.0	30.07	23.51	55.74	29.49	29.21	29.39	34.28	42.39	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	.6	58.0	0.	30.00	24.50	55.25	29.00	28.75	29.00	25.50	45.75	1	0	0
1	180	2.5	55.0	0.	29.75	24.00	55.00	29.00	28.50	29.75	25.25	44.50	1	0	0
2	180	7.5	55.0	0.	29.25	24.00	55.00	28.75	28.25	28.75	25.00	43.75	1	0	0
3	170	9.5	54.0	0.	29.00	23.25	54.75	28.00	28.00	28.25	25.00	42.25	1	0	0
4	150	9.0	53.0	0.	28.75	23.00	54.50	28.00	27.50	28.00	24.75	41.25	1	0	0
5	150	8.0	53.0	0.	28.25	22.50	54.25	27.50	27.50	27.75	24.50	41.25	1	0	0
6	150	7.5	52.0	0.	28.25	22.00	54.25	27.50	27.25	27.75	24.25	41.00	1	0	0
7	150	7.0	55.0	11.7	28.00	22.00	54.00	27.50	27.25	27.50	24.50	40.00	1	0	0
8	150	7.0	55.0	96.4	28.00	22.00	54.00	27.50	27.25	27.50	25.00	37.00	1	0	0
9	150	6.5	60.0	177.9	28.00	21.75	53.75	27.25	27.00	27.25	25.75	21.75	1	0	0
10	170	5.5	65.0	240.8	28.00	22.00	53.50	27.75	27.50	27.75	28.00	32.00	1	0	0
11	170	6.0	68.0	279.7	29.00	22.25	54.75	28.25	28.00	28.25	55.25	64.00	1	0	0
12	210	6.0	70.0	291.6	30.25	23.00	56.00	29.25	29.00	29.00	57.00	68.75	1	0	0
13	210	5.0	70.0	275.7	31.50	23.25	57.50	30.25	30.00	30.00	58.75	71.00	1	0	0
14	210	5.2	72.0	233.2	32.25	23.75	59.00	30.75	30.25	30.50	60.00	71.50	1	0	0
15	210	4.2	72.0	167.2	33.00	24.25	60.00	31.25	31.00	31.25	61.00	69.50	1	0	0
16	240	2.6	73.0	83.8	34.00	25.00	61.00	32.00	31.50	31.75	61.50	66.25	1	0	0
17	250	3.7	73.0	4.0	34.50	25.50	61.00	32.50	32.00	32.25	61.00	61.25	2	0	0
18	210	1.8	71.0	0.	34.50	26.00	61.00	34.00	32.25	32.50	58.50	55.00	1	0	0
19	360	.6	67.0	0.	34.50	25.75	61.00	33.00	32.75	32.75	45.75	43.00	2	0	0
20	60	1.6	62.0	0.	34.00	26.00	60.50	32.50	32.25	32.25	37.00	55.00	2	0	0
21	60	1.4	60.0	0.	33.00	25.75	60.50	32.00	31.50	31.75	30.00	54.50	4	0	0
22	60	.1	60.0	0.	32.25	26.00	60.00	31.25	31.00	31.25	28.00	53.00	2	0	0
23	360	.6	60.0	0.	32.00	26.00	59.75	31.00	31.50	31.00	27.25	51.75	1	0	0
TOT.				1862.0									29	0	0
AVG.	183	4.6	62.2	77.6	30.83	23.90	57.09	29.82	29.49	29.74	38.27	50.62	1	0	0

DATE
(09/28/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	2.0	60.0	0.	31.50	25.75	59.75	30.50	30.25	30.75	27.00	50.25	1	0	0
1	60	3.2	60.0	0.	31.25	25.25	59.50	30.50	30.25	30.50	26.75	49.75	1	0	0
2	60	4.5	60.0	0.	31.00	25.00	59.00	30.00	30.00	30.25	26.25	49.25	1	0	0
3	360	1.8	60.0	0.	30.75	24.50	59.00	30.35	30.35	30.00	26.00	48.25	1	0	0
4	70	3.4	60.0	0.	30.50	24.00	58.75	30.35	29.50	30.00	24.75	47.75	0	0	0
5	330	2.2	60.0	0.	30.25	23.50	58.50	29.75	29.50	29.75	26.00	47.00	1	0	0
6	300	1.0	59.0	0.	30.25	23.25	58.25	29.75	29.25	29.75	26.00	46.50	1	0	0
7	30	.7	58.0	5.4	30.25	23.00	58.00	29.50	29.25	29.50	26.00	46.25	1	0	0
8	200	.6	60.0	40.6	30.00	22.75	58.00	29.25	29.00	29.25	26.00	44.75	1	0	0
9	160	2.5	62.0	74.2	29.75	22.75	57.75	29.25	29.00	29.00	27.00	27.00	1	0	0
10	130	1.8	67.0	125.7	29.75	23.00	57.50	29.50	29.00	29.25	27.50	25.00	1	0	0
11	240	1.4	69.0	186.2	29.75	23.00	57.50	29.50	29.25	29.00	28.75	27.25	1	0	0
12	30	2.8	70.0	221.7	30.00	23.00	57.25	29.50	29.00	29.00	57.00	62.00	1	0	0
13	360	3.0	70.0	204.5	31.00	23.50	58.50	30.00	29.75	30.00	59.25	71.00	1	0	0
14	30	3.2	71.0	173.4	32.00	24.00	59.75	29.75	29.50	29.75	60.25	66.00	1	0	0
15	360	2.8	71.0	125.0	32.75	24.50	60.50	30.75	30.50	30.75	60.75	65.50	1	0	0
16	360	2.0	71.0	65.4	33.50	25.00	60.50	31.75	31.00	31.25	60.75	60.50	2	0	0
17	360	.8	70.0	4.2	34.00	25.25	60.50	32.25	31.75	32.00	59.25	56.75	2	0	0
18	70	1.2	70.0	0.	34.25	25.75	60.25	32.75	32.25	32.25	57.00	57.75	1	0	0
19	120	1.7	64.0	0.	34.00	25.75	60.00	32.75	32.25	32.50	43.25	52.00	2	0	0
20	100	1.1	62.0	0.	33.00	25.75	60.00	32.25	31.75	32.00	36.25	55.00	2	0	0
21	360	1.2	61.0	0.	32.50	25.50	60.00	31.00	30.75	31.25	29.75	53.75	1	0	0
22	60	3.0	60.0	0.	32.00	25.50	60.00	30.75	30.50	31.00	27.50	52.75	4	0	0
23	60	1.6	60.0	0.	31.25	25.50	59.50	30.25	30.25	30.50	26.75	52.00	2	0	0
TOT.				1226.3									30	0	0
AVG.	178	2.1	64.0	51.1	31.47	24.36	59.09	30.50	30.16	30.39	37.32	50.58	1	0	0

DATE
(09/29/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	.3	57.0	0.	31.00	25.50	59.25	30.00	30.00	30.00	26.00	51.00	1	0	0
1	60	.4	57.0	0.	30.75	25.25	59.00	30.00	29.75	30.00	25.50	50.50	1	0	0
2	60	.5	56.0	0.	30.50	25.00	59.00	29.75	29.25	29.50	25.25	50.00	1	0	0
3	100	.4	54.0	0.	30.00	24.50	58.75	29.25	29.00	29.25	24.75	50.00	1	0	0
4	100	0.	54.0	0.	30.00	24.25	58.50	29.00	28.75	29.00	24.25	49.50	1	0	0
5	100	.7	54.0	0.	30.00	24.00	58.25	28.75	28.50	29.00	24.00	49.00	1	0	0
6	360	.9	55.0	0.	29.75	23.50	58.25	29.00	28.75	29.00	24.25	48.75	0	0	0
7	360	.8	55.0	9.9	29.75	23.00	58.00	29.00	28.75	29.00	24.50	48.25	2	0	0
8	360	1.4	56.0	75.4	29.75	23.00	58.00	29.00	28.75	29.00	24.75	48.00	1	0	0
9	360	1.7	58.0	142.3	29.75	23.00	57.75	29.00	28.75	28.75	25.00	46.25	5	0	0
10	360	3.0	62.0	193.0	29.50	23.00	57.75	29.00	28.75	29.00	54.00	52.00	6	0	0
11	360	3.3	63.0	223.8	29.25	23.00	57.75	29.25	29.25	29.25	57.50	66.50	2	0	0
12	330	4.5	66.0	233.4	31.75	23.50	58.25	30.25	30.00	30.00	59.50	70.75	5	0	0
13	330	3.6	66.0	221.1	33.00	24.25	59.50	31.00	31.00	31.00	60.00	65.75	5	0	0
14	330	3.5	68.0	187.8	33.50	24.75	59.25	31.75	31.25	31.50	60.00	68.75	7	0	0
15	330	4.3	68.0	136.2	33.75	24.75	59.25	32.25	31.75	32.00	58.50	59.00	7	0	0
16	330	4.0	70.0	70.6	34.00	25.00	59.25	32.50	32.00	32.25	60.00	64.75	3	0	0
17	330	5.8	68.0	5.5	34.25	25.00	59.25	33.00	32.75	32.75	58.75	58.25	5	0	0
18	330	3.5	62.0	0.	34.50	25.50	59.00	33.00	32.75	33.00	57.00	52.75	4	0	0
19	60	3.5	61.0	0.	34.00	25.00	59.00	33.00	32.50	32.75	44.75	44.00	1	0	0
20	60	3.8	59.0	0.	33.50	25.00	58.75	32.50	32.00	32.25	34.50	53.00	3	0	0
21	60	4.5	58.0	0.	32.75	25.00	58.50	32.00	31.50	31.75	29.00	52.50	1	0	0
22	60	4.0	54.0	0.	32.00	25.00	58.25	31.00	30.75	31.00	27.00	51.00	1	0	0
23	60	3.2	54.0	0.	31.50	24.50	58.25	30.50	30.25	30.75	26.25	49.75	2	0	0
TOT.				1499.0									65	0	0
AVG.	219	2.6	59.8	62.5	31.60	24.34	58.61	30.57	30.28	30.49	38.96	54.17	3	0	0

DATE
(09/30/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0	60	3.0	54.0	0.	31.25	24.25	58.00	30.00	30.00	30.00	25.75	48.00	1	0	0
1	60	3.0	53.0	0.	30.50	24.25	57.75	29.75	29.50	29.75	25.25	48.00	2	0	0
2	60	2.8	52.0	0.	30.00	24.00	57.75	29.25	29.25	29.50	24.50	47.25	0	0	0
3	60	2.4	52.0	0.	29.75	23.50	57.25	29.00	29.00	29.00	24.00	46.50	1	0	0
4	60	1.0	50.0	0.	29.50	23.00	57.25	28.75	28.75	28.75	24.00	45.75	0	0	0
5	330	3.5	51.0	0.	29.25	22.50	57.25	28.25	28.25	28.50	24.00	45.00	1	0	0
6	330	4.0	51.0	0.	29.00	22.25	57.00	28.50	28.25	28.25	24.25	43.50	1	0	0
7	330	3.0	50.0	7.5	29.00	22.00	57.00	28.50	28.00	28.25	24.75	42.00	3	0	0
8	330	3.0	50.0	47.8	28.75	22.00	56.75	28.25	28.25	28.25	25.00	39.25	3	0	0
9	330	2.4	51.0	85.9	28.50	22.25	56.50	28.00	28.00	28.00	25.50	35.00	5	0	0
10	330	3.2	52.0	115.3	28.50	22.00	56.25	28.00	27.75	28.00	26.25	25.00	3	0	0
11	330	3.5	58.0	133.5	28.25	22.00	55.75	28.00	27.75	28.00	27.25	22.00	1	0	0
12	330	5.3	59.0	139.3	29.25	22.00	55.50	28.25	28.25	28.25	55.00	54.25	1	0	0
13	330	5.2	60.0	211.5	28.50	22.00	56.00	28.50	28.00	28.75	56.50	65.25	1	0	0
14	30	3.2	60.0	205.7	30.00	22.50	56.00	28.00	28.00	28.00	55.25	58.00	1	0	0
15	40	4.0	60.0	153.2	31.00	23.00	57.00	29.00	28.75	29.00	58.00	67.00	1	0	0
16	360	3.2	62.0	81.1	32.00	23.50	58.00	30.00	28.75	30.00	58.75	63.50	1	0	0
17	360	1.9	62.0	7.6	32.25	24.00	58.00	30.50	30.25	30.75	58.00	57.75	2	0	0
18	360	1.4	60.0	0.	32.50	24.25	58.00	31.25	31.00	31.00	55.25	51.75	2	0	0
19	30	.2	56.0	0.	32.25	24.25	57.75	31.00	31.00	31.25	41.50	41.50	2	0	0
20	360	1.1	55.0	0.	31.75	24.00	57.50	30.75	30.25	30.50	39.00	49.25	4	0	0
21	360	1.2	53.0	0.	31.00	24.25	57.25	30.00	30.00	30.25	29.50	48.75	2	0	0
22	360	2.7	52.0	0.	30.75	24.00	57.00	30.00	29.50	30.00	27.25	47.50	2	0	0
23	30	3.2	52.0	0.	30.25	24.25	57.00	29.50	29.25	29.50	26.00	45.75	4	0	0
TOT.				1188.4									46	0	0
AVG.	232	2.8	54.8	49.5	30.16	23.17	57.06	29.12	28.91	29.15	35.85	47.40	2	0	0

DATE
(10/01/78)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	4.5	53.0	0.									1	0	0
1	60	3.0	52.0	0.									1	0	0
2	330	1.5	52.0	0.									1	0	0
3	330	2.5	52.0	0.									1	0	0
4	330	2.0	52.0	0.									1	0	0
5	330	1.2	51.0	0.									1	0	0
6	330	.8	51.0	0.									1	0	0
7	300	2.5	51.0	9.6									1	0	0
8	270	2.0	52.0	26.9									4	0	0
9	270	1.5	52.0	44.1									2	0	0
10	280	2.2	53.0	57.3									1	0	0
11	360	1.9	56.0	65.6									1	0	0
12	270	1.9	57.0	68.4									1	0	0
13	360	1.6	58.0	95.2									1	0	0
14	60	3.0	60.0	91.6	28.00	20.50	54.25	26.75	26.50	26.75	25.25	22.00	1	0	0
15	60	3.0	60.0	70.4	28.50	21.50	55.00	27.75	27.25	27.75	46.00	40.00	1	0	0
16	60	2.5	60.0	42.8	29.25	21.75	55.25	28.25	28.00	28.25	55.75	58.75	1	0	0
17	60	1.5	60.0	10.8	30.00	21.50	55.00	28.75	28.25	28.50	54.50	55.00	1	0	0
18	70	.7	58.0	0.	30.25	21.75	54.50	29.25	29.00	29.00	43.00	40.00	1	0	0
19	150	3.5	52.0	0.	29.75	21.75	54.50	29.00	28.50	28.75	35.00	49.00	2	0	0
20	160	5.0	53.0	0.	29.25	21.75	54.25	28.50	28.50	29.00	24.00	52.25	2	0	0
21	150	6.0	52.0	0.	29.00	21.50	54.00	28.25	28.25	28.75	20.75	52.00	1	0	0
22	150	5.5	52.0	0.	28.50	21.25	54.00	28.00	27.75	28.00	19.00	51.75	2	0	0
23	150	4.8	52.0	0.	28.25	21.00	54.00	27.75	27.50	27.75	18.00	51.25	1	0	0
TOT.				582.7									28	0	0
AVG.	206	2.7	54.2	24.3	29.07	21.42	54.47	28.22	27.95	28.25	34.12	47.20	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	52.0	0.	28.00	21.00	53.75	26.50	27.25	27.50	18.00	51.25	1	0	0
1	180	9.2	55.0	0.	27.75	20.75	53.50	27.00	27.00	27.25	17.75	51.00	2	0	0
2	160	6.5	56.0	0.	27.75	20.75	53.50	27.00	27.00	27.00	17.50	50.75	1	0	0
3	160	6.5	52.0	0.	27.75	20.50	53.25	27.00	26.50	27.00	17.75	50.75	0	0	0
4	170	8.2	52.0	0.	27.50	20.50	53.00	27.00	26.50	27.00	17.00	50.25	1	0	0
5	180	8.8	51.0	0.	27.25	20.00	53.00	26.50	26.25	26.75	17.00	50.00	0	0	0
6	160	8.0	50.0	0.	27.00	20.00	53.00	26.50	26.25	26.50	17.00	50.00	1	0	0
7	160	8.0	50.0	6.9	26.50	19.75	53.00	44.50	26.00	49.00	16.25	49.50	1	0	0
8	150	7.0	51.0	21.7	26.50	20.00	52.50	37.00	25.75	40.50	16.50	49.00	1	0	0
9	150	6.0	52.0	28.5	26.25	20.00	52.00	46.00	26.00	50.50	16.75	48.50	2	0	0
10	160	8.0	53.0	37.1	25.50	21.00	51.25	44.00	25.25	50.00	17.25	48.00	1	0	0
11	180	5.5	55.0	42.5	26.00	21.00	50.75	41.00	25.50	45.00	18.00	47.50	1	0	0
12	180	11.0	56.0	44.4	25.75	21.00	50.00	44.00	25.50	47.00	20.00	46.75	1	0	0
13	180	12.5	60.0	42.5	25.75	21.00	49.75	44.00	25.50	48.50	21.00	46.00	1	0	0
14	180	13.5	59.0	37.0	26.00	21.00	49.00	36.00	25.50	40.00	22.00	40.50	1	0	0
15	180	11.5	59.0	28.3	25.75	21.00	48.75	41.00	25.50	45.00	23.00	24.00	1	0	0
16	30	4.0	52.0	17.1	26.00	21.00	48.25	37.00	25.75	39.00	24.00	28.00	1	0	0
17	150	4.0	52.0	4.5	26.25	21.00	47.75	32.75	26.00	35.00	25.00	44.25	1	0	0
18	360	3.0	52.0	0.	26.25	21.00	47.25	32.50	26.00	35.00	20.75	45.00	1	0	0
19	180	2.2	52.0	0.	26.00	21.25	47.25	43.00	26.00	45.00	18.50	44.75	1	0	0
20	170	5.0	52.0	0.	26.00	21.25	47.00	36.00	26.00	39.00	18.00	44.75	2	0	0
21	150	5.0	51.0	0.	25.75	21.00	47.00	40.00	25.75	45.00	17.25	44.00	5	0	0
22	150	4.0	51.0	0.	26.25	21.25	46.00	30.75	25.75	32.00	17.50	44.00	3	0	0
23	150	3.5	50.0	0.	26.00	21.50	46.00	27.50	25.75	28.50	17.25	43.75	2	0	0
TOT.				310.5									31	0	2
AVG.	167	7.0	53.1	12.9	26.48	20.77	50.27	35.19	26.01	37.62	18.79	45.51	1	0	0

DATE
(10/03/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	3.5	50.0	0.	26.00	21.25	46.00	26.25	25.50	27.00	17.00	43.50	4	0	0
1	150	3.2	49.0	0.	25.75	21.25	45.75	26.00	25.50	26.25	17.00	43.00	1	0	0
2	150	3.2	48.0	0.	25.75	21.00	45.50	25.50	25.25	25.75	16.75	43.00	1	0	0
3	150	2.0	48.0	0.	25.25	21.00	45.50	31.75	25.00	34.00	16.50	42.75	1	0	0
4	140	2.5	46.0	0.	25.00	20.50	45.25	35.75	25.00	38.50	16.00	42.50	1	0	0
5	130	2.4	43.0	0.	24.50	20.25	45.00	40.00	24.50	44.00	15.25	42.00	1	0	1
6	140	2.5	43.0	0.	24.00	20.25	44.50	38.00	24.00	43.50	15.00	41.50	1	0	1
7	140	2.4	45.0	7.1	23.50	20.25	44.00	40.00	23.50	43.50	14.75	41.00	1	0	1
8	150	3.5	47.0	26.9	23.25	20.25	43.75	35.00	23.00	42.75	15.00	40.25	1	0	1
9	150	5.0	50.0	44.7	23.75	20.25	43.25	33.00	23.25	39.00	15.75	40.00	1	0	0
10	150	4.2	50.0	58.3	23.75	20.00	43.00	34.00	23.25	37.00	17.00	39.25	4	0	0
11	150	3.5	51.0	83.9	23.25	20.00	42.75	37.00	23.25	40.00	18.25	38.75	5	0	0
12	170	3.2	53.0	87.5	24.25	20.75	42.25	28.00	23.75	29.50	19.75	38.75	7	0	0
13	180	4.2	58.0	96.9	24.25	21.25	42.25	26.00	24.00	26.75	21.00	33.00	2	0	0
14	360	1.8	58.0	92.9	24.75	21.75	42.25	25.25	24.25	25.75	42.25	58.00	7	0	0
15	330	1.8	58.0	70.8	25.00	22.00	42.25	25.50	24.75	25.75	33.50	37.50	9	0	0
16	360	2.0	56.0	42.2	25.00	22.25	42.00	25.25	25.00	25.50	29.00	31.00	7	0	0
17	30	2.2	55.0	9.5	25.25	22.50	42.25	25.50	25.00	25.50	26.50	28.00	2	0	0
18	90	.7	52.0	0.	25.25	22.75	42.00	25.25	25.00	25.25	26.00	28.00	7	0	0
19	70	1.6	50.0	0.	25.00	22.75	42.00	25.25	25.00	25.25	25.25	29.00	5	0	0
20	60	2.6	50.0	0.	25.00	22.25	42.00	25.00	24.75	25.00	25.00	34.75	2	0	0
21	70	2.6	49.0	0.	25.00	22.25	41.50	25.00	24.50	25.00	23.00	37.50	2	0	0
22	90	.8	47.0	0.	25.00	22.25	41.25	24.75	24.25	24.75	20.25	37.00	2	0	0
23	90	2.1	47.0	0.	24.50	22.25	41.25	24.25	24.00	24.25	19.00	37.00	7	0	0
TOT.				620.7									79	0	6
AVG.	151	2.6	50.1	25.9	24.67	21.30	43.23	29.47	24.39	31.23	21.03	38.62	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.8	43.0	0.	24.00	21.75	41.25	24.00	23.75	24.00	18.25	36.50	3	0	0
1	100	1.1	43.0	0.	23.75	21.00	41.00	23.50	23.50	23.75	17.50	36.25	1	0	0
2	120	1.3	43.0	0.	23.50	21.00	41.00	23.25	23.25	23.50	17.25	36.00	1	0	0
3	120	.6	43.0	0.	23.25	20.00	41.00	23.00	23.00	23.00	17.00	35.75	1	0	0
4	140	.8	42.0	0.	22.75	19.75	40.75	22.75	22.50	22.75	16.75	35.50	1	0	0
5	140	1.0	42.0	0.	22.75	19.00	40.75	22.50	22.50	22.75	16.50	35.25	0	0	0
6	140	.6	42.0	0.	22.50	18.75	40.50	22.50	22.25	22.50	16.50	35.00	1	0	0
7	140	1.0	42.0	23.3	22.00	18.50	40.25	33.00	21.75	35.00	16.00	34.50	2	0	1
8	150	3.2	42.0	102.4	21.00	18.75	39.25	36.00	31.00	39.25	15.25	33.00	1	0	1
9	150	4.0	47.0	177.9	20.75	19.25	39.00	35.50	20.75	38.75	15.50	31.00	1	0	0
10	270	2.0	50.0	234.6	21.00	19.75	38.50	28.75	20.75	31.00	17.50	14.75	1	0	0
11	360	2.8	54.0	270.7	21.75	19.25	38.75	24.50	21.50	26.00	39.50	59.75	2	0	0
12	60	4.0	56.0	284.1	21.75	19.75	40.25	24.00	22.25	24.50	42.25	57.00	4	0	0
13	60	4.3	58.0	271.6	24.75	20.00	42.25	24.25	23.50	24.50	44.00	59.25	3	0	0
14	330	3.2	60.0	235.7	26.00	21.00	44.00	25.00	24.50	25.00	45.75	61.00	3	0	0
15	330	4.5	60.0	179.0	26.75	21.75	45.75	25.75	25.50	25.75	47.50	59.75	2	0	0
16	330	3.6	60.0	104.4	27.75	22.00	47.00	26.50	26.00	26.50	48.50	57.25	4	0	0
17	330	4.3	59.0	23.8	28.25	23.25	48.00	27.25	27.00	27.00	48.75	52.75	2	0	0
18	360	2.8	54.0	0.	28.25	23.00	48.00	27.50	27.25	27.25	39.50	37.50	2	0	0
19	360	1.0	52.0	0.	28.00	23.00	47.75	27.50	27.25	27.25	33.75	36.75	2	0	0
20	60	1.2	51.0	0.	27.75	22.50	47.75	27.25	27.00	27.00	30.00	43.00	2	0	0
21	60	.6	51.0	0.	27.25	22.00	47.50	27.00	26.50	27.00	23.75	44.75	1	0	0
22	60	1.7	52.0	0.	27.00	22.00	47.25	26.50	26.00	26.50	20.25	44.25	2	0	0
23	330	.8	51.0	0.	26.50	21.50	47.25	26.00	26.00	26.25	20.00	43.75	1	0	0
TOT.				1907.5									42	0	1
AVG.	191	2.2	49.9	79.5	24.54	20.77	43.11	26.41	24.39	26.95	27.81	42.51	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	.5	50.0	0.	26.00	21.00	47.25	25.75	25.50	25.75	19.25	43.50	0	0	0
1	100	2.0	49.0	0.	26.00	21.00	47.00	25.25	25.50	25.50	19.00	43.00	1	0	0
2	150	.8	48.0	0.	25.75	20.25	47.00	25.25	25.00	25.50	19.00	43.00	0	0	0
3	140	2.0	48.0	0.	25.50	20.25	47.00	25.25	25.00	25.50	18.75	42.75	1	0	0
4	140	2.9	47.0	0.	25.25	20.00	47.00	25.00	24.75	25.00	18.50	42.50	1	0	0
5	150	1.3	46.0	0.	25.25	20.00	46.75	25.00	24.50	25.00	18.25	42.50	1	0	0
6	140	.8	44.0	0.	25.00	20.00	46.75	32.00	24.25	40.50	18.00	42.00	1	0	0
7	180	2.5	47.0	8.7	24.50	20.00	46.25	38.50	24.00	42.25	17.50	41.25	1	0	0
8	150	5.5	48.0	35.9	24.50	20.00	46.00	43.25	24.00	44.50	17.75	41.00	1	0	0
9	150	6.0	50.0	60.3	24.00	20.00	45.25	38.00	23.75	40.50	17.50	40.00	2	0	0
10	150	4.0	52.0	79.0	23.75	20.00	45.00	39.00	23.75	44.50	18.25	38.75	4	0	0
11	150	2.6	56.0	90.7	24.25	20.00	44.50	29.00	24.00	31.00	19.75	36.50	2	0	0
12	150	3.0	60.0	94.6	24.75	20.25	44.50	26.75	24.00	27.75	21.75	28.00	1	0	0
13	150	4.0	60.0	113.3	25.00	20.75	44.25	25.75	24.25	26.00	22.25	23.00	1	0	0
14	180	5.0	62.0	113.7	25.00	20.50	44.00	25.25	24.75	25.25	22.75	22.00	1	0	0
15	180	5.5	64.0	86.0	25.25	20.50	44.50	25.00	24.50	25.00	45.50	54.00	1	0	0
16	200	5.1	62.0	50.2	26.50	21.00	45.25	25.25	25.00	25.25	46.25	52.50	2	0	0
17	200	3.0	61.0	9.4	26.75	21.00	45.00	26.25	26.00	26.00	33.00	32.50	1	0	0
18	180	5.0	60.0	0.	26.50	21.25	45.25	26.50	26.00	26.00	30.00	30.00	2	0	0
19	180	1.0	58.0	0.	26.50	21.25	45.00	26.50	26.00	26.00	28.75	34.75	2	0	0
20	120	.3	58.0	0.	26.25	21.25	45.00	26.50	26.00	26.00	27.25	39.75	4	0	0
21	140	1.8	56.0	0.	26.25	21.75	45.00	26.25	26.00	26.00	24.00	41.25	2	0	0
22	140	1.6	53.0	0.	26.00	22.00	45.00	25.75	25.50	25.75	22.75	40.75	2	0	0
23	150	.9	52.0	0.	26.00	22.25	44.75	25.75	25.50	25.75	21.50	40.25	2	0	0
TOT.				741.8									35	0	1
AVG.	154	2.8	53.8	30.9	25.44	20.68	45.55	28.45	24.90	29.43	23.64	38.98	1	0	0

DATE
(10/06/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.6	53.0	0.	26.00	22.00	44.50	25.75	25.25	25.75	21.00	40.00	1	0	0
1	130	1.0	51.0	0.	25.50	22.00	44.50	25.50	25.00	25.25	20.50	40.00	1	0	0
2	120	.8	50.0	0.	25.25	21.25	44.25	25.00	24.75	25.00	20.00	39.50	1	0	0
3	120	.3	50.0	0.	25.00	21.00	44.25	31.50	24.75	34.00	19.75	39.00	1	0	0
4	360	1.1	50.0	0.	25.00	20.75	44.00	32.00	24.75	34.75	19.50	39.00	1	0	0
5	340	2.0	50.0	0.	24.75	20.50	44.00	33.50	24.25	36.25	19.00	38.25	1	0	0
6	340	2.5	51.0	0.	24.00	20.75	43.75	39.75	23.75	42.50	18.75	37.50	1	0	0
7	330	2.5	49.0	2.2	23.25	20.75	43.00	39.25	23.25	42.75	18.25	36.50	2	0	0
8	330	3.2	50.0	9.6	23.50	20.75	43.00	34.00	23.00	34.75	18.75	36.50	1	0	0
9	360	2.6	50.0	16.2	23.50	20.75	42.25	36.00	23.00	39.00	19.00	35.00	3	0	0
10	30	3.0	51.0	30.9	23.75	21.00	42.00	34.00	23.25	36.50	19.50	34.75	2	0	0
11	360	3.2	56.0	43.6	24.25	21.00	42.00	27.25	23.75	29.00	20.50	32.75	1	0	0
12	360	4.0	59.0	48.3	24.50	21.25	41.75	25.75	24.00	26.50	35.00	38.00	1	0	0
13	30	6.3	62.0	46.1	25.50	21.75	43.50	26.00	24.75	26.00	45.00	60.25	1	0	0
14	330	6.0	66.0	39.9	26.75	22.25	45.25	26.25	26.00	26.25	47.00	62.25	1	0	0
15	330	6.5	66.0	30.0	28.00	23.25	47.25	27.00	26.75	27.00	48.75	61.75	2	0	0
16	330	7.5	66.0	17.3	28.75	24.00	48.75	27.50	27.25	27.25	50.00	59.00	3	0	0
17	330	6.5	64.0	3.5	29.25	25.00	49.50	28.00	27.75	28.00	50.00	54.00	2	0	0
18	330	5.5	60.0	0.	29.75	25.50	49.25	28.50	28.25	28.50	42.50	41.50	4	0	0
19	330	4.0	57.0	0.	29.25	25.00	49.00	28.75	28.25	28.25	35.00	36.50	1	0	0
20	330	3.0	55.0	0.	28.75	25.00	49.00	28.25	28.00	28.00	31.75	39.00	2	0	0
21	330	3.0	55.0	0.	28.25	24.25	48.75	28.00	27.50	27.75	28.00	42.25	2	0	0
22	330	3.0	53.0	0.	28.00	24.00	48.75	27.25	27.00	27.25	25.25	41.25	3	0	0
23	350	2.8	52.0	0.	27.75	24.00	48.50	27.00	27.00	27.00	24.00	40.75	2	0	0
TOT.				287.6									40	0	1
AVG.	278	3.4	55.2	12.0	26.18	22.41	45.45	29.66	25.47	30.55	29.03	42.72	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	350	3.0	52.0	0.	27.00	24.00	48.25	26.75	26.25	26.75	23.00	39.75	2	0	0
1	350	2.5	50.0	0.	27.00	23.75	48.25	26.50	26.25	26.50	23.00	38.50	2	0	0
2	350	3.5	50.0	0.	27.00	23.50	48.00	26.00	26.00	26.00	22.75	37.50	1	0	0
3	350	3.5	50.0	0.	26.50	23.00	48.00	26.00	25.75	26.00	22.50	36.50	1	0	0
4	300	3.6	50.0	0.	26.25	22.25	48.00	25.75	25.25	26.00	22.50	35.00	1	0	0
5	350	3.8	50.0	0.	26.00	22.00	48.00	25.75	25.25	25.75	23.00	33.75	1	0	0
6	350	4.0	50.0	0.	26.00	21.75	47.75	25.50	25.00	25.50	23.00	32.25	1	0	0
7	350	3.8	50.0	21.0	25.75	21.25	47.75	25.25	25.00	25.50	23.25	31.00	1	0	0
8	350	4.0	50.0	103.6	25.75	21.00	47.50	25.25	25.00	25.25	23.25	31.25	1	0	0
9	350	4.0	50.0	178.7	25.75	21.00	47.25	25.00	25.00	25.50	23.25	29.00	1	0	0
10	300	3.0	55.0	235.4	25.50	21.00	47.25	25.25	25.00	25.25	23.50	20.00	4	0	0
11	350	3.2	60.0	270.7	26.00	21.00	48.00	25.75	25.50	25.75	48.75	58.00	2	0	0
12	350	3.8	63.0	282.2	27.25	21.75	49.25	26.50	26.25	26.25	51.00	64.00	2	0	0
13	350	1.2	69.0	269.1	28.75	22.50	51.25	27.25	27.00	27.25	52.75	67.75	6	0	0
14	350	2.6	70.0	232.2	30.00	23.00	52.75	28.00	28.00	28.00	54.00	69.00	4	0	0
15	320	5.4	72.0	174.2	30.25	23.75	54.75	29.00	28.50	29.00	55.75	66.25	4	0	0
16	320	2.5	71.0	99.5	31.25	24.00	55.50	29.50	29.00	29.25	56.25	64.50	3	0	0
17	320	1.5	71.0	18.4	31.75	25.00	56.25	30.00	30.00	30.00	56.50	59.75	3	0	0
18	180	1.0	66.0	0.	32.00	25.50	56.00	30.50	30.00	30.50	55.00	52.75	3	0	0
19	180	1.7	62.0	0.	32.00	25.50	55.75	30.75	30.25	30.75	43.25	40.50	3	0	0
20	150	1.5	60.0	0.	31.75	25.00	55.50	30.50	30.25	30.50	35.00	50.50	3	0	0
21	120	2.2	58.0	0.	30.75	25.25	55.25	29.50	29.00	29.75	27.50	50.50	3	0	0
22	150	3.5	58.0	0.	30.25	25.25	55.00	29.00	29.00	29.25	24.50	49.75	2	0	0
23	170	2.0	60.0	0.	30.00	25.25	55.00	29.00	28.50	29.00	24.00	49.00	6	0	0
TOT.				1885.0									56	0	0
AVG.	294	2.9	58.2	78.5	28.35	23.22	51.09	27.43	27.12	27.47	34.89	46.20	2	0	0

DATE
(10/08/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	.8	53.0	0.	29.25	25.00	54.75	28.75	28.50	28.75	23.75	48.00	1	0	0
1	180	.8	53.0	0.	29.25	24.25	54.50	28.50	28.25	28.50	23.00	47.00	1	0	0
2	150	2.0	53.0	0.	28.75	24.00	54.25	28.00	28.00	28.00	22.75	46.75	1	0	0
3	160	8.5	53.0	0.	28.50	23.25	54.00	27.75	27.50	28.00	22.00	46.50	1	0	0
4	170	8.5	53.0	0.	28.00	22.75	54.00	27.50	27.25	27.75	21.50	46.00	1	0	0
5	180	10.0	52.0	0.	28.00	22.00	53.75	27.50	27.00	27.50	21.75	45.25	1	0	0
6	170	8.0	52.0	0.	28.00	21.75	53.50	27.25	27.00	27.25	22.00	45.00	1	0	0
7	150	9.0	52.0	23.7	28.00	21.00	53.25	27.25	27.00	27.25	21.75	45.00	1	0	0
8	150	7.5	52.0	111.7	27.50	21.00	53.25	27.00	26.75	27.00	21.50	44.75	1	0	0
9	150	6.5	58.0	191.7	27.25	21.00	53.00	26.75	26.75	27.00	22.00	37.75	1	0	0
10	150	7.0	60.0	253.2	27.25	21.00	53.00	26.75	26.50	26.75	24.00	18.75	5	0	0
11	170	7.0	63.0	289.9	28.00	21.25	53.00	27.00	27.00	27.00	53.75	60.75	6	0	0
12	180	10.0	66.0	302.2	29.00	21.75	54.00	28.00	27.75	28.00	55.25	66.00	5	0	0
13	180	10.5	68.0	274.4	30.00	22.00	55.50	27.75	27.75	27.75	56.75	69.00	4	0	0
14	180	8.5	68.0	212.3	31.00	22.25	57.00	29.50	29.25	29.50	58.00	69.50	2	0	0
15	210	8.0	70.0	143.9	32.00	23.00	58.00	30.00	30.00	30.25	59.25	68.00	2	0	0
16	210	9.0	68.0	70.1	32.75	24.00	59.00	31.00	30.50	31.00	59.75	65.75	2	0	0
17	210	7.0	67.0	11.8	33.00	24.50	59.00	31.50	31.00	31.00	59.00	60.00	1	0	0
18	180	6.5	64.0	0.	34.50	24.75	59.75	33.00	32.25	32.25	56.00	52.25	3	0	0
19	170	5.5	62.0	0.	33.75	25.00	59.50	32.50	32.00	32.00	41.75	42.25	2	0	0
20	170	4.5	62.0	0.	33.00	25.25	59.00	32.00	31.50	31.50	30.50	54.00	2	0	0
21	180	4.5	60.0	0.	31.75	25.00	58.25	30.75	30.25	30.75	27.50	52.00	4	0	0
22	170	4.5	59.0	0.	31.00	25.00	58.00	30.25	30.00	30.25	26.75	50.50	2	0	0
23	180	2.0	59.0	0.	30.75	25.00	58.00	30.00	29.75	30.00	26.25	49.00	2	0	0
TOT.				1884.9									51	0	0
AVG.	174	6.5	59.5	78.5	30.01	23.16	55.80	29.01	28.73	28.96	35.69	51.24	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.5	58.0	0.	30.25	24.75	57.75	29.50	29.25	29.75	26.00	48.25	1	0	0
1	240	.6	58.0	0.	30.00	24.50	57.50	29.25	29.00	29.25	25.25	48.00	1	0	0
2	210	1.8	57.0	0.	30.00	24.25	57.00	29.00	28.75	29.00	25.00	47.75	1	0	0
3	120	1.4	53.0	0.	29.50	24.00	57.00	29.00	28.50	29.00	24.25	47.25	1	0	0
4	140	1.8	52.0	0.	29.25	24.00	57.00	28.50	28.50	28.75	24.00	47.00	1	0	0
5	150	1.6	51.0	0.	29.00	23.75	56.75	28.25	28.00	28.25	23.50	46.75	1	0	0
6	120	1.5	51.0	0.	28.75	23.25	56.50	28.00	28.00	28.00	23.00	46.25	1	0	0
7	120	1.2	50.0	9.7	28.75	22.75	56.25	28.00	27.50	28.00	22.75	45.75	0	0	0
8	120	1.8	51.0	48.6	28.25	22.50	56.25	27.75	27.25	27.75	22.25	46.00	1	0	0
9	180	2.4	53.0	84.0	28.25	22.00	56.00	27.75	27.25	27.75	23.00	41.50	1	0	0
10	180	2.4	60.0	111.2	28.00	22.00	56.00	27.25	27.25	27.25	25.00	21.00	2	0	0
11	180	2.8	62.0	160.8	28.25	22.25	56.00	27.75	27.50	27.75	47.00	49.50	1	0	0
12	210	2.5	66.0	167.6	29.75	22.50	56.75	28.50	28.25	28.75	57.25	63.00	1	0	0
13	270	3.0	65.0	159.5	30.75	23.00	57.25	29.25	29.00	29.50	58.50	64.50	1	0	0
14	360	2.6	65.0	109.3	31.25	23.50	58.00	30.00	29.75	30.00	58.00	58.50	1	0	0
15	260	4.0	65.0	81.3	32.00	24.00	57.50	30.50	30.00	30.75	56.00	55.25	1	0	0
16	180	3.0	62.0	45.3	32.25	24.00	57.25	31.00	30.50	31.00	55.00	52.50	1	0	0
17	150	3.5	62.0	6.8	32.00	24.00	57.25	31.00	30.50	31.00	40.00	39.00	1	0	0
18	150	3.0	60.0	0.	31.50	24.00	57.00	30.50	30.00	30.50	36.00	45.00	1	0	0
19	180	3.5	60.0	0.	31.00	24.00	57.00	30.25	29.75	30.00	31.00	48.25	1	0	0
20	190	5.0	60.0	0.	30.75	23.75	56.75	29.75	29.25	29.75	28.50	47.25	1	0	0
21	190	6.6	58.0	0.	30.00	23.25	56.50	29.25	29.00	29.25	28.25	45.75	2	0	0
22	180	7.0	58.0	0.	29.75	23.00	56.50	29.00	28.75	29.00	26.75	43.50	1	0	0
23	170	6.0	55.0	0.	29.50	23.00	56.50	29.00	28.25	28.75	26.50	42.00	2	0	0
TOT.				984.1									26	0	0
AVG.	185	2.9	58.0	41.0	29.95	23.42	56.84	29.08	28.74	29.11	33.86	47.69	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KwH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	54.0	0.	29.25	22.75	56.25	28.50	28.25	28.50	26.00	42.50	1	0	0
1	150	7.0	54.0	0.	29.00	22.75	56.00	28.00	28.00	28.25	25.75	42.00	1	0	0
2	150	6.8	53.0	0.	28.75	22.50	56.00	28.00	28.00	28.00	25.25	41.00	1	0	0
3	160	6.5	54.0	0.	28.75	22.25	55.75	28.00	28.00	28.00	25.25	39.75	1	0	0
4	180	5.8	53.0	0.	28.25	22.00	55.75	27.50	27.50	28.00	25.25	38.00	1	0	0
5	170	3.5	55.0	0.	28.25	22.00	55.50	27.75	27.50	28.00	25.75	36.00	1	0	0
6	160	4.2	56.0	0.	28.00	21.75	55.50	27.75	27.25	27.50	26.00	34.00	1	0	0
7	180	4.5	58.0	3.5	28.00	21.75	55.25	27.50	27.25	27.75	26.25	32.50	1	0	0
8	180	5.0	57.0	23.3	28.00	21.75	55.00	27.50	27.25	27.50	26.25	31.50	0	0	0
9	180	7.0	59.0	40.6	28.00	21.50	55.00	27.50	27.25	27.75	26.50	29.75	1	0	0
10	190	8.0	59.0	53.9	28.00	21.25	55.00	27.50	27.25	27.50	26.25	25.75	2	0	0
11	190	8.6	60.0	62.2	28.00	21.50	55.00	27.50	27.25	27.75	26.25	24.75	1	0	0
12	180	8.5	60.0	64.8	28.00	21.75	55.00	27.75	27.25	27.50	26.25	25.25	2	0	0
13	190	7.2	62.0	78.7	28.00	21.75	55.00	27.75	27.25	27.50	26.25	26.25	2	0	0
14	190	8.0	66.0	75.1	28.00	22.00	54.50	27.50	27.25	27.50	26.25	25.50	2	0	0
15	210	6.5	66.0	55.6	28.50	22.00	54.75	28.00	27.75	27.75	52.00	55.00	1	0	0
16	210	5.2	66.0	30.6	29.50	22.25	54.75	28.50	28.25	28.25	54.25	54.00	1	0	0
17	190	6.0	66.0	3.7	30.00	22.50	54.25	29.00	28.75	29.00	41.00	38.25	0	0	0
18	180	5.0	62.0	0.	30.00	22.50	54.00	29.00	29.00	29.00	34.00	33.50	2	0	0
19	180	5.5	60.0	0.	29.50	22.75	54.00	29.00	28.75	28.75	32.00	43.00	1	0	0
20	180	7.5	58.0	0.	29.00	22.75	54.00	29.00	28.50	28.75	26.75	48.50	2	0	0
21	180	7.5	58.0	0.	29.00	22.75	53.75	28.50	28.25	28.50	24.75	47.00	2	0	0
22	180	6.5	58.0	0.	28.75	22.50	53.75	28.50	28.00	28.25	24.00	46.00	3	0	0
23	170	6.5	58.0	0.	28.50	23.00	53.50	28.25	27.75	28.00	23.75	45.00	3	0	0
TOT.				492.0									32	0	0
AVG.	178	6.4	58.8	20.5	28.62	22.18	54.89	28.07	27.81	28.05	29.25	37.70	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	6.5	58.0	0.	28.50	23.00	53.25	28.00	27.50	28.00	23.75	44.25	2	0	0
1	170	5.0	57.0	0.	28.00	23.00	53.00	27.75	27.50	27.75	23.50	43.50	1	0	0
2	180	5.5	56.0	0.	28.00	22.75	53.00	27.50	27.00	27.50	23.50	43.00	1	0	0
3	180	4.2	57.0	0.	28.00	22.25	52.75	27.50	27.25	27.50	23.50	42.75	1	0	0
4	180	4.2	55.0	0.	28.00	22.00	52.75	27.50	27.00	27.25	23.25	42.25	1	0	0
5	180	3.0	55.0	0.	27.75	22.00	52.25	27.25	27.00	27.25	23.50	42.00	1	0	0
6	360	1.4	55.0	0.	27.75	21.75	52.25	27.25	27.00	27.00	23.25	41.75	1	0	0
7	120	3.5	53.0	5.5	27.50	21.25	52.00	27.25	27.00	27.00	23.25	41.25	1	0	0
8	180	1.8	55.0	30.9	27.25	21.25	52.00	27.00	26.75	27.00	23.25	41.75	1	0	0
9	180	2.5	57.0	54.3	27.25	21.25	52.00	27.00	26.75	27.00	23.25	39.50	1	0	0
10	210	2.0	60.0	90.7	27.75	21.00	52.00	27.00	27.00	27.00	25.00	25.00	1	0	0
11	210	2.0	60.0	121.2	27.50	21.25	51.75	27.00	26.75	27.00	25.00	22.50	4	0	0
12	60	2.2	62.0	139.3	27.50	21.50	51.75	27.25	27.00	27.00	25.25	23.25	1	0	0
13	60	2.8	63.0	132.3	28.00	22.00	51.75	27.50	27.25	27.25	51.25	52.50	1	0	0
14	30	2.0	62.0	113.3	29.00	22.50	52.00	28.25	28.00	28.00	53.00	62.00	1	0	0
15	360	1.2	62.0	83.5	30.00	23.00	52.00	28.75	28.50	28.75	51.50	50.25	1	0	0
16	360	1.6	65.0	48.3	30.25	23.00	52.50	29.50	29.00	29.00	53.00	59.00	1	0	0
17	360	.8	62.0	5.9	31.00	23.50	53.00	29.75	29.25	29.50	53.00	53.00	1	0	0
18	330	1.1	58.0	0.	31.00	23.50	52.50	30.00	29.25	30.00	43.00	41.00	1	0	0
19	360	1.2	54.0	0.	30.50	23.00	52.50	29.75	29.25	29.50	36.25	40.00	4	0	0
20	360	1.1	53.0	0.	30.00	23.00	52.25	29.00	29.00	29.00	28.00	49.25	4	0	0
21	60	1.5	52.0	0.	29.25	23.00	52.25	28.75	28.50	28.75	22.00	48.25	2	0	0
22	60	.4	52.0	0.	28.75	23.00	52.00	28.00	28.00	28.25	21.75	47.75	1	0	0
23	90	.5	50.0	0.	28.25	22.75	52.00	28.00	27.25	27.75	21.00	47.25	4	0	0
TOT.				825.2									36	0	0
AVG.	200	2.4	57.2	34.4	28.61	22.35	52.31	28.02	27.70	27.92	30.87	43.58	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.2	48.0	0.	28.00	22.50	52.00	27.25	27.00	26.75	20.00	47.00	6	0	0
1	100	.4	48.0	0.	27.25	22.00	51.50	27.00	26.50	27.00	19.00	46.50	2	0	0
2	110	0.	46.0	0.	27.00	22.00	51.00	26.50	26.50	27.50	18.75	46.00	1	0	0
3	100	.8	47.0	0.	26.75	21.50	51.00	26.25	26.00	27.50	18.25	45.75	1	0	0
4	100	1.0	44.0	0.	26.50	21.00	51.00	26.00	26.00	27.00	18.00	45.50	1	0	0
5	150	1.0	43.0	0.	26.50	20.75	50.75	25.75	25.50	26.00	18.00	45.00	1	0	0
6	60	.8	43.0	0.	26.00	20.00	50.25	25.25	25.25	25.75	17.75	45.00	1	0	0
7	360	1.0	44.0	7.6	25.75	20.00	50.00	25.25	25.00	25.50	17.25	44.50	1	0	0
8	360	1.0	47.0	36.8	25.50	19.75	50.00	32.25	24.75	35.00	17.25	44.00	1	0	0
9	270	1.3	49.0	65.2	25.00	20.00	49.75	42.75	24.75	47.25	18.25	41.25	2	0	0
10	360	1.0	50.0	109.1	25.75	20.00	49.00	30.25	25.00	32.00	20.25	37.25	1	0	0
11	360	1.3	50.0	171.7	25.75	20.00	48.75	27.50	25.25	28.25	22.25	20.50	2	0	0
12	360	2.5	52.0	194.3	26.00	19.75	48.50	26.50	25.50	27.00	23.00	20.25	3	0	0
13	360	2.5	56.0	184.4	25.75	20.00	48.75	26.25	25.50	26.50	26.00	18.00	3	0	0
14	330	2.5	62.0	155.3	27.00	20.00	50.00	26.50	26.00	26.50	51.50	53.75	1	0	0
15	330	3.5	62.0	113.9	28.25	21.25	51.75	26.00	26.00	26.25	52.50	63.25	3	0	0
16	330	3.5	62.0	60.9	29.00	22.00	52.50	27.25	27.00	27.25	53.00	59.50	1	0	0
17	330	2.6	62.0	6.0	29.75	22.75	53.00	28.25	28.00	28.25	53.00	54.25	4	0	0
18	330	2.0	58.0	0.	30.00	23.00	52.75	28.75	28.50	28.75	44.75	42.50	2	0	0
19	330	1.8	54.0	0.	29.50	22.75	52.50	28.75	28.50	28.75	36.00	38.75	1	0	0
20	360	2.0	52.0	0.	29.00	22.50	52.25	28.25	28.25	28.25	30.00	45.50	2	0	0
21	360	1.0	51.0	0.	28.50	22.50	52.00	28.00	27.75	28.00	23.75	48.00	1	0	0
22	360	1.8	51.0	0.	28.00	22.00	52.00	27.75	27.25	27.50	20.25	47.50	2	0	0
23	360	1.2	50.0	0.	27.75	22.00	52.00	27.25	27.00	27.25	20.25	46.75	3	0	0
TOT.				1105.2									45	0	0
AVG.	273	1.7	51.3	46.0	27.26	21.25	50.96	27.98	26.36	28.57	27.46	44.01	2	0	0

DATE
(10/13/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.0	50.0	0.	27.50	21.75	51.75	27.00	26.50	27.00	20.00	46.25	5	0	0
1	60	1.1	48.0	0.	26.25	22.00	51.25	42.25	25.75	45.25	19.00	44.75	1	0	0
2	360	.6	48.0	0.	25.50	22.00	50.50	44.50	25.00	47.25	18.75	44.00	1	0	0
3	180	1.0	46.0	0.	25.00	22.00	50.00	45.00	24.00	49.50	18.00	43.00	1	0	0
4	270	.3	46.0	0.	25.00	22.00	49.25	42.75	24.25	45.00	17.50	42.75	1	0	2
5	150	1.0	45.0	0.	24.25	22.00	48.50	44.00	24.00	48.00	17.50	41.50	1	0	5
6	180	1.1	44.0	0.	24.50	22.00	47.75	48.25	24.00	41.25	18.00	40.75	1	0	1
7	150	1.0	43.0	4.5	24.00	22.00	47.00	42.75	23.50	46.50	17.75	39.75	2	0	3
8	160	1.4	42.0	29.3	23.75	22.25	46.00	42.00	23.25	45.75	17.75	38.75	2	0	1
9	150	1.2	48.0	52.4	24.00	22.25	45.50	30.75	23.50	33.25	18.25	38.00	1	0	0
10	180	2.4	49.0	70.1	24.50	21.75	45.25	26.50	23.75	28.00	19.75	33.50	2	0	0
11	220	2.4	50.0	81.0	24.50	21.75	45.00	25.50	24.00	26.00	21.25	19.50	2	0	0
12	210	2.0	51.0	84.4	24.50	21.50	45.00	25.00	24.00	25.25	21.75	14.00	4	0	0
13	360	2.5	52.0	136.9	24.50	21.25	45.00	24.75	24.00	25.00	23.00	19.25	1	0	0
14	60	3.0	55.0	127.6	24.50	21.25	45.00	25.00	24.25	25.00	24.75	20.00	1	0	0
15	340	2.4	60.0	94.3	25.00	21.75	45.25	25.00	24.50	25.00	46.50	56.25	4	0	0
16	360	1.2	60.0	49.6	26.25	22.25	46.25	25.50	25.50	25.50	47.00	54.50	1	0	0
17	330	.8	60.0	4.1	27.25	22.75	46.75	26.25	26.25	26.25	41.75	42.50	1	0	0
18	50	2.0	54.0	0.	27.00	23.00	46.25	26.75	26.50	26.50	32.50	31.75	2	0	0
19	60	2.0	52.0	0.	26.75	23.00	46.00	26.50	26.25	26.50	29.75	40.25	2	0	0
20	360	.5	50.0	0.	26.50	22.75	46.00	26.25	26.00	26.25	27.50	41.25	2	0	0
21	360	.8	49.0	0.	25.75	22.25	46.25	25.00	24.75	25.00	23.50	40.00	2	0	0
22	360	1.6	49.0	0.	25.25	22.25	46.00	25.00	24.75	25.00	22.00	39.50	2	0	0
23	360	1.8	49.0	0.	25.25	22.25	46.00	25.00	24.75	25.00	21.00	39.00	2	0	0
TOT.				734.2									45	0	13
AVG.	235	1.5	50.0	30.6	25.30	22.08	46.98	31.97	24.71	32.87	24.35	38.16	2	0	1

DATE
(10/14/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	2.2	49.0	0.	25.00	22.00	45.75	24.75	24.50	25.00	20.75	38.25	6	0	0
1	60	2.6	48.0	0.	25.00	21.50	45.75	24.75	24.25	25.00	20.75	37.50	3	0	0
2	360	1.8	48.0	0.	25.00	21.25	45.50	24.75	24.25	24.75	20.75	37.00	1	0	0
3	60	2.5	48.0	0.	24.75	21.00	45.25	24.50	24.00	24.75	20.75	36.75	1	0	0
4	60	2.5	48.0	0.	24.75	20.50	45.00	24.50	24.25	24.50	20.75	36.50	1	0	0
5	60	2.5	48.0	0.	24.50	20.25	45.00	24.50	24.25	24.50	20.75	36.25	1	0	0
6	60	2.5	48.0	0.	24.25	20.00	45.00	32.50	24.75	34.50	20.75	35.25	1	0	0
7	60	2.0	47.0	3.8	24.00	20.00	44.50	32.00	24.00	34.50	21.00	35.00	2	0	0
8	360	1.5	49.0	27.1	24.00	20.00	44.25	35.25	23.75	40.00	20.75	34.00	7	0	0
9	30	2.5	52.0	48.8	24.25	20.00	44.00	33.00	24.00	35.50	21.00	33.00	7	0	0
10	30	2.5	52.0	65.4	24.00	20.00	43.75	29.00	23.25	31.00	21.00	25.50	5	0	0
11	360	3.3	52.0	85.0	24.00	20.00	43.50	24.50	22.25	26.00	21.00	21.75	7	0	0
12	360	3.5	55.0	99.0	24.75	20.25	43.00	24.50	23.50	25.00	21.25	19.25	8	0	0
13	360	3.2	56.0	93.8	24.50	20.50	43.00	21.50	21.25	22.00	43.00	50.75	8	0	0
14	360	3.2	54.0	79.8	24.25	21.00	42.75	20.50	20.00	21.00	37.00	38.00	6	0	0
15	60	4.0	52.0	67.0	24.50	21.50	43.00	22.00	22.00	22.25	29.50	32.75	4	0	0
16	70	3.0	54.0	38.3	24.50	21.75	42.75	23.00	23.00	23.25	27.00	27.75	3	0	0
17	120	1.0	50.0	2.7	24.75	22.00	42.75	23.75	23.50	24.00	25.25	27.00	3	0	0
18	90	2.0	49.0	0.	25.00	21.75	42.50	24.00	24.00	24.25	32.75	31.50	3	0	0
19	90	1.4	45.0	0.	24.75	21.50	42.50	24.00	23.75	24.00	27.25	27.50	3	0	0
20	90	.5	44.0	0.	24.25	21.00	42.25	23.25	23.00	23.50	24.50	26.50	3	0	0
21	90	.7	43.0	0.	24.00	20.75	42.25	22.75	22.50	23.00	22.75	25.75	4	0	0
22	90	1.1	42.0	0.	24.25	20.00	42.25	22.25	22.25	22.50	21.75	24.75	3	0	0
23	140	1.8	42.0	0.	24.00	20.00	42.25	34.75	22.00	37.00	20.50	24.50	2	0	0
TOT.				620.7									90	0	1
AVG.	145	2.2	49.0	25.9	24.46	20.77	43.69	25.84	23.26	26.74	24.27	31.78	4	0	0

DATE
(10/15/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	1.1	42.0	0.	22.75	20.25	41.75	35.00	22.00	38.00	20.25	24.00	1	0	0
1	80	1.6	42.0	0.	23.00	20.00	41.50	38.00	22.00	41.00	20.00	23.00	1	0	0
2	50	.8	42.0	0.	22.00	20.00	41.25	35.25	22.00	35.00	20.00	22.25	1	0	0
3	60	2.5	42.0	0.	22.00	20.00	41.00	33.75	22.00	39.00	19.75	22.00	1	0	0
4	90	2.5	43.0	0.	22.00	20.00	40.75	33.50	22.00	35.75	19.50	21.75	1	0	0
5	60	3.0	42.0	0.	21.50	20.00	40.00	36.25	21.75	39.75	19.25	21.75	1	0	0
6	360	2.2	43.0	0.	21.75	20.00	39.75	34.00	21.50	39.00	19.25	22.00	1	0	0
7	330	2.0	43.0	5.8	21.50	20.00	39.25	32.00	21.25	38.75	19.25	22.50	1	0	0
8	360	2.5	43.0	44.9	21.25	20.00	38.75	34.00	21.25	36.00	19.25	24.25	1	0	0
9	360	2.3	47.0	102.5	21.25	20.00	38.25	35.00	21.00	38.00	19.50	27.00	2	0	0
10				176.1	21.00	20.00	37.75	31.00	19.75	31.00	18.75	27.75	4	0	0
11				226.9	20.00	20.00	37.25	30.00	17.00	32.25	36.50	36.50	2	0	0
12				248.1	21.00	20.25	37.00	24.25	19.00	31.00	38.00	44.00	1	0	0
13				236.1	22.50	20.25	38.00	25.00	21.00	26.00	38.75	45.00	1	0	0
14				200.3	23.75	21.00	38.50	24.25	22.00	24.75	39.50	45.00	4	0	0
15				143.9	24.75	21.75	39.25	24.00	23.25	24.75	40.00	49.00	3	0	0
16				72.8	25.00	21.75	40.00	24.25	24.25	24.75	41.00	35.50	6	0	0
17				3.6	25.50	22.25	40.25	24.75	24.50	25.00	32.50	33.00	1	0	0
18	360	.4	53.0	0.	25.00	22.00	40.00	25.00	24.50	25.00	29.00	28.50	1	0	0
19	360	.4	49.0	0.	24.75	21.75	40.00	24.25	24.25	24.75	26.50	28.25	1	0	0
20	30	0.	47.0	0.	24.75	21.50	40.00	24.25	24.00	24.25	25.50	30.75	2	0	0
21	360	1.1	47.0	0.	24.00	21.25	40.00	24.00	23.50	24.00	24.25	32.00	2	0	0
22	360	.8	47.0	0.	24.00	20.75	40.00	23.75	23.50	23.75	23.75	34.00	1	0	0
23	90	.8	47.0	0.	23.50	20.25	39.75	23.25	23.00	23.50	23.00	35.25	2	0	0
TOT.				1461.0									38	0	3
AVG.	216	1.5	44.9	60.9	22.85	20.62	39.58	29.32	22.09	31.04	26.37	30.67	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	.4	43.0	0.	23.00	20.00	40.00	33.75	22.75	35.25	20.50	35.75	1	0	0
1	30	1.1	42.0	0.	23.00	19.75	39.75	32.50	22.00	34.25	19.75	35.00	1	0	0
2	140	.4	42.0	0.	22.25	19.75	39.25	34.25	21.75	26.75	19.00	35.00	1	0	0
3	140	.2	42.0	0.	22.00	19.75	39.00	32.00	21.50	34.00	18.25	34.75	1	0	0
4	140	1.0	43.0	0.	21.25	19.75	38.25	35.25	21.00	36.75	18.00	34.00	1	0	0
5	150	1.0	42.0	0.	21.00	20.00	38.00	35.00	21.00	37.75	18.00	33.75	1	0	0
6	150	.6	42.0	0.	21.00	20.00	37.50	34.50	20.75	37.00	17.50	33.25	1	0	0
7	150	1.1	42.0	5.3	21.00	19.50	37.00	29.00	21.00	30.75	18.00	33.00	1	0	0
8	90	1.1	42.0	45.1	21.25	19.25	37.00	24.50	21.00	25.50	18.25	33.00	2	0	0
9	150	3.2	42.0	82.8	21.00	19.00	36.75	34.00	21.00	36.25	18.00	32.75	2	0	0
10	200	2.4	42.0	140.1	21.00	19.50	36.50	31.25	20.75	32.75	18.00	31.50	2	0	0
11	330	2.5	43.0	188.1	21.00	19.50	36.00	31.50	20.75	33.00	34.50	32.50	3	0	0
12	10	3.3	52.0	230.6	21.50	19.50	35.75	33.00	21.00	34.75	36.00	41.25	6	0	0
13	340	3.0	52.0	236.7	22.50	20.00	36.00	26.00	22.00	27.25	36.75	41.00	6	0	0
14	340	3.0	57.0	203.1	23.75	20.25	36.50	24.75	22.75	25.25	37.25	42.25	5	0	0
15	330	3.0	58.0	146.8	24.25	21.00	37.00	24.25	23.75	25.00	38.25	46.00	3	0	0
16	330	3.5	59.0	73.5	25.00	21.75	38.00	24.75	23.00	24.75	39.25	45.75	3	0	0
17	340	4.5	58.0	2.8	25.25	21.75	38.50	25.00	24.50	25.00	38.00	40.00	2	0	0
18	330	2.5	55.0	0.	25.00	21.75	38.25	25.00	24.50	25.00	29.00	29.00	2	0	0
19	30	1.4	50.0	0.	24.75	22.00	38.25	24.25	24.00	24.25	27.50	28.25	3	0	0
20	50	2.3	49.0	0.	24.25	22.00	38.25	24.25	24.00	24.25	25.75	30.25	3	0	0
21	350	1.0	47.0	0.	24.00	21.75	38.25	24.00	23.50	24.00	24.50	32.25	5	0	0
22	60	2.5	43.0	0.	23.25	21.25	38.00	23.25	23.00	23.50	23.75	34.00	2	0	0
23	60	3.0	44.0	0.	23.00	21.00	38.00	23.00	22.50	23.00	21.50	35.00	2	0	0
TOT.				1354.9									60	0	3
AVG.	182	2.0	47.1	56.5	22.72	20.41	37.74	28.71	22.24	29.62	25.04	35.39	3	0	0

DATE
(10/17/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	50	2.7	42.0	0.	23.00	20.25	38.00	22.75	22.25	22.75	19.75	35.00	1	0	0
1	60	2.7	42.0	0.	22.50	19.75	37.75	22.25	22.25	22.50	19.00	34.75	2	0	0
2	60	2.5	42.0	0.	22.25	19.50	37.75	22.25	22.00	22.25	18.25	34.75	1	0	0
3	60	4.3	42.0	0.	22.00	19.00	37.75	28.50	21.75	30.00	18.00	34.50	1	0	0
4	60	3.5	42.0	0.	22.00	19.00	37.50	30.25	21.75	32.00	17.25	34.25	1	0	0
5	350	2.8	42.0	0.	21.25	19.00	37.25	33.75	21.25	37.00	17.00	34.00	1	0	0
6	50	4.0	42.0	0.	21.00	18.75	36.75	33.50	21.00	36.00	16.75	33.50	1	0	0
7	70	4.5	54.0	42. 10.5	21.00	18.75	36.75	33.00	20.75	34.50	17.00	33.25	1	0	0
8	60	4.5	42.0	100.5	20.50	18.75	36.00	32.25	20.50	34.00	16.75	32.75	1	0	1
9	30	4.5	44.0	186.2	20.00	19.00	35.75	33.00	20.00	35.25	16.50	31.25	2	0	0
10	60	4.0	46.0	252.0	20.25	19.25	35.25	28.75	20.00	30.25	17.75	25.00	5	0	0
11	60	3.5	50.0	292.4	21.00	19.75	35.00	23.75	20.50	25.00	18.75	20.00	5	0	0
12	60	4.5	52.0	304.6	21.25	20.00	35.00	22.50	21.00	23.00	19.50	17.50	2	0	0
13	60	7.0	52.0	287.7	21.75	20.00	34.75	22.25	21.25	22.50	20.75	25.25	1	0	0
14	60	7.0	55.0	243.0	22.25	20.75	35.25	22.25	21.75	22.50	36.00	41.75	1	0	0
15	50	8.0	55.0	173.6	23.75	21.25	36.00	23.00	23.00	23.00	37.25	44.50	1	0	0
16	50	7.5	55.0	85.3	24.50	21.50	37.00	23.75	23.50	23.50	38.25	46.00	1	0	0
17	60	4.5	54.0	2.2	25.00	21.75	37.75	24.25	24.25	24.00	37.00	40.00	1	0	0
18	60	3.0	51.0	0.	24.25	21.50	37.50	24.25	24.00	24.00	29.00	29.25	2	0	0
19	60	3.5	50.0	0.	24.25	21.25	37.25	24.00	23.75	24.00	26.75	28.75	4	0	0
20	60	2.5	48.0	0.	24.00	21.25	37.25	24.00	23.75	23.75	25.25	29.25	3	0	0
21	60	2.5	47.0	0.	23.75	21.00	37.00	23.50	23.25	23.50	24.00	29.75	2	0	0
22	360	1.8	44.0	0.	23.50	20.75	37.00	23.50	23.25	23.00	23.00	30.25	2	0	0
23	30	3.0	43.0	0.	23.00	20.00	37.00	23.00	22.50	23.00	22.50	31.00	2	0	0
TOT.				1938.0									45	0	3
AVG.	82	4.1	47.3	80.7	22.42	20.07	36.68	26.01	22.05	26.72	23.00	32.34	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	3.0	43.0	0.	23.00	20.00	37.00	22.50	22.25	22.75	21.75	31.75	2	0	0
1	30	2.5	43.0	0.	22.50	19.75	37.00	29.00	22.00	30.50	21.00	32.25	1	0	0
2	30	2.0	42.0	0.	22.00	19.75	36.75	32.50	21.75	35.00	20.00	31.75	1	0	0
3	330	2.0	42.0	0.	21.50	19.50	36.25	33.75	21.50	36.00	19.25	31.50	1	0	0
4	360	1.5	41.0	0.	21.25	19.50	36.00	30.00	21.00	34.25	19.00	31.25	1	0	0
5	360	2.5	41.0	0.	20.75	19.75	35.75	31.00	20.50	33.00	18.25	30.75	1	0	0
6	30	2.5	42.0	0.	20.25	19.25	35.00	32.75	20.25	35.00	18.00	30.00	2	0	0
7	360	2.5	41.0	9.2	20.00	19.25	34.75	32.25	20.00	34.50	17.75	29.75	2	0	0
8	360	2.5	41.0	100.1	19.75	19.25	34.25	30.00	19.75	32.00	17.50	29.25	4	0	2
9	360	2.6	43.0	188.7	20.00	20.00	34.00	22.25	30.75	24.25	18.00	28.00	2	0	1
10	330	3.0	50.0	256.1	19.00	20.00	34.00	19.75	26.00	18.75	33.00	45.00	3	0	0
11	360	2.5	54.0	297.5	20.25	20.25	34.25	18.75	19.50	18.75	35.50	45.00	2	0	0
12	360	4.0	60.0	309.9	22.50	21.00	35.75	18.25	19.25	18.50	37.00	49.25	2	0	0
13	360	5.0	61.0	292.4	24.50	21.25	37.00	19.50	20.00	19.75	39.00	51.75	7	0	0
14	360	6.0	62.0	246.3	25.00	22.00	38.50	21.50	22.00	21.75	40.00	52.25	4	0	0
15	360	6.0	62.0	174.9	25.50	22.50	40.00	22.00	22.00	22.00	41.25	51.25	1	0	0
16	360	5.5	62.0	84.4	26.50	23.00	41.00	23.25	23.25	23.25	42.00	48.25	2	0	0
17	360	4.0	60.0	1.3	27.00	23.25	41.25	24.75	24.50	24.75	42.00	44.25	1	0	0
18	360	2.0	56.0	0.	26.75	23.50	41.25	25.25	25.00	25.00	34.50	33.25	2	0	0
19	360	1.3	52.0	0.	26.00	23.00	41.00	25.25	25.00	25.25	30.00	31.00	2	0	0
20	360	1.8	51.0	0.	25.75	22.50	41.00	25.00	24.75	25.00	27.75	33.00	2	0	0
21	360	1.4	48.0	0.	25.25	22.25	41.00	24.75	24.25	24.75	26.25	37.75	3	0	0
22	360	1.6	47.0	0.	25.00	21.75	41.00	24.50	24.00	24.75	23.50	38.00	4	0	0
23	360	1.4	46.0	0.	24.25	21.75	40.75	24.00	23.75	24.00	21.00	37.75	2	0	0
TOT.				1960.8									54	0	5
AVG.	302	2.9	49.6	81.7	23.09	21.00	37.69	25.52	22.62	26.40	27.64	37.67	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.8	44.0	0.	24.00	21.50	40.75	23.75	23.25	24.00	20.00	37.75	1	0	0
1	360	1.3	42.0	0.	23.75	21.00	40.75	23.50	23.00	23.50	19.00	37.25	1	0	0
2	360	1.7	43.0	0.	23.25	20.75	40.25	23.00	22.75	23.00	18.25	37.00	1	0	0
3	360	1.5	42.0	0.	22.75	20.00	40.50	34.00	22.25	35.75	17.75	37.00	1	0	0
4	360	1.7	42.0	0.	22.25	20.00	40.25	34.00	22.00	39.00	17.00	36.50	1	0	0
5	360	1.0	42.0	0.	21.75	20.00	39.75	33.50	21.25	39.00	16.75	36.00	2	0	0
6	150	.8	42.0	0.	21.00	20.00	39.00	35.50	21.00	38.50	16.00	35.25	1	0	0
7	150	1.1	40.0	5.9	21.00	20.00	38.25	33.50	20.25	36.00	15.75	34.75	2	0	0
8	180	1.0	40.0	73.2	20.50	19.75	38.00	34.75	20.00	37.25	15.50	34.00	2	0	1
9	330	1.1	42.0	138.5	20.00	19.75	37.25	34.00	19.75	37.00	15.00	33.00	2	0	0
10	330	1.8	46.0	188.5	20.00	20.00	36.50	34.00	19.75	36.00	36.00	49.25	2	0	0
11	360	2.4	52.0	219.2	21.00	20.25	36.75	32.50	20.75	35.00	38.00	46.75	2	0	0
12	360	2.0	58.0	228.3	22.75	20.75	38.25	26.25	22.00	27.25	39.75	50.75	1	0	0
13	30	2.2	62.0	215.2	24.25	21.00	39.75	25.00	23.00	25.75	41.25	53.00	5	0	0
14	30	2.2	62.0	180.8	25.00	22.00	41.00	24.25	23.25	24.50	42.25	53.75	3	0	0
15	30	2.0	66.0	127.7	26.00	22.75	42.00	24.25	22.00	23.00	43.00	53.00	1	0	0
16	360	2.0	68.0	60.3	27.00	23.25	43.00	24.00	23.75	24.25	44.00	50.25	4	0	0
17	330	3.2	64.0	.5	27.25	23.50	43.50	25.25	25.00	25.00	43.75	45.25	6	0	0
18	300	.4	56.0	0.	27.00	23.50	43.25	25.75	25.75	25.75	36.25	34.50	2	0	0
19	300	.3	50.0	0.	26.50	23.25	42.75	25.75	25.25	26.00	30.25	31.25	2	0	0
20	330	.5	50.0	0.	26.00	23.00	42.75	25.25	25.00	25.50	28.25	34.00	2	0	0
21	360	.7	48.0	0.	25.50	22.25	42.75	25.00	24.50	25.00	26.25	35.50	3	0	0
22	160	.8	47.0	0.	25.00	22.00	42.50	24.25	24.00	24.75	25.00	38.75	3	0	0
23	160	.3	44.0	0.	24.25	22.00	42.75	24.00	23.75	24.00	21.50	39.25	1	0	0
TOT.				1438.1									53	0	3
AVG.	267	1.4	49.7	59.9	23.66	21.34	40.51	28.12	22.64	29.36	27.77	40.57	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	.7	43.0	0.	24.00	21.50	42.25	23.50	23.00	23.50	19.75	39.25	1	0	0
1	160	.7	42.0	0.	23.50	21.00	42.25	23.00	22.75	23.25	18.25	39.00	1	0	0
2	170	.7	42.0	0.	23.00	20.25	42.00	22.50	22.25	22.75	18.00	38.75	1	0	0
3	170	1.0	40.0	0.	22.50	19.75	42.00	22.00	22.00	22.50	17.75	38.25	0	0	0
4	270	.9	40.0	0.	22.25	19.25	42.00	22.00	21.75	22.00	17.00	38.00	1	0	0
5	320	.5	41.0	0.	22.00	19.00	41.75	21.75	21.50	22.00	17.00	38.00	1	0	0
6	330	.6	41.0	0.	22.00	18.75	41.75	34.00	21.25	36.50	16.50	37.75	1	0	0
7	240	.9	40.0	3.2	21.75	18.25	41.25	31.75	21.25	34.00	16.75	37.25	1	0	0
8	210	1.4	40.0	45.9	21.00	18.75	41.00	37.00	21.00	40.50	16.25	35.25	2	0	1
9	270	1.1	40.0	87.8	20.75	19.00	40.00	36.50	20.00	39.75	16.00	35.25	1	0	1
10	270	1.4	41.0	119.9	20.00	19.75	39.50	36.00	20.00	39.00	16.25	34.00	2	0	0
11	300	1.5	45.0	139.6	20.25	20.25	39.00	32.25	20.00	35.00	27.00	33.00	2	0	0
12	330	1.5	52.0	145.4	21.25	20.00	39.50	25.00	21.00	26.75	40.75	50.50	1	0	0
13	360	1.0	57.0	133.4	23.00	20.00	40.75	24.00	21.75	25.00	42.00	53.00	1	0	0
14	330	1.6	61.0	107.2	23.00	21.00	42.25	20.75	20.00	21.25	43.25	55.00	2	0	0
15	320	3.7	62.0	70.5	23.75	21.75	41.25	20.00	20.00	20.50	41.00	51.25	1	0	0
16	320	2.4	60.0	32.6	25.25	22.00	39.50	22.00	21.50	22.00	40.25	47.00	4	0	0
17	330	2.2	59.0	.1	26.00	22.25	40.00	23.75	23.25	23.50	40.00	42.00	3	0	0
18	320	.4	52.0	0.	26.00	23.00	40.00	24.50	24.25	24.25	33.00	32.75	6	0	0
19	350	.7	50.0	0.	25.50	22.25	40.00	25.00	24.25	24.50	28.00	28.50	5	0	0
20	360	.6	50.0	0.	25.00	22.25	40.00	24.50	24.25	24.25	26.00	27.25	3	0	0
21	360	.3	47.0	0.	24.75	22.25	40.00	24.00	24.00	24.00	24.25	26.75	3	0	0
22	120	1.0	43.0	0.	24.00	22.00	39.75	23.25	23.75	23.25	23.00	27.00	2	0	0
23	130	0.	43.0	0.	24.00	21.75	39.75	23.00	22.75	23.25	22.25	26.75	2	0	0
TOT.				885.6									45	0	2
AVG.	271	1.1	47.1	36.9	23.10	20.67	40.73	25.92	21.98	26.80	25.84	37.98	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	0.	42.0	0.	23.50	21.25	39.75	22.75	22.25	23.00	21.50	26.25	1	0	0
1	170	.7	41.0	0.	23.00	20.25	39.50	22.25	22.00	22.75	21.00	25.00	1	0	0
2	140	.3	40.0	0.	22.00	20.00	39.25	33.00	22.00	37.00	20.25	25.75	1	0	0
3	140	.3	40.0	0.	21.75	19.75	39.00	34.50	21.50	36.00	19.50	25.00	1	0	0
4	140	1.1	40.0	0.	21.25	19.75	38.50	31.00	21.00	34.00	18.75	24.50	2	0	0
5	90	.9	40.0	0.	20.75	19.75	38.00	33.00	20.25	33.75	17.75	23.75	1	0	0
6	90	.6	39.0	0.	20.00	19.25	37.50	34.00	20.00	37.00	16.50	23.25	2	0	0
7	90	.5	38.0	2.0	20.00	19.25	37.00	34.00	19.50	36.50	16.50	22.75	2	0	1
8	90	.5	38.0	27.8	19.50	19.50	36.50	33.50	19.50	36.00	16.25	22.00	3	0	1
9	150	1.0	39.0	53.8	19.50	19.75	36.25	27.00	35.00	33.50	16.50	21.75	4	0	1
10	210	1.5	42.0	73.7	20.00	19.25	36.00	22.50	29.00	24.75	18.00	23.00	5	0	2
11	270	1.1	43.0	85.8	20.50	20.00	35.00	22.00	28.00	23.00	18.75	22.00	5	0	1
12	270	1.4	43.0	89.4	20.00	20.25	35.00	18.00	34.75	21.50	33.00	30.00	9	0	2
13	260	1.8	43.0	105.5	21.75	21.25	34.00	23.00	30.00	22.25	32.75	31.00	4	0	0
14	270	2.5	50.0	102.1	22.00	21.00	33.75	25.00	31.00	23.00	33.00	33.00	7	0	1
15	270	1.4	52.0	71.2	22.50	21.00	33.50	23.25	27.00	23.25	33.25	36.00	7	0	0
16	270	2.6	55.0	32.2	23.00	21.00	33.50	22.50	24.25	23.25	34.00	37.50	6	0	0
17	300	1.3	50.0	0.	23.25	21.00	33.75	22.00	23.00	22.75	34.00	36.00	4	0	0
18	270	.6	47.0	0.	23.25	21.00	33.75	23.00	23.00	23.00	28.00	28.25	3	0	0
19	150	.8	42.0	0.	23.00	20.25	33.75	22.75	22.75	23.00	24.75	25.25	3	0	0
20	150	0.	42.0	0.	22.75	20.00	33.75	22.75	22.50	22.75	22.50	24.25	4	0	0
21	150	.6	42.0	0.	22.25	20.00	33.75	22.00	22.00	22.75	21.25	24.00	2	0	0
22	150	.7	42.0	0.	22.00	19.75	33.50	21.75	22.00	21.75	20.50	23.25	3	0	1
23	150	1.5	42.0	0.	21.75	19.50	33.50	22.50	26.50	21.75	20.15	23.00	3	0	1
TOT.				643.5									83	0	11
AVG.	194	1.0	43.0	26.8	21.64	20.16	35.74	25.75	24.53	27.01	23.27	26.56	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	110	1.0	41.0	0.	21.75	20.00	33.00	21.75	27.00	22.00	19.75	22.75	2	0	1
1	100	1.0	40.0	0.	21.25	20.00	32.75	23.25	32.50	22.00	19.50	22.50	2	0	1
2	100	.9	40.0	0.	21.25	20.00	32.25	22.75	31.00	22.00	19.25	22.50	2	0	2
3	150	1.3	38.0	0.	21.25	20.00	31.75	22.00	29.00	22.00	19.00	22.25	2	0	1
4	150	1.0	39.0	0.	21.00	20.00	31.75	22.25	31.75	22.00	19.00	22.00	2	0	1
5	140	1.2	41.0	0.	21.00	20.00	31.25	22.00	29.00	22.00	19.00	22.00	2	0	2
6	140	.2	41.0	0.	21.00	20.00	31.00	21.50	29.00	22.00	19.00	22.00	2	0	1
7	140	.5	42.0	0.	21.25	20.00	30.50	21.25	28.75	22.00	19.00	22.00	1	0	1
8	140	.8	42.0	5.8	21.00	20.00	30.25	21.25	28.75	22.00	19.25	22.00	3	0	2
9	180	1.0	43.0	28.5	21.00	20.25	30.00	21.00	28.50	22.00	19.25	21.75	3	0	2
10	180	.6	43.0	47.3	21.00	20.75	29.75	20.50	29.00	22.00	19.25	21.75	1	0	1
11	300	2.0	43.0	59.0	21.00	20.50	29.25	22.00	28.00	21.75	19.00	21.75	6	0	2
12	270	1.5	44.0	62.5	21.25	21.00	28.75	20.50	28.00	22.00	19.25	21.75	1	0	0
13	240	2.2	51.0	57.6	21.50	20.75	28.75	21.25	24.00	22.00	20.00	22.00	2	0	0
14	240	2.1	50.0	44.7	21.50	20.75	28.75	20.00	26.00	21.50	20.00	22.00	2	0	1
15	330	2.5	50.0	25.0	21.50	20.75	28.50	21.00	24.50	21.75	23.00	22.75	1	0	0
16	360	.6	49.0	2.7	22.00	20.75	28.50	21.75	23.50	22.00	28.50	28.75	2	0	1
17	360	.8	47.0	0.	22.00	21.00	28.75	20.50	27.00	22.25	23.00	24.50	2	0	1
18	360	.8	43.0	0.	22.00	20.75	28.25	20.00	27.50	22.25	21.25	23.00	3	0	2
19	360	.9	42.0	0.	21.75	21.00	28.00	19.75	27.75	22.25	20.50	22.25	3	0	1
20	360	1.1	42.0	0.	21.75	20.75	27.75	17.00	27.75	22.75	20.25	22.00	3	0	1
21	350	1.7	42.0	0.	21.75	21.00	27.50	20.00	26.25	22.50	20.00	22.00	3	0	1
22	360	.6	43.0	0.	21.50	21.00	27.25	19.50	26.00	22.25	20.00	22.00	4	0	1
23	360	.8	43.0	0.	21.75	21.00	27.00	19.50	26.00	22.25	20.00	22.00	2	0	0
TOT.				333.1									56	0	23
AVG.	241	1.1	43.3	13.9	21.42	20.50	29.64	20.93	27.77	22.06	20.25	22.51	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.4	42.0	0.	21.50	21.00	27.00	21.00	23.00	22.00	20.00	21.75	2	0	0
1	360	.7	42.0	0.	21.25	21.25	27.00	18.00	22.00	21.75	20.00	21.75	1	0	0
2	350	1.2	42.0	0.	21.00	20.50	27.00	20.00	21.25	21.25	19.75	21.50	1	0	0
3	360	.6	42.0	0.	21.00	20.50	27.00	20.75	21.00	21.00	19.50	21.25	1	0	1
4	360	.4	42.0	0.	21.00	20.00	26.75	19.25	25.00	21.00	19.25	21.25	2	0	1
5	90	1.5	42.0	0.	21.00	20.00	26.75	19.50	24.75	21.00	19.25	21.00	1	0	0
6	150	2.3	43.0	0.	21.00	20.00	26.75	20.50	22.25	21.00	19.50	21.00	2	0	1
7	150	3.2	42.0	0.	21.00	20.00	26.25	19.00	25.00	21.00	19.25	21.00	2	0	1
8	150	2.6	42.0	5.0	20.75	20.00	26.25	19.00	24.75	21.00	19.00	21.00	4	0	1
9	150	2.4	43.0	22.9	21.00	20.50	26.00	19.25	23.50	21.25	19.00	21.00	3	0	0
10	150	3.5	47.0	37.5	21.00	20.25	26.00	20.25	22.00	21.25	19.25	21.00	5	0	0
11	150	4.2	48.0	46.6	21.00	20.75	26.00	21.00	21.25	21.00	20.25	16.25	2	0	0
12	150	3.6	50.0	49.4	20.75	20.00	25.75	21.00	21.00	21.00	19.75	19.75	5	0	1
13	180	3.2	52.0	45.6	20.75	20.00	25.25	18.75	24.00	21.00	19.25	20.50	8	0	0
14	180	2.4	52.0	35.5	20.75	20.00	25.25	20.00	22.00	21.00	19.50	20.75	8	0	1
15	170	3.3	52.0	20.1	21.00	20.50	24.75	19.00	23.50	21.25	19.50	20.75	7	0	0
16	150	3.2	52.0	2.5	21.00	20.75	25.00	20.00	22.25	21.50	19.75	21.00	9	0	1
17	150	2.8	50.0	0.	21.00	20.75	24.50	17.00	24.50	21.25	19.50	21.00	4	0	1
18	140	2.2	50.0	0.	21.00	20.50	24.00	17.50	24.00	21.25	19.75	21.00	2	0	0
19	150	2.2	48.0	0.	21.00	20.25	24.00	20.00	22.00	21.50	19.75	21.00	5	0	0
20	150	2.2	47.0	0.	21.00	20.25	24.25	20.75	21.50	21.50	19.75	21.00	4	0	0
21	150	2.4	48.0	0.	21.00	20.00	24.00	20.75	21.00	21.00	19.50	21.00	2	0	0
22	150	3.5	49.0	0.	20.75	20.00	24.00	20.75	20.75	21.00	19.25	21.00	6	0	1
23	180	3.5	48.0	0.	20.75	20.00	24.00	17.50	23.25	20.75	19.00	20.75	5	0	1
TOT.				265.1									95	0	9
AVG.	195	2.5	46.5	11.0	20.97	20.32	25.56	19.60	22.73	21.19	19.51	20.80	4	0	0

DATE
(10/24/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	150	2.5	46.0	0.	20.75	20.00	23.50	17.00	23.00	20.75	19.00	20.75	3	0	1
1	150	3.8	45.0	0.	20.50	20.00	23.00	17.00	23.00	20.75	19.00	20.50	1	0	1
2	150	3.3	45.0	0.	20.25	20.00	23.25	18.00	22.00	20.75	18.75	20.25	2	0	1
3	130	2.5	44.0	0.	20.25	20.00	23.00	16.00	23.00	20.75	18.75	20.25	2	0	1
4	150	2.3	43.0	0.	20.25	20.00	22.75	17.00	22.00	20.75	18.75	20.25	2	0	1
5	160	1.5	48.0	0.	20.25	20.00	22.50	17.50	22.00	20.75	18.75	20.25	1	0	0
6	180	1.2	44.0	0.	20.25	19.75	22.50	19.00	20.75	20.75	18.75	20.25	1	0	1
7	150	1.5	43.0	0.	20.00	19.50	22.50	15.25	22.50	20.25	18.50	20.25	1	0	0
8	180	2.0	45.0	4.0	20.00	19.00	22.50	18.00	21.00	20.50	18.50	20.25	2	0	1
9	180	2.0	45.0	17.1	20.00	19.25	22.00	16.00	21.75	20.25	18.50	20.00	4	0	2
10	170	3.0	44.0	27.8	20.25	20.25	21.50	19.50	21.25	20.75	18.50	20.00	1	0	0
11	150	3.6	48.0	34.4	20.25	20.00	21.75	18.25	20.75	20.75	18.75	20.00	0	0	0
12	180	2.6	49.0	36.4	20.00	19.75	21.75	20.00	20.50	20.75	18.75	20.00	1	0	0
13	180	2.4	50.0	33.6	20.25	19.00	21.50	20.00	20.25	20.75	18.75	20.25	1	0	0
14	160	3.0	49.0	26.3	20.00	18.75	21.50	20.25	20.25	20.25	18.75	20.25	1	0	0
15	120	3.5	49.0	15.1	20.25	18.75	21.50	20.25	20.25	20.25	19.00	20.25	3	0	2
16	180	5.6	50.0	2.1	20.25	19.50	21.00	16.00	21.00	20.25	18.75	20.00	1	0	1
17	180	8.0	52.0	0.	20.00	19.50	20.75	16.00	20.75	20.25	19.00	20.00	3	0	2
18	140	1.0	51.0	0.	20.00	19.75	20.75	14.25	20.75	20.75	18.75	20.00	1	0	1
19	180	1.1	50.0	0.	20.25	20.00	20.25	15.75	20.50	20.75	19.00	20.00	2	0	1
20	180	9.0	50.0	0.	20.25	20.00	20.00	16.50	20.25	21.00	19.00	20.25	4	0	1
21	180	9.0	50.0	0.	20.50	20.00	20.00	18.00	20.00	21.00	19.00	20.50	4	0	1
22	180	9.3	49.0	0.	20.50	20.00	19.75	17.50	20.00	21.00	19.00	20.50	5	0	1
23	180	1.2	48.0	0.	20.25	20.00	19.75	16.00	20.00	21.00	19.00	20.50	4	0	0
TOT.				196.8									55	0	17
AVG.	166	3.5	47.4	8.2	20.23	19.70	21.64	17.29	21.15	20.66	18.80	20.23	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	9.8	46.0	0.	20.25	20.00	19.75	19.00	20.00	20.50	18.75	20.25	2	0	0
1	180	9.5	48.0	0.	20.00	20.00	19.50	19.75	20.00	20.25	18.50	20.00	1	0	0
2	180	10.5	48.0	0.	19.75	19.50	19.50	19.75	20.00	20.00	18.25	20.00	2	0	0
3	180	10.0	46.0	0.	20.00	19.00	19.75	19.75	20.00	20.00	18.25	20.00	2	0	0
4	180	10.5	48.0	0.	20.00	18.75	19.75	19.50	19.75	20.00	18.25	20.25	2	0	0
5	180	12.5	49.0	0.	19.75	18.75	19.75	19.50	19.50	19.75	18.00	20.00	2	0	0
6	180	11.5	50.0	0.	19.75	18.75	19.75	19.50	19.50	19.75	18.00	20.00	3	0	0
7	180	10.5	50.0	0.	19.75	18.50	19.75	19.50	19.50	19.50	18.00	19.75	2	0	0
8	180	10.5	50.0	4.0	19.25	18.75	19.75	19.50	19.50	19.25	18.00	19.75	2	0	0
9	180	10.0	50.0	15.9	19.25	18.75	19.75	19.25	19.25	19.50	18.00	19.75	3	0	0
10	180	7.5	50.0	25.6	19.25	18.75	19.75	19.50	19.50	19.50	17.75	19.75	5	0	0
11	180	8.8	52.0	31.6	19.50	19.00	19.75	19.50	19.50	19.50	18.00	19.75	5	0	0
12	180	10.0	54.0	33.4	19.50	20.00	19.75	19.50	19.50	19.50	18.00	19.50	9	0	0
13	180	9.0	56.0	30.9	19.50	19.75	19.50	19.75	19.50	19.50	18.25	19.75	9	0	0
14	180	8.0	52.0	24.2	19.75	19.25	19.75	19.50	19.50	19.75	18.25	19.75	8	0	0
15	180	4.5	53.0	14.0	19.75	20.00	19.75	19.50	19.50	19.75	18.25	19.75	5	0	0
16	90	2.0	52.0	2.2	19.75	20.00	19.75	19.50	19.50	19.50	15.50	20.00	4	0	0
17	120	2.5	52.0	0.	20.00	20.25	19.50	20.00	19.75	20.00	18.75	19.75	1	0	0
18	90	2.3	50.0	0.	20.00	20.50	19.75	20.00	20.00	20.00	18.50	18.25	2	0	0
19	90	3.1	50.0	0.	20.00	20.00	19.75	20.00	20.00	20.00	18.75	19.25	2	0	0
20	120	2.5	50.0	0.	20.00	20.00	19.50	20.00	20.00	20.00	18.75	19.75	3	0	0
21	150	3.3	50.0	0.	20.00	19.75	19.75	20.00	20.00	20.00	18.75	20.00	2	0	0
22	160	5.0	51.0	0.	20.00	19.50	19.75	20.00	19.75	20.00	18.50	20.00	2	0	0
23	180	6.0	49.0	0.	20.00	19.75	19.50	20.00	19.75	20.00	18.50	20.00	3	0	0
TOT.				181.8									80	0	1
AVG.	162	7.5	50.3	7.6	19.78	19.47	19.69	19.66	19.70	19.81	18.31	19.79	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	5.0	48.0	0.	19.75	19.50	19.50	19.75	19.50	19.50	18.50	19.50	3	0	0
1	150	3.5	48.0	0.	19.75	19.00	19.75	19.50	19.50	19.50	18.25	19.50	3	0	0
2	150	3.5	48.0	0.	19.75	19.50	19.50	19.50	19.50	19.50	18.25	19.50	2	0	0
3	150	4.0	44.0	0.	19.25	19.00	19.25	19.50	19.25	19.50	18.00	19.25	2	0	0
4	160	4.0	47.0	0.	19.25	19.25	19.25	19.25	19.00	19.25	17.75	19.00	2	0	0
5	160	4.0	48.0	0.	19.00	19.00	19.75	19.00	19.25	19.25	17.75	19.00	2	0	0
6	150	3.8	47.0	0.	19.00	19.00	19.75	19.25	19.00	19.25	17.50	19.00	2	0	0
7	150	3.5	46.0	0.	19.00	19.25	19.50	15.75	19.25	19.25	17.75	19.00	1	0	0
8	150	3.0	48.0	7.2	19.00	18.75	19.50	17.75	19.00	19.00	17.50	19.00	3	0	1
9	150	4.0	48.0	27.3	18.75	19.25	19.25	12.75	18.75	17.00	10.25	14.00	5	0	1
10	140	2.8	50.0	43.5	17.25	19.75	18.75	12.50	18.50	15.50	12.00	17.00	6	0	1
11	150	4.5	51.0	53.5	17.75	20.00	18.50	13.00	18.00	15.75	13.50	17.75	3	0	1
12	170	4.8	52.0	56.6	17.50	20.00	18.75	15.00	16.75	16.00	14.25	17.75	2	0	1
13	150	4.0	57.0	52.3	17.75	20.25	18.25	14.00	17.00	16.00	14.50	17.50	5	0	1
14	160	2.2	56.0	41.2	18.00	20.50	18.00	12.00	18.25	16.25	15.00	18.25	3	0	0
15	180	2.0	58.0	30.3	18.00	20.25	18.00	15.25	17.00	16.50	15.00	18.00	1	0	0
16	160	2.5	58.0	6.0	18.75	20.25	18.00	16.75	17.25	17.00	16.00	18.75	1	0	0
17	190	.8	56.0	0.	19.50	20.00	18.00	18.25	18.50	18.50	16.75	19.50	4	0	0
18	150	1.3	50.0	0.	19.25	20.00	18.00	19.00	19.00	19.00	17.75	19.00	1	0	0
19	110	2.0	49.0	0.	19.00	20.25	18.00	19.00	18.75	19.00	18.00	19.00	4	1	0
20	110	2.0	49.0	0.	19.25	20.00	18.25	19.25	19.00	19.00	18.50	19.00	5	1	0
21	150	2.5	48.0	0.	19.50	20.00	18.50	19.25	19.00	19.25	18.50	19.50	5	1	0
22	150	3.0	47.0	0.	19.50	20.00	18.75	19.50	19.00	19.50	18.75	19.25	4	1	0
23	130	.7	43.0	0.	19.50	20.00	19.00	19.25	19.25	19.50	18.75	19.25	6	1	1
TOT.				317.9									78	7	8
AVG.	152	3.1	49.8	13.2	18.87	19.70	18.82	17.25	18.64	18.24	16.61	18.59	3	0	0

DATE
(10/27/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.8	43.0	0.	19.75	19.75	19.00	16.00	19.25	19.50	18.50	19.25	2	0	1
1	100	1.0	42.0	0.	19.50	19.75	19.00	14.50	19.50	19.75	18.25	19.00	2	0	1
2	130	1.7	42.0	0.	19.00	20.00	18.25	13.00	18.75	19.75	18.00	19.00	2	0	1
3	130	.8	42.0	0.	19.00	20.00	18.25	13.75	18.25	19.75	18.00	19.00	3	0	1
4	150	3.5	42.0	0.	19.00	20.00	17.75	14.00	18.25	20.00	18.00	19.00	2	0	2
5	100	4.0	42.0	0.	19.00	20.00	17.75	12.00	18.00	19.75	17.75	19.00	3	0	2
6	150	2.8	42.0	0.	19.00	20.00	17.25	11.50	17.75	19.75	17.25	19.00	4	0	2
7	150	3.5	40.0	0.	19.00	20.25	17.00	13.00	17.75	19.75	17.25	19.00	3	0	2
8	150	4.0	42.0	52.4	18.75	20.25	16.50	11.25	17.00	19.75	17.25	19.00	3	0	2
9	150	3.0	42.0	183.5	19.00	20.50	16.25	10.50	16.50	19.75	17.25	18.75	3	0	0
10	150	.7	48.0	277.9	18.50	20.50	16.25	15.00	16.25	18.00	16.25	18.00	3	0	0
11	150	.7	50.0	289.7	18.00	20.75	16.25	15.00	15.00	15.75	18.00	16.00	2	0	0
12	180	5.8	53.0	264.1	19.00	21.00	16.25	16.00	16.00	16.00	20.25	17.00	1	0	0
13	180	4.5	60.0	195.0	19.75	20.75	16.25	17.00	16.75	16.75	20.25	18.25	2	0	0
14	180	5.7	60.0	154.1	21.00	21.75	17.25	18.00	18.00	18.00	18.50	26.00	2	0	0
15	180	8.2	60.0	91.2	22.00	22.00	18.00	19.25	19.00	19.00	21.00	32.00	1	0	0
16	180	5.2	60.0	21.2	22.00	22.00	19.25	20.25	20.25	20.25	20.50	26.50	1	0	0
17	180	4.8	60.0	0.	22.00	22.00	19.50	21.00	20.75	20.75	20.25	22.75	1	0	0
18	160	5.0	56.0	0.	22.00	22.00	19.75	21.00	21.00	21.00	20.00	20.00	2	0	0
19	160	5.5	53.0	0.	22.00	22.00	19.75	21.25	21.00	21.00	19.25	19.00	7	1	0
20	160	6.0	52.0	0.	21.75	22.00	20.00	21.00	21.00	21.00	20.00	20.25	5	1	0
21	160	5.5	51.0	0.	21.50	22.00	20.25	21.00	20.50	21.00	20.00	21.00	4	1	0
22	160	6.0	50.0	0.	21.50	22.00	20.75	20.75	20.75	20.75	19.75	21.00	5	1	0
23	160	6.2	50.0	0.	21.25	22.00	21.00	20.50	20.50	20.50	19.75	21.00	7	1	0
TOT.				1529.1									67	7	13
AVG.	154	4.0	49.2	63.7	20.14	20.97	18.23	16.52	18.66	19.47	18.80	20.36	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	7.0	48.0	0.	21.00	22.00	21.00	20.25	20.00	20.25	19.50	20.75	2	0	0
1	160	7.5	45.0	0.	20.50	21.50	21.00	20.00	20.00	20.00	19.25	21.00	1	0	0
2	160	7.0	45.0	0.	20.00	21.00	21.00	19.75	20.00	20.00	19.00	20.75	1	0	0
3	160	7.5	48.0	0.	20.00	20.25	21.00	20.00	19.75	20.00	19.00	20.75	1	0	0
4	160	5.0	48.0	0.	19.75	20.00	21.00	19.75	19.50	19.50	18.50	20.25	1	0	1
5	160	3.0	48.0	0.	20.00	20.50	21.00	17.00	20.50	19.75	18.50	20.50	1	0	1
6	150	.7	48.0	0.	19.75	19.75	20.25	14.00	21.00	19.75	18.50	20.00	2	0	1
7	130	.3	47.0	0.	19.75	20.00	20.00	16.00	20.00	20.00	18.25	20.00	2	0	1
8	130	.7	47.0	2.1	19.75	20.00	19.75	14.00	20.00	20.00	18.25	20.00	1	0	1
9	360	1.0	48.0	7.1	20.00	20.00	19.50	16.00	20.00	20.00	18.25	19.75	2	0	1
10	60	1.0	48.0	11.1	20.00	20.25	19.50	13.25	19.75	20.00	18.50	19.75	4	0	2
11	60	1.0	48.0	13.5	20.00	20.75	19.00	15.00	19.50	20.25	18.50	19.75	1	0	1
12	30	1.0	48.0	14.3	20.00	21.00	19.00	15.00	19.25	20.25	18.50	19.50	2	0	1
13	120	1.3	48.0	16.6	20.00	21.00	19.00	14.25	19.25	20.25	18.75	19.25	2	0	1
14	140	1.7	50.0	15.2	20.00	20.75	18.50	15.25	19.25	20.25	18.50	19.50	2	0	1
15	90	.8	49.0	9.1	20.00	21.00	18.75	13.50	19.00	20.25	18.50	19.75	2	0	0
16	160	1.8	49.0	1.8	20.00	21.00	18.50	12.25	18.75	19.75	17.75	19.75	4	0	1
17	180	2.5	48.0	0.	19.25	21.00	18.25	15.00	18.50	18.50	16.25	19.00	1	0	0
18	150	2.4	48.0	0.	19.50	21.00	18.25	17.25	18.75	19.00	17.00	16.50	6	0	1
19	170	1.3	47.0	0.	19.50	21.00	18.25	16.25	19.00	19.25	17.75	18.50	4	1	1
20	150	2.0	47.0	0.	20.00	21.00	18.25	13.75	19.00	19.50	18.00	19.00	5	1	1
21	160	3.0	48.0	0.	20.00	21.00	18.50	14.50	18.75	19.75	18.00	19.25	4	1	0
22	150	3.2	47.0	0.	20.00	21.25	18.50	16.50	19.00	20.00	18.00	19.25	4	1	0
23	160	4.0	47.0	0.	20.00	21.00	18.75	18.25	19.25	20.00	18.25	19.00	7	1	1
TOT.				90.8									60	8	13
AVG.	146	2.8	47.7	3.8	19.95	20.75	19.44	16.11	19.49	19.84	18.30	19.65	3	0	1

DATE
(10/29/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.8	47.0	0.	20.00	21.25	19.00	14.75	19.00	20.00	18.25	19.25	3	0	0
1	150	3.0	48.0	0.	20.00	21.50	18.75	13.00	19.00	19.75	18.25	19.25	3	0	1
2	150	3.2	48.0	0.	19.75	21.75	18.25	14.00	19.00	20.00	18.25	19.00	1	0	0
3	150	3.0	48.0	0.	19.50	21.25	18.25	17.50	19.00	19.75	18.25	19.00	1	0	0
4	150	3.5	46.0	0.	19.50	21.00	18.25	18.75	19.25	19.50	18.25	19.00	1	0	1
5	160	3.0	47.0	0.	19.25	20.25	18.00	15.75	18.75	19.50	18.25	19.00	2	0	1
6	150	2.0	47.0	0.	19.25	20.25	18.00	12.25	18.25	19.50	18.00	18.75	2	0	1
7	180	3.5	44.0	0.	19.25	20.25	17.75	14.25	18.25	19.50	18.00	18.75	2	0	1
8	270	.6	44.0	16.0	19.00	20.25	17.50	12.00	18.00	19.50	17.75	18.50	2	0	1
9	220	.8	45.0	52.4	19.25	20.25	17.25	14.75	18.00	19.75	17.75	18.50	3	0	1
10	120	1.5	46.0	81.3	19.25	20.25	17.00	11.50	17.25	19.75	17.75	18.25	4	0	1
11	60	1.1	51.0	124.4	19.25	20.75	17.00	13.00	17.75	19.75	17.25	15.00	6	0	0
12	60	2.6	50.0	131.1	19.25	20.25	17.25	17.00	18.75	19.75	18.25	20.00	8	0	1
13	350	2.8	53.0	165.7	19.50	20.25	17.25	13.75	18.00	19.75	18.25	23.25	7	0	0
14	350	3.2	52.0	141.0	19.25	20.00	17.25	17.25	18.75	19.75	19.00	25.00	6	0	0
15	350	2.4	54.0	87.0	19.25	20.00	17.75	18.50	19.00	19.75	19.50	26.00	3	0	0
16	350	2.0	53.0	18.8	19.75	20.00	18.25	19.25	19.50	19.75	20.25	26.75	3	0	0
17	360	1.0	50.0	0.	20.00	20.00	19.00	19.75	19.75	20.00	20.00	23.25	2	0	0
18	90	1.4	48.0	0.	20.00	20.00	19.25	20.00	20.00	20.00	19.25	19.25	3	0	0
19	90	.9	43.0	0.	20.00	20.00	19.25	20.00	19.75	20.00	19.25	19.50	4	1	0
20	90	.7	43.0	0.	20.00	20.25	19.75	20.00	19.75	19.75	19.00	19.75	4	1	0
21	90	.6	43.0	0.	20.00	20.25	20.00	19.75	19.00	19.50	18.50	19.75	4	1	0
22	120	1.7	42.0	0.	20.00	20.50	20.25	19.75	19.50	19.75	18.50	17.00	3	0	0
23	150	1.5	42.0	0.	20.00	20.75	20.75	19.50	19.50	19.75	18.25	18.75	1	0	0
TOT.				817.7									77	4	5
AVG.	182	2.0	47.2	34.1	19.59	20.47	18.37	16.50	18.86	19.74	18.50	20.02	3	0	0

DATE
(10/30/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (Kwh)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.9	40.0	0.	19.50	20.00	20.25	19.25	19.25	19.25	18.00	19.25	1	0	0
1	150	2.5	40.0	0.	19.00	19.50	20.50	19.00	19.00	19.00	17.50	19.00	2	0	1
2	150	1.8	40.0	0.	18.75	19.50	20.00	13.50	20.75	18.75	16.75	19.00	2	0	1
3	150	3.3	40.0	0.	18.25	19.00	19.75	14.00	20.00	18.75	16.50	18.25	2	0	2
4	150	3.5	42.0	0.	18.00	19.75	19.25	14.00	19.25	18.75	16.50	18.00	3	0	2
5	150	4.6	40.0	0.	18.00	19.75	18.75	13.25	19.25	19.00	16.25	18.00	2	0	2
6	160	4.8	39.0	0.	18.75	19.75	18.50	12.25	18.75	18.75	16.50	18.00	3	0	2
7	150	1.8	39.0	0.	18.50	19.75	18.25	13.50	18.25	19.00	16.25	17.75	3	0	2
8	150	2.5	41.0	8.5	18.50	20.00	18.00	11.75	18.25	19.00	16.00	17.50	3	0	2
9	150	2.4	40.0	26.6	18.75	20.50	17.25	12.00	17.50	19.25	16.00	17.25	2	0	1
10	180	3.0	42.0	41.0	18.75	20.25	17.00	12.00	17.25	18.75	16.25	16.25	3	0	1
11	180	2.0	47.0	49.9	18.25	20.25	17.00	11.00	17.00	17.00	17.25	19.50	5	0	3
12	180	3.0	48.0	52.5	18.75	21.25	16.50	12.75	17.25	18.50	16.75	18.75	2	0	0
13	180	4.0	48.0	48.8	18.50	21.00	16.50	10.50	16.75	18.75	17.00	18.50	2	0	1
14	180	5.0	50.0	38.9	18.25	20.75	16.25	12.00	16.75	19.00	17.25	18.50	2	0	1
15	170	6.2	50.0	23.7	19.00	20.50	16.00	10.00	16.25	19.25	17.50	18.50	2	0	1
16	150	3.5	49.0	5.4	19.00	20.50	16.00	12.00	16.50	19.25	17.25	18.75	2	0	1
17	150	4.2	50.0	0.	19.00	20.50	15.75	10.00	16.00	19.25	17.50	18.75	4	0	1
18	150	4.2	49.0	0.	19.25	20.75	15.50	9.75	16.00	19.25	17.50	18.75	2	0	1
19	150	4.5	51.0	0.	19.25	20.50	15.25	11.00	17.00	19.50	17.50	18.75	3	0	1
20	150	2.0	49.0	0.	19.25	20.75	15.00	13.50	16.50	19.50	17.50	19.00	3	0	1
21	150	4.5	48.0	0.	19.25	20.75	15.00	13.75	17.00	19.25	17.50	18.75	3	0	1
22	150	5.0	48.0	0.	19.00	20.50	15.00	12.25	16.25	19.25	17.25	18.75	3	0	1
23	150	5.2	48.0	0.	19.00	20.00	15.00	13.75	16.50	19.00	17.25	18.75	4	2	0
TOT.				295.3									63	2	28
AVG.	157	3.5	44.9	12.3	18.77	20.24	17.18	12.82	17.64	18.96	16.98	18.43	3	0	1

DATE
(10/31/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.0	48.0	0.	19.00	20.00	15.25	17.00	17.75	19.00	17.00	18.50	4	2	1
1	150	2.5	49.0	0.	19.00	20.00	15.75	11.00	16.25	18.75	17.00	18.50	4	3	1
2	150	1.8	47.0	0.	19.00	20.00	16.00	11.25	16.25	18.75	17.00	18.50	4	3	1
3	150	2.5	45.0	0.	19.25	20.00	16.00	10.00	16.25	19.00	17.25	18.50	5	3	1
4	90	3.0	45.0	0.	19.50	20.00	16.25	12.50	17.00	19.00	17.25	18.50	5	3	1
5	180	2.0	46.0	0.	19.75	20.25	16.25	10.75	16.75	19.25	17.25	18.50	2	1	0
6	210	2.0	44.0	0.	19.25	20.25	16.25	14.50	17.50	19.25	17.25	18.75	1	0	1
7	90	3.2	44.0	0.	19.00	20.00	16.00	10.25	16.25	19.00	17.25	18.50	2	0	1
8	150	3.5	48.0	6.8	19.00	20.00	15.75	13.00	16.75	19.00	17.25	18.75	2	0	1
9	180	7.0	50.0	20.6	19.00	20.00	15.50	9.75	15.75	19.00	17.25	18.50	2	0	1
10	180	11.8	52.0	31.4	19.00	20.25	15.00	9.75	15.75	19.25	17.50	18.75	3	0	1
11	180	9.5	56.0	38.2	19.00	20.25	15.00	9.25	15.25	19.25	17.50	18.75	2	0	1
12	180	10.0	52.0	40.2	19.00	20.75	14.75	11.00	16.00	19.50	18.00	19.00	1	0	1
13	180	13.0	54.0	37.3	19.00	20.25	14.50	14.00	16.75	19.50	18.00	19.00	4	0	1
14	180	13.0	58.0	29.8	19.00	20.25	14.00	14.75	15.50	19.25	17.75	19.00	2	0	1
15	180	12.0	55.0	18.3	19.25	20.50	14.00	15.50	17.25	19.50	16.25	24.75	1	0	1
16	180	12.5	55.0	4.5	19.25	20.25	14.00	11.75	15.50	19.25	17.25	20.75	2	0	1
17	180	10.8	58.0	0.	19.25	20.50	13.75	9.50	14.75	19.75	17.00	20.00	2	0	1
18	180	5.2	52.0	0.	20.00	21.25	14.25	12.25	16.00	20.25	17.75	20.00	2	0	1
19	180	11.0	60.0	0.	20.00	21.25	14.25	13.50	16.50	20.00	18.25	20.00	3	0	1
20	180	9.5	60.0	0.	20.00	21.00	14.25	12.00	16.00	20.00	18.25	20.00	3	0	0
21	240	3.0	60.0	0.	20.00	21.00	14.25	17.00	18.25	20.00	18.25	20.00	1	0	0
22	180	1.1	59.0	0.	20.00	21.00	14.00	18.50	18.50	19.75	18.25	19.75	2	0	0
23	120	2.0	58.0	0.	19.75	21.00	14.25	15.00	17.00	19.75	18.25	19.75	2	0	1
TOT.				227.1									62	14	17
AVG.	167	6.5	52.3	9.5	19.34	20.42	14.97	12.66	16.48	19.37	17.50	19.37	3	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	4.5	48.0	0.	20.00	20.75	14.25	10.00	14.75	19.50	18.25	19.25	3	0	1
1	160	5.2	48.0	0.	19.25	21.00	14.25	15.50	17.25	19.50	18.25	19.50	1	0	0
2	170	7.2	48.0	0.	19.25	20.75	14.00	17.75	18.25	19.50	18.00	19.25	1	0	0
3	160	6.5	48.0	0.	19.25	20.25	14.00	18.25	18.25	19.25	18.00	19.00	0	0	0
4	170	5.4	48.0	0.	19.25	20.00	14.00	18.75	18.50	19.25	18.00	19.25	1	0	0
5	180	4.2	47.0	0.	19.00	19.75	14.00	19.00	18.75	19.00	17.75	19.00	1	0	0
6	150	1.2	43.0	0.	19.00	19.25	14.00	19.00	18.75	18.75	17.75	19.00	1	0	0
7	150	.8	42.0	0.	19.00	19.00	14.25	19.00	18.50	18.75	17.50	19.00	2	0	1
8	150	.8	42.0	53.9	18.50	19.00	14.00	11.50	15.50	19.00	17.25	18.75	2	0	1
9	150	1.3	43.0	128.1	18.50	18.75	13.75	9.50	15.00	18.75	17.25	18.75	1	0	1
10	150	2.4	46.0	188.6	18.25	18.75	13.75	8.00	14.00	18.75	17.25	18.50	1	0	0
11	360	2.0	50.0	228.7	18.75	19.00	14.00	15.25	16.75	18.75	18.00	39.50	2	0	0
12	360	2.0	52.0	242.2	19.00	19.75	14.75	17.50	18.00	19.25	16.00	33.25	3	0	0
13	60	2.5	52.0	225.1	19.00	20.00	16.00	18.50	18.50	19.25	20.00	34.50	4	0	0
14	360	2.8	56.0	183.6	19.25	21.00	17.75	19.25	19.00	19.50	21.25	37.25	1	0	0
15	360	2.5	55.0	121.4	20.00	21.50	19.00	19.75	19.75	20.00	22.50	35.50	2	0	0
16	330	3.0	56.0	44.0	21.25	22.25	20.25	20.00	20.00	20.00	21.75	38.00	2	0	0
17	330	3.0	50.0	0.	21.25	22.25	21.00	20.75	20.75	20.75	23.00	27.50	7	0	0
18	340	2.5	48.0	0.	21.00	22.25	21.00	20.50	20.50	20.75	21.75	22.50	4	0	0
19	360	1.5	47.0	0.	21.00	22.00	21.25	20.75	21.00	21.25	21.00	22.00	2	0	0
20	30	1.2	45.0	0.	21.00	22.00	21.25	20.50	20.75	20.75	20.75	21.25	2	0	0
21	360	1.0	42.0	0.	20.75	21.50	21.25	20.25	20.00	20.25	20.00	21.00	4	0	0
22	330	3.0	42.0	0.	20.50	21.25	21.25	20.50	20.00	20.00	20.00	21.00	4	0	1
23	360	2.0	42.0	0.	20.00	21.00	21.50	20.00	20.00	20.00	19.75	21.00	2	0	1
TOT.				1415.6									52	0	5
AVG.	237	2.9	47.5	59.0	19.67	20.54	16.85	17.49	18.44	19.60	19.12	24.31	2	0	0

DATE
(11/02/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	350	3.0	42.0	0.	20.00	21.00	21.25	19.75	19.75	19.75	19.00	20.75	2	0	1
1	340	3.2	42.0	0.	20.00	20.50	21.25	19.50	19.50	19.50	18.50	20.50	2	0	1
2	330	2.0	42.0	0.	19.50	20.25	21.00	18.00	21.25	19.50	18.25	20.25	2	0	1
3	330	2.0	41.0	0.	19.25	20.25	20.75	15.00	20.50	19.50	18.25	20.00	2	0	1
4	350	2.5	41.0	0.	19.25	20.00	20.25	15.50	20.25	19.75	18.00	20.00	3	0	1
5	330	1.4	41.0	0.	19.25	20.00	20.00	14.25	20.50	20.00	18.00	20.00	3	0	1
6	360	.8	41.0	0.	19.00	20.00	20.00	13.00	20.00	20.00	18.00	19.75	2	0	1
7	30	.9	41.0	0.	19.25	20.00	19.75	12.50	20.00	20.00	17.75	19.75	3	0	2
8	360	1.7	42.0	0.	19.25	20.00	19.25	15.00	19.75	20.00	18.00	19.50	2	0	1
9	360	1.5	42.0	0.	19.25	20.00	19.00	13.50	19.25	20.00	18.00	19.25	3	0	0
10	360	4.3	43.0	0.	19.50	20.00	19.00	12.50	19.00	20.00	18.00	19.25	2	0	0
11	330	2.1	44.0	0.	19.50	21.00	18.75	12.50	19.00	20.00	18.00	19.25	1	0	0
12	330	1.2	49.0	0.	19.50	21.00	18.50	14.75	18.75	20.00	18.00	19.00	2	0	0
13	360	1.3	50.0	0.	20.00	21.25	18.25	15.50	19.00	20.00	18.00	19.25	2	0	0
14	360	1.3	52.0	0.	19.75	21.00	18.25	18.25	19.25	20.00	18.00	19.25	3	0	0
15	360	1.8	52.0	0.	19.75	21.00	18.25	19.25	19.25	20.00	18.00	19.00	4	0	1
16	360	1.0	51.0	0.	20.00	21.00	18.25	19.50	19.50	19.75	18.25	19.00	3	0	0
17	330	.3	51.0	0.	19.75	21.00	18.25	19.50	19.50	19.75	18.25	19.25	4	0	0
18	300	1.0	50.0	0.	19.75	20.50	18.25	20.00	19.25	19.75	18.00	18.00	5	0	0
19	330	.9	48.0	0.	19.50	20.75	18.25	18.00	19.00	19.50	18.25	18.75	4	0	1
20	310	.6	47.0	0.	19.50	20.50	18.25	18.25	19.00	19.75	18.25	19.25	2	0	1
21	310	.5	43.0	0.	19.50	20.50	18.25	18.75	19.00	19.50	18.00	19.25	3	0	1
22	310	1.0	45.0	0.	19.25	20.25	18.00	19.25	19.00	19.25	18.00	19.25	2	0	1
23	330	.7	43.0	0.	19.25	20.50	18.00	17.00	18.00	19.25	18.00	19.00	2	0	2
TOT.				0.									67	0	18
AVG.	326	1.6	45.1	0.	19.52	20.51	19.12	16.46	19.47	19.77	18.11	19.44	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	1.3	42.0	0.	19.25	20.75	17.75	14.75	18.25	19.75	18.00	19.00	2	0	2
1	330	2.3	43.0	0.	19.00	21.00	17.75	12.50	18.00	19.50	17.75	19.25	1	0	0
2	340	1.5	42.0	0.	19.00	21.00	17.25	11.00	17.25	19.75	17.75	19.25	0	0	0
3	350	1.5	42.0	0.	19.00	21.00	17.00	12.00	17.25	19.75	17.50	19.00	1	0	1
4	360	1.2	42.0	0.	19.00	21.00	16.75	11.00	17.00	19.50	17.50	19.00	1	0	1
5	30	.8	42.0	0.	18.75	20.00	16.50	15.00	17.75	19.50	17.50	18.75	2	0	1
6	330	1.2	42.0	0.	18.75	20.00	16.50	17.25	18.25	19.25	17.25	18.75	2	0	1
7	360	.8	42.0	0.	18.50	19.25	16.50	11.00	17.00	18.75	17.00	18.75	7	0	2
8	360	.8	42.0	7.1	18.50	19.25	16.25	12.75	17.00	18.75	17.00	18.50	2	0	0
9	360	.9	42.0	17.0	18.75	19.25	16.25	11.00	16.25	18.75	17.00	18.25	3	0	0
10	360	1.2	44.0	24.7	18.50	19.50	16.00	12.25	16.75	19.00	17.00	18.50	1	0	0
11	310	1.8	50.0	29.5	18.75	20.50	16.00	14.00	17.00	19.00	18.50	27.00	1	0	0
12	320	2.5	55.0	30.9	19.25	20.75	16.75	17.75	18.25	19.50	20.00	32.75	1	0	0
13	320	3.5	58.0	28.6	19.25	21.00	18.50	18.50	19.00	19.75	21.50	35.25	1	0	0
14	330	3.5	60.0	23.4	20.00	21.75	20.25	20.00	20.00	20.00	23.00	36.50	1	0	0
15	330	4.5	61.0	15.3	20.50	22.25	21.25	20.25	20.00	20.50	24.50	36.25	1	0	0
16	310	2.5	61.0	5.2	21.50	22.75	22.50	20.75	20.75	20.75	25.75	34.75	2	0	0
17	240	1.0	60.0	0.	21.75	22.75	23.75	21.25	21.00	21.00	25.00	29.00	3	0	0
18	180	.8	53.0	0.	21.75	22.50	23.75	21.00	21.00	21.00	23.00	24.25	4	0	0
19	140	1.4	50.0	0.	21.25	22.25	23.75	21.00	20.75	21.00	21.75	22.75	7	0	0
20	180	.8	49.0	0.	21.00	22.00	23.75	20.50	20.50	21.00	21.00	22.00	3	0	0
21	160	.6	47.0	0.	21.00	21.50	23.75	20.75	20.50	20.50	20.25	20.25	2	0	0
22	150	1.7	47.0	0.	20.75	21.25	23.75	20.25	20.00	20.25	19.75	20.75	1	0	0
23	150	2.5	45.0	0.	20.00	21.50	23.75	20.00	20.00	20.00	19.00	20.25	1	0	0
TOT.				181.7									52	0	7
AVG.	279	1.7	48.4	7.6	19.74	21.03	19.42	16.52	18.73	19.85	19.76	23.70	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA(C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	1.5	42.0	0.	20.00	21.25	23.75	19.75	19.75	19.75	18.75	20.00	0	0	0
1	120	.8	43.0	0.	20.00	21.00	23.75	19.75	19.25	19.75	18.50	20.00	1	0	1
2	120	.7	43.0	0.	19.50	20.25	23.50	19.25	19.25	19.25	18.25	20.00	1	0	1
3	120	1.0	42.0	0.	19.25	20.00	23.75	19.25	19.00	19.25	18.00	19.75	2	0	1
4	120	.7	41.0	0.	19.00	19.25	23.75	18.75	19.00	19.25	18.00	19.75	2	0	1
5	150	.8	40.0	0.	19.00	19.00	23.50	16.00	23.00	19.00	17.50	19.75	2	0	1
6	140	1.0	40.0	0.	18.75	18.75	23.25	17.00	21.25	19.00	17.25	19.25	2	0	2
7	120	.8	40.0	0.	18.75	18.75	22.75	15.00	23.00	19.00	17.00	19.25	3	0	1
8	150	.6	40.0	58.1	19.00	19.00	22.50	16.25	21.25	19.00	17.25	19.25	3	0	1
9	240	.8	41.0	122.4	18.50	19.00	22.25	15.75	20.75	19.25	17.00	19.00	2	0	0
10	270	1.0	42.0	178.6	18.75	19.50	22.00	14.25	22.00	19.25	17.00	19.25	1	0	0
11	310	1.0	44.0	246.8	19.00	20.00	21.25	15.50	20.75	19.50	17.25	19.00	5	0	0
12	330	1.4	44.0	285.3	19.00	20.25	21.25	16.50	21.50	19.75	21.25	28.00	9	0	0
13	330	2.8	50.0	241.6	19.50	20.25	21.75	18.50	20.00	20.00	24.00	32.00	8	0	0
14	270	2.0	56.0	196.7	19.50	20.00	22.50	19.25	20.00	20.00	24.25	29.75	8	0	0
15	300	4.5	61.0	110.2	20.00	20.75	23.75	20.00	20.00	20.00	25.75	32.50	7	0	0
16	270	1.0	56.0	36.4	20.50	20.50	24.25	20.25	20.50	20.50	25.75	29.50	3	0	0
17	310	.3	50.0	0.	20.75	20.75	24.50	20.50	20.50	20.75	25.00	25.50	2	0	0
18	30	.8	47.0	0.	21.00	20.75	24.50	21.00	20.75	21.00	22.50	22.25	7	0	1
19	150	.8	45.0	0.	20.75	20.75	24.75	20.50	20.25	20.50	21.00	21.50	4	0	0
20	150	.7	45.0	0.	20.25	20.00	24.75	20.25	20.00	20.50	20.00	21.00	2	0	1
21	150	.7	44.0	0.	20.25	20.00	25.00	20.00	20.00	20.00	19.50	20.75	2	0	0
22	150	.3	43.0	0.	20.00	20.00	24.50	18.50	21.50	20.00	19.00	20.75	3	0	2
23	150	.2	43.0	0.	20.00	20.00	24.75	18.00	21.00	20.00	18.75	20.50	2	0	1
TOT.				1476.1									84	0	12
AVG.	192	1.1	45.1	61.5	19.62	19.99	23.43	18.36	20.59	19.76	19.94	22.43	3	0	0

DATE
(11/05/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.6	42.0	0.	20.00	20.00	24.25	18.50	21.75	20.00	18.50	20.00	1	0	1
1	150	1.0	42.0	0.	19.75	19.75	24.25	15.00	23.00	20.00	18.25	20.00	2	0	1
2	150	.5	41.0	0.	19.50	20.00	23.50	17.00	22.50	20.00	18.00	20.00	2	0	1
3	150	.7	40.0	0.	19.25	20.00	23.25	16.50	22.25	19.75	18.00	19.75	2	0	2
4	150	.3	40.0	0.	19.25	19.75	23.00	16.50	22.25	20.00	18.00	19.75	3	0	2
5	210	.2	40.0	0.	19.00	20.00	22.75	16.00	22.25	19.75	18.00	19.75	2	0	1
6	240	1.1	40.0	0.	19.25	20.00	22.50	19.50	21.25	20.00	18.00	19.75	2	0	1
7	150	.6	40.0	0.	19.25	20.00	22.00	16.00	21.25	19.75	18.00	19.75	2	0	2
8	130	1.8	40.0	26.3	19.00	20.25	21.75	14.75	21.75	19.75	17.50	19.50	2	0	0
9	180	2.5	41.0	65.8	19.00	20.25	21.25	15.00	21.00	19.75	17.75	19.50	1	0	0
10	180	2.0	42.0	96.6	19.00	20.25	21.00	15.25	20.50	20.00	17.50	19.50	1	0	0
11	210	1.4	44.0	144.9	19.25	20.75	20.75	14.00	21.00	20.00	17.75	19.25	1	0	0
12	360	1.3	44.0	151.9	19.50	20.25	20.50	17.50	20.00	20.00	21.00	27.00	2	0	1
13	330	2.3	50.0	141.8	19.25	20.00	20.75	14.75	19.50	19.75	21.25	26.00	2	0	1
14	330	3.3	52.0	115.2	19.75	20.00	21.00	19.25	19.75	19.75	23.00	28.50	1	0	0
15	330	4.0	52.0	74.2	19.75	20.25	22.00	19.75	20.00	20.00	23.25	26.00	3	0	1
16	330	3.2	52.0	23.7	20.00	20.00	22.00	16.50	21.50	20.25	22.00	22.75	2	0	1
17	330	3.0	51.0	0.	20.25	20.00	22.00	15.50	22.00	20.25	21.00	21.75	3	0	1
18	330	3.0	50.0	0.	20.00	20.00	22.00	18.75	21.00	20.25	20.25	21.00	3	0	1
19	330	5.0	49.0	0.	20.00	20.00	21.50	16.50	21.25	20.50	19.75	20.25	3	0	1
20	330	5.0	46.0	0.	20.00	20.25	21.50	16.00	21.00	20.50	19.25	20.25	2	0	0
21	330	4.0	48.0	0.	20.00	20.25	21.00	16.00	21.00	20.25	19.00	20.00	6	0	1
22	330	5.0	48.0	0.	20.25	20.50	21.00	14.00	21.00	20.25	19.00	20.00	2	0	0
23	330	3.5	48.0	0.	20.00	20.75	20.75	16.50	20.50	20.50	18.75	19.75	1	0	0
TOT.				840.4									49	0	17
AVG.	254	2.3	45.1	35.0	19.59	20.14	21.93	16.62	21.22	20.04	19.28	21.24	2	0	1

DATE
(11/08/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	4.0	48.0	0.	20.00	20.50	20.75	15.25	20.00	20.00	18.75	20.00	1	0	0
1	330	4.0	48.0	0.	20.00	20.50	20.75	15.00	20.50	20.25	18.75	19.50	1	0	1
2	30	4.0	48.0	0.	20.00	20.50	20.50	14.00	20.00	20.00	18.75	19.50	2	0	0
3	30	4.2	47.0	0.	20.00	20.00	20.75	19.25	19.75	20.00	18.50	19.50	2	0	1
4	30	3.6	45.0	0.	19.50	19.50	20.50	19.25	19.50	19.75	18.50	19.25	2	0	1
5	360	3.2	44.0	0.	19.75	19.50	20.25	16.75	19.75	19.75	18.25	19.25	2	0	1
6	360	4.0	42.0	0.	19.25	19.00	20.25	17.00	19.75	19.50	18.00	19.00	2	0	2
7	330	4.5	42.0	0.	19.50	19.25	20.00	13.25	20.00	19.50	17.75	18.75	2	0	0
8	320	4.0	42.0	17.5	19.00	19.50	19.75	15.00	20.00	19.75	17.75	19.00	1	0	0
9	330	4.0	43.0	44.8	19.00	19.75	19.75	16.50	19.25	19.50	17.50	18.75	1	0	0
10	320	3.2	45.0	66.2	19.25	20.00	19.00	13.75	19.50	19.75	17.75	18.25	2	0	1
11	350	2.2	50.0	79.4	19.50	19.75	19.00	15.25	19.50	19.50	17.50	17.50	1	0	0
12	350	2.5	50.0	83.3	19.00	19.25	19.25	13.00	19.25	19.50	17.75	17.00	1	0	0
13	320	3.5	52.0	77.7	19.50	19.50	19.00	17.50	19.50	19.50	20.00	22.50	1	0	0
14	330	2.2	55.0	63.0	19.50	19.50	19.00	17.25	19.50	20.00	20.00	23.50	1	0	0
15	330	1.2	57.0	40.3	20.00	19.50	19.75	19.25	20.00	20.00	21.00	25.00	5	0	2
16	330	.8	53.0	12.4	20.25	19.50	20.00	19.75	20.00	20.50	20.75	22.25	4	0	1
17	180	1.8	53.0	0.	20.50	19.50	20.00	20.50	20.50	20.75	20.00	20.00	5	0	1
18	170	4.2	52.0	0.	20.25	19.00	20.00	13.00	20.25	20.25	20.00	20.00	3	0	1
19	180	5.5	52.0	0.	20.00	20.25	19.50	12.75	19.75	20.50	19.00	20.00	3	0	1
20	180	5.0	52.0	0.	20.00	20.75	19.25	15.50	19.00	20.50	19.00	20.00	3	0	1
21	150	3.3	52.0	0.	20.00	20.75	19.25	14.50	19.50	20.25	19.00	20.00	3	0	1
22	150	3.0	50.0	0.	20.00	21.00	19.00	13.00	19.25	20.50	19.00	19.75	3	0	1
23	170	3.0	50.0	0.	19.50	21.00	19.00	15.00	19.25	20.25	18.75	19.75	4	0	1
TOT.				484.6									51	0	17
AVG.	248	3.4	48.8	20.2	19.72	19.89	19.76	16.22	19.72	19.90	18.83	19.92	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	4.0	50.0	0.	19.50	20.50	18.50	14.50	19.25	20.00	18.50	19.50	2	0	1
1	170	5.2	50.0	0.	19.50	20.50	18.50	12.25	18.50	20.00	18.25	19.00	2	0	1
2	150	4.0	50.0	0.	19.75	20.50	18.25	15.00	18.75	20.00	18.00	18.75	2	0	1
3	150	8.5	48.0	0.	19.25	20.25	18.25	17.00	18.00	20.00	18.00	19.00	2	0	1
4	150	10.0	44.0	0.	19.00	20.50	18.00	14.00	18.25	19.75	17.75	18.75	2	0	1
5	150	9.0	47.0	0.	19.50	20.75	17.75	11.50	18.00	19.75	17.50	18.75	3	0	2
6	150	10.0	44.0	0.	19.25	20.25	17.25	12.00	18.00	19.75	17.50	18.50	2	0	1
7	150	8.5	45.0	0.	19.25	20.50	17.00	14.00	17.75	19.50	17.50	18.50	3	0	2
8	150	7.5	49.0	13.5	19.50	20.50	17.00	10.75	17.00	19.75	17.50	18.50	5	0	0
9	150	5.5	49.0	35.6	19.25	20.75	16.50	11.00	17.00	19.75	17.75	18.25	5	0	0
10	150	6.0	50.0	52.9	19.50	21.00	16.50	14.00	17.50	19.75	17.50	18.25	8	0	0
11	150	4.6	52.0	63.6	19.50	21.50	16.00	13.25	17.25	20.00	17.75	18.00	7	0	1
12	150	4.2	54.0	66.7	19.50	21.00	16.00	16.00	18.00	20.00	17.50	18.00	6	0	0
13	150	6.0	56.0	62.2	19.25	20.75	15.75	18.00	17.75	19.75	17.50	17.50	3	0	0
14	150	6.7	56.0	50.3	19.25	20.00	15.75	18.50	18.50	19.50	17.50	17.50	8	0	0
15	150	5.0	54.0	31.9	19.00	19.75	16.00	13.50	17.00	19.25	17.75	18.00	8	0	0
16	150	2.3	54.0	9.4	19.75	20.50	15.75	17.50	18.50	19.50	17.25	18.00	4	0	0
17	150	2.2	54.0	0.	19.75	20.75	16.00	18.50	19.00	19.50	18.00	19.00	2	0	1
18	150	3.0	53.0	0.	19.50	20.25	15.75	19.00	19.00	19.25	18.00	19.25	3	0	1
19	150	2.7	53.0	0.	19.50	20.00	15.75	19.00	19.00	19.25	18.00	18.75	4	0	1
20	150	1.3	53.0	0.	19.50	20.25	15.75	19.25	19.00	19.25	18.00	18.75	9	0	0
21	150	1.0	52.0	0.	19.25	19.75	15.50	13.75	17.00	19.25	18.00	18.75	8	0	0
22	150	.5	52.0	0.	19.75	20.25	15.75	11.25	16.50	19.50	18.00	18.50	2	0	0
23	150	.6	52.0	0.	19.50	20.25	15.50	15.75	17.75	19.75	18.25	19.00	1	0	0
TOT.				386.1									100	0	14
AVG.	152	4.9	50.9	16.1	19.43	20.46	16.61	14.97	18.01	19.66	17.80	18.53	4	0	1

DATE
(11/08/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	.6	52.0	0.	19.25	20.00	15.75	17.75	18.25	19.25	18.00	18.25	1	0	0
1	150	.8	51.0	0.	19.25	20.00	15.75	18.50	18.50	19.00	17.75	18.25	1	0	0
2	90	1.4	51.0	0.	19.00	20.00	15.50	18.25	18.25	19.00	18.00	18.25	1	0	0
3	330	.9	51.0	0.	19.00	19.75	15.50	19.00	18.50	19.00	17.75	18.25	1	0	0
4	360	.8	50.0	0.	19.00	19.75	15.50	19.00	18.50	19.00	17.75	18.50	1	0	1
5	360	1.2	50.0	0.	18.75	19.25	15.75	19.00	18.75	19.00	18.00	18.25	2	0	1
6	330	1.8	50.0	0.	19.00	19.00	15.75	17.00	19.00	19.00	18.00	18.25	2	0	1
7	350	1.5	51.0	0.	19.00	19.00	15.75	18.00	18.75	18.75	18.00	18.25	4	0	0
8	350	2.0	50.0	4.1	18.75	19.00	15.25	12.00	16.25	18.75	17.50	18.25	2	0	1
9	330	2.5	50.0	11.1	19.00	19.25	15.25	11.50	16.00	19.00	17.75	18.25	6	0	1
10	330	3.5	51.0	16.6	19.00	19.25	15.00	9.25	15.25	19.00	17.50	18.00	5	0	0
11	330	3.2	51.0	20.0	19.00	19.50	15.00	16.00	17.50	19.00	17.50	18.50	2	0	0
12	330	2.6	53.0	21.1	19.00	20.00	15.00	9.00	15.25	19.00	17.75	18.25	2	0	0
13	330	3.5	55.0	19.6	19.00	20.50	15.00	15.25	17.25	19.25	16.00	20.00	3	0	0
14	330	5.5	55.0	15.8	19.50	20.75	15.00	18.00	18.50	19.50	16.00	18.25	7	0	0
15	330	5.5	53.0	10.0	19.25	21.00	15.25	18.50	19.00	19.75	16.00	17.75	9	0	0
16	320	5.0	51.0	2.8	20.00	21.50	15.50	19.50	19.25	19.75	16.00	17.00	6	0	1
17	330	4.0	51.0	0.	19.50	21.25	15.50	19.75	19.25	19.75	18.00	18.50	9	0	0
18	340	2.2	50.0	0.	19.75	21.00	15.50	10.00	16.00	19.50	18.00	19.00	8	0	0
19	340	3.0	50.0	0.	19.00	20.50	15.50	15.75	18.00	19.25	17.00	17.50	4	0	0
20	330	4.0	50.0	0.	19.00	20.50	15.25	13.00	16.75	19.00	17.25	18.50	3	0	0
21	330	4.3	50.0	0.	19.25	20.75	15.25	14.25	17.00	19.25	17.75	18.75	4	0	0
22	320	4.0	49.0	0.	19.00	21.00	15.25	16.75	18.00	19.25	17.75	18.75	5	0	1
23	330	3.0	49.0	0.	18.75	21.00	15.25	18.00	18.25	19.00	18.00	18.75	2	0	1
TOT.				121.1									88	0	7
AVG.	309	2.8	51.0	5.0	19.12	20.15	15.37	15.96	17.75	19.17	17.46	18.34	4	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	3.5	48.0	0.	19.25	20.75	15.25	18.75	18.75	19.00	18.00	18.75	2	0	1
1	330	2.5	49.0	0.	18.75	20.25	15.25	18.00	18.50	18.75	17.75	18.50	2	0	1
2	330	2.5	48.0	0.	19.00	20.25	15.00	13.25	16.50	19.00	17.75	18.50	2	0	1
3	330	3.5	48.0	0.	18.75	20.25	15.00	13.00	16.50	19.00	17.50	18.25	2	0	1
4	330	2.5	48.0	0.	19.00	20.25	15.00	10.00	15.25	19.00	17.50	18.25	2	0	1
5	330	2.5	48.0	0.	19.00	20.50	14.75	12.00	16.00	19.00	17.50	18.25	1	0	0
6	330	3.5	46.0	0.	19.00	20.00	14.75	8.50	14.75	19.00	17.25	18.25	3	0	2
7	330	2.0	46.0	0.	18.75	20.00	14.50	11.75	15.75	19.25	17.25	18.25	4	1	2
8	330	2.5	46.0	7.9	18.75	20.25	14.25	12.50	16.00	19.25	17.25	18.00	4	0	1
9	330	2.5	46.0	22.1	18.50	19.25	14.25	10.50	15.50	19.00	17.25	18.25	3	0	1
10	320	2.2	47.0	33.4	19.00	20.00	14.00	12.25	15.75	19.25	17.25	18.00	3	0	2
11	330	2.8	48.0	40.3	17.00	20.75	14.00	8.50	14.00	16.00	13.75	16.00	1	0	0
12	30	2.3	48.0	42.3	18.00	20.75	13.75	8.00	13.75	16.75	15.00	16.25	1	0	0
13	180	1.4	50.0	39.4	18.25	21.00	13.50	11.00	14.50	18.00	16.00	17.00	1	0	0
14	60	2.0	52.0	31.7	18.75	21.00	13.00	11.50	15.00	18.75	16.25	17.25	3	0	1
15	90	2.0	50.0	19.8	18.50	21.25	13.00	15.50	17.00	18.75	16.25	17.50	2	0	0
16	150	3.5	50.0	5.3	18.75	21.25	13.00	17.00	17.50	18.75	16.75	18.00	4	0	0
17	160	3.4	49.0	0.	18.75	21.00	13.00	8.00	13.50	18.75	17.00	18.25	3	0	0
18	170	2.0	49.0	0.	18.50	20.75	13.00	8.00	13.75	18.75	17.00	18.25	2	0	0
19	150	2.0	48.0	0.	18.75	20.75	13.00	9.50	14.25	18.75	15.00	16.00	5	1	0
20	150	1.7	48.0	0.	19.00	21.00	13.00	15.50	16.00	18.75	16.00	17.00	4	2	0
21	180	2.3	48.0	0.	18.75	20.75	13.00	17.25	17.50	18.75	16.75	18.00	4	2	0
22	150	2.2	47.0	0.	18.75	20.75	13.00	17.50	18.00	18.75	17.00	18.25	3	2	0
23	150	2.0	47.0	0.	18.50	20.75	13.50	18.00	18.00	18.50	17.00	18.00	3	2	0
TOT.				242.2									64	12	14
AVG.	232	2.5	48.1	10.1	18.67	20.56	13.91	12.74	15.92	18.65	16.75	17.79	3	0	1

DATE
(11/10/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.8	46.0	0.	18.75	20.25	14.00	18.25	18.25	18.50	17.00	18.25	3	2	0
1	180	1.0	47.0	0.	19.00	20.00	14.25	18.25	18.25	18.50	17.00	18.00	3	2	0
2	180	1.6	47.0	0.	18.50	19.50	14.50	18.00	18.00	18.25	17.00	18.00	3	2	0
3	330	1.4	44.0	0.	18.75	19.25	15.00	18.25	18.25	18.25	17.25	18.25	1	1	0
4	330	1.6	44.0	0.	18.50	19.00	15.50	18.00	18.25	18.50	17.00	18.00	1	0	0
5	360	.6	44.0	0.	19.00	18.50	15.75	18.50	18.25	18.50	17.25	18.25	1	0	0
6	30	1.5	44.0	0.	18.75	18.25	16.50	18.25	18.25	18.25	17.00	18.00	5	0	0
7	330	1.6	44.0	0.	18.75	18.00	16.25	18.00	18.25	18.50	17.00	18.00	6	0	0
8	360	1.4	44.0	1.4	18.50	17.75	16.50	18.50	18.50	18.50	17.25	18.25	5	0	0
9	360	8.0	44.0	4.1	18.00	17.25	16.25	18.25	18.25	18.25	17.00	18.00	8	0	0
10	30	9.0	44.0	6.3	18.25	18.00	16.25	18.00	18.00	18.00	16.50	18.00	7	0	0
11	220	1.0	47.0	7.6	18.00	19.25	16.50	18.25	18.00	18.00	16.50	17.75	8	0	0
12	210	1.8	50.0	8.0	18.25	19.75	16.50	18.00	18.00	18.00	16.50	17.00	4	0	0
13	210	2.0	50.0	7.4	18.50	20.00	16.50	18.25	18.25	18.25	17.00	16.75	3	0	0
14	170	3.2	52.0	6.0	18.00	20.00	16.25	18.25	18.25	18.50	15.75	19.25	2	0	0
15	180	3.3	52.0	3.7	19.00	20.25	16.50	18.25	18.50	18.50	17.50	24.50	4	0	0
16	160	2.6	50.0	.9	18.50	20.50	16.75	18.50	16.75	18.75	18.00	20.50	3	0	0
17	150	1.0	43.0	0.	19.00	20.50	16.75	19.00	19.00	19.00	17.00	17.00	2	0	0
18	270	.6	42.0	0.	19.00	20.75	16.75	19.00	19.00	19.00	17.00	17.50	3	0	1
19	330	1.3	42.0	0.	18.50	20.50	17.00	18.75	18.75	18.75	17.50	18.50	4	1	1
20	330	2.5	44.0	0.	19.25	20.50	17.00	19.00	18.75	18.75	17.75	18.50	5	2	1
21	330	3.8	44.0	0.	18.50	20.50	16.75	18.50	18.50	18.75	17.75	18.75	5	2	1
22	330	2.6	44.0	0.	18.25	20.00	17.00	13.50	17.75	18.50	17.25	18.50	1	0	0
23	330	2.2	43.0	0.	19.00	20.50	17.00	10.75	17.25	19.00	17.25	18.25	5	0	0
TOT.				45.4									92	13	5
AVG.	245	2.4	45.6	1.9	18.60	19.53	16.17	17.84	18.30	18.49	17.08	18.41	4	1	0

DATE
(11/11/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	270	2.4	42.0	0.	18.25	20.25	17.25	13.50	18.00	19.25	17.50	18.25	1	0	0
1	330	4.0	42.0	0.	19.00	20.00	17.00	14.75	17.75	19.00	17.25	18.25	1	0	0
2	330	4.0	42.0	0.	19.00	19.75	17.25	17.50	18.25	19.00	17.25	18.25	1	0	0
3	330	4.2	42.0	0.	18.50	19.25	17.00	17.75	18.00	18.75	17.00	18.25	0	0	0
4	330	4.0	42.0	0.	18.50	19.50	17.00	18.25	18.25	18.75	17.25	18.00	2	0	1
5	330	4.7	41.0	0.	18.00	19.00	20.00	18.25	18.00	18.50	17.00	18.00	1	0	1
6	270	5.2	41.0	0.	18.00	18.00	17.00	18.25	18.25	18.25	17.00	18.25	1	0	1
7	330	4.2	41.0	0.	18.00	18.25	17.00	18.25	18.25	18.25	17.00	18.00	5	0	2
8	330	4.0	41.0	8.4	18.00	18.00	17.00	12.75	17.50	18.00	16.50	17.75	5	0	1
9	330	4.2	41.0	25.3	18.25	18.00	16.75	13.75	17.25	18.25	16.50	17.75	3	0	2
10	330	5.2	41.0	38.7	17.00	18.00	16.50	13.75	17.00	18.00	16.50	17.00	2	0	1
11	330	4.8	42.0	58.9	18.25	18.75	16.00	10.00	16.25	18.25	16.75	17.00	1	0	0
12	270	5.2	43.0	71.8	18.25	19.00	15.75	12.25	16.50	18.75	16.50	16.50	1	0	0
13	330	3.5	48.0	78.6	18.25	19.75	15.50	10.50	16.00	19.00	17.00	20.50	1	0	0
14	330	3.3	48.0	67.2	18.75	19.75	15.75	12.75	16.50	19.00	17.25	24.00	2	0	1
15	330	4.3	50.0	41.9	18.75	20.00	16.50	16.75	18.00	19.25	18.75	21.50	7	0	2
16	360	3.2	50.0	10.3	19.25	20.00	17.00	18.25	18.75	19.50	18.75	24.75	3	0	1
17	360	2.5	49.0	0.	19.50	20.25	17.50	19.25	19.00	19.75	18.50	20.50	3	0	0
18	360	2.0	48.0	0.	20.00	20.25	17.75	12.50	17.75	19.75	18.25	18.50	4	0	1
19	360	3.0	47.0	0.	19.50	21.00	17.25	11.00	17.25	20.00	18.25	19.00	4	1	1
20	360	3.0	44.0	0.	19.75	21.00	17.00	11.25	17.25	19.75	18.00	19.00	5	2	3
21	360	3.0	43.0	0.	19.25	21.00	17.00	15.00	18.25	19.50	18.25	19.00	4	2	0
22	360	3.5	42.0	0.	19.00	21.00	16.75	11.00	17.00	19.25	17.75	19.00	2	0	0
23	360	4.0	41.0	0.	19.00	21.00	17.00	10.75	17.00	19.25	17.50	18.50	1	0	0
TOT.				401.1									58	6	16
AVG.	332	3.8	43.8	16.7	18.67	19.61	16.94	14.50	17.58	18.96	17.43	18.98	2	0	1

DATE
(11/12/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	2.2	42.0	0.	19.50	21.00	17.25	16.00	18.00	19.25	17.25	18.50	1	0	1
1	330	2.2	40.0	0.	19.25	20.25	17.75	17.50	18.25	19.00	17.25	18.50	1	0	1
2	330	2.0	40.0	0.	18.50	20.00	17.75	18.25	18.25	19.00	17.00	18.25	2	0	1
3	330	2.0	40.0	0.	18.50	19.50	17.75	18.25	18.25	18.50	17.25	18.25	2	0	1
4	330	2.0	40.0	0.	18.25	19.00	17.25	11.00	17.50	18.00	16.75	17.75	1	0	1
5	330	2.2	40.0	0.	18.25	19.00	17.25	12.00	17.75	18.50	16.75	18.00	3	0	2
6	330	3.0	39.0	0.	18.25	19.00	17.00	14.00	17.50	18.50	16.75	17.75	4	0	3
7	330	2.0	39.0	0.	18.25	19.00	16.50	11.00	17.00	18.25	16.25	17.50	6	0	2
8	330	1.2	39.0	9.8	18.25	18.75	16.50	13.25	17.00	18.50	16.50	17.50	5	0	1
9	330	2.0	39.0	30.6	18.00	19.00	16.25	10.00	16.50	18.25	16.25	17.00	3	0	0
10	330	3.0	39.0	68.5	18.25	20.00	16.00	12.00	16.00	19.00	16.25	17.25	2	0	0
11	330	3.0	40.0	105.0	18.25	20.50	15.50	9.75	16.00	19.00	16.25	17.00	6	0	0
12	330	2.4	51.0	114.5	18.75	20.50	15.25	13.00	16.25	18.25	17.00	32.00	3	0	0
13	300	3.5	52.0	106.3	19.00	21.00	16.50	15.00	16.75	18.00	19.25	31.25	2	0	0
14	300	3.3	52.0	84.7	19.00	21.00	17.50	17.00	18.00	18.50	19.75	31.00	2	0	0
15	270	1.2	54.0	51.6	19.50	21.25	18.75	18.25	18.50	19.00	21.00	34.00	5	0	0
16	260	8.0	49.0	11.8	20.00	21.25	19.75	19.00	19.00	19.50	21.50	29.00	2	0	0
17	310	1.8	46.0	0.	20.00	21.25	20.25	19.50	19.50	19.75	21.00	25.25	4	0	0
18	180	1.3	43.0	0.	20.00	21.25	20.00	19.75	19.50	20.00	20.00	22.00	5	0	0
19	310	3.0	44.0	0.	20.25	21.00	20.25	19.75	19.50	19.75	19.75	19.25	3	0	0
20	330	1.8	43.0	0.	20.00	21.00	20.00	19.75	19.25	19.50	19.00	20.00	2	0	0
21	140	1.6	42.0	0.	19.50	21.00	20.25	19.25	19.00	19.00	18.50	20.00	2	0	1
22	150	5.0	40.0	0.	19.00	20.50	20.25	18.50	19.00	19.00	18.00	19.75	3	0	1
23	180	2.5	40.0	0.	19.00	20.00	20.25	19.00	18.75	18.75	17.75	19.75	3	0	1
TOT.				582.8									75	0	14
AVG.	292	2.6	43.0	24.3	18.98	20.25	17.99	15.86	17.96	18.86	18.04	21.52	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	190	2.6	41.0	0.	18.50	19.25	20.25	14.25	20.00	18.50	17.00	19.25	3	0	1
1	180	2.8	41.0	0.	18.25	19.25	20.00	14.25	19.75	18.50	16.75	19.00	2	0	1
2	180	4.0	40.0	0.	18.00	19.00	19.75	13.00	20.00	18.50	16.75	19.00	3	0	1
3	170	3.0	40.0	0.	18.25	19.00	19.50	14.00	19.50	18.50	16.50	18.75	3	0	1
4	180	2.0	41.0	0.	18.25	19.00	19.00	12.75	19.50	18.50	16.50	18.75	2	0	1
5	190	2.0	39.0	0.	18.25	19.00	19.00	14.50	19.00	18.50	16.50	18.75	3	0	2
6	180	1.2	38.0	0.	18.25	19.00	18.75	12.75	19.00	18.50	16.25	18.50	2	0	2
7	180	2.3	41.0	0.	18.00	19.00	18.50	12.25	18.75	18.50	16.25	18.50	2	0	1
8	150	4.0	41.0	18.7	18.00	19.00	18.25	12.00	18.25	18.50	16.25	18.25	3	0	1
9	150	5.0	39.0	61.2	18.25	19.25	18.00	12.25	18.25	18.50	16.25	18.25	5	0	0
10	150	2.5	40.0	138.0	18.00	19.25	17.50	11.25	18.00	18.50	16.00	18.25	2	0	0
11	270	2.4	44.0	206.5	17.75	19.50	17.25	10.00	17.75	18.50	16.00	18.00	1	0	0
12	240	2.0	52.0	229.6	18.00	19.75	17.25	12.50	17.25	18.00	18.75	30.25	2	0	0
13	240	2.5	53.0	210.3	18.50	20.00	19.00	15.25	16.25	17.00	22.50	40.00	1	0	0
14	180	4.0	54.0	160.6	18.50	19.75	20.25	17.00	17.50	18.00	23.75	37.75	1	0	0
15	160	4.8	52.0	96.9	19.00	20.25	22.00	18.25	18.25	18.75	23.75	31.50	6	0	1
16	160	7.5	47.0	21.3	19.50	20.00	22.75	18.75	16.00	19.00	24.25	30.50	6	0	0
17	150	4.5	46.0	0.	19.25	20.00	23.00	19.25	16.00	19.25	22.50	25.50	5	0	0
18	150	3.3	42.0	0.	19.25	19.50	22.75	17.50	20.00	19.25	20.00	21.00	3	0	1
19	100	1.8	43.0	0.	19.00	19.50	23.00	17.25	20.50	19.25	19.50	21.00	3	0	1
20	90	1.5	42.0	0.	19.00	19.50	23.00	18.25	19.50	19.00	18.75	21.00	3	0	1
21	90	1.5	41.0	0.	18.50	19.00	22.75	15.00	22.75	18.75	18.25	21.00	3	0	1
22	100	2.3	42.0	0.	18.75	19.00	22.00	16.25	21.00	18.75	18.25	21.00	2	0	1
23	140	1.6	43.0	0.	18.50	19.25	21.75	14.25	22.00	19.00	17.75	20.75	2	0	1
TOT.				1143.1									68	0	19
AVG.	165	3.0	43.4	47.6	18.48	19.37	20.22	14.70	18.95	18.58	18.54	22.69	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	270	1.0	42.0	0.	18.50	19.00	21.75	16.25	21.75	18.75	17.25	20.25	2	0	1
1	180	2.5	42.0	0.	18.25	19.50	21.25	14.25	21.25	18.75	17.00	20.25	2	0	1
2	140	3.0	42.0	0.	18.25	19.00	21.00	16.00	20.00	18.75	17.00	20.00	2	0	1
3	160	7.7	41.0	0.	18.00	19.00	20.25	18.00	20.25	18.75	17.00	20.00	1	0	1
4	160	7.2	41.0	0.	18.00	19.00	20.50	16.50	20.00	18.50	16.75	19.75	3	0	2
5	150	3.2	42.0	0.	18.50	18.75	20.25	14.00	20.00	18.75	16.50	19.50	2	0	2
6	150	3.8	42.0	0.	18.25	18.75	20.00	13.50	20.00	18.50	16.75	19.25	2	0	2
7	140	2.5	42.0	0.	18.00	18.75	20.00	15.00	19.25	18.00	16.75	19.00	2	0	0
8	140	4.5	46.0	37.5	18.25	19.00	19.50	14.00	19.50	18.50	16.75	19.00	1	0	1
9	180	4.0	50.0	128.4	18.00	19.00	19.00	13.00	19.25	19.00	16.75	18.50	1	0	0
10	160	4.0	52.0	200.9	18.25	19.50	18.50	12.50	19.00	19.00	19.00	30.00	1	0	0
11	160	5.5	55.0	245.8	18.50	19.25	19.25	16.50	18.75	18.75	19.25	24.00	1	0	0
12	180	8.0	58.0	206.7	18.50	19.50	19.00	16.25	19.00	19.25	21.25	29.00	1	0	0
13	190	9.5	56.0	191.6	19.00	19.25	19.25	14.00	19.25	19.25	21.25	31.25	1	0	0
14	180	4.0	54.0	151.9	19.50	19.25	20.25	18.50	19.25	19.50	20.50	27.25	5	0	2
15	180	7.5	55.0	90.8	19.00	18.75	20.00	18.75	19.00	19.50	19.50	21.25	6	0	1
16	180	7.0	53.0	18.2	19.75	18.00	20.00	19.25	19.25	19.50	19.25	20.00	5	0	0
17	180	9.0	52.0	0.	19.25	18.50	20.00	19.25	19.25	19.25	18.75	20.00	5	0	0
18	150	6.5	50.0	0.	19.50	19.25	19.50	13.50	20.00	19.75	18.50	20.00	2	0	0
19	150	5.2	47.0	0.	19.75	20.25	19.50	16.00	19.75	19.75	18.50	20.00	1	0	0
20	180	7.8	49.0	0.	19.75	21.00	19.25	18.00	19.50	20.00	18.50	20.00	2	0	0
21	180	14.0	50.0	0.	19.50	21.50	19.50	19.00	19.50	19.50	18.50	19.75	1	0	0
22	180	14.5	50.0	0.	19.50	21.00	19.50	18.50	19.25	19.25	18.25	19.50	2	0	0
23	180	10.6	50.0	0.	19.50	20.25	19.50	19.00	19.00	19.00	18.00	19.50	1	0	1
TOT.				1271.8									51	0	14
AVG.	171	6.4	48.4	53.0	18.80	19.37	19.85	16.40	19.62	19.06	18.23	21.54	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.8	50.0	0.	19.25	19.50	19.50	19.00	19.00	19.00	18.25	19.50	2	0	1
1	180	8.5	48.0	0.	19.00	19.25	19.00	18.75	19.00	19.00	17.75	19.25	1	0	1
2	180	4.0	49.0	0.	19.25	19.00	19.50	19.00	19.00	19.00	18.00	19.50	1	0	0
3	180	4.5	49.0	0.	19.00	19.00	19.50	12.75	19.00	19.00	18.00	19.00	1	0	1
4	180	7.0	49.0	0.	19.00	19.25	19.00	13.25	19.00	19.00	18.00	19.25	2	0	2
5	180	7.0	49.0	0.	18.75	19.25	19.00	15.00	19.00	19.25	17.75	19.00	3	0	2
6	180	9.0	48.0	0.	19.00	19.00	19.00	17.25	19.00	19.00	17.75	19.00	3	0	2
7	180	6.0	44.0	0.	19.00	18.25	18.50	15.50	19.00	19.25	17.75	19.00	2	0	1
8	150	5.5	46.0	13.2	19.00	18.75	18.50	14.00	19.00	19.00	17.50	19.00	3	0	1
9	150	5.5	50.0	47.5	19.00	19.75	18.25	11.75	18.50	19.25	17.50	19.00	2	0	1
10	180	5.8	51.0	74.9	18.75	20.25	17.75	12.00	18.25	19.75	17.50	18.75	2	0	0
11	180	5.5	51.0	73.3	19.00	20.75	17.50	14.75	18.50	19.75	17.75	28.50	1	0	0
12	180	4.2	53.0	77.4	19.50	20.50	17.50	11.50	18.00	19.75	18.25	22.00	2	0	1
13	170	4.5	54.0	71.7	19.50	20.75	17.50	12.50	18.00	19.75	18.25	19.25	1	0	1
14	150	2.8	52.0	56.6	19.25	20.50	17.50	15.75	18.75	20.00	18.25	19.50	3	0	2
15	180	3.1	51.0	33.5	19.50	20.25	17.50	14.00	19.00	19.75	18.25	19.50	5	0	0
16	150	4.5	51.0	6.2	19.50	20.25	17.25	13.75	18.50	19.75	18.25	19.50	7	0	0
17	140	3.2	50.0	0.	19.50	20.75	17.25	12.00	17.50	19.75	18.50	19.25	7	0	0
18	150	3.2	50.0	0.	19.75	21.25	16.75	11.00	17.00	20.00	18.25	19.25	9	3	0
19	150	1.1	51.0	0.	19.75	21.00	16.75	16.50	18.50	20.00	17.75	18.00	6	3	0
20	150	1.2	48.0	0.	19.75	21.00	16.75	18.50	19.00	19.75	18.00	19.00	5	3	0
21	90	1.6	48.0	0.	19.25	20.75	16.75	18.50	18.75	19.50	18.00	19.00	6	3	1
22	90	1.3	48.0	0.	19.50	21.00	17.25	19.00	19.00	19.00	18.00	19.50	1	0	0
23	180	.9	47.0	0.	19.75	20.75	18.25	19.00	18.25	19.25	18.00	19.75	1	0	0
TOT.				454.3									77	12	16
AVG.	162	4.4	49.5	18.9	19.27	20.03	18.00	15.37	18.60	19.44	17.97	19.68	3	1	1

DATE
(11/16/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.0	48.0	0.	20.00	20.25	18.75	16.75	18.75	19.25	18.00	19.25	1	0	0
1	150	3.2	48.0	0.	20.00	20.25	18.50	16.25	19.00	19.50	18.00	19.00	1	0	1
2	150	8.5	46.0	0.	19.50	20.00	18.50	18.00	19.00	19.50	18.00	19.00	1	0	0
3	150	7.2	48.0	0.	19.50	20.00	18.50	18.75	19.00	19.50	18.25	19.25	1	0	1
4	160	9.5	50.0	0.	19.00	19.50	18.50	18.75	19.00	19.00	18.00	18.75	2	0	1
5	160	11.0	51.0	0.	19.00	19.00	18.75	12.00	18.75	19.00	17.75	19.00	1	0	1
6	160	10.0	52.0	0.	19.00	19.00	18.25	15.00	19.00	19.00	17.75	19.00	1	0	1
7	160	9.0	53.0	0.	19.00	18.75	18.00	16.25	18.50	19.25	17.75	19.00	1	0	1
8	160	8.5	55.0	.7	19.25	19.00	17.75	13.00	18.25	19.25	18.00	19.00	2	0	1
9	160	8.0	56.0	2.7	19.00	19.25	17.50	14.75	18.25	19.75	18.00	19.00	1	0	0
10	180	8.2	57.0	4.3	19.50	19.50	17.25	15.25	18.25	20.00	18.25	19.00	3	0	0
11	180	9.5	58.0	5.2	19.50	19.75	17.25	16.00	18.50	20.00	18.25	19.25	3	0	0
12	180	8.5	59.0	5.5	19.75	19.75	17.00	15.25	18.25	20.00	18.25	19.50	1	0	0
13	180	8.0	60.0	5.1	19.50	19.75	17.25	18.00	19.25	20.00	18.25	19.50	2	0	0
14	180	6.0	60.0	4.0	19.75	19.75	17.25	18.75	19.25	20.00	18.00	19.50	2	0	0
15	180	6.8	60.0	2.4	19.50	19.75	17.00	19.50	19.50	19.75	18.00	21.00	2	0	0
16	180	8.2	60.0	.4	20.00	20.00	17.25	19.50	19.50	19.75	18.25	19.50	2	0	0
17	180	7.5	60.0	0.	19.25	20.00	17.00	19.00	19.25	19.25	17.25	19.00	2	0	0
18	180	8.3	59.0	0.	19.50	20.00	17.00	19.00	19.25	19.50	18.00	19.25	5	2	1
19	200	6.5	57.0	0.	20.00	20.00	17.25	19.25	19.50	19.50	18.00	19.00	8	2	3
20	200	7.5	57.0	0.	20.00	19.50	17.25	19.50	19.75	19.75	18.00	18.75	4	2	0
21	180	5.0	54.0	0.	20.00	19.50	17.25	19.75	19.75	19.75	18.50	19.75	3	2	0
22	150	4.8	52.0	0.	20.25	20.00	17.50	11.00	17.50	20.00	17.75	17.50	1	0	0
23	150	6.0	53.0	0.	21.00	21.75	17.00	12.50	18.00	20.75	18.25	19.50	1	0	0
TOT.				30.3									49	8	10
AVG.	169	7.4	54.7	1.3	19.61	19.75	17.65	16.74	18.87	19.62	18.02	19.18	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	5.0	54.0	0.	21.00	22.00	17.50	18.00	19.25	20.75	18.75	20.00	1	1	0
1	160	3.0	53.0	0.	20.75	21.25	17.75	18.75	19.50	20.25	18.50	20.00	0	0	0
2	180	5.2	50.0	0.	20.50	21.00	17.75	19.75	19.50	20.25	18.75	20.00	1	0	0
3	190	8.5	52.0	0.	20.00	20.75	18.00	19.75	19.75	20.00	18.75	20.00	0	0	0
4	180	9.0	52.0	0.	20.00	20.00	18.00	19.75	19.50	20.00	18.75	20.00	1	0	0
5	180	10.2	53.0	0.	19.75	20.00	18.00	19.50	19.50	19.75	18.75	20.00	6	0	1
6	180	9.0	54.0	0.	19.50	19.00	17.75	19.50	19.50	19.50	18.25	19.50	3	0	2
7	180	9.0	54.0	0.	19.75	19.25	18.00	19.50	19.25	19.25	18.25	19.75	3	0	1
8	180	9.5	52.0	2.1	19.50	18.75	17.75	14.75	18.50	19.25	18.25	19.50	3	0	2
9	180	14.5	53.0	8.6	19.50	19.25	17.00	11.00	17.25	19.75	18.00	19.25	3	0	0
10	180	15.5	53.0	13.9	20.00	20.00	17.00	12.25	17.50	20.00	18.25	19.50	1	0	0
11	180	12.5	52.0	17.1	20.00	20.00	16.75	13.25	17.50	20.25	18.25	19.50	3	0	2
12	270	6.0	52.0	18.1	20.00	20.75	16.25	15.00	18.00	20.50	18.25	20.00	2	0	2
13	60	8.5	48.0	16.7	20.00	20.00	16.50	14.00	19.00	20.25	18.25	20.00	2	0	1
14	60	8.0	48.0	13.1	19.00	20.00	16.25	18.50	19.00	20.00	18.25	19.75	3	0	1
15	60	5.0	48.0	7.6	20.00	20.25	16.00	12.00	16.25	20.00	18.25	20.00	5	0	0
16	90	1.1	48.0	1.2	19.75	20.75	16.00	17.00	16.75	20.00	18.00	19.50	4	0	0
17	360	.9	47.0	0.	19.50	20.25	15.75	13.00	17.00	19.75	18.00	19.75	3	0	1
18	350	2.5	46.0	0.	19.50	21.25	15.50	12.00	16.50	19.75	18.00	19.50	7	2	1
19	50	4.0	46.0	0.	19.25	21.25	15.50	15.25	18.00	19.75	18.00	19.25	7	2	1
20	90	2.4	42.0	0.	19.50	21.00	15.50	14.00	18.50	19.50	18.00	19.00	6	2	1
21	90	1.2	41.0	0.	19.00	21.00	15.25	9.00	15.50	19.25	17.75	18.75	6	2	0
22	100	3.0	41.0	0.	19.50	21.00	15.75	11.00	16.00	19.25	17.75	18.50	3	0	1
23	90	2.3	41.0	0.	19.00	21.00	16.00	13.00	17.00	19.25	17.50	18.00	3	0	1
TOT.				98.4									76	9	17
AVG.	159	6.4	49.2	4.1	19.76	20.41	16.73	15.77	18.08	19.84	18.23	19.54	3	0	1

DATE
(11/18/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	80	1.0	40.0	0.	19.00	20.00	16.25	14.25	17.00	19.00	17.00	17.75	2	0	1
1	80	.8	40.0	0.	19.00	20.25	16.50	16.50	17.50	18.75	17.00	17.75	3	0	2
2	80	.8	39.0	0.	18.00	19.75	16.00	12.25	16.75	18.25	16.75	17.50	3	0	2
3	150	1.3	39.0	0.	18.00	20.00	15.75	11.75	16.25	18.25	16.50	17.50	3	0	2
4	140	1.0	38.0	0.	18.00	20.00	15.25	11.00	16.00	18.25	16.25	17.50	3	0	2
5	140	1.3	38.0	0.	18.00	20.00	15.00	11.00	15.75	18.50	16.25	17.00	4	0	3
6	140	1.2	38.0	0.	18.00	20.00	14.75	8.75	15.00	18.50	16.00	17.25	5	0	3
7	140	.9	38.0	0.	17.50	20.00	14.50	8.00	14.50	18.25	15.75	17.00	3	0	2
8	140	1.0	38.0	1.6	17.75	20.25	14.00	8.00	14.00	18.25	15.75	17.00	3	0	2
9	150	4.0	39.0	4.6	17.75	20.75	13.25	7.25	13.75	18.75	15.75	16.50	8	0	2
10	160	4.2	40.0	7.4	17.75	20.75	13.00	7.25	13.25	18.75	13.75	17.25	7	0	2
11	180	5.0	40.0	9.2	18.00	21.00	12.75	7.00	13.00	18.50	15.00	17.25	5	0	1
12	180	4.0	39.0	9.7	17.75	21.00	12.50	9.00	14.00	18.75	15.50	17.50	8	0	1
13	220	3.0	41.0	9.0	17.50	21.00	12.00	8.75	13.00	18.75	12.00	18.75	9	0	0
14	220	3.5	41.0	7.0	18.00	21.00	11.75	6.25	12.00	18.75	15.00	18.00	8	0	0
15	180	2.5	41.0	4.0	18.00	21.00	11.25	8.25	13.00	18.75	15.75	18.00	8	0	0
16	150	4.2	40.0	.6	18.00	20.75	11.25	10.00	13.00	17.00	14.75	17.00	9	3	1
17	160	6.0	40.0	0.	17.00	20.00	11.50	11.00	14.00	17.00	15.00	17.00	7	3	1
18	150	3.0	41.0	0.	17.00	19.75	11.25	13.00	14.75	17.00	15.00	17.00	6	3	1
19	150	5.2	40.0	0.	17.25	20.00	11.50	15.75	16.00	17.00	13.25	13.00	7	3	2
20	150	6.2	42.0	0.	17.75	19.50	12.25	9.00	13.25	17.25	14.25	15.00	6	3	1
21	140	8.0	38.0	0.	17.75	19.50	12.50	7.00	13.00	17.50	15.00	16.75	4	3	0
22	180	7.5	38.0	0.	18.00	19.50	13.00	9.50	14.25	18.00	15.25	17.00	6	3	2
23	150	6.4	38.0	0.	18.00	19.75	13.00	9.00	14.00	18.00	15.50	17.00	6	3	2
TOT.				53.1									134	27	34
AVG.	152	3.4	39.4	2.2	17.86	20.23	13.36	9.98	14.46	18.16	15.33	17.05	6	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	5.5	38.0	0.	17.75	19.75	13.25	12.25	15.00	18.00	15.50	17.25	5	3	2
1	170	4.0	38.0	0.	17.50	19.25	14.00	15.00	16.00	17.75	15.25	17.25	3	0	1
2	170	5.0	38.0	0.	17.75	19.25	14.00	14.00	14.25	17.75	15.25	17.00	2	0	1
3	120	2.0	38.0	0.	18.00	20.00	14.00	8.00	14.25	18.00	15.25	17.00	3	0	2
4	60	1.0	39.0	0.	17.50	19.50	14.25	8.50	14.50	18.00	15.25	17.00	3	0	2
5	120	1.0	38.0	0.	17.25	19.75	13.75	8.00	14.00	18.00	15.25	17.00	4	0	3
6	210	1.0	38.0	0.	17.00	19.75	13.25	9.50	14.25	17.75	15.25	17.00	3	0	2
7	320	1.4	38.0	0.	17.00	19.75	13.00	8.00	13.75	17.75	15.25	16.75	5	0	2
8	330	.6	40.0	7.0	17.25	20.00	12.50	7.00	13.00	18.00	15.25	17.00	9	0	3
9	330	1.7	40.0	32.0	17.50	21.00	11.75	6.00	12.25	18.50	15.25	17.00	8	0	2
10	330	2.4	42.0	52.5	17.75	21.25	11.50	9.00	13.00	18.50	15.50	17.00	3	0	2
11	330	2.8	42.0	65.2	18.00	21.75	11.25	6.00	12.00	18.50	15.75	17.00	3	0	2
12	320	3.2	42.0	69.1	18.00	22.25	10.75	5.75	12.50	19.00	16.00	17.25	2	0	1
13	320	1.8	42.0	63.8	18.75	22.50	10.25	5.25	11.00	19.00	16.25	18.00	2	0	1
14	340	1.0	42.0	49.7	18.50	22.50	10.00	8.50	10.50	19.25	16.25	18.00	2	0	1
15	330	1.1	42.0	28.1	18.75	22.75	10.00	6.50	10.00	19.00	16.50	18.00	3	0	1
16	330	1.8	42.0	3.5	18.50	22.50	9.75	12.00	14.00	19.00	16.50	18.00	4	2	1
17	360	2.2	42.0	0.	18.00	22.00	9.50	7.25	11.50	18.75	16.50	18.00	5	3	0
18	40	2.8	42.0	0.	18.25	22.00	9.25	8.00	11.25	18.75	16.50	18.25	5	3	0
19	40	4.2	42.0	0.	17.50	21.75	9.25	7.00	11.50	18.50	16.50	17.75	6	3	1
20	40	3.0	42.0	0.	18.25	21.50	9.75	10.75	10.00	18.50	10.00	12.00	6	3	1
21	360	3.5	42.0	0.	19.00	21.00	10.25	14.00	15.75	18.25	14.50	16.25	6	3	0
22	330	5.0	42.0	0.	18.75	20.50	11.00	15.25	16.75	18.25	15.50	17.00	8	3	0
23	30	4.0	42.0	0.	18.75	20.25	11.75	6.50	13.00	18.00	16.00	17.50	5	3	0
TOT.				370.9									107	29	32
AVG.	229	2.6	40.5	15.5	17.97	20.94	11.58	9.08	13.08	18.36	15.46	17.09	4	1	1

DATE
(11/20/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	3.6	40.0	0.	18.75	20.25	12.00	14.25	15.75	18.00	16.00	17.50	5	3	1
1	360	4.0	40.0	0.	18.25	19.75	12.75	8.00	13.25	18.00	16.00	18.25	6	3	1
2	60	4.0	38.0	0.	18.50	19.75	13.25	14.00	16.00	18.00	16.00	17.00	5	3	1
3	60	4.5	38.0	0.	18.25	19.25	13.75	8.00	14.00	18.00	16.00	17.00	6	3	1
4	60	4.0	38.0	0.	18.25	19.00	14.00	11.00	15.25	18.00	16.00	17.00	6	3	2
5	60	5.0	38.0	0.	18.00	19.25	14.50	10.00	15.00	18.00	16.00	16.75	6	3	2
6	50	4.0	38.0	0.	17.75	19.00	14.75	8.75	14.75	18.00	15.75	16.75	7	3	2
7	340	3.7	38.0	0.	18.00	19.00	15.00	9.50	15.00	18.00	15.75	16.75	10	3	1
8	330	5.2	38.0	1.2	18.00	19.00	15.00	10.25	15.25	18.00	15.50	16.75	8	0	0
9	330	5.0	40.0	6.8	18.00	19.50	15.00	11.00	15.50	18.00	15.50	16.75	5	0	0
10	330	4.5	42.0	11.2	18.00	20.25	15.00	11.25	15.75	18.25	15.25	18.75	1	0	0
11	360	3.0	45.0	14.0	18.00	20.25	15.25	13.50	16.25	18.25	17.25	25.50	1	0	0
12	360	3.2	48.0	13.5	18.25	20.25	16.75	16.25	17.25	18.50	20.00	35.00	1	0	0
13	360	2.5	52.0	10.7	18.25	20.25	17.25	17.50	18.00	18.75	21.00	30.75	1	0	1
14	330	2.0	52.0	6.6	18.50	20.00	19.00	18.00	18.25	19.00	21.00	30.00	2	0	1
15	90	3.0	52.0	3.7	18.75	20.00	19.50	18.75	18.75	19.25	21.50	27.25	2	0	1
16	90	5.0	52.0	.4	19.00	19.75	20.00	19.00	19.00	19.50	20.25	20.75	1	0	1
17	90	7.0	52.0	0.	19.25	19.75	20.00	14.75	20.25	19.75	19.00	18.75	2	0	1
18	50	4.4	50.0	0.	19.25	19.75	20.00	16.00	20.00	19.75	18.50	18.00	2	0	1
19	60	3.5	50.0	0.	19.25	20.00	19.25	13.50	19.75	19.75	18.25	19.00	3	0	1
20	90	4.0	50.0	0.	19.00	20.00	19.25	15.00	19.50	19.75	18.25	19.00	3	0	0
21	150	2.0	50.0	0.	19.25	20.00	19.00	14.00	19.25	19.50	18.00	19.00	2	0	0
22	150	2.5	50.0	0.	19.00	20.00	18.75	13.00	19.00	19.50	18.00	19.25	1	0	0
23	150	4.0	49.0	0.	19.25	20.50	18.75	14.00	19.00	19.50	18.00	19.00	1	0	0
TOT.				68.1									88	28	17
AVG.	181	3.9	45.0	2.8	18.53	19.77	16.57	13.30	17.07	18.71	17.61	20.44	4	1	1

DATE
(11/21/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	8.0	50.0	0.	18.50	20.75	18.50	17.25	19.00	19.50	18.00	18.75	2	0	1
1	150	6.3	50.0	0.	19.00	20.75	18.25	18.25	18.75	19.25	18.00	19.00	1	0	1
2	160	6.8	48.0	0.	18.00	20.00	18.50	18.25	18.50	19.00	17.75	18.50	2	0	1
3	160	8.0	46.0	0.	18.50	19.50	18.50	13.00	19.00	19.00	17.50	18.50	2	0	1
4	150	6.5	44.0	0.	18.00	19.25	18.25	12.50	18.75	18.50	17.25	18.50	2	0	1
5	150	7.5	44.0	0.	18.25	19.00	18.25	13.75	18.50	18.75	17.25	18.50	2	0	1
6	150	5.2	42.0	0.	18.25	19.25	18.00	13.00	18.25	19.00	17.25	18.25	2	0	1
7	190	4.0	42.0	0.	18.00	19.00	17.50	11.00	18.00	19.00	17.00	18.00	3	0	1
8	160	1.6	42.0	16.3	18.25	19.50	17.25	11.25	18.00	19.00	17.00	18.00	1	0	0
9	150	5.5	42.0	87.5	18.25	19.50	17.00	10.50	17.50	19.00	17.00	18.00	3	0	1
10	150	4.0	42.0	146.6	18.00	20.00	17.00	11.00	17.25	19.00	17.00	18.00	2	0	1
11	150	2.4	42.0	183.4	18.50	20.00	17.00	13.00	17.25	19.00	17.00	17.75	2	0	2
12	270	.7	42.0	194.5	18.25	19.75	16.75	15.00	18.00	18.75	17.00	17.50	2	0	1
13	30	1.5	42.0	179.2	18.50	20.00	16.75	11.00	17.00	18.75	17.00	18.00	2	0	1
14	30	1.6	42.0	138.6	18.25	20.50	16.25	11.00	16.75	19.00	17.00	17.75	3	0	1
15	190	3.2	42.0	76.4	18.25	20.50	16.00	10.75	16.50	19.00	17.00	18.00	2	0	1
16	100	1.3	42.0	7.1	19.00	20.75	16.00	11.00	16.25	19.25	15.75	15.75	3	0	1
17	130	.6	42.0	0.	18.50	20.75	15.75	9.50	16.00	19.25	16.25	17.50	3	0	1
18	190	1.2	42.0	0.	18.75	20.50	15.50	9.00	15.50	19.00	16.75	18.00	3	0	1
19	180	.6	42.0	0.	18.25	20.25	15.25	9.00	15.25	19.00	16.75	18.25	3	0	1
20	120	1.6	42.0	0.	18.00	20.75	15.00	10.00	15.50	19.00	16.75	18.00	3	0	1
21	120	.6	41.0	0.	18.75	21.00	14.75	9.50	15.00	19.00	16.75	18.25	3	0	1
22	120	1.2	41.0	0.	18.00	21.00	14.50	8.50	14.75	19.00	16.75	17.75	3	0	1
23	90	1.0	41.0	0.	18.00	20.75	14.25	8.00	14.25	18.75	16.50	17.50	1	0	1
TOT.				1029.6									55	0	27
AVG.	143	3.4	43.1	42.9	18.33	20.12	16.70	11.87	17.06	18.99	17.01	18.00	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	.8	42.0	0.	18.25	20.25	14.00	12.75	15.75	16.75	16.25	17.25	2	0	1
1	90	.5	42.0	0.	17.50	20.00	14.00	10.00	14.75	18.50	16.25	17.00	2	0	1
2	330	.8	42.0	0.	18.00	19.75	14.00	10.75	15.00	18.25	16.25	17.00	1	0	1
3	360	.8	42.0	0.	17.50	19.50	13.75	7.50	14.00	18.25	16.25	16.75	2	0	1
4	360	1.3	42.0	0.	18.00	19.25	13.50	11.00	14.25	18.25	16.25	17.00	3	0	2
5	360	.6	41.0	0.	18.00	19.50	13.25	8.25	14.00	18.25	16.25	17.00	3	0	2
6	330	.8	39.0	0.	17.50	19.00	13.00	7.75	13.25	18.25	16.25	16.75	2	0	2
7	60	.7	39.0	0.	17.50	19.00	12.75	9.75	14.00	18.25	16.25	16.75	3	0	1
8	330	1.2	40.0	0.	17.75	19.25	12.50	7.25	12.50	18.25	16.00	16.50	5	0	1
9	60	1.5	40.0	4.3	17.25	19.25	12.00	7.00	13.00	18.00	15.75	16.25	3	0	1
10	360	2.0	40.0	10.1	17.25	19.50	12.00	6.25	12.25	18.00	15.75	16.50	2	0	1
11	30	3.0	41.0	14.0	17.50	19.50	11.50	10.50	14.00	18.25	15.75	16.75	2	0	0
12	330	3.0	43.0	15.5	17.25	19.75	11.75	7.00	12.00	18.00	15.50	17.25	2	0	0
13	330	3.4	46.0	14.5	16.25	19.50	11.25	5.50	11.75	14.50	12.00	19.00	3	0	1
14	330	3.0	48.0	11.2	16.50	19.75	12.25	11.00	12.50	14.00	14.00	27.00	2	0	1
15	330	2.5	46.0	5.8	16.75	19.50	13.00	13.00	13.50	13.75	13.75	30.25	4	0	1
16	360	1.8	42.0	.2	17.75	20.00	14.00	10.00	14.25	14.00	15.00	17.00	5	0	0
17	60	1.6	42.0	0.	17.00	20.00	14.00	8.25	14.25	14.50	14.00	14.50	10	0	1
18	30	1.2	42.0	0.	17.00	20.00	14.00	12.00	15.25	16.00	13.25	12.75	8	0	1
19	40	2.6	41.0	0.	17.50	20.00	13.75	14.00	15.75	17.00	15.00	15.00	13	3	1
20	40	3.5	41.0	0.	17.25	19.75	13.75	15.75	16.25	17.25	15.50	16.50	13	3	1
21	360	2.5	40.0	0.	17.25	20.00	13.75	9.00	14.25	17.25	15.75	16.75	12	3	0
22	360	.8	39.0	0.	17.25	20.00	13.25	7.50	13.75	17.25	15.50	17.00	13	3	1
23	150	1.0	39.0	0.	17.75	20.00	13.75	10.75	15.00	17.75	15.75	17.00	9	3	1
TOT.				75.6									123	16	22
AVG.	228	1.7	41.6	3.1	17.40	19.67	13.11	9.69	13.97	17.10	15.34	17.56	5	1	1

DATE
(11/23/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	1.0	39.0	0.	18.25	19.75	14.25	10.00	15.00	17.75	15.50	17.00	7	3	1
1	30	1.8	39.0	0.	18.00	19.50	14.50	9.00	15.00	17.25	15.50	16.75	4	2	1
2	330	1.9	39.0	0.	18.00	19.50	15.00	9.00	15.25	17.25	15.50	16.75	2	0	1
3	30	1.2	39.0	0.	18.00	19.25	15.00	11.50	15.75	17.75	15.50	17.00	3	0	2
4	360	1.8	39.0	0.	18.25	19.50	15.25	11.75	16.00	18.00	16.00	17.00	3	0	2
5	360	1.7	38.0	0.	18.00	19.50	15.50	10.00	16.00	18.00	16.00	17.00	2	0	1
6	270	1.4	38.0	0.	17.75	19.00	15.00	13.00	16.00	18.00	16.00	17.00	2	0	2
7	210	1.2	38.0	0.	17.75	19.25	14.50	9.50	15.25	18.00	16.00	17.00	4	0	2
8	150	1.8	38.0	0.	17.75	19.75	14.25	8.25	14.50	18.00	16.00	17.00	3	0	1
9	150	2.2	38.0	32.8	17.50	19.50	13.75	8.50	14.50	18.25	15.75	17.00	3	0	2
10	210	2.0	39.0	75.1	17.50	19.75	13.50	7.25	14.00	18.00	15.75	17.00	6	0	2
11	60	2.0	39.0	103.5	17.75	19.75	13.50	7.75	13.75	18.00	15.50	17.00	4	0	1
12	360	2.5	40.0	114.5	16.75	19.75	13.00	6.25	13.25	14.00	12.00	15.25	3	0	1
13	150	2.5	40.0	107.4	15.75	19.75	13.50	7.00	13.00	13.25	11.00	15.00	2	0	1
14	180	1.4	41.0	82.6	15.00	19.75	13.25	8.00	12.00	12.75	12.25	13.50	6	3	1
15	150	2.5	41.0	42.9	16.00	20.00	12.00	10.25	13.00	14.50	13.75	12.00	7	3	2
16	150	3.5	40.0	1.3	16.25	20.00	12.00	8.00	12.75	16.75	14.75	13.00	7	3	1
17	180	3.4	40.0	0.	16.50	20.00	11.50	12.00	14.25	16.50	15.00	13.75	6	3	1
18	270	.8	40.0	0.	17.00	20.00	12.25	11.00	13.00	16.75	15.00	15.00	6	3	0
19	60	.8	40.0	0.	17.75	20.00	12.75	8.75	13.25	17.25	12.25	12.00	7	3	1
20	100	1.5	41.0	0.	18.00	20.00	13.25	10.00	14.25	17.25	14.00	15.50	7	3	1
21	150	3.6	40.0	0.	17.75	19.75	13.50	12.00	15.00	17.25	14.75	16.25	6	3	1
22	150	5.0	40.0	0.	17.75	19.75	14.25	15.25	16.00	17.50	15.00	16.75	6	3	1
23	150	5.0	39.0	0.	17.75	19.50	14.50	8.50	15.00	17.50	15.50	17.00	7	3	2
TOT.				560.1									110	38	29
AVG.	178	2.2	39.4	23.3	17.36	19.68	13.74	9.69	14.41	16.90	14.76	15.77	5	2	1

DATE
(11/24/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.2	41.0	0.	17.75	19.50	14.75	12.50	15.50	17.50	15.50	17.00	6	3	2
1	150	4.0	41.0	0.	17.75	19.25	15.50	11.25	16.00	17.25	15.50	17.00	6	3	2
2	140	2.6	41.0	0.	17.75	19.25	15.75	12.00	16.00	17.50	15.50	17.00	5	3	1
3	150	2.4	41.0	0.	18.00	19.75	15.50	10.00	16.00	18.00	15.75	17.00	2	0	1
4	140	2.0	40.0	0.	18.25	19.75	15.75	9.75	16.00	18.00	15.75	17.25	3	0	2
5	150	4.0	40.0	0.	18.25	20.00	15.75	10.00	16.25	18.00	16.00	17.50	3	0	2
6	150	5.5	40.0	0.	18.25	20.00	16.00	9.75	16.00	18.25	16.00	17.50	2	0	1
7	150	5.2	40.0	0.	17.75	20.00	15.00	11.25	16.00	18.25	16.00	17.75	2	0	1
8	150	8.0	41.0	0.	17.75	20.00	14.75	10.25	15.50	18.25	16.00	18.00	3	0	1
9	150	9.0	42.0	10.0	18.00	20.25	14.50	9.75	15.00	18.25	16.00	18.00	4	0	2
10	180	10.0	43.0	22.4	17.75	20.00	13.75	7.75	14.25	18.00	16.00	17.75	5	0	1
11	180	11.5	43.0	30.7	18.00	20.25	14.00	10.75	14.75	18.25	16.00	18.00	2	0	1
12	180	10.5	43.0	34.0	17.75	20.00	13.50	11.00	15.00	18.25	16.00	17.75	2	0	1
13	180	10.5	45.0	31.8	18.00	20.00	13.25	9.25	14.25	18.25	16.25	18.00	3	0	1
14	180	10.5	48.0	24.5	17.75	20.00	13.25	12.25	15.25	18.25	16.00	18.00	5	3	1
15	180	10.5	49.0	12.7	17.75	19.75	13.00	7.75	13.50	18.00	16.00	18.00	6	3	1
16	180	13.5	48.0	.4	18.00	19.75	13.00	11.25	15.00	18.00	16.25	18.25	6	3	0
17	180	13.0	48.0	0.	18.25	19.75	13.00	8.75	13.75	18.25	16.50	18.00	7	3	2
18	180	16.5	48.0	0.	18.50	19.50	13.50	11.50	15.00	18.25	16.50	18.00	7	3	1
19	180	14.0	48.0	0.	19.25	20.00	13.75	9.00	14.25	18.50	16.75	16.00	7	3	1
20	180	13.0	48.0	0.	19.00	19.25	14.25	11.00	15.50	18.75	16.00	16.25	10	3	1
21	180	10.0	48.0	0.	19.25	19.25	14.75	10.25	15.25	18.75	16.75	17.00	10	3	0
22	180	10.0	48.0	0.	19.25	19.25	14.75	8.75	15.00	18.50	17.00	17.75	9	3	0
23	180	7.8	48.0	0.	19.25	19.25	15.00	11.25	16.00	19.00	17.00	18.00	8	3	0
TOT.				166.5									122	43	26
AVG.	167	8.7	44.2	6.9	18.22	19.74	14.42	10.29	15.21	18.18	16.12	17.53	5	2	1

DATE
(11/25/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	210	5.0	48.0	0.	19.50	19.75	15.50	15.00	17.00	18.75	16.75	18.25	11	3	0
1	360	2.1	42.0	0.	18.75	19.25	15.75	16.50	17.25	18.50	16.75	18.00	5	2	1
2	100	1.3	42.0	0.	18.50	19.25	16.50	17.25	17.25	18.25	16.75	18.00	2	0	1
3	90	2.5	43.0	0.	18.75	19.50	17.00	17.50	17.50	18.00	16.75	18.00	2	0	1
4	150	1.8	43.0	0.	18.25	19.50	17.25	17.50	17.50	18.00	16.75	18.00	3	0	2
5	180	5.2	42.0	0.	18.50	19.50	18.00	11.25	18.25	18.00	16.75	18.00	3	0	2
6	160	7.0	42.0	0.	18.25	19.50	17.00	14.00	17.75	18.50	16.75	18.00	2	0	1
7	150	7.0	41.0	0.	18.25	20.00	16.75	13.00	17.25	18.50	16.75	18.25	4	0	1
8	150	5.5	41.0	0.	18.25	20.00	16.25	11.25	16.75	18.50	16.75	18.25	5	0	0
9	150	5.5	42.0	2.6	18.25	20.00	15.75	9.50	16.00	18.50	16.75	18.25	2	0	0
10	180	6.0	44.0	5.7	18.25	20.25	15.50	12.50	16.50	18.75	16.50	18.25	4	0	0
11	210	4.2	48.0	9.8	18.25	20.25	15.00	11.25	16.00	18.75	15.00	20.50	2	0	0
12	30	4.0	48.0	12.5	18.25	20.00	15.25	15.75	17.00	18.50	17.00	20.75	2	0	0
13	30	4.8	44.0	12.9	18.00	19.75	15.50	17.25	17.25	18.25	17.25	22.75	1	0	0
14	30	9.5	46.0	11.0	18.00	20.75	16.50	17.75	17.75	18.25	18.75	23.50	9	3	0
15	30	8.0	44.0	5.9	18.25	21.25	17.00	18.00	18.00	18.50	19.00	26.50	5	3	0
16	30	6.0	42.0	.2	18.25	21.50	17.50	18.00	18.00	18.50	19.00	26.25	6	3	0
17	30	4.2	41.0	0.	18.50	21.25	17.50	18.25	18.25	18.50	18.50	19.50	6	3	1
18	30	3.0	41.0	0.	18.25	20.75	18.25	18.00	18.00	18.25	18.00	18.25	7	3	1
19	30	3.5	39.0	0.	18.50	20.00	19.00	17.75	17.75	18.00	17.50	18.25	10	3	1
20	30	2.0	40.0	0.	18.75	19.75	19.50	15.00	19.75	18.00	17.25	18.75	7	3	0
21	30	2.5	41.0	0.	18.75	19.50	19.50	14.00	19.25	18.00	17.00	18.75	8	3	2
22	360	1.6	39.0	0.	18.75	19.50	20.00	13.25	20.25	18.25	17.00	18.75	6	3	1
23	360	1.0	39.0	0.	18.75	19.75	20.00	14.50	19.50	18.25	16.75	18.75	7	3	2
TOT.				60.6									119	34	18
AVG.	130	4.5	42.6	2.5	18.45	20.02	17.16	15.17	17.74	18.34	17.17	19.60	5	2	1

DATE
(11/26/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.8	38.0	0.	18.25	19.25	20.50	16.75	18.25	18.25	16.25	18.50	7	3	1
1	40	3.0	38.0	0.	18.50	20.00	20.75	14.75	20.00	18.25	16.50	18.50	6	2	2
2	50	4.0	37.0	0.	18.50	20.00	20.75	15.00	19.50	18.25	16.25	18.25	2	0	1
3	60	4.0	37.0	0.	18.50	19.75	21.00	14.00	21.00	18.50	16.25	18.25	2	0	1
4	40	3.5	36.0	0.	18.25	20.00	21.00	13.50	21.00	18.50	16.00	18.25	4	0	3
5	60	3.5	36.0	0.	17.75	20.00	20.00	14.00	20.50	18.50	16.00	18.25	3	0	2
6	60	4.5	36.0	0.	18.00	20.25	20.00	15.00	19.00	18.25	16.00	18.00	3	0	2
7	60	4.0	36.0	0.	17.00	19.75	19.50	12.00	19.75	18.00	15.50	17.75	3	0	1
8	360	2.5	36.0	0.	17.25	20.25	18.75	12.25	19.00	18.00	15.50	17.75	4	0	0
9	360	3.2	36.0	54.0	17.00	20.50	18.25	11.75	18.75	18.00	15.25	17.75	2	0	0
10	60	4.2	36.0	117.8	17.25	20.25	17.50	13.00	18.00	18.00	18.25	25.00	1	0	0
11	60	4.2	39.0	160.2	17.25	20.25	18.25	12.00	18.50	18.00	20.00	29.75	1	0	0
12	30	3.5	40.0	177.4	17.25	20.00	19.00	16.00	18.00	18.25	21.75	34.25	5	0	0
13	30	4.3	40.0	165.1	19.00	20.75	20.50	16.75	17.75	18.25	19.25	31.75	1	0	0
14	60	4.5	41.0	127.1	18.00	20.25	21.50	17.50	17.75	18.25	23.75	32.50	3	0	0
15	50	3.0	41.0	66.5	18.50	20.25	22.75	18.25	18.25	18.50	24.00	30.50	3	0	0
16	60	3.5	38.0	2.5	19.00	20.25	23.25	18.50	18.50	19.00	24.75	33.25	7	0	0
17	50	3.0	38.0	0.	19.00	20.00	23.75	18.50	18.50	19.00	23.50	25.75	4	0	1
18	30	1.8	38.0	0.	18.75	20.00	23.75	18.75	18.50	19.00	20.00	21.00	3	0	2
19	60	1.5	42.0	0.	19.00	19.50	23.75	18.50	18.50	18.75	19.50	18.75	4	0	2
20	30	.8	37.0	0.	18.00	19.25	23.75	18.25	18.25	18.25	18.25	19.00	4	0	1
21	60	1.5	37.0	0.	18.00	19.50	23.75	16.25	21.75	18.00	16.75	18.75	2	0	1
22	60	.7	37.0	0.	17.50	19.25	23.00	15.00	23.00	18.00	16.25	18.50	3	0	2
23	50	1.8	37.0	0.	17.25	19.00	22.25	15.00	22.25	18.00	16.75	18.50	3	0	2
TOT.				870.6									81	5	25
AVG.	89	3.0	37.8	36.3	18.03	19.93	21.14	15.47	19.34	18.32	18.43	22.48	3	0	1

DATE
(11/27/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	1.1	36.0	0.	17.25	18.75	22.00	15.75	19.25	17.75	15.25	18.25	3	0	2
1	30	1.5	32.0	0.	16.75	18.25	21.50	13.25	22.00	17.50	15.00	17.75	3	0	2
2	60	2.2	32.0	0.	17.00	18.25	21.25	14.50	20.25	17.50	15.00	17.75	3	0	3
3	50	1.3	32.0	0.	16.50	18.00	20.25	13.50	20.75	17.25	14.75	17.25	3	0	2
4	60	2.5	32.0	0.	16.50	18.50	20.00	13.25	20.50	17.25	14.75	17.25	4	0	3
5	150	.8	31.0	0.	16.50	18.25	19.75	12.75	20.00	17.25	14.50	17.25	5	0	3
6	150	1.1	31.0	0.	16.50	18.50	19.00	12.75	19.25	17.25	14.25	17.00	4	0	3
7	100	1.1	31.0	0.	16.75	18.50	18.50	12.00	19.00	17.00	14.00	17.00	3	0	2
8	150	1.8	31.0	0.	16.25	18.25	18.00	11.25	18.25	17.00	14.00	17.00	3	0	1
9	360	1.3	31.0	97.3	16.75	19.25	17.25	10.75	18.50	17.25	14.00	17.00	4	1	1
10	330	1.7	32.0	209.0	16.75	19.00	17.00	10.75	17.00	17.00	14.25	18.00	5	3	1
11	150	2.0	31.0	283.1	16.75	19.25	17.00	10.50	17.00	17.50	18.75	32.00	4	2	0
12	330	2.5	38.0	312.8	17.00	19.50	17.50	13.75	17.50	17.75	19.25	29.50	5	3	0
13	330	4.0	40.0	290.9	17.00	19.50	18.25	14.50	17.75	18.00	19.50	24.25	6	3	1
14	330	3.1	40.0	222.3	18.25	19.50	19.75	15.00	18.75	18.00	23.25	46.00	4	1	2
15	330	2.3	39.0	116.5	19.00	19.75	21.75	16.00	17.25	17.25	24.00	37.00	4	0	2
16	330	1.4	38.0	4.6	20.00	19.25	23.00	17.50	18.25	18.25	24.75	32.25	3	0	1
17	330	2.0	38.0	0.	20.75	19.25	24.50	17.75	20.75	19.25	24.50	27.00	5	0	1
18	90	2.0	33.0	0.	20.25	19.50	24.25	16.75	23.75	19.75	20.00	21.25	6	0	1
19	100	2.2	33.0	0.	19.50	19.75	23.50	15.75	23.25	19.50	18.25	20.50	7	0	1
20	120	.8	32.0	0.	18.75	19.75	23.00	15.00	23.00	19.00	17.50	20.25	3	0	1
21	150	.8	31.0	0.	18.25	19.75	22.50	16.00	21.50	18.75	17.25	20.50	3	0	1
22	150	1.0	31.0	0.	17.75	19.50	22.25	16.50	19.75	18.25	17.00	20.50	3	0	1
23	150	1.0	31.0	0.	17.50	19.50	22.00	15.25	20.50	18.00	16.50	20.25	3	0	2
TOT.				1536.5									95	14	34
AVG.	182	1.7	33.6	64.0	17.68	19.05	20.57	14.20	19.74	17.89	17.51	22.78	4	1	1

DATE
(11/28/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	1.2	31.0	0.	17.25	19.00	21.75	15.50	19.50	17.75	16.00	20.00	3	0	2
1	160	1.4	31.0	0.	17.00	18.75	21.75	14.25	21.50	17.00	15.25	19.75	3	0	2
2	160	.8	31.0	0.	16.75	18.50	21.25	16.00	19.75	17.00	15.00	19.50	3	0	3
3	160	.7	31.0	0.	16.50	18.75	21.00	14.00	20.00	17.00	14.75	19.00	3	0	2
4	160	1.2	31.0	0.	16.75	18.50	21.25	13.25	20.25	17.00	14.50	18.50	4	0	3
5	100	.8	30.0	0.	16.50	18.50	20.00	13.75	20.00	17.25	14.25	18.00	4	0	3
6	180	.9	30.0	0.	16.50	18.75	19.25	12.75	19.25	17.00	14.25	17.75	4	1	2
7	240	.6	30.0	0.	16.00	18.75	19.00	12.00	19.00	17.00	14.00	17.00	7	3	2
8	240	.3	30.0	.2	16.25	19.00	18.25	11.25	18.50	17.00	14.00	17.00	6	3	2
9	360	1.1	30.0	93.9	16.25	19.25	17.50	11.00	18.00	17.00	14.00	17.00	6	3	1
10	360	1.1	31.0	180.3	16.50	19.25	17.25	11.25	18.25	17.00	14.25	16.75	6	3	1
11	330	2.0	32.0	210.0	17.25	19.50	17.50	11.75	18.00	17.25	18.25	25.50	5	3	1
12	330	2.3	32.0	230.4	17.50	19.50	18.00	11.50	18.50	17.25	19.75	29.25	5	3	1
13	320	4.0	40.0	293.3	18.00	19.50	19.00	14.25	18.25	18.00	20.75	29.50	4	0	1
14	330	3.0	40.0	241.8	18.25	19.75	19.75	13.25	20.00	18.00	20.25	27.00	9	0	1
15	330	2.0	40.0	130.0	18.75	19.75	20.50	15.75	19.75	18.50	22.00	30.00	11	0	2
16	340	1.1	38.0	5.4	19.00	19.75	21.50	15.00	21.00	19.00	22.75	30.50	11	0	1
17	40	1.6	35.0	0.	18.75	20.00	22.00	15.00	21.75	19.00	21.25	23.00	9	0	1
18	40	4.0	33.0	0.	18.25	19.75	21.50	15.50	20.75	19.00	19.00	19.50	9	0	1
19	360	1.2	32.0	0.	18.25	19.75	21.00	14.75	20.50	19.00	17.50	19.00	9	0	1
20	360	.8	32.0	0.	18.00	20.00	20.50	14.00	20.25	18.50	17.00	18.50	8	0	1
21	360	1.4	32.0	0.	18.00	19.75	20.25	15.25	19.00	18.25	16.50	18.50	6	2	1
22	330	1.0	32.0	0.	17.50	19.50	20.00	14.00	19.50	18.25	16.00	18.00	6	3	1
23	360	1.2	32.0	0.	17.00	19.50	19.50	13.00	19.75	18.00	15.75	18.00	6	3	2
TOT.				1385.3									147	31	38
AVG.	253	1.5	32.7	57.7	17.36	19.29	19.97	13.67	19.62	17.75	16.96	21.10	6	1	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.5	32.0	0.	17.50	19.00	19.50	13.75	19.00	18.00	15.50	18.00	7	3	2
1	360	.6	31.0	0.	17.50	19.00	19.75	12.50	20.00	17.75	15.50	17.75	6	3	2
2	30	.4	31.0	0.	17.75	19.00	19.75	13.75	19.00	17.75	15.25	17.75	6	3	2
3	60	1.1	31.0	0.	17.50	19.25	20.00	14.00	19.75	17.75	15.25	17.75	7	3	2
4	30	1.0	31.0	0.	17.50	19.25	20.00	13.00	20.00	17.75	15.00	17.25	7	3	3
5	40	.6	31.0	0.	17.50	19.25	20.00	13.00	20.00	17.75	15.00	17.50	3	0	2
6	60	.9	31.0	0.	17.50	19.50	20.00	15.00	19.50	17.50	14.75	17.25	3	0	2
7	60	1.1	31.0	0.	17.00	19.50	19.75	12.50	20.00	17.50	14.75	17.25	2	0	2
8	270	.8	31.0	.2	17.75	20.00	19.50	13.00	19.50	17.75	15.00	17.00	3	0	2
9	360	1.1	31.0	66.6	17.00	20.00	18.75	13.00	18.25	17.75	15.00	17.00	3	0	0
10	360	1.3	32.0	145.0	17.00	20.00	18.25	12.75	18.25	17.50	15.00	17.00	4	0	0
11	360	1.0	36.0	199.9	17.00	20.00	18.00	12.00	18.00	17.50	15.00	17.00	2	0	0
12	330	2.0	40.0	223.9	17.00	20.00	17.75	12.00	18.00	17.50	18.25	24.00	1	0	0
13	30	3.0	42.0	191.1	17.25	20.00	18.25	14.00	18.00	18.00	21.00	37.00	3	0	0
14	340	2.5	42.0	125.1	17.75	20.00	19.50	16.25	17.75	18.00	22.00	36.75	7	0	0
15	360	2.4	42.0	45.4	17.75	21.00	21.00	14.75	15.00	16.00	23.50	34.25	6	0	0
16	50	2.0	40.0	2.0	18.00	20.75	22.00	16.00	16.25	16.75	24.00	36.50	3	0	0
17	360	1.0	38.0	0.	18.00	20.25	22.75	17.00	17.00	17.50	23.00	24.25	2	0	0
18	360	1.8	38.0	0.	18.00	20.50	22.50	17.25	17.25	17.50	19.75	20.00	4	0	2
19	330	1.8	33.0	0.	18.00	20.75	22.50	17.50	17.25	17.50	18.25	19.50	7	0	0
20	60	2.0	33.0	0.	17.75	20.25	22.75	17.50	17.25	17.50	17.50	19.50	6	0	1
21	360	1.5	32.0	0.	17.25	19.50	22.50	17.25	17.25	17.25	17.00	19.50	10	1	0
22	360	1.0	32.0	0.	17.75	19.75	22.00	15.25	21.00	17.75	16.75	19.50	9	3	1
23	90	1.1	31.0	0.	17.25	19.75	22.00	17.00	19.50	17.75	16.25	19.25	9	3	2
TOT.				999.2									121	24	24
AVG.	224	1.4	34.2	41.6	17.51	19.84	20.36	14.58	18.45	17.55	17.43	21.60	5	1	1

DATE
(11/30/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	40	.9	31.0	0.	17.25	19.50	21.75	16.25	19.00	17.50	16.00	19.25	6	3	2
1	360	1.0	31.0	0.	17.00	19.00	21.75	16.75	17.75	17.25	15.75	19.00	6	3	2
2	360	.6	31.0	0.	17.25	19.00	22.00	14.50	21.50	17.00	15.25	18.50	6	3	2
3	360	.4	31.0	0.	17.25	19.00	22.00	14.75	21.75	17.25	15.25	18.75	4	1	2
4	310	.8	31.0	0.	17.50	19.25	22.25	14.50	22.00	17.50	15.25	18.25	4	0	3
5	360	1.2	31.0	0.	17.50	19.00	22.25	14.50	22.25	17.75	15.25	18.25	3	0	2
6	60	1.5	31.0	0.	17.75	19.00	22.25	14.50	22.00	17.75	15.25	18.00	3	0	2
7	90	1.5	31.0	0.	17.25	19.25	21.75	15.50	21.25	17.75	15.25	17.50	3	0	2
8	360	1.3	31.0	.5	17.25	19.25	21.00	14.00	20.50	18.00	15.25	17.75	5	0	2
9	360	1.7	31.0	73.6	17.25	19.75	20.75	14.00	20.00	18.00	15.25	18.00	8	6	2
10	310	2.5	32.0	151.6	17.00	19.50	20.00	13.50	19.75	18.00	15.25	18.00	3	0	1
11	360	2.5	33.0	202.9	17.25	19.75	19.75	13.50	19.50	18.00	15.25	17.75	1	0	0
12	330	2.5	36.0	221.9	17.00	19.50	19.25	13.00	19.25	18.00	15.25	17.25	1	0	0
13	340	2.5	42.0	207.0	17.25	20.00	18.75	12.00	19.00	18.00	15.50	17.25	1	0	0
14	330	2.1	41.0	159.6	17.50	20.00	18.75	14.75	18.00	18.25	20.75	32.25	2	0	1
15	30	1.0	41.0	84.3	17.75	20.00	20.75	15.25	16.75	17.00	22.00	30.00	4	0	2
16	320	.6	40.0	3.9	18.00	19.75	21.00	17.00	17.00	17.50	21.00	23.00	2	0	0
17	310	.6	38.0	0.	18.00	19.75	21.00	15.00	19.50	18.00	19.00	20.00	4	0	2
18	20	.4	38.0	0.	18.25	20.00	20.75	14.00	20.50	18.25	18.50	16.75	3	0	1
19	90	.8	33.0	0.	17.75	20.00	20.50	16.25	18.50	18.00	17.00	17.75	5	0	2
20	140	1.2	32.0	0.	17.75	19.75	20.25	13.25	20.25	18.00	17.00	18.75	6	3	1
21	140	1.0	32.0	0.	17.50	19.75	20.00	14.25	19.25	18.00	16.25	19.00	6	3	1
22	150	1.6	32.0	0.	17.25	19.75	19.75	13.00	19.50	18.00	16.00	18.75	8	3	1
23	140	1.4	31.0	0.	17.25	19.25	20.00	14.00	19.50	17.50	15.75	18.75	6	3	2
TOT.				1105.3									99	24	30
AVG.	238	1.3	33.8	46.1	17.45	19.53	20.76	14.50	19.76	17.76	16.59	19.52	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	110	1.2	31.0	0.	17.25	19.00	20.50	12.75	20.50	17.25	15.25	19.00	6	3	1
1	100	.6	31.0	0.	17.25	19.00	20.50	13.25	20.75	17.25	15.00	19.00	6	3	2
2	120	1.0	31.0	0.	17.25	18.75	20.75	13.25	20.75	17.25	14.75	18.75	6	3	2
3	170	1.6	31.0	0.	17.50	18.75	20.50	13.75	20.25	17.25	15.00	18.75	6	3	2
4	170	.8	31.0	0.	17.75	19.00	20.50	12.00	20.75	17.50	15.00	18.75	6	2	2
5	170	.7	31.0	0.	17.50	19.00	20.25	14.00	20.00	17.50	15.00	18.50	3	0	2
6	270	.8	30.0	0.	17.75	19.00	20.50	13.00	20.75	17.75	15.25	18.75	2	0	2
7	330	2.0	32.0	0.	17.50	19.25	20.25	13.25	20.50	17.75	15.25	18.50	3	0	2
8	330	2.7	32.0	4.2	17.25	19.25	19.50	12.75	20.00	18.00	15.25	18.50	3	0	2
9	360	2.0	32.0	49.6	17.25	19.50	19.25	12.75	19.50	18.00	15.25	18.25	1	0	0
10	330	1.6	32.0	90.4	16.75	19.50	18.75	12.00	19.25	17.75	15.25	18.00	5	0	2
11	240	2.0	33.0	116.5	17.25	19.75	18.25	12.00	18.50	18.00	15.50	17.75	6	0	2
12	280	1.4	32.0	125.2	17.25	20.00	18.00	13.25	18.25	18.00	15.25	17.50	3	0	1
13	330	2.5	32.0	116.0	17.25	20.00	17.50	12.25	18.00	17.75	15.25	17.25	3	0	2
14	60	1.5	33.0	89.6	17.25	20.00	17.50	11.25	18.00	17.75	15.25	17.25	2	0	1
15	360	1.6	33.0	48.5	17.25	20.00	17.25	11.25	17.50	17.75	15.25	17.00	2	0	1
16	330	1.2	32.0	3.4	17.25	19.75	17.00	10.25	17.00	17.75	15.25	17.00	7	0	2
17	150	3.0	33.0	0.	17.00	19.50	16.75	13.00	17.00	17.75	15.50	17.00	4	0	1
18	150	2.6	32.0	0.	17.00	19.50	16.50	11.50	16.75	17.50	15.25	17.00	7	0	2
19	150	2.5	32.0	0.	17.00	20.00	16.50	10.00	16.75	17.50	15.25	13.50	5	0	1
20	150	2.5	32.0	0.	17.25	19.75	16.00	11.25	16.50	17.25	15.25	15.50	5	0	2
21	140	1.4	32.0	0.	17.00	19.50	15.75	10.25	16.00	17.25	15.00	16.25	13	3	1
22	90	2.0	32.0	0.	17.00	19.50	15.75	10.25	16.00	17.25	14.50	16.25	12	3	1
23	90	2.0	32.0	0.	17.00	19.25	15.75	10.25	16.00	17.00	14.50	16.50	14	3	2
TOT.				643.4									129	25	36
AVG.	207	1.7	31.8	26.8	17.24	19.44	18.32	12.06	18.55	17.57	15.14	17.52	5	1	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.0	32.0	0.	17.00	19.00	16.00	9.50	16.25	17.00	14.50	16.75	10	3	2
1	150	1.4	32.0	0.	17.25	19.00	16.00	10.25	16.25	17.00	14.75	16.75	8	3	2
2	60	2.0	32.0	0.	17.25	19.00	16.25	10.25	16.50	17.00	14.75	16.75	6	3	1
3	60	3.0	32.0	0.	17.25	19.00	16.50	10.00	16.50	17.00	15.00	16.75	6	3	2
4	360	.8	32.0	0.	17.25	18.75	16.50	11.75	16.75	17.25	15.00	16.75	6	3	2
5	330	2.2	32.0	0.	17.25	19.00	16.50	11.00	16.75	17.25	15.00	16.75	6	2	2
6	60	3.5	32.0	0.	17.25	19.00	16.50	10.25	17.00	17.25	15.00	16.75	3	0	2
7	40	2.0	31.0	0.	17.50	19.25	16.25	11.00	16.75	17.50	15.00	17.00	3	0	2
8	60	2.6	31.0	.6	17.00	19.25	15.75	9.75	16.00	17.25	15.25	17.00	4	0	2
9	60	1.8	31.0	8.1	16.50	19.00	15.25	9.25	15.75	17.25	15.00	16.75	7	0	2
10	180	1.0	31.0	14.9	17.00	19.25	15.00	9.75	15.25	17.25	15.00	16.75	12	0	2
11	180	2.0	31.0	19.2	16.75	18.75	14.50	8.75	15.25	17.25	15.00	16.75	9	3	1
12	300	1.3	32.0	20.7	17.00	19.50	14.50	9.75	15.00	17.50	15.00	16.75	6	3	1
13	330	.8	33.0	19.2	17.50	19.75	15.00	10.00	15.25	17.25	15.00	17.00	6	3	1
14	330	2.0	33.0	14.8	17.00	19.50	15.25	9.00	15.50	17.25	15.00	16.75	7	3	2
15	360	1.3	33.0	8.0	18.00	19.50	15.25	9.75	15.75	17.50	15.25	17.00	10	0	1
16	90	2.0	33.0	.5	18.00	20.00	15.50	11.00	16.00	17.75	15.25	16.75	5	0	0
17	150	2.0	33.0	0.	17.25	20.00	15.00	9.75	15.00	17.75	15.50	17.00	9	0	1
18	150	1.5	33.0	0.	17.00	20.00	15.00	14.75	16.00	17.25	15.25	17.00	6	0	0
19	90	1.2	33.0	0.	16.50	19.50	15.00	11.00	15.25	17.00	15.25	17.00	3	0	1
20	30	1.5	33.0	0.	16.75	19.25	15.00	14.75	16.00	17.00	15.25	16.75	3	0	1
21	360	2.0	33.0	0.	17.00	19.75	14.75	13.25	15.75	17.00	15.25	16.75	6	3	1
22	20	2.6	32.0	0.	16.25	19.25	14.50	7.75	15.00	17.00	15.00	16.25	7	3	2
23	30	2.5	32.0	0.	17.00	19.25	15.25	13.75	15.75	16.75	15.00	16.00	6	3	2
TOT.				106.0									151	42	32
AVG.	164	1.9	32.2	4.4	17.10	19.31	15.46	10.67	15.89	17.22	15.05	16.77	6	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	2.5	32.0	0.	17.00	19.50	15.25	10.75	15.75	17.00	15.00	16.00	6	3	2
1	90	1.4	32.0	0.	17.00	19.50	15.25	9.75	15.75	17.00	15.00	16.00	6	3	2
2	100	1.8	32.0	0.	17.25	20.00	15.50	9.25	15.75	17.25	15.00	16.25	7	3	2
3	180	1.5	32.0	0.	17.25	20.00	15.00	10.00	15.75	17.25	15.25	16.00	6	3	2
4	180	1.6	32.0	0.	17.50	20.00	15.25	9.25	15.75	17.50	15.25	16.75	7	3	2
5	150	1.8	32.0	0.	17.75	20.25	15.50	10.00	15.75	17.75	15.25	16.25	6	3	2
6	150	2.0	32.0	0.	17.75	20.00	15.25	9.75	15.75	17.75	15.25	16.75	6	3	1
7	150	2.0	32.0	0.	18.00	20.50	15.25	9.75	16.00	17.75	15.25	16.50	3	0	1
8	180	1.6	32.0	.4	17.50	20.00	15.25	10.50	16.00	17.75	15.25	16.25	3	0	1
9	60	1.2	32.0	6.8	17.25	19.50	15.00	11.25	15.75	17.25	15.50	16.75	3	0	2
10	360	1.6	32.0	12.7	17.00	19.75	15.00	8.75	15.25	17.00	15.00	16.00	2	0	1
11	30	1.5	36.0	16.5	17.25	20.00	14.75	8.00	15.00	17.25	15.25	16.75	6	3	1
12	30	2.5	38.0	17.8	17.00	20.00	14.50	10.25	15.00	17.25	15.00	16.75	7	3	2
13	40	2.5	38.0	16.5	17.75	19.75	15.00	10.25	15.25	17.25	15.00	15.00	6	3	1
14	360	2.0	38.0	12.7	18.00	19.75	15.00	8.25	15.25	15.50	14.25	14.75	6	3	1
15	30	1.7	38.0	6.9	17.00	20.00	15.50	9.00	15.75	14.50	14.25	15.50	6	0	1
16	30	2.0	38.0	.5	17.25	19.75	15.50	8.50	15.75	16.00	14.50	16.25	5	0	1
17	30	2.0	38.0	0.	17.00	20.00	15.00	10.00	15.75	16.75	14.75	16.50	5	0	0
18	40	2.0	38.0	0.	16.75	19.25	15.00	9.75	15.50	16.75	14.75	16.25	2	0	0
19	360	1.2	38.0	0.	16.50	20.00	15.00	14.00	15.75	16.75	14.75	16.25	3	0	0
20	360	1.2	38.0	0.	16.25	20.00	15.00	15.25	16.00	16.50	14.75	16.25	3	0	0
21	330	.5	37.0	0.	16.00	20.75	15.00	16.00	16.00	16.25	14.75	16.00	5	3	0
22	270	.8	37.0	0.	16.00	21.25	15.00	16.00	16.00	16.25	14.50	16.00	10	3	0
23	270	1.0	35.0	0.	16.25	21.00	15.50	16.00	15.75	16.00	14.75	15.75	5	3	0
TOT.				90.8									124	47	27
AVG.	161	1.7	35.0	3.8	17.09	20.02	15.14	10.84	15.67	16.84	14.93	16.15	5	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.0	33.0	0.	16.75	20.00	16.00	15.75	15.75	16.00	14.25	15.75	5	3	1
1	150	1.3	33.0	0.	16.25	19.50	16.75	15.50	15.50	15.75	14.25	15.50	5	3	1
2	150	1.4	32.0	0.	16.25	18.75	17.25	10.50	17.25	15.75	13.75	15.75	6	3	2
3	120	.2	32.0	0.	16.25	18.75	17.25	12.25	17.00	16.00	14.00	15.75	6	3	2
4	120	1.0	32.0	0.	16.25	18.50	17.00	10.75	17.25	16.25	14.00	15.75	6	3	2
5	130	1.0	32.0	0.	16.50	19.00	17.00	11.50	17.00	16.75	14.25	16.00	7	3	2
6	150	2.0	33.0	0.	17.00	19.00	17.00	11.25	16.50	16.75	14.25	16.00	7	3	3
7	150	2.0	32.0	0.	17.00	19.00	17.00	10.25	17.00	17.00	14.50	16.25	3	0	2
8	180	1.0	33.0	.5	17.25	19.50	16.75	10.75	17.00	17.25	14.75	16.75	2	0	2
9	150	1.7	33.0	9.6	17.00	19.50	16.25	11.00	16.75	17.25	14.75	16.50	3	0	2
10	270	1.0	33.0	18.0	16.75	19.50	15.75	11.50	16.50	17.25	15.00	16.50	3	0	1
11	30	1.5	38.0	23.4	17.00	19.50	15.75	10.00	16.00	17.00	15.00	16.50	10	3	2
12	60	3.5	38.0	25.3	16.75	19.00	15.50	9.50	16.00	17.00	14.75	16.25	6	3	1
13	60	3.8	39.0	23.5	17.25	19.75	15.75	10.00	16.25	17.25	15.00	16.75	6	3	1
14	60	3.5	38.0	18.1	17.75	19.50	16.25	10.75	16.75	17.25	15.25	15.75	2	0	1
15	60	4.0	38.0	9.7	17.75	19.25	16.50	12.25	16.75	17.25	15.25	16.25	3	0	2
16	70	3.0	38.0	.6	17.00	19.25	16.00	11.25	16.50	17.50	15.25	16.75	3	0	2
17	70	2.0	38.0	0.	17.00	19.25	15.50	10.00	16.00	17.25	15.00	16.50	2	0	2
18	90	1.5	38.0	0.	17.00	19.25	15.25	9.50	15.75	17.25	15.00	16.75	2	0	2
19	120	2.5	38.0	0.	17.00	19.25	15.00	9.00	15.25	17.25	15.00	17.00	5	0	2
20	150	1.7	38.0	0.	17.00	19.25	14.75	8.25	15.00	17.25	15.00	16.75	4	0	2
21	130	2.8	38.0	0.	17.00	19.50	14.25	10.00	15.00	17.25	15.00	17.00	5	1	1
22	150	3.0	38.0	0.	17.25	19.75	14.00	10.00	14.75	17.25	15.00	16.75	6	3	1
23	190	2.0	38.0	0.	17.00	19.25	13.75	9.25	14.75	17.00	15.00	16.75	7	3	2
TOT.				128.7									114	43	38
AVG.	123	2.1	35.5	5.4	16.92	19.28	15.93	10.86	16.18	16.91	14.72	16.34	5	2	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	3.5	37.0	0.	17.25	19.00	14.50	8.00	14.75	17.00	15.00	16.75	7	3	2
1	150	4.0	38.0	0.	17.00	19.00	14.50	10.00	15.25	17.00	15.00	16.00	6	3	1
2	150	2.0	38.0	0.	17.00	19.00	14.75	8.75	15.00	17.00	14.75	16.75	6	3	2
3	150	1.1	38.0	0.	17.25	19.00	15.00	9.00	15.25	17.00	15.00	16.75	6	3	1
4	150	2.5	34.0	0.	17.25	19.00	14.75	8.75	15.25	17.00	14.75	16.50	6	3	2
5	150	1.6	34.0	0.	17.25	19.00	15.00	11.00	15.75	17.00	15.00	16.75	4	0	3
6	150	3.5	34.0	0.	17.00	19.00	15.25	10.00	15.00	17.00	14.75	16.50	3	0	2
7	150	3.0	33.0	0.	17.25	19.25	14.25	8.25	14.75	17.25	15.00	16.50	4	0	2
8	150	1.5	33.0	.4	16.75	19.25	14.00	8.00	14.25	17.25	14.75	17.00	4	0	2
9	150	5.0	38.0	7.8	16.50	20.00	13.50	9.00	14.25	17.25	13.25	22.25	2	0	1
10	180	2.0	40.0	14.7	17.25	20.50	13.75	7.75	14.00	17.25	16.00	27.00	3	0	1
11	320	2.2	41.0	16.6	17.00	19.75	14.25	11.50	15.00	17.50	16.75	32.00	5	3	1
12	310	2.0	41.0	14.3	17.50	20.00	15.25	14.00	16.00	17.75	17.75	30.00	6	3	1
13	360	1.8	41.0	13.3	18.25	20.00	16.75	11.00	17.00	18.00	17.00	21.75	6	3	1
14	360	2.6	41.0	10.3	18.25	19.75	17.00	13.00	17.25	18.25	17.00	16.75	2	0	1
15	360	.4	41.0	5.5	18.50	19.75	17.25	11.00	17.50	18.00	16.25	17.50	2	0	1
16	360	1.0	41.0	.3	18.00	20.00	17.25	11.00	17.25	18.00	16.25	17.50	3	0	2
17	90	.8	41.0	0.	18.00	19.25	16.75	12.75	17.00	18.00	16.00	17.25	3	0	1
18	130	1.2	40.0	0.	17.75	19.75	16.25	11.00	16.75	18.00	15.75	17.25	3	0	1
19	90	2.5	40.0	0.	17.25	19.50	16.00	9.75	16.25	18.00	15.50	17.25	3	0	1
20	120	1.1	40.0	0.	17.25	19.25	16.00	12.00	16.50	18.00	15.75	17.25	5	0	2
21	150	.8	41.0	0.	17.00	19.75	16.00	11.00	16.25	17.75	15.25	17.00	6	1	1
22	150	1.8	39.0	0.	17.25	19.50	15.25	10.50	15.75	17.50	15.25	17.25	5	3	0
23	90	3.2	39.0	0.	17.25	19.75	15.50	12.50	16.00	17.50	15.25	17.00	5	3	1
TOT.				83.2									104	36	32
AVG.	192	2.1	38.5	3.5	17.37	19.50	15.36	10.40	15.75	17.51	15.54	18.94	4	1	1

DATE
(12/06/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	1.4	39.0	0.	17.75	19.50	16.25	15.25	16.50	17.25	15.25	16.75	5	3	1
1	150	1.4	39.0	0.	17.25	19.00	16.75	11.00	16.75	17.00	15.00	17.00	6	3	2
2	150	2.8	39.0	0.	17.25	19.00	17.00	12.75	16.00	17.00	15.00	16.75	6	3	2
3	150	4.0	38.0	0.	17.50	18.50	16.75	11.50	17.00	17.00	15.25	17.00	6	3	2
4	150	4.3	38.0	0.	17.50	18.75	17.00	11.00	17.50	17.25	15.25	17.00	6	3	2
5	160	2.5	38.0	0.	17.25	18.50	17.00	12.50	16.75	17.50	15.50	17.00	3	0	2
6	160	5.0	38.0	0.	18.00	19.00	17.25	12.00	17.50	17.50	15.25	17.00	3	0	2
7	180	3.5	38.0	0.	17.25	19.00	16.25	10.25	16.75	17.75	15.50	17.00	3	0	2
8	160	3.5	38.0	1.8	17.50	19.00	16.00	12.00	16.50	18.00	15.75	17.00	2	0	1
9	140	4.0	40.0	45.1	17.75	19.75	15.75	9.50	16.00	18.00	15.75	17.50	3	0	2
10	150	3.2	41.0	86.4	17.00	19.25	15.50	9.50	15.75	17.75	15.50	17.00	3	0	1
11	150	4.5	42.0	113.2	17.25	19.75	15.25	11.25	15.75	17.75	15.50	17.25	7	3	1
12	150	4.5	42.0	122.6	17.25	19.50	15.25	9.00	15.25	17.75	15.50	17.25	11	3	2
13	150	6.0	42.0	113.9	17.75	19.25	15.50	10.25	15.75	18.00	15.50	17.00	12	3	2
14	180	8.0	44.0	87.9	18.25	19.75	15.75	11.75	16.25	18.00	16.00	17.50	10	0	1
15	180	6.5	48.0	47.1	17.75	20.00	15.75	9.50	16.00	18.25	16.00	17.25	10	0	0
16	180	5.5	48.0	2.8	18.25	20.00	15.25	9.50	15.50	18.25	16.25	17.75	9	0	1
17	180	4.0	48.0	0.	17.75	20.00	15.25	15.00	16.75	18.00	16.25	17.50	9	0	0
18	180	7.0	48.0	0.	17.75	20.00	15.00	11.25	16.00	18.00	16.00	17.25	8	0	1
19	170	4.5	48.0	0.	17.25	19.75	15.00	14.00	16.25	17.50	16.00	17.25	5	0	0
20	150	5.0	47.0	0.	17.50	19.75	15.00	13.50	16.00	17.50	16.00	17.25	4	0	0
21	180	6.8	47.0	0.	17.25	19.25	14.50	14.00	16.00	17.75	16.00	17.25	7	3	1
22	180	1.5	47.0	0.	17.25	19.25	14.75	16.00	16.50	17.50	15.75	17.25	5	3	0
23	180	9.5	47.0	0.	17.25	18.75	15.00	13.00	16.00	17.00	15.50	17.00	6	3	1
TOT.				620.8									145	37	27
AVG.	162	4.5	42.7	25.9	17.52	19.34	15.78	11.69	16.29	17.64	15.64	17.16	6	2	1

DATE
(12/05/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	3.5	37.0	0.	17.25	19.00	14.50	8.00	14.75	17.00	15.00	16.75	7	3	2
1	150	4.0	38.0	0.	17.00	19.00	14.50	10.00	15.25	17.00	15.00	16.00	6	3	1
2	150	2.0	38.0	0.	17.00	19.00	14.75	8.75	15.00	17.00	14.75	16.75	6	3	2
3	150	1.1	38.0	0.	17.25	19.00	15.00	9.00	15.25	17.00	15.00	16.75	6	3	1
4	150	2.5	34.0	0.	17.25	19.00	14.75	8.75	15.25	17.00	14.75	16.50	6	3	2
5	150	1.6	34.0	0.	17.25	19.00	15.00	11.00	15.75	17.00	15.00	16.75	4	0	3
6	150	3.5	34.0	0.	17.00	19.00	15.25	10.00	15.00	17.00	14.75	16.50	3	0	2
7	150	3.0	33.0	0.	17.25	19.25	14.25	8.25	14.75	17.25	15.00	16.50	4	0	2
8	150	1.5	33.0	.4	16.75	19.25	14.00	8.00	14.25	17.25	14.75	17.00	4	0	2
9	150	5.0	38.0	7.8	16.50	20.00	13.50	9.00	14.25	17.25	13.25	22.25	2	0	1
10	180	2.0	40.0	14.7	17.25	20.50	13.75	7.75	14.00	17.25	16.00	27.00	3	0	1
11	320	2.2	41.0	16.6	17.00	19.75	14.25	11.50	15.00	17.50	16.75	32.00	5	3	1
12	310	2.0	41.0	14.3	17.50	20.00	15.25	14.00	16.00	17.75	17.75	30.00	6	3	1
13	360	1.8	41.0	13.3	18.25	20.00	16.75	11.00	17.00	18.00	17.00	21.75	6	3	1
14	360	2.6	41.0	10.3	18.25	19.75	17.00	13.00	17.25	18.25	17.00	16.75	2	0	1
15	360	.4	41.0	5.5	18.50	19.75	17.25	11.00	17.50	18.00	16.25	17.50	2	0	1
16	360	1.0	41.0	.3	18.00	20.00	17.25	11.00	17.25	18.00	16.25	17.50	3	0	2
17	90	.8	41.0	0.	18.00	19.25	16.75	12.75	17.00	18.00	16.00	17.25	3	0	1
18	130	1.2	40.0	0.	17.75	19.75	16.25	11.00	16.75	18.00	15.75	17.25	3	0	1
19	90	2.5	40.0	0.	17.25	19.50	16.00	9.75	16.25	18.00	15.50	17.25	3	0	1
20	120	1.1	40.0	0.	17.25	19.25	16.00	12.00	16.50	18.00	15.75	17.25	5	0	2
21	150	.8	41.0	0.	17.00	19.75	16.00	11.00	16.25	17.75	15.25	17.00	6	1	1
22	150	1.8	39.0	0.	17.25	19.50	15.25	10.50	15.75	17.50	15.25	17.25	5	3	0
23	90	3.2	39.0	0.	17.25	19.75	15.50	12.50	16.00	17.50	15.25	17.00	5	3	1
TOT.				83.2									104	36	32
AVG.	192	2.1	38.5	3.5	17.37	19.50	15.36	10.40	15.75	17.51	15.54	18.94	4	1	1

DATE
(12/08/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	9.5	47.0	0.	18.75	18.50	18.00	16.25	17.75	18.00	17.00	18.25	6	3	1
1	180	10.0	48.0	0.	18.75	18.00	18.00	14.25	18.00	18.25	16.75	18.25	5	3	1
2	180	9.8	48.0	0.	19.00	18.25	18.25	12.25	18.25	18.50	17.00	18.25	5	3	1
3	180	8.6	47.0	0.	18.75	18.00	18.25	14.75	18.50	18.50	16.75	18.25	5	3	1
4	180	10.0	46.0	0.	19.00	18.25	18.50	13.50	19.00	18.50	17.00	18.25	5	3	1
5	180	9.0	48.0	0.	18.75	18.50	18.75	14.75	18.75	18.75	17.00	18.00	4	0	2
6	180	10.0	48.0	0.	19.00	18.50	19.00	13.25	19.25	18.75	17.00	18.25	3	0	2
7	180	16.5	50.0	0.	18.75	18.75	18.50	12.00	18.75	18.75	17.00	18.25	2	0	1
8	180	18.0	44.0	.5	18.50	18.75	18.00	11.75	18.25	18.75	17.00	18.25	4	0	3
9	180	18.5	44.0	18.9	18.25	18.00	17.25	10.50	17.75	18.50	16.75	18.00	4	0	2
10	180	18.0	44.0	37.0	18.25	18.00	16.50	9.75	16.75	19.00	16.25	18.00	4	0	2
11	180	17.0	44.0	48.8	18.50	18.25	16.25	10.25	16.50	18.75	16.25	18.25	7	3	2
12	180	18.3	44.0	53.0	18.25	17.75	15.75	11.25	16.25	18.75	16.00	18.00	9	3	2
13	180	19.0	44.0	49.3	18.75	18.00	16.00	11.25	16.25	18.75	15.75	18.00	7	3	2
14	180	18.5	44.0	38.0	19.25	18.50	16.00	10.00	16.25	18.50	15.50	12.00	4	0	2
15	180	16.0	44.0	25.4	19.00	18.00	16.25	10.25	16.25	18.75	17.25	23.00	5	0	3
16	180	15.5	44.0	1.6	19.00	17.50	16.25	10.00	16.25	18.75	16.50	18.00	5	0	1
17	180	13.0	43.0	0.	18.75	18.00	15.75	9.75	16.00	19.00	16.25	18.25	3	0	0
18	180	11.5	42.0	0.	19.50	19.00	16.25	13.25	17.25	19.50	17.00	19.00	6	0	0
19	180	9.5	42.0	0.	18.75	19.25	16.00	16.25	17.50	19.00	17.00	18.75	3	0	0
20	180	10.6	42.0	0.	18.50	19.25	16.00	17.25	17.75	18.50	16.75	18.25	3	0	1
21	180	8.0	42.0	0.	18.00	19.00	16.00	10.00	16.00	18.25	16.25	17.75	6	3	1
22	150	6.0	40.0	0.	18.00	18.50	16.00	9.00	16.25	18.00	16.25	18.00	6	3	1
23	150	7.2	38.0	0.	18.25	18.75	16.25	12.25	16.50	18.00	16.25	17.75	6	3	2
TOT.				272.5									116	38	36
AVG.	177	12.8	44.5	11.4	18.68	18.39	16.99	12.24	17.33	18.61	16.60	18.12	5	2	2

DATE
(12/09/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR PAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	1.5	38.0	0.	17.75	18.50	16.25	12.00	17.00	18.00	16.00	17.50	6	3	1
1	150	7.5	38.0	0.	18.25	18.25	16.75	10.50	17.00	18.00	16.25	17.50	6	3	2
2	150	8.0	38.0	0.	18.00	18.00	16.75	12.00	17.00	18.00	16.00	17.25	5	3	2
3	150	7.0	38.0	0.	18.25	18.25	16.75	10.50	17.00	18.00	16.00	17.75	6	3	2
4	150	6.5	38.0	0.	17.75	18.25	16.75	12.50	17.00	18.00	16.00	17.75	6	3	2
5	150	7.0	38.0	0.	18.25	18.25	16.75	10.75	17.00	18.00	16.00	17.75	4	0	2
6	150	5.0	38.0	0.	18.25	18.00	17.00	12.00	17.00	18.00	16.00	17.75	3	0	2
7	150	5.0	38.0	0.	17.50	18.75	16.00	11.00	16.75	18.25	16.00	17.25	3	0	2
8	150	3.0	38.0	.4	18.00	19.25	16.00	11.25	16.50	18.00	16.00	17.75	3	0	2
9	150	5.5	40.0	20.7	17.25	19.25	15.75	10.75	16.00	18.00	15.50	17.25	2	0	1
10	150	5.6	42.0	40.7	17.75	19.25	15.75	9.75	16.25	18.00	18.00	30.50	5	0	2
11	150	6.5	44.0	49.6	18.25	19.25	16.75	12.75	17.00	18.25	19.25	34.75	5	3	1
12	150	5.0	44.0	31.6	18.00	20.00	16.75	12.00	17.25	18.50	18.00	28.50	5	3	0
13	150	5.0	43.0	29.4	19.00	19.75	17.75	13.50	17.25	18.75	18.00	19.75	5	3	1
14	150	4.0	42.0	28.5	19.00	19.75	18.25	16.75	18.25	18.75	18.00	18.25	1	0	1
15	150	2.5	42.0	17.5	19.25	19.25	18.75	14.50	18.75	18.75	17.75	18.00	2	0	1
16	150	4.0	42.0	1.1	18.75	19.25	18.75	13.75	18.75	18.75	17.00	18.00	3	0	2
17	150	4.0	41.0	0.	18.25	19.25	18.25	14.50	18.25	18.50	17.00	18.25	4	0	1
18	150	5.0	40.0	0.	18.00	19.25	17.75	12.75	18.00	18.50	16.50	15.75	3	0	1
19	150	5.5	39.0	0.	18.00	19.25	17.50	14.25	17.75	18.25	16.25	17.50	3	0	1
20	150	6.5	40.0	0.	17.25	19.00	17.00	14.75	17.25	18.00	16.25	17.50	7	0	1
21	150	6.5	40.0	0.	17.75	19.00	17.25	12.25	17.50	18.00	16.00	17.50	8	0	1
22	150	9.5	40.0	0.	17.25	19.00	17.00	13.00	16.25	17.50	16.00	17.25	11	3	1
23	150	8.0	40.0	0.	17.25	18.75	16.50	12.50	17.00	17.50	15.75	17.50	12	3	1
TOT.				219.5									118	34	31
AVG.	150	5.6	40.0	9.1	18.04	18.95	17.03	12.51	17.24	18.18	16.65	19.35	5	1	1

DATE
(12/10/76)

HOUR	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.0	40.0	0.	17.50	18.25	17.00	12.50	17.00	17.25	15.75	17.25	8	3	2
1	180	7.0	41.0	0.	17.50	18.00	17.00	10.75	17.75	17.25	15.50	17.00	6	3	1
2	180	7.5	42.0	0.	18.00	18.25	17.25	12.75	17.75	18.00	16.00	17.25	6	3	1
3	180	7.5	42.0	0.	17.00	18.00	17.50	10.50	18.00	18.00	16.00	17.25	6	3	2
4	180	7.5	40.0	0.	18.50	18.00	17.50	13.25	18.00	18.00	16.00	17.50	6	3	2
5	180	8.5	42.0	0.	18.00	18.00	18.00	12.75	18.00	18.25	16.25	17.25	7	3	3
6	180	9.0	42.0	0.	18.25	18.25	18.00	11.25	18.25	18.00	16.25	17.25	3	1	1
7	180	9.0	42.0	0.	18.50	18.75	18.25	12.00	18.00	18.25	16.50	18.00	2	0	2
8	180	9.5	42.0	.6	17.50	18.75	17.50	11.75	18.00	18.25	16.25	17.75	4	0	2
9	180	10.5	42.0	46.3	18.25	18.75	17.00	13.00	16.00	18.25	16.50	18.25	2	0	1
10	180	11.0	42.0	92.9	18.50	18.75	17.00	11.00	17.00	18.25	16.50	18.00	4	0	2
11	180	12.0	48.0	123.4	18.25	18.50	16.75	11.25	17.00	18.50	16.25	17.50	5	0	1
12	180	10.0	48.0	107.2	18.75	19.25	16.25	11.00	16.75	18.50	16.75	18.25	5	0	2
13	180	10.0	48.0	99.9	18.25	18.75	16.00	13.50	16.75	18.75	16.75	18.25	3	0	2
14	180	10.0	49.0	77.1	18.75	19.00	15.75	12.00	16.75	18.75	17.00	18.25	6	3	1
15	180	11.5	49.0	40.9	18.75	18.75	15.50	9.50	16.00	18.50	16.75	18.25	7	3	1
16	180	9.5	47.0	2.1	19.00	19.00	16.00	13.00	16.75	18.75	17.00	18.25	4	1	1
17	180	8.5	48.0	0.	19.50	19.00	16.25	10.25	16.75	18.75	17.00	18.25	3	0	2
18	180	9.0	47.0	0.	19.00	19.00	16.00	12.00	16.75	18.75	17.00	18.75	3	0	1
19	180	10.5	46.0	0.	18.75	18.75	15.25	11.00	16.50	19.00	17.00	18.50	4	0	2
20	180	10.0	46.0	0.	18.75	19.00	15.25	9.50	15.75	18.75	17.00	18.50	3	0	0
21	180	7.0	43.0	0.	18.75	19.25	15.25	9.25	15.25	18.75	17.00	18.25	3	0	1
22	180	7.5	43.0	0.	18.25	19.00	15.00	15.25	17.00	18.50	16.75	18.50	4	3	0
23	180	8.2	42.0	0.	18.00	18.75	15.00	13.00	16.00	18.25	16.75	17.75	11	3	1
TOT.				590.4									115	34	31
AVG.	180	9.0	44.2	24.6	18.34	18.66	16.51	11.75	16.99	18.34	16.52	17.92	5	1	1

DATE
(12/11/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	10.0	42.0	0.	17.25	18.25	15.25	16.00	16.75	18.00	16.25	18.00	12	3	1
1	150	7.3	43.0	0.	18.50	18.00	16.00	12.00	16.25	17.75	16.25	17.75	12	3	1
2	150	6.5	42.0	0.	18.25	18.00	16.25	12.50	16.75	18.00	16.00	17.50	7	3	1
3	150	6.5	42.0	0.	18.50	18.00	16.75	10.75	16.75	17.75	16.25	17.75	6	3	2
4	150	8.2	42.0	0.	17.75	18.00	16.75	10.75	17.00	18.00	16.00	17.50	6	3	2
5	150	2.5	42.0	0.	18.25	18.00	16.75	12.00	17.00	18.25	16.00	17.50	6	3	2
6	150	6.0	41.0	0.	18.25	18.00	17.00	11.00	17.25	18.00	16.25	17.75	3	1	2
7	150	5.5	42.0	0.	18.25	18.25	16.75	10.50	17.00	18.25	16.25	17.25	2	0	2
8	150	7.0	43.0	0.	18.25	18.75	16.25	10.50	16.75	18.25	16.25	18.00	3	0	2
9	150	7.0	44.0	7.5	17.50	18.50	16.25	13.00	16.00	18.25	16.25	18.00	2	0	1
10	150	5.0	44.0	15.3	18.00	18.50	15.50	10.00	16.00	18.25	16.75	17.50	5	0	1
11	150	3.5	47.0	20.4	18.00	19.00	15.50	11.00	16.00	18.50	16.50	18.00	7	0	0
12	150	3.3	48.0	22.2	17.50	19.00	15.25	14.50	16.75	18.25	16.25	17.75	7	0	0
13	180	2.0	51.0	20.7	18.00	19.50	15.50	16.75	17.00	18.25	18.50	31.50	5	0	0
14	60	1.8	51.0	17.6	17.75	20.00	16.75	17.25	17.25	18.00	19.25	30.50	6	3	0
15	350	1.7	50.0	9.3	18.25	20.00	17.75	18.00	18.00	18.50	19.50	28.25	6	3	0
16	330	1.2	46.0	.5	19.00	20.25	19.00	18.50	18.25	18.75	19.25	21.75	2	1	0
17	330	2.0	44.0	0.	19.25	19.75	19.50	18.50	18.25	18.75	18.25	17.25	3	0	1
18	330	1.9	42.0	0.	18.75	19.75	19.75	17.00	18.75	18.50	18.00	18.25	2	0	1
19	330	2.8	42.0	0.	18.50	19.50	19.25	14.50	19.25	18.50	17.25	18.75	3	0	1
20	360	2.5	42.0	0.	18.25	19.25	19.00	12.00	19.25	18.25	17.00	18.25	3	0	1
21	30	2.0	41.0	0.	18.25	19.50	18.50	13.25	18.75	18.50	17.00	18.50	3	0	1
22	90	1.6	40.0	0.	18.00	19.25	18.25	11.75	18.75	18.25	16.75	18.25	5	3	1
23	60	1.0	40.0	0.	17.75	19.25	18.00	13.75	18.00	18.00	16.50	18.25	6	3	1
TOT.				113.5									123	34	23
AVG.	183	4.1	43.8	4.7	18.17	18.93	17.15	13.57	17.41	18.24	17.02	19.57	5	1	1

DATE
(12/12/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	.4	39.0	0.	18.00	19.00	18.50	13.25	18.25	18.00	16.25	18.00	5	3	0
1	360	.1	39.0	0.	18.00	18.75	18.50	14.00	18.25	18.00	16.00	18.00	6	3	2
2	350	1.2	38.0	0.	18.25	18.75	19.00	15.50	18.00	18.00	16.00	18.00	7	3	2
3	360	1.2	38.0	0.	17.75	18.25	19.25	13.50	19.00	17.75	16.00	18.00	6	3	2
4	360	1.0	37.0	0.	18.25	18.00	19.00	13.25	19.25	18.00	16.00	17.75	6	3	2
5	60	.5	38.0	0.	18.00	18.25	19.25	12.75	19.75	18.00	16.00	17.75	8	3	3
6	150	4.0	32.0	0.	17.50	18.50	19.00	13.50	19.25	18.00	16.25	17.25	4	1	3
7	150	3.5	32.0	0.	18.50	19.00	19.25	12.75	19.25	18.25	16.25	18.00	3	0	2
8	160	5.2	32.0	.2	17.75	19.00	18.50	11.75	18.75	18.25	16.25	18.00	3	0	2
9	170	6.7	32.0	28.8	17.75	19.25	18.25	13.00	18.25	18.25	16.25	18.00	3	0	1
10	150	7.2	32.0	74.5	17.50	19.25	17.75	11.25	18.00	18.25	16.00	18.00	2	0	1
11	150	6.0	38.0	115.4	16.75	18.75	17.50	13.50	17.50	18.00	15.50	17.75	4	0	0
12	150	6.0	41.0	139.2	17.75	19.25	17.50	11.75	17.50	17.75	18.50	44.00	2	0	1
13	160	7.5	43.0	117.8	17.50	19.00	18.50	15.50	17.25	18.00	21.25	36.00	1	0	0
14	170	6.8	46.0	78.4	18.00	19.25	19.25	13.50	19.25	18.00	21.25	31.75	6	3	1
15	180	5.1	43.0	41.4	18.00	18.75	19.75	14.50	19.25	18.25	21.00	24.75	5	3	1
16	150	7.0	42.0	2.2	18.75	18.75	20.50	13.25	21.00	18.50	19.25	16.00	5	1	1
17	150	8.0	42.0	0.	19.00	18.75	20.75	16.25	20.25	18.75	18.25	18.50	3	0	1
18	150	8.2	42.0	0.	18.50	18.75	20.25	14.50	20.00	18.75	17.75	18.75	3	0	1
19	150	6.2	42.0	0.	18.25	18.50	19.75	15.25	18.75	18.75	17.25	19.00	3	0	1
20	150	8.2	42.0	0.	18.50	19.00	19.75	15.75	19.00	18.75	17.00	19.00	3	0	1
21	150	3.2	42.0	0.	17.75	18.75	19.25	12.00	19.50	18.75	17.00	18.75	3	0	1
22	150	6.2	42.0	0.	18.25	18.75	19.00	13.50	19.00	18.50	16.75	18.50	5	3	1
23	150	5.5	42.0	0.	18.00	18.75	18.75	13.00	18.50	18.25	17.00	18.00	6	3	1
TOT.				597.9									100	34	31
AVG.	180	4.8	39.0	24.9	18.01	18.79	19.03	13.61	18.86	18.24	17.29	20.81	4	1	1

DATE
(12/13/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	7.0	42.0	0.	18.00	18.50	19.00	13.75	19.00	18.25	16.50	18.00	5	3	2
1	160	8.0	43.0	0.	18.75	18.75	19.50	14.25	19.25	18.25	16.75	18.25	5	3	1
2	170	8.2	43.0	0.	18.50	18.25	19.50	13.00	20.00	18.25	16.75	18.25	5	3	2
3	220	5.2	44.0	0.	19.00	18.50	19.75	15.00	19.25	18.75	17.00	18.75	4	3	1
4	300	3.0	42.0	0.	17.00	18.50	19.75	13.75	20.00	18.75	17.00	18.25	2	0	1
5	300	2.8	42.0	0.	19.00	18.50	20.00	14.75	19.75	18.75	17.00	18.50	3	0	2
6	320	2.2	42.0	0.	18.50	18.75	20.25	15.25	19.50	19.00	17.25	18.50	2	0	1
7	360	.6	42.0	0.	18.25	19.25	19.25	13.25	19.50	18.75	17.00	18.50	2	0	2
8	180	2.0	42.0	.1	18.75	19.50	19.25	13.00	17.00	19.00	17.00	18.75	3	0	1
9	150	3.0	42.0	35.0	18.25	19.50	18.75	13.75	17.00	19.00	17.00	18.75	2	0	1
10	150	4.6	42.0	73.1	18.25	19.25	18.25	12.00	16.50	18.00	16.50	18.25	3	0	1
11	150	4.6	45.0	98.2	19.50	19.25	18.25	14.25	16.25	18.25	16.25	18.75	5	0	1
12	150	2.3	48.0	107.6	19.00	19.00	18.25	15.50	18.25	18.50	18.25	33.50	1	0	0
13	210	1.0	48.0	126.0	20.25	19.75	18.25	16.25	19.00	19.00	18.50	25.00	2	0	0
14	180	.8	48.0	97.1	19.25	19.75	18.25	16.50	17.00	18.00	18.25	18.50	5	3	1
15	150	1.5	45.0	51.1	21.00	19.50	18.50	14.50	18.50	19.00	19.00	22.00	6	3	1
16	120	1.1	42.0	2.2	19.25	19.75	19.00	15.00	17.00	17.25	16.00	19.25	5	1	1
17	140	1.8	42.0	0.	19.00	19.75	19.25	15.00	18.50	18.00	17.25	19.25	4	0	1
18	150	2.5	43.0	0.	18.75	19.75	19.25	15.00	19.00	18.25	17.00	19.00	2	0	1
19	150	3.5	42.0	0.	18.75	19.75	19.00	15.75	18.50	18.25	17.00	18.75	3	0	1
20	150	4.2	43.0	0.	18.50	19.25	18.50	15.00	18.25	18.25	17.00	18.50	3	0	1
21	150	4.0	42.0	0.	18.50	19.25	18.50	12.50	18.50	18.25	17.00	18.75	3	0	1
22	150	6.8	42.0	0.	18.50	19.25	18.50	12.00	18.25	18.25	16.75	18.25	6	3	0
23	150	6.6	42.0	0.	18.50	19.25	18.50	13.75	18.00	18.50	16.75	18.25	6	3	0
TOT.				590.4									87	28	20
AVG.	186	3.6	43.2	24.6	18.79	19.19	18.97	14.28	18.41	18.44	17.20	19.60	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	42.0	0.	18.50	19.00	18.75	17.00	18.00	18.25	17.00	18.50	5	3	0
1	150	6.0	42.0	0.	18.25	18.75	19.00	17.25	17.75	18.00	16.75	18.25	4	3	0
2	160	5.8	42.0	0.	18.50	18.75	19.50	17.75	18.00	18.00	17.00	18.25	6	3	2
3	140	3.6	42.0	0.	17.75	18.00	20.25	14.00	19.75	18.00	16.50	18.00	4	3	1
4	150	4.8	42.0	0.	18.00	18.25	20.00	14.00	19.75	18.00	16.75	18.25	3	0	2
5	150	9.0	41.0	0.	18.00	18.50	20.00	14.50	18.25	18.25	16.75	18.25	4	0	3
6	230	3.0	41.0	0.	17.75	18.25	19.25	12.25	19.75	18.25	16.50	18.25	1	0	1
7	240	2.0	42.0	0.	18.75	19.75	18.75	12.75	18.75	18.75	17.00	18.50	2	0	1
8	130	1.4	42.0	0.	17.25	19.75	18.50	12.00	18.75	18.75	17.00	18.25	3	0	2
9	150	3.4	42.0	10.7	17.75	19.75	18.25	13.75	18.00	17.00	15.25	18.00	2	0	1
10	150	6.5	42.0	22.6	18.25	19.75	18.00	11.75	18.25	18.00	16.25	18.25	4	0	1
11	150	5.0	43.0	38.2	19.00	19.25	17.75	14.50	18.25	18.75	16.50	18.50	4	0	1
12	130	2.5	47.0	48.6	19.50	19.50	17.75	16.00	18.50	19.25	16.75	18.75	6	0	0
13	150	2.5	48.0	45.4	19.75	19.75	17.50	16.25	18.50	19.50	18.50	20.75	9	0	0
14	90	2.2	50.0	35.0	19.00	19.75	17.50	13.25	17.00	17.75	18.75	24.00	11	3	0
15	150	.8	48.0	18.4	19.50	20.00	18.00	15.75	16.75	17.25	19.25	24.00	11	3	0
16	150	1.0	47.0	.8	19.50	20.00	18.75	16.00	17.00	17.00	18.25	19.25	6	1	0
17	90	.8	43.0	0.	19.25	19.75	19.25	17.00	17.25	17.50	17.50	18.25	3	0	0
18	120	1.1	42.0	0.	18.50	19.75	19.25	17.25	17.25	17.75	17.00	18.50	2	0	0
19	150	1.4	42.0	0.	18.25	20.00	19.25	17.50	17.50	18.00	17.00	18.50	4	0	0
20	140	2.5	43.0	0.	18.00	20.25	19.50	17.75	17.50	18.00	16.75	18.50	4	0	0
21	160	1.7	43.0	0.	18.00	19.75	19.25	17.50	17.50	17.75	16.75	18.25	4	0	0
22	150	2.0	42.0	0.	18.00	19.50	19.25	17.50	17.25	17.75	16.50	18.00	5	3	0
23	60	.8	43.0	0.	17.75	19.75	19.25	17.25	17.25	17.25	16.25	18.00	4	3	0
TOT.				219.7									113	26	15
AVG.	145	3.2	43.4	9.2	18.45	19.40	18.85	15.44	18.02	18.03	17.02	18.92	5	1	1

DATE
(12/15/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	210	1.3	42.0	0.	17.25	19.00	19.25	17.25	17.00	17.25	16.25	18.00	5	3	1
1	180	3.5	42.0	0.	18.25	19.00	20.00	17.25	17.25	17.25	16.25	18.00	5	3	1
2	150	4.0	43.0	0.	18.00	18.75	20.50	12.50	21.00	17.75	16.25	18.00	5	3	1
3	150	3.7	43.0	0.	18.25	19.00	20.75	14.75	20.00	18.00	16.50	18.25	5	3	1
4	140	4.6	43.0	0.	18.50	19.00	21.00	13.50	21.25	18.25	16.50	18.25	1	0	1
5	140	3.6	44.0	0.	18.75	19.00	21.25	14.25	21.00	18.25	16.75	18.25	3	0	2
6	150	4.4	47.0	0.	18.50	19.00	21.00	14.00	20.75	18.50	17.00	18.75	1	0	1
7	160	5.2	48.0	0.	18.00	19.00	20.00	13.75	20.25	18.50	17.00	18.25	2	0	1
8	170	7.7	49.0	0.	18.50	19.50	20.00	15.00	19.50	18.75	17.00	18.50	1	0	1
9	180	8.5	50.0	18.7	18.50	19.50	19.75	14.00	19.50	18.75	17.25	18.50	3	0	1
10	180	8.5	51.0	40.1	18.75	19.25	19.25	13.50	19.25	19.00	17.25	18.25	8	0	1
11	190	7.5	53.0	54.3	17.75	19.25	18.75	12.00	19.00	17.25	19.25	21.75	2	0	1
12	190	7.0	52.0	59.7	18.25	19.75	18.75	13.00	19.00	17.75	18.50	20.00	1	0	0
13	190	8.0	55.0	55.9	18.50	20.00	18.50	13.00	19.00	18.25	18.75	21.50	1	0	0
14	180	10.0	56.0	43.0	18.75	20.00	18.50	16.75	18.75	18.75	19.00	21.75	4	3	0
15	180	9.0	57.0	22.6	19.00	20.00	19.00	18.25	18.75	19.00	19.75	22.00	5	3	0
16	180	8.6	55.0	.9	19.75	19.75	19.75	18.75	19.00	19.00	19.00	18.75	3	1	1
17	160	4.0	53.0	0.	20.00	19.75	20.50	19.00	18.75	19.00	18.75	19.25	1	0	0
18	190	3.0	53.0	0.	19.50	19.75	20.50	15.25	20.00	19.00	18.25	19.50	2	0	1
19	190	3.0	53.0	0.	19.25	19.50	20.25	17.75	19.25	19.25	18.25	19.25	2	0	1
20	180	3.5	53.0	0.	19.25	19.50	20.00	16.50	19.50	19.00	18.25	19.25	2	0	1
21	150	4.5	50.0	0.	19.25	19.50	20.00	16.25	19.50	19.00	18.00	19.00	2	0	1
22	150	5.5	49.0	0.	19.00	19.50	19.75	16.25	19.25	19.25	18.00	19.25	4	3	0
23	150	5.5	48.0	0.	19.00	19.25	19.50	16.25	19.25	19.00	17.75	19.00	7	3	0
TOT.				295.2									79	26	18
AVG.	170	5.6	49.5	12.3	18.69	19.40	19.85	15.36	19.41	18.49	17.73	19.22	3	1	1

DATE
(12/16/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	7.0	48.0	0.	19.25	19.00	20.00	17.75	18.75	19.00	17.50	19.00	6	3	1
1	150	5.5	48.0	0.	19.25	18.75	20.50	18.00	18.25	18.50	17.25	19.00	5	3	1
2	150	6.2	48.0	0.	19.25	18.75	21.00	16.25	19.50	18.50	17.25	19.00	5	3	1
3	150	4.5	46.0	0.	19.25	18.50	21.25	14.25	21.25	18.50	17.25	19.00	5	3	1
4	150	1.6	44.0	0.	19.25	18.75	21.50	15.00	21.00	18.75	17.25	19.25	1	0	1
5	140	2.5	42.0	0.	19.25	18.50	21.75	15.75	20.75	18.75	17.00	19.00	3	0	2
6	150	1.4	42.0	0.	18.75	18.50	21.50	16.00	21.00	18.75	17.00	19.25	2	0	1
7	150	1.2	42.0	0.	18.75	19.00	20.75	14.25	20.75	18.75	17.00	19.00	2	0	2
8	150	2.2	42.0	0.	18.50	19.00	20.50	15.25	18.00	18.75	17.00	19.25	2	0	1
9	150	3.0	44.0	17.9	18.50	19.25	20.00	14.25	20.00	18.75	16.75	18.50	3	0	1
10	150	7.0	48.0	39.0	18.25	19.25	19.75	13.25	19.00	17.25	20.75	26.75	2	0	1
11	160	8.0	48.0	53.0	18.25	19.00	20.00	14.00	20.00	17.25	22.00	31.00	5	0	1
12	150	6.0	50.0	58.4	18.25	19.00	20.75	15.25	20.00	18.25	21.75	26.25	3	0	0
13	160	6.5	50.0	54.6	19.00	19.25	21.00	16.00	20.00	19.00	22.50	29.00	1	0	0
14	150	5.6	48.0	42.0	19.25	19.75	21.50	18.00	19.50	19.25	23.00	29.00	4	3	0
15	150	3.5	50.0	22.0	19.50	19.75	22.00	18.75	19.50	19.25	22.50	25.00	6	3	1
16	140	3.8	48.0	.8	19.75	19.50	23.00	19.00	19.25	19.25	21.25	20.50	9	1	0
17	150	4.2	48.0	0.	20.00	19.50	23.25	17.25	21.00	19.25	19.50	19.50	2	0	0
18	160	4.0	48.0	0.	19.50	19.75	23.25	18.50	20.00	19.25	19.00	20.25	2	0	0
19	150	4.5	47.0	0.	19.25	19.75	23.25	18.75	19.25	19.25	18.75	20.25	3	0	1
20	150	5.2	46.0	0.	19.00	19.50	23.50	18.75	19.00	18.75	18.00	20.25	3	0	1
21	150	6.8	46.0	0.	19.00	19.50	22.75	15.75	22.25	18.75	17.75	20.00	3	0	1
22	150	8.2	46.0	0.	19.00	19.25	22.25	16.50	21.00	19.00	17.50	19.75	4	3	0
23	170	8.5	47.0	0.	18.75	19.00	22.25	16.00	21.25	19.00	17.25	19.50	6	3	1
TOT.				287.7									86	26	16
AVG.	151	4.9	46.5	12.0	19.03	19.16	21.55	16.35	20.01	18.74	18.86	21.55	4	1	1

DATE
(12/17/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	9.0	46.0	0.	19.25	18.25	23.00	17.75	19.50	18.75	17.25	19.25	5	3	1
1	170	9.0	47.0	0.	19.25	18.50	23.25	16.25	22.00	18.75	17.25	19.25	3	0	2
2	150	.7	43.0	0.	19.50	18.75	23.50	16.75	23.00	19.00	17.50	19.25	1	0	1
3	140	5.5	42.0	0.	19.25	19.00	22.75	15.75	22.25	19.00	17.50	19.50	2	0	1
4	140	4.0	43.0	0.	19.00	18.75	22.25	15.00	22.25	19.00	17.25	19.75	2	0	1
5	160	4.2	46.0	0.	18.75	18.75	22.00	15.25	21.75	19.00	17.25	19.50	3	0	2
6	180	6.3	48.0	0.	18.75	18.75	22.00	14.75	22.00	18.75	17.25	19.00	2	0	1
7	180	5.2	47.0	0.	19.00	19.00	21.50	14.50	21.25	19.00	17.25	19.00	3	0	0
8	160	6.5	45.0	0.	19.00	19.25	21.25	16.75	20.00	19.25	17.25	19.00	4	0	0
9	150	6.2	43.0	38.3	18.75	18.75	21.25	18.00	19.00	19.00	17.25	19.00	4	0	2
10	150	5.8	43.0	84.8	18.75	18.25	21.00	15.50	20.00	18.75	17.00	18.75	2	0	1
11	170	6.2	43.0	115.9	18.50	19.00	20.75	16.25	19.50	18.75	17.00	18.50	2	0	1
12	170	6.6	43.0	127.8	18.25	19.25	20.25	16.00	18.50	18.25	16.50	18.25	4	0	1
13	180	7.5	44.0	119.7	18.25	19.00	20.25	15.75	19.00	18.00	16.25	18.25	2	0	1
14	180	7.6	45.0	92.1	18.25	19.00	20.00	13.75	20.00	18.25	16.75	18.25	3	1	1
15	180	8.5	46.0	48.0	18.25	19.00	19.75	15.25	19.25	18.25	16.75	18.25	6	3	1
16	180	9.5	43.0	1.7	18.50	19.00	20.00	13.25	20.00	18.50	16.75	18.25	6	1	1
17	180	10.5	44.0	0.	19.00	19.25	20.00	15.00	19.50	18.50	17.00	18.50	4	0	1
18	180	12.3	43.0	0.	19.00	19.00	20.00	14.00	19.50	18.75	17.00	18.75	5	0	2
19	180	12.0	42.0	0.	19.00	19.25	19.50	13.00	19.25	19.00	17.00	19.00	3	0	1
20	180	10.5	42.0	0.	19.00	19.00	19.25	14.00	19.25	19.00	17.00	19.00	3	0	1
21	180	10.6	42.0	0.	18.75	18.50	18.75	13.00	19.00	18.75	17.00	19.00	2	0	1
22	180	8.5	42.0	0.	18.75	18.25	18.50	13.00	18.75	18.75	17.00	19.00	4	0	1
23	150	6.0	42.0	0.	18.50	18.00	18.50	12.75	18.50	18.50	16.75	18.75	2	0	0
TOT.				628.3									76	9	24
AVG.	168	7.4	43.9	26.2	18.80	18.81	20.80	15.05	20.12	18.73	17.03	18.87	3	0	1

DATE
(12/18/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	6.5	42.0	0.	18.50	18.75	18.25	14.00	18.25	18.25	16.75	18.50	6	0	1
1	160	7.0	41.0	0.	18.25	18.25	18.25	16.25	18.00	18.25	16.25	18.25	1	0	0
2	180	5.0	41.0	0.	18.00	18.25	18.25	15.00	18.00	18.00	16.25	18.00	5	2	1
3	180	4.0	41.0	0.	18.00	18.50	18.00	15.00	18.00	17.75	16.25	18.00	5	3	1
4	180	3.0	41.0	0.	18.00	18.75	18.25	12.75	18.25	17.75	16.00	18.00	5	3	1
5	60	1.2	42.0	0.	18.25	18.75	18.75	12.00	19.00	18.00	16.25	17.75	3	0	2
6	60	.9	42.0	0.	18.25	18.75	19.00	13.00	18.75	18.00	16.25	18.00	2	0	1
7	60	1.2	42.0	0.	18.00	19.25	18.25	13.25	18.25	18.00	16.25	18.00	2	0	1
8	90	.2	42.0	0.	18.00	19.50	18.00	11.75	18.00	18.00	16.25	18.00	4	0	1
9	150	1.4	42.0	3.5	18.00	19.25	17.75	13.00	18.00	18.00	16.00	18.00	9	0	1
10	150	1.8	43.0	7.9	18.00	19.25	17.75	15.25	17.50	18.00	16.00	17.50	8	0	1
11	150	2.2	47.0	10.8	17.75	19.25	17.50	13.00	17.75	17.75	16.00	17.25	7	0	0
12	360	1.2	44.0	11.9	17.75	19.50	17.25	14.25	17.25	18.00	18.75	35.00	6	0	1
13	360	1.4	44.0	17.9	17.75	19.25	17.75	14.75	17.50	17.75	17.75	19.00	5	0	1
14	30	1.6	43.0	15.3	18.00	19.50	17.50	12.75	17.75	18.00	17.00	17.75	3	1	1
15	330	1.0	43.0	8.2	18.00	19.25	17.00	13.75	17.75	18.00	17.75	24.50	7	3	2
16	360	.8	41.0	.3	18.25	19.25	17.75	11.25	16.00	18.25	17.75	18.25	4	1	1
17	40	1.8	41.0	0.	19.00	19.25	18.25	13.25	18.25	18.50	17.00	17.00	3	0	2
18	50	2.4	41.0	0.	18.75	19.25	18.00	12.75	17.75	18.50	17.00	17.25	4	0	1
19	50	2.5	42.0	0.	18.00	19.25	17.25	11.25	17.75	18.25	16.75	18.00	3	0	1
20	30	2.0	41.0	0.	18.00	19.25	17.00	12.25	17.25	18.00	16.50	18.00	4	0	1
21	360	2.4	40.0	0.	18.00	19.25	17.00	11.00	17.00	18.00	16.25	17.75	4	0	2
22	360	2.5	38.0	0.	17.75	19.25	16.75	11.25	17.00	17.75	16.25	17.75	3	0	1
23	350	2.1	38.0	0.	17.50	19.25	16.25	12.25	16.75	17.75	16.00	17.50	4	0	1
TOT.				75.8									106	15	24
AVG.	177	2.3	41.7	3.2	18.07	19.08	17.74	13.12	17.82	18.02	16.64	18.07	4	1	1

DATE
(12/19/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.4	37.0	0.	17.25	19.00	16.25	10.00	16.25	17.25	15.75	17.25	4	0	1
1	360	1.4	35.0	0.	17.00	18.75	16.00	12.75	15.75	17.00	15.50	17.25	7	3	2
2	70	2.3	33.0	0.	17.00	18.75	16.00	11.50	15.75	17.00	15.25	17.00	7	3	2
3	120	1.2	32.0	0.	17.25	18.50	16.25	11.00	16.25	17.00	15.00	17.00	6	3	2
4	360	1.0	32.0	0.	17.25	18.75	16.25	10.00	16.75	16.75	15.00	17.00	6	3	2
5	330	2.5	31.0	0.	17.00	18.75	16.50	10.00	16.75	16.75	14.75	16.75	7	3	2
6	50	2.0	32.0	0.	17.00	18.75	16.50	10.75	16.50	16.75	14.75	17.00	7	3	3
7	60	1.4	32.0	0.	17.25	19.00	16.50	10.00	16.50	16.75	15.00	16.75	3	1	2
8	360	1.6	33.0	0.	17.25	19.25	16.25	10.50	16.50	17.00	14.75	16.75	3	0	2
9	180	.5	35.0	19.7	17.00	19.25	15.75	9.50	16.00	17.00	14.50	16.50	2	0	1
10	300	1.7	38.0	44.4	17.00	19.25	16.00	12.25	16.25	17.00	18.25	29.25	2	0	1
11	300	1.4	40.0	61.1	17.25	19.25	17.00	14.00	16.75	17.50	20.00	36.25	1	0	0
12	330	1.8	42.0	67.7	17.75	19.25	18.25	15.00	17.25	17.75	21.25	41.25	1	0	0
13	270	1.4	43.0	59.3	18.00	19.25	20.00	16.75	17.50	18.00	22.75	41.50	1	0	0
14	270	1.0	44.0	42.8	18.50	19.50	21.25	17.75	18.00	18.25	24.00	39.25	3	1	1
15	240	1.0	43.0	22.2	18.75	19.25	22.75	18.25	18.25	18.50	24.25	31.25	5	3	1
16	150	2.2	41.0	.7	18.75	19.25	23.25	16.50	21.25	18.75	21.50	26.50	3	0	1
17	150	3.2	39.0	0.	19.00	19.25	23.50	15.50	23.50	18.75	19.75	20.50	2	0	2
18	150	3.2	38.0	0.	18.75	19.25	23.00	15.25	22.25	18.75	18.50	20.00	2	0	1
19	150	2.6	38.0	0.	18.50	19.25	22.25	15.50	21.50	18.50	18.00	19.75	2	0	1
20	200	1.2	33.0	0.	18.00	19.25	22.00	14.25	22.00	18.25	17.25	19.50	3	0	1
21	70	2.0	32.0	0.	18.00	19.25	21.50	15.00	20.00	18.25	16.75	19.00	5	0	2
22	170	1.8	32.0	0.	17.75	19.25	21.25	14.00	21.25	18.00	16.00	18.50	2	0	1
23	150	2.0	32.0	0.	17.25	19.75	20.50	14.50	19.75	17.75	15.75	18.00	2	0	1
TOT.				317.9									85	25	31
AVG.	204	1.7	36.1	13.2	17.69	19.12	18.95	13.35	18.27	17.64	17.68	22.91	4	1	1

DATE
(12/20/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.5	32.0	0.	17.00	19.00	20.25	13.25	20.25	17.25	15.25	17.75	6	3	2
1	150	6.8	33.0	0.	17.00	19.00	20.00	12.75	20.25	17.25	15.25	17.25	6	3	2
2	150	7.0	33.0	0.	17.25	18.25	20.25	13.50	20.00	17.25	15.00	17.00	7	3	3
3	140	6.5	33.0	0.	17.50	18.00	20.00	13.00	20.25	17.25	15.25	16.75	5	3	2
4	170	5.0	37.0	0.	17.75	18.00	20.00	13.50	19.75	17.50	15.25	16.75	4	1	2
5	160	7.5	34.0	0.	17.75	18.25	20.00	13.00	20.00	17.25	15.25	16.75	4	0	3
6	160	7.5	32.0	0.	17.25	17.75	19.25	13.00	19.25	17.25	15.25	16.50	4	0	3
7	150	8.0	33.0	0.	17.00	18.00	19.00	12.00	19.00	17.50	15.25	16.50	4	0	3
8	160	10.0	36.0	0.	17.25	17.75	18.25	11.50	18.25	17.50	15.25	16.50	3	0	2
9	170	7.5	34.0	119.2	17.25	17.50	17.75	11.00	18.00	17.75	15.50	16.25	3	0	2
10	170	6.8	40.0	273.6	17.50	18.00	17.00	10.75	17.25	17.75	15.00	7.00	6	0	1
11	170	4.2	41.0	331.5	17.50	18.25	16.75	10.75	17.00	17.50	16.75	27.00	2	0	1
12	160	4.2	42.0	229.6	17.75	18.75	17.00	14.50	17.00	18.00	17.75	19.25	2	0	1
13	170	6.5	42.0	215.4	17.50	19.00	17.00	14.00	17.00	17.75	16.50	18.25	3	0	1
14	170	6.5	42.0	165.7	17.25	18.75	16.75	11.00	17.00	17.50	16.25	17.75	4	1	2
15	180	7.0	42.0	85.7	17.25	19.00	16.25	10.50	16.75	17.50	16.00	17.50	7	3	1
16	190	5.6	42.0	2.5	17.50	19.00	16.50	11.50	17.00	17.50	16.00	17.25	3	0	1
17	180	5.5	41.0	0.	18.00	19.00	16.75	10.50	16.75	17.25	16.00	17.00	4	0	1
18	140	3.0	42.0	0.	17.75	19.25	16.00	10.00	16.25	17.50	15.75	17.00	3	0	1
19	150	4.5	42.0	0.	17.25	19.25	16.00	11.25	16.50	17.50	15.50	17.00	3	0	1
20	150	5.0	42.0	0.	17.25	19.25	16.00	12.00	16.25	17.25	15.50	17.00	4	0	2
21	150	3.0	42.0	0.	17.00	19.25	15.50	9.25	16.00	17.25	15.25	16.75	3	0	1
22	170	4.0	42.0	0.	17.25	19.25	15.25	11.25	16.00	17.25	15.25	16.75	2	0	1
23	160	3.5	42.0	0.	17.25	19.25	15.00	10.50	15.50	17.25	15.50	16.75	7	3	2
TOT.				1423.2									100	21	40
AVG.	161	5.8	38.4	59.3	17.37	18.61	17.60	11.84	17.60	17.44	15.65	17.09	4	1	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	4.5	42.0	0.	17.25	19.25	15.00	9.00	15.50	17.25	15.50	16.75	6	3	1
1	170	3.5	42.0	0.	17.75	19.00	15.25	11.75	16.00	17.25	15.75	16.75	5	3	1
2	160	3.3	42.0	0.	18.00	19.25	15.75	10.00	16.00	17.75	15.75	16.75	5	3	1
3	180	3.5	42.0	0.	18.00	19.00	15.75	10.25	16.00	17.50	15.75	16.75	6	3	2
4	160	2.7	42.0	0.	18.00	19.00	16.00	9.25	16.25	17.50	15.75	16.75	5	3	1
5	160	.8	42.0	0.	18.25	19.00	16.00	11.50	16.50	17.75	16.00	16.75	5	3	1
6	160	.4	42.0	0.	18.00	19.25	16.25	10.00	16.75	17.75	15.75	16.75	2	0	2
7	150	1.5	42.0	0.	18.00	19.25	16.25	10.75	16.75	17.75	15.75	17.00	3	0	2
8	180	1.2	42.0	0.	17.75	19.25	15.75	12.25	16.25	17.75	15.75	17.00	3	0	2
9	180	1.2	42.0	17.4	17.50	19.25	15.50	11.50	16.25	17.50	15.50	17.00	5	0	1
10	180	2.4	42.0	41.3	17.50	19.50	15.00	9.25	15.50	17.50	15.75	16.75	9	0	1
11	180	3.5	43.0	57.4	17.50	20.00	15.00	9.75	15.25	17.75	15.75	17.00	8	0	1
12	150	2.2	44.0	63.8	17.50	19.75	14.75	14.00	16.00	17.50	15.75	16.75	6	0	1
13	90	2.7	43.0	59.9	17.25	19.50	14.50	11.50	15.50	17.25	15.50	16.75	3	0	1
14	330	2.3	43.0	46.1	17.25	19.75	14.25	10.50	15.25	17.25	15.50	16.75	5	3	1
15	270	3.0	42.0	23.7	16.25	19.50	14.25	9.25	14.25	15.25	14.25	14.75	5	3	1
16	60	.8	42.0	.8	16.75	19.50	15.00	12.00	15.25	16.00	14.75	16.00	3	0	1
17	150	1.6	42.0	0.	17.25	19.25	15.25	12.75	15.75	16.50	15.00	16.25	2	0	1
18	140	3.0	42.0	0.	17.00	19.25	15.25	10.50	15.50	16.75	15.00	16.25	5	0	1
19	150	4.2	41.0	0.	17.00	19.25	15.00	9.50	15.25	16.75	15.00	16.00	3	0	0
20	150	4.5	41.0	0.	17.00	19.75	14.50	11.75	15.25	17.00	15.00	16.00	6	0	1
21	150	6.0	40.0	0.	16.75	20.50	14.50	15.00	16.00	16.75	14.75	16.00	11	2	2
22	160	4.5	39.0	0.	16.75	19.75	14.25	9.75	14.25	16.50	14.75	15.75	12	3	1
23	150	3.2	39.0	0.	17.00	19.25	14.50	12.00	15.25	16.75	14.75	15.75	12	3	1
TOT.				310.4									135	35	26
AVG.	166	2.8	41.8	12.9	17.39	19.42	15.15	10.99	15.69	17.14	15.36	16.46	6	1	1

DATE
(12/22/75)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	2.5	38.0	0.	17.00	19.00	15.00	10.50	15.25	16.75	14.50	15.50	12	3	1
1	150	3.0	38.0	0.	17.00	18.75	15.00	11.25	15.25	16.25	14.50	15.75	10	3	1
2	170	3.8	38.0	0.	17.00	18.50	15.50	12.25	15.75	16.50	14.25	15.75	8	3	0
3	150	5.8	36.0	0.	16.75	17.75	15.75	11.50	16.00	16.25	14.25	15.75	7	3	1
4	140	3.0	36.0	0.	16.75	17.50	16.25	9.75	16.25	16.25	14.00	15.75	6	3	2
5	160	2.5	36.0	0.	16.75	17.25	16.25	11.50	16.50	16.25	14.00	16.00	8	3	3
6	150	1.5	34.0	0.	17.00	18.00	16.25	10.00	16.75	16.50	14.25	16.00	8	3	3
7	330	1.2	33.0	0.	17.25	18.50	16.00	10.00	16.25	16.75	14.25	16.25	8	0	3
8	190	1.4	33.0	0.	17.50	19.25	15.75	9.50	16.00	17.00	14.75	16.25	4	0	2
9	180	1.0	34.0	8.0	17.50	19.25	15.00	8.75	15.25	17.50	15.00	16.25	9	0	1
10	60	1.4	36.0	17.3	17.25	19.75	14.50	9.25	15.00	17.50	15.00	16.50	9	0	1
11	300	1.8	42.0	23.9	17.25	19.50	14.50	14.50	15.00	17.25	16.50	27.50	8	0	1
12	30	1.4	42.0	27.0	17.25	19.50	14.75	9.75	15.00	17.00	16.25	21.00	5	0	1
13	60	1.8	42.0	26.4	17.25	19.50	14.25	8.25	14.75	17.25	16.00	17.50	5	0	2
14	150	1.5	42.0	22.1	17.25	19.50	14.00	11.50	15.25	17.50	16.00	17.00	11	3	1
15	150	4.0	42.0	14.5	17.25	19.75	13.75	10.00	14.75	17.50	16.00	17.00	8	3	2
16	120	2.5	41.0	4.6	17.75	19.25	14.25	8.25	14.75	17.25	15.75	16.75	7	3	1
17	60	1.5	42.0	0.	18.00	19.75	14.50	11.00	15.25	17.50	16.00	16.75	5	1	1
18	60	1.4	42.0	0.	18.00	20.00	14.75	9.00	15.00	17.50	15.75	16.75	9	0	1
19	60	.4	42.0	0.	17.75	20.00	14.75	10.75	15.50	17.50	15.75	16.75	10	0	1
20	150	1.7	42.0	0.	17.25	20.00	14.50	11.00	15.25	17.25	15.75	16.75	7	0	1
21	180	4.2	42.0	0.	17.25	20.00	14.00	9.00	14.50	17.25	15.75	16.75	7	2	1
22	180	4.0	41.0	0.	17.00	20.00	14.00	10.25	14.75	17.25	15.50	16.50	9	3	0
23	180	6.5	42.0	0.	17.25	20.00	14.25	11.25	15.25	17.00	15.25	16.50	6	3	0
TOT.				143.8									186	43	31
AVG.	145	2.5	39.0	6.0	17.26	19.18	14.90	10.36	15.39	17.02	15.21	17.05	8	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(Kwh)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.0	42.0	0.	17.25	19.50	15.00	15.00	16.00	17.00	15.25	16.25	4	3	0
1	190	4.8	42.0	0.	17.25	19.25	15.50	15.75	16.00	16.75	15.25	16.25	4	3	0
2	180	5.5	41.0	0.	17.25	19.25	16.00	16.25	16.25	16.75	15.00	16.50	4	3	0
3	200	4.5	41.0	0.	17.25	18.75	16.50	16.25	16.25	16.75	15.00	16.25	4	3	0
4	180	5.5	41.0	0.	17.25	18.25	17.00	16.25	16.25	16.50	15.00	16.25	5	3	1
5	160	7.0	41.0	0.	17.00	17.75	17.75	11.00	17.75	16.25	15.25	16.25	8	3	3
6	150	5.5	40.0	0.	17.00	17.25	18.00	10.75	18.00	16.50	15.00	16.00	7	3	3
7	150	7.0	40.0	0.	17.75	18.50	17.25	10.75	17.25	17.00	15.25	16.50	4	0	3
8	120	4.3	39.0	0.	18.00	19.00	17.00	10.50	17.00	17.25	15.50	16.75	5	0	2
9	150	4.5	39.0	9.9	17.50	19.50	16.25	10.50	16.50	17.75	15.75	16.75	5	0	1
10	180	4.2	39.0	21.6	17.25	19.75	15.75	10.50	16.25	17.50	15.75	16.75	3	0	1
11	60	5.0	37.0	29.8	17.25	20.00	15.25	11.75	16.00	17.25	15.50	17.00	4	0	1
12	120	4.2	33.0	33.6	17.25	19.75	15.00	10.00	15.75	17.25	15.50	16.75	5	0	1
13	150	3.2	37.0	47.7	17.00	19.50	15.00	13.00	15.75	17.25	15.00	16.50	3	0	0
14	140	3.5	41.0	44.0	17.00	19.25	14.75	12.25	15.50	17.00	16.75	30.00	5	3	1
15	150	3.5	38.0	30.7	17.00	19.00	15.25	15.00	16.00	16.75	17.75	31.00	6	3	2
16	120	3.5	36.0	9.9	17.25	18.75	16.00	11.25	16.25	16.75	16.25	17.25	7	3	2
17	150	3.0	33.0	0.	17.25	19.00	16.25	10.00	16.25	16.75	16.00	17.00	5	1	2
18	140	2.4	33.0	0.	17.25	18.75	16.25	9.75	16.25	17.00	15.75	16.75	4	0	2
19	150	2.5	32.0	0.	17.25	19.00	15.75	11.00	16.00	17.00	15.25	16.50	3	0	2
20	140	2.0	32.0	0.	16.75	19.00	15.50	9.50	15.75	17.00	15.00	16.25	4	0	3
21	150	2.5	32.0	0.	16.75	18.75	15.00	8.75	15.00	17.00	14.50	16.25	5	2	2
22	140	3.0	32.0	0.	16.75	19.00	14.25	8.75	14.75	16.75	14.25	16.00	5	3	0
23	150	4.0	32.0	0.	16.75	18.50	14.50	11.00	15.00	16.75	14.25	15.75	5	3	1
TOT.				227.2									115	43	31
AVG.	150	4.2	37.2	9.5	17.18	18.96	15.86	11.90	16.16	16.94	15.41	17.65	5	2	1

DATE
(12/24/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	.8	32.0	0.	16.75	18.00	15.25	14.50	15.50	16.25	14.00	15.25	6	3	1
1	190	1.0	31.0	0.	16.75	17.75	15.75	11.00	15.75	16.00	13.75	15.50	5	3	1
2	150	1.3	31.0	0.	16.25	17.75	15.75	10.00	16.00	16.00	13.75	15.50	6	3	2
3	150	1.0	31.0	0.	16.25	17.25	16.00	9.75	16.00	15.75	13.25	15.25	6	3	2
4	120	.4	31.0	0.	16.25	17.25	16.00	11.25	16.00	15.75	13.25	15.25	5	3	1
5	120	0.	31.0	0.	16.00	17.50	16.00	10.00	16.25	15.50	13.00	15.25	8	3	3
6	120	0.	31.0	0.	16.00	17.50	16.00	9.75	16.25	15.75	13.00	15.00	7	3	3
7	190	0.	31.0	0.	16.25	18.25	16.00	9.50	16.00	15.75	13.00	15.00	5	0	3
8	150	0.	31.0	0.	16.25	18.50	15.50	9.25	15.75	16.25	13.25	15.25	4	0	3
9	150	0.	31.0	15.5	16.25	19.00	14.75	9.00	15.00	16.25	13.75	15.25	3	0	2
10	120	.8	31.0	33.9	16.25	19.25	14.25	8.00	14.50	16.25	13.75	15.00	4	0	3
11	180	1.8	32.0	46.8	16.00	19.00	13.75	8.00	14.25	16.25	13.75	15.25	4	0	3
12	180	1.8	32.0	52.9	16.00	19.25	13.25	7.25	13.50	16.25	14.00	15.00	3	0	2
13	180	2.6	32.0	51.6	16.25	19.75	12.75	7.00	13.25	16.25	14.00	15.50	3	0	3
14	180	2.0	32.0	43.0	16.25	19.75	12.25	7.75	13.00	16.25	14.25	15.50	12	3	2
15	90	3.0	32.0	27.9	16.25	20.00	12.00	6.25	12.25	16.25	14.25	15.25	15	3	2
16	140	2.0	32.0	8.4	16.75	20.00	12.25	6.25	12.50	16.25	14.25	15.75	14	3	1
17	160	2.5	33.0	0.	16.75	19.25	12.25	9.25	13.25	16.25	14.25	15.25	10	1	1
18	150	3.8	32.0	0.	16.75	19.25	12.50	7.50	13.00	16.00	14.00	15.00	7	0	2
19	150	2.6	32.0	0.	16.25	19.00	12.25	7.25	13.00	16.00	14.00	15.00	4	0	2
20	130	3.6	32.0	0.	16.00	19.00	12.00	6.00	12.25	16.00	14.00	15.00	4	0	2
21	190	1.2	32.0	0.	16.00	19.00	11.75	7.75	12.25	16.00	13.75	15.00	6	2	2
22	180	1.6	32.0	0.	16.00	19.00	11.25	6.25	11.75	16.00	13.75	15.00	5	3	0
23	180	1.4	32.0	0.	16.00	19.00	11.75	8.75	13.00	15.75	13.75	15.00	8	3	0
TOT.				280.0									155	43	45
AVG.	152	1.5	31.6	11.7	16.27	18.72	13.80	8.64	14.18	16.04	13.74	15.21	6	2	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.8	32.0	0.	16.00	18.25	12.25	13.00	14.25	15.75	13.50	14.75	6	3	1
1	150	2.6	33.0	0.	16.00	18.00	13.25	14.25	14.75	15.50	13.50	14.75	6	3	1
2	150	4.6	32.0	0.	16.00	17.75	13.75	9.75	14.00	15.25	13.50	14.75	5	3	1
3	140	2.2	33.0	0.	16.00	17.25	13.75	8.75	14.00	15.50	13.50	14.75	5	3	1
4	180	2.5	32.0	0.	16.00	17.25	14.00	7.50	14.00	15.75	13.50	14.75	6	3	2
5	150	4.6	36.0	0.	16.00	17.50	14.00	7.75	14.25	15.75	13.50	14.75	7	3	3
6	150	2.0	36.0	0.	16.00	17.50	14.00	8.75	13.50	15.75	13.75	15.00	6	3	3
7	140	1.5	38.0	0.	16.50	18.25	13.50	7.75	14.00	16.00	14.00	15.00	3	0	2
8	180	2.0	38.0	0.	17.00	19.00	12.75	7.75	13.75	16.25	14.50	15.00	4	0	2
9	150	1.5	38.0	5.0	16.75	19.50	12.25	8.00	13.50	16.75	14.50	15.25	5	0	2
10	140	1.2	38.0	11.0	16.50	19.00	12.00	6.50	12.75	16.50	14.75	15.25	5	0	1
11	180	3.6	40.0	15.2	16.25	19.25	12.00	10.00	13.75	16.50	14.50	15.50	2	0	0
12	150	1.7	40.0	17.2	16.25	19.75	12.00	10.75	13.75	16.50	14.50	15.50	2	0	0
13	150	1.2	42.0	16.8	16.00	19.50	11.75	14.00	14.75	16.25	14.25	15.50	6	0	1
14	150	3.8	42.0	13.9	16.00	20.00	11.50	12.00	14.25	16.00	14.50	15.75	6	3	1
15	150	5.0	42.0	9.0	16.00	20.00	12.25	7.50	12.50	16.00	14.50	15.50	7	3	2
16	150	5.0	42.0	2.6	16.75	19.50	12.50	6.50	12.50	16.25	14.50	15.75	7	3	2
17	150	6.2	42.0	0.	17.00	19.50	12.50	8.25	12.75	16.25	14.75	15.75	5	1	2
18	150	7.5	42.0	0.	17.25	19.50	12.00	9.00	13.75	16.50	15.00	15.75	4	0	2
19	150	6.0	42.0	0.	17.00	19.50	11.75	8.00	13.00	16.75	15.00	16.00	3	0	1
20	150	6.0	44.0	0.	17.00	19.75	11.75	6.25	12.25	16.75	15.00	16.00	3	0	2
21	150	3.5	44.0	0.	17.25	19.75	11.50	6.25	12.00	17.00	15.00	16.00	6	2	1
22	150	4.5	45.0	0.	17.00	20.00	11.25	7.00	12.25	17.00	15.25	16.25	5	3	0
23	150	4.3	45.0	0.	17.25	19.75	11.50	10.00	13.50	17.00	15.25	16.25	5	3	0
TOT.				90.7									122	44	33
AVG.	154	3.5	39.1	3.8	16.49	18.96	12.49	8.97	13.49	16.23	14.35	15.40	5	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.5	46.0	0.	17.50	19.25	12.50	14.50	15.00	17.00	15.25	16.25	5	3	0
1	180	7.5	47.0	0.	17.75	18.75	13.00	15.75	15.75	17.00	15.25	16.25	4	3	0
2	180	9.8	48.0	0.	17.75	18.25	13.75	16.25	16.00	17.00	15.25	16.50	4	3	1
3	180	10.0	48.0	0.	17.50	17.75	14.25	16.50	16.25	16.75	15.25	16.50	5	3	1
4	180	9.0	47.0	0.	17.75	17.75	14.50	8.50	15.00	17.00	15.50	16.50	5	3	1
5	180	9.0	45.0	0.	17.75	17.25	14.75	9.25	15.25	16.75	15.50	16.50	8	3	3
6	180	11.0	43.0	0.	17.75	17.25	15.25	9.00	15.25	17.00	15.50	16.50	7	3	3
7	180	11.5	46.0	0.	18.00	18.25	15.00	8.75	15.00	17.25	16.00	16.50	4	0	3
8	180	13.0	46.0	0.	18.50	19.00	14.50	8.25	14.75	18.00	16.25	17.00	3	0	2
9	180	11.3	46.0	3.4	18.50	19.25	13.75	8.50	14.25	18.25	16.25	17.25	4	0	2
10	180	13.5	47.0	7.4	18.25	19.25	13.00	8.50	14.00	18.25	16.00	17.50	3	0	2
11	180	13.7	48.0	10.2	18.50	19.25	12.50	7.25	13.25	18.25	16.50	17.50	3	0	2
12	180	13.5	52.0	11.5	18.75	19.00	12.25	6.75	12.50	18.25	15.00	28.00	3	0	2
13	180	17.0	48.0	11.2	18.75	19.25	12.00	6.75	12.50	18.25	16.25	17.25	3	0	2
14	180	16.0	47.0	9.3	18.75	19.25	11.75	6.75	12.25	18.50	16.50	16.00	5	3	1
15	180	15.5	47.0	6.0	19.00	19.50	11.25	7.50	12.25	18.50	16.25	18.00	6	3	2
16	180	17.5	47.0	1.7	19.00	19.00	12.00	6.50	12.50	18.25	16.50	18.25	7	3	1
17	180	16.5	48.0	0.	19.00	19.25	12.25	7.00	12.75	18.00	16.50	18.00	5	1	1
18	180	13.5	47.0	0.	18.75	18.25	12.25	8.25	13.50	18.00	16.00	17.50	7	0	0
19	180	11.5	47.0	0.	18.25	18.00	12.25	8.50	13.25	18.00	16.00	17.00	4	0	0
20	180	10.5	47.0	0.	17.75	18.25	12.25	14.00	15.25	17.50	15.75	17.00	2	0	0
21	180	10.5	47.0	0.	17.25	18.25	12.25	15.50	16.00	17.00	15.50	16.75	5	2	0
22	180	10.0	47.0	0.	17.00	18.00	12.25	16.25	16.00	16.75	15.25	16.25	6	3	0
23	180	10.5	42.0	0.	17.00	18.25	12.75	16.25	16.00	16.50	15.00	16.25	6	3	0
TOT.				60.7									112	44	30
AVG.	180	12.0	46.8	2.5	18.11	18.56	13.01	10.46	14.35	17.58	15.79	17.46	5	2	1

DATE
(12/27/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	9.5	42.0	0.	17.00	18.25	13.25	16.25	16.00	16.75	15.00	16.25	5	3	0
1	180	7.5	42.0	0.	17.25	18.25	14.00	16.25	16.00	16.25	15.00	16.25	4	3	0
2	180	7.5	43.0	0.	17.00	18.00	14.50	16.25	16.00	16.25	15.25	16.00	2	1	1
3	180	6.0	42.0	0.	17.25	17.75	15.00	16.25	16.00	16.25	15.00	16.25	1	0	0
4	180	4.0	43.0	0.	16.75	17.25	15.00	11.50	15.50	16.25	15.00	16.00	1	0	1
5	180	4.0	42.0	0.	16.50	17.50	15.00	9.75	15.50	16.25	15.00	16.00	4	0	3
6	140	3.0	43.0	0.	16.50	17.25	14.75	10.25	14.75	16.25	15.00	16.00	3	0	2
7	150	3.4	42.0	0.	16.75	18.25	13.75	10.50	14.75	16.75	15.25	16.25	2	0	2
8	160	4.0	42.0	0.	17.00	18.75	13.25	8.75	14.00	16.75	15.25	16.25	2	0	1
9	180	5.0	42.0	7.5	17.00	18.75	13.00	7.25	13.25	16.75	15.25	16.25	2	0	2
10	150	4.0	43.0	16.5	17.00	19.00	12.75	8.00	13.50	17.00	15.25	16.25	3	0	1
11	120	3.0	45.0	22.8	17.00	19.00	12.50	10.00	14.00	17.00	15.75	25.50	6	0	0
12	110	2.2	43.0	25.7	17.00	19.00	12.50	12.00	14.75	17.00	14.00	26.00	1	0	0
13	90	2.0	43.0	40.0	17.00	19.00	12.50	15.00	15.75	17.00	15.00	17.25	2	0	0
14	330	2.0	46.0	37.8	19.75	19.25	12.75	15.75	16.00	17.00	15.25	18.75	2	0	0
15	60	1.5	47.0	24.7	17.25	19.75	13.50	17.00	16.50	17.00	16.25	27.50	1	0	0
16	60	3.0	42.0	6.7	17.25	19.75	14.25	17.00	16.75	17.00	15.25	17.50	3	0	1
17	360	2.4	42.0	0.	17.00	19.25	14.25	17.00	16.50	17.00	15.00	15.25	4	0	1
18	30	2.3	42.0	0.	17.00	19.75	14.25	9.00	14.75	16.75	15.25	16.50	4	0	1
19	340	3.0	38.0	0.	17.00	19.75	14.00	11.50	15.00	16.75	15.25	16.75	2	0	0
20	330	2.5	38.0	0.	17.00	20.00	14.00	12.25	15.25	16.75	15.00	16.25	6	0	0
21	40	2.5	38.0	0.	16.75	20.00	14.00	15.00	15.75	16.75	15.00	16.00	3	0	0
22	40	4.5	38.0	0.	16.25	20.00	14.00	15.50	15.75	16.25	14.75	16.00	2	0	0
23	30	2.5	36.0	0.	16.00	20.00	14.00	15.75	15.75	16.00	14.50	15.75	2	0	0
TOT.				181.7									68	6	14
AVG.	158	3.8	41.8	7.6	17.01	18.90	13.78	13.07	15.32	16.66	15.10	17.61	3	0	1

DATE
(12/28/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	1.5	33.0	0.	16.00	19.75	14.00	15.50	15.50	15.75	14.25	15.50	2	0	0
1	30	1.5	33.0	0.	15.75	18.75	14.00	15.50	15.25	15.75	14.00	15.25	2	0	1
2	40	2.3	32.0	0.	15.50	18.00	14.00	15.50	15.25	15.50	14.00	15.25	2	0	1
3	360	2.2	32.0	0.	15.25	17.50	13.50	8.50	14.00	15.50	13.50	15.00	3	0	2
4	90	1.5	32.0	0.	15.00	17.25	13.25	7.00	13.75	15.25	13.25	14.75	3	0	2
5	200	.8	31.0	0.	15.00	17.25	13.00	7.00	13.00	15.25	13.25	14.75	4	0	3
6	140	1.0	32.0	0.	15.00	17.25	12.50	7.50	13.25	15.25	13.00	14.50	4	0	3
7	140	1.3	31.0	0.	15.25	18.00	12.00	6.00	12.25	15.25	13.25	14.50	4	0	3
8	140	1.0	31.0	0.	15.25	18.50	11.50	5.75	11.75	15.50	13.25	14.50	3	0	2
9	120	1.0	31.0	37.1	15.50	18.75	10.75	5.00	11.25	15.50	13.00	13.25	5	0	2
10	240	1.2	32.0	78.5	15.50	18.75	10.50	7.50	12.00	15.75	13.75	31.00	4	0	1
11	220	2.0	33.0	92.2	15.75	19.00	10.75	7.00	11.50	15.75	13.75	15.00	3	0	1
12	180	3.0	34.0	71.5	16.00	19.00	10.50	5.00	11.00	15.50	15.00	33.00	6	0	0
13	180	4.0	36.0	69.4	16.00	19.25	11.00	12.00	13.75	16.00	12.00	48.00	2	0	0
14	180	6.5	36.0	57.3	16.00	19.50	11.25	6.75	12.00	15.75	14.75	18.50	2	0	1
15	150	5.0	36.0	36.3	16.00	19.25	11.50	12.75	14.00	16.00	14.50	16.75	4	0	1
16	150	3.7	33.0	11.9	16.00	19.00	11.25	8.50	13.00	15.75	14.25	16.00	11	0	0
17	150	3.0	33.0	0.	15.75	19.00	11.00	7.50	12.25	15.75	14.25	15.00	8	0	0
18	120	2.0	32.0	0.	15.75	19.00	11.00	12.50	14.00	15.25	14.00	14.00	8	0	0
19	150	2.0	32.0	0.	15.25	19.00	11.00	14.00	14.50	15.00	13.50	14.00	5	0	0
20	150	3.7	33.0	0.	14.75	19.00	11.00	14.25	14.50	15.00	13.00	14.00	5	0	0
21	180	3.0	36.0	0.	14.75	19.00	11.00	14.50	14.75	14.75	13.00	14.00	5	0	0
22	150	2.2	34.0	0.	14.75	18.75	11.00	14.50	14.75	14.75	13.00	14.00	4	0	0
23	180	4.0	36.0	0.	14.75	18.75	11.00	14.25	14.75	14.75	12.75	14.00	4	0	0
TOT.				454.2									108	0	25
AVG.	154	2.5	33.2	18.9	15.44	18.64	11.76	10.18	13.42	15.43	13.59	17.69	5	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	3.0	36.0	0.	15.00	18.50	11.00	14.50	14.75	14.75	13.00	14.00	3	0	0
1	120	3.0	38.0	0.	14.25	18.25	11.00	14.50	14.75	14.75	13.00	14.25	3	0	0
2	140	3.5	39.0	0.	14.75	18.00	11.25	14.25	14.75	14.75	13.00	14.25	4	0	0
3	150	2.0	39.0	0.	14.75	17.75	11.00	14.50	14.75	14.75	13.00	14.00	4	0	0
4	90	1.2	39.0	0.	14.75	17.75	11.25	14.50	14.75	14.75	13.00	14.25	4	0	0
5	210	1.6	38.0	0.	14.75	17.75	11.25	14.50	15.00	15.00	13.25	14.25	3	0	0
6	270	.4	38.0	0.	14.75	17.75	11.25	14.75	15.00	15.00	13.25	14.25	4	0	0
7	210	1.3	38.0	0.	15.00	18.00	11.00	14.50	15.00	15.00	13.50	14.50	3	0	0
8	120	1.2	38.0	0.	15.00	17.75	11.00	14.50	15.00	15.00	13.25	14.25	4	0	0
9	60	1.2	40.0	33.8	14.75	17.75	11.25	14.75	15.00	15.00	13.25	14.25	3	0	0
10	60	2.2	42.0	76.0	15.00	18.00	11.00	14.75	15.00	15.00	15.00	21.25	4	0	0
11	360	2.0	43.0	105.8	16.25	18.00	12.25	15.00	15.50	15.50	16.00	31.50	2	0	0
12	30	2.5	45.0	119.7	16.25	18.25	14.00	15.75	16.00	16.00	18.00	40.00	4	0	0
13	30	2.2	48.0	112.9	17.00	18.75	15.75	16.00	16.00	16.25	19.25	41.00	3	0	0
14	360	2.2	48.0	86.9	17.00	19.50	17.25	16.50	16.50	16.50	20.50	40.25	1	0	0
15	360	3.0	48.0	51.2	17.00	20.00	18.50	16.75	16.75	17.00	20.75	31.00	1	0	0
16	340	2.2	44.0	11.7	17.50	19.75	19.25	17.00	17.00	17.25	20.50	25.00	1	0	0
17	360	2.0	42.0	0.	17.50	19.75	19.50	17.25	17.00	17.00	19.00	19.00	2	0	0
18	360	3.0	41.0	0.	17.50	19.00	19.25	17.25	17.00	17.00	17.75	18.25	3	0	0
19	360	2.6	41.0	0.	17.00	18.75	19.50	17.00	16.75	16.75	16.75	18.00	3	0	0
20	360	3.0	40.0	0.	17.00	18.25	19.50	16.50	16.50	16.50	16.25	17.50	3	0	0
21	30	3.8	39.0	0.	16.75	18.00	19.25	16.50	16.50	16.50	15.75	17.25	4	0	0
22	30	3.2	39.0	0.	16.75	18.00	19.25	15.25	16.25	16.25	15.25	17.00	4	0	0
23	30	2.5	38.0	0.	16.25	17.75	19.50	16.00	16.00	16.00	15.00	16.75	4	0	0
TOT.				598.0									76	0	2
AVG.	192	2.3	40.9	24.9	15.94	18.37	14.79	15.57	15.73	15.76	15.72	20.67	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	2.0	38.0	0.	16.25	17.75	19.50	16.00	16.00	16.00	14.75	16.50	3	0	0
1	30	.4	38.0	0.	16.25	18.00	19.25	15.75	15.75	15.75	14.50	16.25	3	0	0
2	40	3.5	38.0	0.	16.00	17.75	19.50	15.75	15.75	15.75	14.25	16.00	3	0	0
3	30	2.8	36.0	0.	15.75	17.50	19.25	15.75	15.75	15.75	14.00	16.00	3	0	0
4	30	3.5	36.0	0.	15.75	17.25	19.25	15.50	15.50	15.50	14.00	15.75	3	0	0
5	30	2.8	33.0	0.	15.50	17.25	19.25	15.25	15.50	15.25	13.75	15.75	4	0	0
6	30	2.0	33.0	0.	15.50	17.00	19.25	15.00	15.00	15.25	13.75	15.50	3	0	0
7	30	2.2	34.0	0.	15.50	17.00	19.25	15.00	15.00	15.25	13.50	15.50	4	0	0
8	30	2.5	33.0	0.	15.50	17.00	19.50	15.00	15.00	15.00	13.25	15.50	3	0	0
9	30	3.5	36.0	73.4	15.00	17.00	19.25	14.75	15.00	15.00	12.75	14.00	3	0	0
10	330	4.2	39.0	162.8	15.50	17.00	19.50	15.00	15.00	15.00	18.75	46.25	4	0	1
11	330	3.5	43.0	225.0	16.00	17.25	20.75	15.50	15.50	15.50	24.50	41.75	1	0	0
12	330	4.0	44.0	253.2	16.50	18.00	21.25	15.00	20.75	16.25	26.00	44.75	2	0	1
13	330	3.5	44.0	245.1	17.50	18.25	24.50	16.75	18.75	17.25	27.75	46.75	1	0	0
14	320	5.0	48.0	201.4	18.25	18.50	26.25	17.25	22.25	18.00	29.00	45.00	1	0	0
15	330	3.2	44.0	125.9	18.75	18.75	27.75	18.00	20.00	18.50	29.25	39.25	2	0	1
16	330	3.0	42.0	30.3	19.00	19.00	28.25	18.50	19.25	18.75	28.75	30.25	6	0	1
17	330	2.6	40.0	0.	19.00	19.00	28.00	17.75	23.00	19.00	26.00	23.00	3	0	0
18	30	2.5	40.0	0.	19.00	19.25	27.75	18.25	22.25	19.25	20.75	21.00	2	0	0
19	300	2.0	39.0	0.	18.75	19.25	27.50	18.00	21.50	19.00	19.50	21.75	3	0	1
20	30	2.3	38.0	0.	18.50	19.50	27.50	18.25	19.50	18.50	18.25	21.75	2	0	1
21	50	3.0	38.0	0.	18.25	19.25	27.25	17.75	23.75	18.35	17.25	21.00	4	0	2
22	340	1.2	33.0	0.	18.00	19.25	26.50	14.00	26.50	18.00	16.50	20.00	2	0	0
23	50	2.2	36.0	0.	17.75	19.25	26.00	16.75	24.00	18.00	16.00	19.25	3	0	1
TOT.				1317.1									69	0	10
AVG.	156	2.8	38.5	54.9	16.99	18.12	23.00	16.27	18.59	16.83	19.03	24.94	3	0	0

DATE
(12/31/76)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	40	1.0	33.0	0.	17.50	18.75	26.00	17.00	19.25	17.50	15.75	19.00	2	0	1
1	110	.8	32.0	0.	17.00	18.00	25.25	16.50	25.00	17.25	15.25	18.00	3	0	2
2	120	1.1	32.0	0.	17.00	17.75	25.00	15.75	23.75	17.00	15.00	17.75	3	0	2
3	120	1.2	32.0	0.	17.00	17.25	24.75	16.25	22.50	17.00	15.00	17.25	3	0	2
4	120	.8	31.0	0.	16.75	18.25	24.00	15.50	23.25	17.00	14.50	17.00	3	0	1
5	120	1.0	31.0	0.	16.25	17.50	23.75	15.25	23.75	16.75	14.50	16.75	5	0	4
6	120	1.2	31.0	0.	16.25	17.25	23.00	15.00	23.25	16.50	14.25	16.75	5	0	3
7	150	1.2	31.0	0.	16.25	18.25	22.25	14.50	22.25	16.50	14.50	16.00	3	0	2
8	150	.6	31.0	0.	16.00	19.00	21.25	14.00	21.50	17.00	14.50	16.00	5	0	3
9	270	1.3	31.0	95.9	16.50	19.00	20.75	13.25	20.75	16.75	14.50	16.00	9	0	1
10	330	1.3	31.0	181.5	16.50	19.50	20.00	13.00	20.00	16.75	14.25	15.00	5	0	2
11	270	2.2	32.0	216.6	16.25	19.00	19.50	13.50	18.75	16.50	14.00	13.25	8	0	2
12	210	2.0	32.0	194.2	16.50	18.75	19.25	12.50	19.50	16.50	14.00	12.00	9	0	1
13	330	1.3	33.0	320.9	16.50	18.75	18.75	12.00	18.75	16.50	14.00	11.50	7	0	1
14	90	1.2	33.0	285.5	16.25	18.75	18.50	12.00	18.50	16.50	16.50	19.00	5	0	0
15	150	3.0	32.0	178.6	16.25	18.75	18.00	13.00	17.50	16.25	15.25	17.00	5	0	0
16	150	2.0	32.0	40.9	16.25	18.25	18.25	14.75	16.25	16.00	14.50	16.25	3	0	0
17	150	2.5	32.0	0.	16.00	17.50	18.00	15.25	15.75	15.75	14.25	16.00	2	0	0
18	150	1.7	32.0	0.	15.75	16.75	18.25	15.25	15.50	15.50	14.25	16.00	3	0	1
19	150	1.6	32.0	0.	15.50	16.00	18.25	11.00	18.25	15.25	14.00	15.75	2	0	1
20	140	1.4	32.0	0.	15.50	16.00	17.75	11.25	18.00	15.25	14.00	15.50	3	0	1
21	150	1.2	32.0	0.	15.25	16.25	17.75	11.00	17.75	15.50	13.75	15.25	2	0	1
22	140	1.2	31.0	0.	15.50	16.25	17.25	10.50	17.50	15.25	13.50	15.00	1	0	0
23	90	.6	31.0	0.	15.25	16.25	17.00	12.00	16.25	15.50	13.50	15.00	2	0	0
TOT.				1514.1									100	0	30
AVG.	161	1.4	31.7	63.1	16.24	17.82	20.52	13.75	19.73	16.34	14.48	15.96	4	0	1

DATE
(01/01/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	0.	30.0	0.	15.25	15.75	17.00	14.25	15.50	15.25	13.25	15.00	2	0	1
1	90	0.	30.0	0.	15.25	15.00	17.00	14.75	15.25	15.00	13.25	15.00	3	0	1
2	90	0.	30.0	0.	15.00	14.75	16.75	12.25	16.00	15.00	13.00	14.75	2	0	1
3	90	0.	30.0	0.	14.75	15.00	16.75	10.00	17.00	14.75	12.75	14.50	3	0	1
4	90	0.	30.0	0.	14.50	15.00	16.50	10.75	16.25	14.75	12.50	14.25	3	0	1
5	90	0.	30.0	0.	14.25	15.00	16.25	9.75	16.25	14.75	12.25	14.00	4	0	3
6	90	0.	30.0	0.	14.25	15.00	15.75	9.00	16.25	14.50	12.25	14.00	4	0	2
7	90	0.	30.0	0.	14.25	16.25	15.25	9.50	15.75	14.50	12.00	13.75	3	0	2
8	90	0.	30.0	0.	14.25	16.75	15.00	8.75	15.25	14.50	12.00	13.50	3	0	2
9	90	0.	30.0	5.8	14.00	16.75	14.50	8.00	15.00	14.25	12.00	12.25	3	0	1
10	90	0.	30.0	13.4	14.00	16.50	14.25	7.75	14.25	14.25	11.50	10.50	1	0	0
11	180	1.4	31.0	21.5	14.50	16.75	14.25	10.00	14.25	14.75	18.75	39.50	1	0	0
12	220	2.0	32.0	29.4	15.00	16.25	16.00	13.25	14.75	15.00	19.75	38.00	1	0	0
13	190	3.0	38.0	26.9	15.25	16.00	17.75	15.00	15.00	15.25	20.75	36.75	1	0	0
14	150	3.0	40.0	20.1	15.75	15.75	18.50	15.25	15.25	15.75	21.00	33.00	3	0	2
15	180	3.5	40.0	10.4	15.50	15.25	19.25	13.75	17.00	16.00	20.75	24.00	5	0	3
16	150	3.5	36.0	1.1	15.75	15.75	19.25	11.75	19.00	16.00	17.25	18.00	6	0	3
17	170	2.5	33.0	0.	15.75	17.50	18.25	11.25	18.50	16.00	15.00	16.75	5	0	3
18	170	4.0	33.0	0.	16.00	18.75	17.50	11.00	18.00	16.25	15.00	16.25	4	0	2
19	150	5.0	33.0	0.	16.00	18.25	17.00	10.25	17.25	16.50	14.75	16.00	6	0	2
20	120	8.8	37.0	0.	16.00	18.75	16.50	10.25	16.75	16.50	14.50	15.75	5	0	3
21	120	8.0	38.0	0.	16.25	17.75	16.00	9.50	16.25	16.25	14.25	15.50	3	0	1
22	120	7.8	38.0	0.	16.25	17.75	15.50	9.00	15.75	16.50	14.25	15.25	2	0	1
23	120	5.6	37.0	0.	16.00	17.25	15.00	10.00	15.25	16.25	14.25	15.25	3	0	2
TOT.				128.6									81	0	39
AVG.	126	2.4	33.2	5.4	15.16	16.40	16.49	11.04	16.07	15.35	14.87	18.81	3	0	2

DATE
(01/02/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	6.0	35.0	0.	16.00	17.00	14.75	8.50	15.00	16.00	14.00	15.00	3	0	2
1	120	5.0	32.0	0.	16.00	17.25	14.50	10.00	15.00	16.00	14.00	15.00	3	0	3
2	120	5.0	31.0	0.	16.00	17.75	14.25	8.00	14.50	16.00	14.00	15.00	4	0	3
3	120	3.5	31.0	0.	15.75	17.75	13.75	8.50	14.00	16.00	14.00	15.00	3	0	2
4	120	3.8	31.0	0.	15.75	18.00	13.25	7.25	13.75	16.00	14.00	15.00	3	0	2
5	120	4.0	31.0	0.	15.75	18.00	12.75	8.50	13.50	15.75	13.75	15.00	4	0	3
6	120	3.8	31.0	0.	15.75	18.00	12.25	6.25	12.75	15.50	13.50	14.75	4	0	3
7	120	3.0	31.0	0.	15.75	18.25	11.75	5.75	12.00	15.75	13.75	14.75	3	0	3
8	120	2.6	31.0	0.	16.00	18.75	11.00	5.25	11.50	16.00	14.00	14.75	5	0	3
9	120	6.0	32.0	36.4	16.00	19.00	10.75	5.00	11.00	16.00	14.00	15.00	3	0	2
10	120	5.0	32.0	83.1	16.00	19.00	10.25	5.00	10.75	16.00	14.00	14.75	7	0	2
11	180	2.3	32.0	115.1	15.75	18.50	10.00	4.00	10.00	15.75	13.75	14.50	5	0	0
12	120	5.2	32.0	128.8	15.75	19.00	9.50	9.25	12.25	15.50	13.25	14.25	7	0	0
13	150	4.0	36.0	154.4	15.25	18.00	9.75	12.75	13.75	15.00	12.75	13.75	4	0	0
14	150	4.2	36.0	142.7	15.00	18.25	10.00	13.75	14.00	14.75	14.00	34.50	8	0	0
15	150	3.5	33.0	91.0	15.00	18.25	10.75	14.00	14.25	14.75	15.00	23.75	9	0	0
16	120	1.8	32.0	13.0	15.00	18.00	10.75	14.25	14.50	14.75	14.00	14.25	13	0	0
17	90	1.8	33.0	0.	14.75	17.50	10.75	14.00	14.25	14.50	13.75	13.25	11	0	0
18	90	3.0	32.0	0.	15.00	18.00	10.75	14.00	14.25	14.25	13.25	13.25	11	0	0
19	60	.8	31.0	0.	14.50	17.25	10.75	13.75	14.25	14.25	12.75	13.25	10	0	0
20	80	2.2	31.0	0.	14.50	17.00	10.75	13.50	14.00	14.00	12.25	13.25	7	0	0
21	120	2.2	31.0	0.	14.25	17.75	10.75	13.50	14.00	14.00	12.00	13.00	7	0	0
22	120	1.4	31.0	0.	14.25	17.75	10.75	13.25	14.00	14.00	11.75	13.00	5	0	0
23	90	2.8	31.0	0.	14.00	17.25	10.75	13.25	13.75	13.75	11.25	13.00	5	0	0
TOT.				764.5									145	0	29
AVG.	118	3.5	32.0	31.9	15.32	17.97	11.47	10.05	13.37	15.18	13.45	15.46	6	0	1

DATE
(01/03/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.5	31.0	0.	14.00	17.25	10.75	13.00	13.50	13.75	11.25	12.75	4	0	0
1	150	1.2	30.0	0.	13.75	17.00	10.75	13.00	13.25	13.25	11.00	12.75	5	0	0
2	210	.3	31.0	0.	13.25	16.75	10.75	12.75	13.00	13.25	10.75	12.25	5	0	0
3	150	1.7	31.0	0.	13.25	16.50	10.25	12.50	13.00	13.00	10.50	12.25	5	0	0
4	150	3.5	31.0	0.	13.00	16.25	10.00	12.25	13.00	13.00	10.25	12.00	5	0	0
5	140	2.4	31.0	0.	13.00	16.25	10.25	12.25	13.00	13.00	10.50	12.25	5	0	0
6	150	2.2	30.0	0.	13.00	16.25	10.25	12.25	13.00	13.00	10.50	12.25	5	0	0
7	150	2.5	30.0	0.	13.00	16.25	10.00	12.25	12.75	12.75	10.50	12.00	5	0	0
8	150	2.5	30.0	0.	13.00	16.25	10.00	12.25	13.00	13.00	10.75	12.00	5	0	0
9	150	4.0	31.0	20.4	13.00	16.25	10.25	12.25	13.00	13.00	10.75	12.00	7	0	0
10	150	3.2	31.0	46.4	13.00	16.00	10.00	12.25	13.00	13.00	10.75	12.25	8	0	0
11	150	3.0	31.0	64.2	12.00	16.75	10.25	10.00	10.50	10.75	7.75	8.00	8	0	0
12	150	4.5	31.0	71.9	12.50	16.75	10.25	10.25	11.00	11.25	9.00	11.00	7	0	0
13	150	4.6	31.0	68.7	13.00	17.00	10.25	11.25	12.00	12.00	10.00	12.00	14	0	0
14	150	5.0	31.0	55.1	13.25	17.25	10.25	11.75	12.25	12.50	10.50	12.50	12	0	0
15	150	3.2	31.0	32.1	13.00	17.00	10.00	11.50	12.25	12.50	10.50	12.25	12	0	0
16	150	3.5	31.0	4.6	13.50	16.75	10.75	11.75	12.75	12.75	10.75	12.50	17	3	0
17	150	3.0	31.0	0.	14.75	18.00	12.25	13.00	13.75	13.75	12.00	13.50	17	3	0
18	150	3.0	31.0	0.	15.00	18.00	13.00	13.00	13.75	13.75	11.75	13.50	16	3	0
19	150	1.6	31.0	0.	15.00	17.25	13.25	13.00	13.75	13.75	11.75	13.75	14	3	0
20	150	1.7	31.0	0.	14.25	17.25	13.50	13.00	13.75	13.75	11.75	13.75	11	2	0
21	150	1.2	31.0	0.	14.00	17.50	13.75	13.00	13.75	13.75	11.75	13.75	7	0	0
22	150	1.0	31.0	0.	13.75	17.25	13.25	12.75	13.00	13.25	11.00	13.25	6	0	0
23	150	1.0	31.0	0.	13.50	17.00	13.25	12.75	13.00	13.00	11.00	13.00	5	0	0
TOT.				363.4									206	15	5
AVG.	150	2.6	30.8	15.1	13.45	16.86	11.14	12.25	12.87	12.95	10.71	12.40	9	1	0

DATE
(01/04/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	100	0.	30.0	0.	13.75	17.00	13.75	13.00	13.50	13.50	11.25	13.25	4	0	0
1	100	0.	30.0	0.	13.75	17.00	14.00	13.00	13.25	13.25	11.25	13.25	4	0	0
2	100	0.	30.0	0.	14.00	17.00	14.50	13.00	13.50	13.50	11.50	13.50	5	1	0
3	100	0.	30.0	0.	14.25	16.75	15.00	13.00	13.50	13.25	11.25	13.50	8	3	0
4	100	0.	30.0	0.	14.25	16.50	15.50	13.00	13.50	13.25	11.50	13.50	7	3	0
5	100	0.	30.0	0.	14.25	16.25	16.00	13.00	13.50	13.50	11.50	13.75	7	3	0
6	100	0.	30.0	0.	14.25	16.50	16.50	13.00	13.50	13.50	11.50	14.00	6	3	0
7	100	0.	30.0	0.	14.25	16.25	17.00	13.00	13.50	13.50	11.50	14.00	7	3	0
8	100	0.	30.0	0.	14.00	16.50	17.00	13.00	13.75	13.50	11.75	14.00	7	3	0
9	100	0.	30.0	2.9	14.00	17.00	17.00	13.00	13.75	13.75	11.75	14.00	6	0	0
10	100	0.	30.0	6.5	14.00	17.25	17.00	13.00	13.75	13.75	12.00	14.00	7	0	0
11	100	0.	30.0	9.0	14.00	17.75	16.75	13.00	13.75	13.75	12.00	14.00	8	0	0
12	100	0.	30.0	10.1	14.00	18.00	16.75	13.00	13.75	13.75	12.00	14.00	8	0	0
13	50	1.4	31.0	9.7	14.25	18.00	17.00	13.25	14.00	14.00	12.00	14.00	11	0	0
14	30	2.5	31.0	7.8	14.25	18.00	17.00	13.25	14.00	14.00	12.25	14.25	10	0	0
15	330	2.5	31.0	5.8	14.75	18.25	17.00	13.25	14.00	14.00	12.25	14.75	6	0	0
16	30	4.5	31.0	1.1	15.00	18.25	17.75	13.25	14.00	14.00	12.25	14.75	10	3	0
17	30	4.5	31.0	0.	15.00	18.25	18.25	13.25	14.00	14.25	12.25	15.00	10	3	0
18	30	4.4	31.0	0.	15.50	18.25	18.00	11.50	17.50	15.00	12.75	15.25	9	3	0
19	60	5.2	31.0	0.	15.50	18.50	17.75	11.00	17.50	15.25	12.75	15.25	8	3	2
20	60	3.8	31.0	0.	15.25	18.75	16.75	10.00	17.00	15.25	12.75	15.25	6	1	2
21	70	3.8	30.0	0.	15.00	18.75	16.00	10.00	16.00	15.50	12.50	15.25	5	0	3
22	120	8.0	30.0	0.	14.75	18.25	15.75	9.00	15.75	15.00	12.25	15.00	7	0	2
23	120	11.0	30.0	0.	14.75	18.00	14.75	8.25	15.00	15.00	12.25	14.75	6	0	1
TOT.				52.9									170	35	14
AVG.	93	2.1	30.3	2.2	14.45	17.54	16.36	12.29	14.39	14.04	11.96	14.26	7	1	1

DATE
(01/05/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	1.8	30.0	0.	14.75	18.00	14.75	8.00	14.75	15.00	12.00	14.50	4	0	3
1	90	1.4	30.0	0.	15.00	17.75	14.50	8.50	14.75	15.00	12.00	14.25	5	1	2
2	60	2.0	30.0	0.	15.25	17.75	14.50	7.75	14.50	15.00	12.00	14.25	7	3	2
3	60	0.	30.0	0.	15.00	18.00	14.25	7.75	14.50	15.00	12.00	14.00	7	3	3
4	60	0.	30.0	0.	15.00	17.75	14.25	7.75	14.25	15.00	11.75	14.00	7	3	3
5	60	0.	30.0	0.	15.00	18.00	13.25	7.00	13.75	15.00	11.75	14.00	7	3	3
6	60	0.	30.0	0.	14.50	18.00	12.75	6.25	13.00	15.00	11.50	13.75	5	1	3
7	60	0.	30.0	0.	14.50	18.25	12.00	6.00	12.25	15.00	11.75	13.50	4	0	3
8	60	0.	30.0	0.	14.75	18.50	11.75	5.75	12.00	15.25	15.25	30.75	4	0	3
9	60	0.	30.0	5.5	15.25	18.50	13.00	7.25	13.25	15.25	16.75	36.00	4	0	3
10	360	1.3	31.0	12.5									5	0	2
11	30	3.8	31.0	17.3									5	0	0
12	360	4.0	32.0	19.3	14.50	18.75	15.00	10.75	12.25	13.50	19.00	41.00	5	0	0
13	360	3.2	34.0	18.5	14.75	18.25	17.00	12.75	13.00	14.00	20.75	42.25	2	0	0
14	360	3.0	34.0	14.9	15.00	18.75	18.75	14.00	14.00	14.50	22.00	40.75	1	0	0
15	330	4.2	34.0	8.9	15.25	18.50	20.25	14.50	14.25	15.00	22.75	34.75	1	0	0
16	330	3.0	32.0	1.5	15.50	18.00	21.00	15.00	14.75	15.25	22.00	28.25	3	1	1
17	360	1.8	32.0	0.	15.75	18.25	21.25	13.75	21.25	15.50	17.25	18.50	7	3	1
18	30	2.2	31.0	0.	16.25	18.25	21.25	14.00	20.00	16.00	15.75	17.00	8	3	2
19	40	2.6	31.0	0.	16.25	18.50	21.25	14.00	20.75	16.25	15.50	11.00	7	3	1
20	120	1.4	31.0	0.	16.25	18.50	21.25	13.25	21.25	16.25	15.00	15.75	7	3	1
21	150	.8	31.0	0.	16.25	18.25	21.25	13.75	21.50	16.25	14.25	16.25	7	2	2
22	150	1.6	30.0	0.	16.00	18.50	21.25	14.00	20.50	16.25	14.00	16.00	3	0	1
23	140	1.3	30.0	0.	15.50	18.00	20.75	13.50	19.25	16.00	13.50	15.75	2	0	1
TOT.				98.4									119	31	41
AVG.	160	1.6	31.0	4.1	15.28	18.23	17.06	10.69	15.90	15.24	15.34	21.56	5	1	

DATE
(01/06/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	140	5.0	30.0	0.	15.00	17.75	20.00	12.75	20.25	15.50	13.00	15.25	3	0	2
1	140	1.0	30.0	0.	15.00	17.75	19.75	12.75	19.00	15.50	13.00	15.00	3	0	2
2	140	6.0	30.0	0.	15.00	17.75	19.25	12.00	19.25	15.25	12.75	14.75	3	0	2
3	140	8.0	30.0	0.	15.00	17.50	18.50	11.75	18.00	15.25	12.50	14.75	3	0	2
4	140	6.0	30.0	0.	15.00	17.75	18.00	11.50	17.00	15.25	12.50	14.50	3	0	2
5	140	8.0	30.0	0.	14.75	17.50	17.50	10.75	17.50	15.25	12.25	14.25	7	3	3
6	140	1.4	30.0	0.	15.00	17.75	17.50	10.50	17.75	15.25	12.25	14.25	8	3	3
7	140	1.0	30.0	0.	15.50	18.00	17.00	10.25	17.25	15.25	12.50	14.25	8	3	3
8	140	8.0	30.0	0.	15.50	18.25	17.00	10.00	17.00	15.50	12.50	14.00	7	3	3
9	140	1.4	30.0	90.4	15.75	18.75	16.75	10.00	16.75	15.75	12.50	13.00	7	3	3
10	140	3.0	30.0	203.9	16.00	18.75	16.50	10.00	17.00	16.00	18.75	31.25	7	3	1
11	360	3.0	33.0	282.1	16.25	18.75	18.25	12.25	17.00	16.00	21.00	37.50	3	1	1
12	330	3.2	34.0	316.4	16.00	18.25	19.50	12.75	19.50	16.00	23.25	44.00	6	0	0
13	360	2.4	38.0	303.9	16.25	18.25	21.50	15.00	17.25	16.75	25.00	44.25	2	0	0
14	360	1.5	40.0	244.0	16.75	18.50	23.00	15.75	16.75	16.75	26.25	42.50	1	0	0
15	360	1.5	39.0	145.9	16.75	18.25	25.00	16.00	16.25	16.50	27.00	37.50	2	0	1
16	360	6.0	33.0	25.9	17.00	18.25	25.75	16.25	25.00	16.75	25.75	28.00	4	0	0
17	360	1.4	32.0	0.	17.00	18.50	25.50	16.50	23.00	17.00	20.75	20.00	3	0	1
18	360	3.2	32.0	0.	17.00	18.75	25.00	16.25	23.00	17.00	17.50	18.75	5	0	2
19	360	1.8	31.0	0.	17.00	19.00	24.25	15.75	24.25	17.00	16.75	18.75	5	0	3
20	360	1.0	31.0	0.	16.75	19.00	23.25	15.25	22.25	17.25	16.00	18.50	8	0	2
21	60	1.2	30.0	0.	16.50	18.25	22.50	14.75	22.75	17.00	15.00	18.00	8	0	3
22	150	1.8	30.0	0.	16.25	19.00	21.50	14.00	21.75	16.75	14.75	17.25	7	0	3
23	150	1.0	30.0	0.	16.50	19.50	20.75	13.75	20.00	17.00	14.75	17.00	2	0	0
TOT.				1612.5									113	20	44
AVG.	228	3.2	31.8	67.2	15.98	18.32	20.56	13.19	19.40	16.15	17.01	22.39	5	1	2

DATE
(01/07/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	1.2	30.0	0.	16.00	18.50	20.75	13.00	20.75	16.25	14.00	16.75	3	0	2
1	150	1.0	30.0	0.	15.75	18.00	20.00	13.00	19.75	16.00	14.00	16.00	3	0	2
2	190	1.1	30.0	0.	15.75	17.75	19.75	12.25	19.75	16.00	13.75	15.75	3	0	3
3	150	1.3	30.0	0.	15.50	17.50	19.00	12.00	19.00	16.00	13.50	15.50	3	0	2
4	130	.6	30.0	0.	15.25	17.75	18.50	11.75	18.00	16.00	13.00	15.25	6	2	3
5	150	.5	30.0	0.	15.50	17.75	18.25	11.25	18.00	16.00	13.25	15.00	7	3	3
6	130	1.0	30.0	0.	15.75	17.75	18.00	11.00	18.25	16.00	13.00	15.00	7	3	3
7	120	1.2	30.0	0.	16.00	17.75	18.00	10.75	18.00	16.00	13.00	15.00	7	2	3
8	140	1.3	30.0	0.	16.00	18.00	17.00	10.50	17.25	16.00	13.00	15.00	4	0	3
9	330	1.0	30.0	68.1	15.75	18.00	16.50	9.75	16.75	16.00	13.25	14.00	5	0	3
10	330	1.6	30.0	180.2	16.00	18.25	16.00	9.00	16.00	16.25	13.00	11.00	8	0	3
11	330	4.0	30.0	266.6	16.00	18.75	15.50	10.25	15.50	16.50	18.25	34.25	7	3	1
12	360	4.5	33.0	309.7	16.75	18.75	17.25	12.00	17.00	16.50	18.75	37.00	6	3	1
13	350	4.0	37.0	297.9	17.00	18.75	19.00	13.00	19.00	16.75	22.50	42.25	5	3	0
14	350	4.5	37.0	241.4	17.50	18.75	21.25	14.00	21.00	17.00	24.00	40.25	5	2	0
15	350	2.0	37.0	145.5	17.75	19.00	23.00	16.25	18.75	17.50	25.75	37.50	1	0	0
16	50	4.2	35.0	27.4	17.25	18.75	24.00	17.00	18.00	17.75	25.00	28.50	3	0	1
17	50	3.0	34.0	0.	17.00	18.75	24.00	15.75	23.00	17.75	19.50	20.00	3	0	2
18	30	1.5	32.0	0.	17.00	18.75	23.25	15.00	23.00	18.00	17.25	18.75	3	0	2
19	30	2.0	32.0	0.	17.00	18.75	22.75	15.00	21.25	17.50	16.75	18.50	4	0	2
20	40	2.5	32.0	0.	17.00	18.75	22.00	15.00	21.00	17.25	16.00	18.00	4	0	2
21	50	1.2	31.0	0.	17.00	18.75	21.75	14.25	20.75	17.00	15.25	17.50	4	0	2
22	30	2.6	31.0	0.	16.75	18.75	21.00	13.50	21.00	17.00	15.00	17.00	3	0	2
23	30	2.2	31.0	0.	16.25	18.75	20.50	13.75	19.75	17.00	14.50	16.75	3	0	1
TOT.				1536.8									106	23	45
AVG.	164	2.1	31.7	64.0	16.40	18.37	19.87	12.87	19.19	16.67	16.47	21.27	4	1	2

DATE
(01/08/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	2.6	31.0	0.	16.00	17.75	20.25	16.25	19.25	16.25	14.00	16.25	3	0	2
1	60	2.5	31.0	0.	16.00	18.00	20.00	13.00	19.50	16.25	14.00	16.00	3	0	2
2	350	1.6	31.0	0.	15.50	17.75	19.50	12.50	19.00	16.00	13.75	15.75	3	0	2
3	120	1.3	30.0	0.	15.75	18.00	19.00	12.00	19.00	16.00	13.50	15.25	3	0	2
4	10	1.4	30.0	0.	15.25	18.00	18.50	11.25	18.50	15.75	13.25	15.25	5	2	2
5	150	2.1	30.0	0.	15.25	18.00	18.50	11.75	18.00	15.75	13.00	15.00	7	3	2
6	150	1.6	30.0	0.	15.75	18.00	18.25	11.00	18.50	15.75	13.00	15.00	7	3	3
7	150	1.0	30.0	0.	16.00	18.25	18.00	11.00	18.00	16.00	13.00	15.00	7	2	3
8	150	.8	30.0	0.	16.00	18.75	17.25	10.50	17.75	16.00	13.25	14.75	4	0	3
9	150	.8	30.0	74.9	15.75	18.75	17.00	10.00	17.00	15.75	12.75	13.00	3	0	2
10	300	1.6	31.0	168.1	15.75	18.75	16.50	10.50	16.75	16.00	19.00	32.00	4	0	2
11	330	1.3	32.0	232.5	16.00	19.00	17.75	11.00	18.25	16.25	20.50	39.50	11	3	1
12	270	1.9	38.0	261.0	16.50	18.75	19.75	13.00	19.50	16.50	23.00	44.25	11	3	1
13	270	2.2	40.0	246.4	17.00	18.50	21.75	14.75	20.25	17.00	25.50	46.00	9	3	1
14	270	2.6	40.0	192.4	17.75	19.00	24.25	16.00	23.25	17.00	27.00	43.50	4	2	0
15	300	1.7	38.0	112.0	18.25	18.75	26.00	16.75	25.50	18.00	27.50	37.00	2	0	1
16	150	1.8	33.0	22.3	18.00	18.75	26.50	17.00	23.75	18.25	26.75	28.00	3	0	2
17	140	1.0	31.0	0.	18.00	19.00	26.25	17.00	26.00	18.50	21.00	20.75	2	0	1
18	140	1.3	31.0	0.	17.75	18.75	25.75	16.50	25.75	18.25	18.00	19.75	4	0	2
19	140	1.8	31.0	0.	17.25	19.00	25.00	16.00	24.00	18.00	17.00	19.75	4	0	2
20	140	1.8	30.0	0.	17.00	19.00	24.00	15.75	22.75	17.75	16.00	19.25	4	0	2
21	30	2.5	30.0	0.	17.00	19.00	23.50	15.25	23.00	17.25	15.25	18.50	3	0	2
22	30	2.8	30.0	0.	16.75	18.75	23.00	15.00	23.00	17.00	15.00	17.75	4	0	2
23	140	1.6	30.0	0.	16.50	18.75	22.25	15.00	20.25	17.00	14.50	17.00	5	1	1
TOT.				1309.6									113	24	43
AVG.	168	1.7	32.0	54.6	16.53	18.54	21.19	13.70	20.69	16.76	17.48	23.09	5	1	2

DATE
(01/09/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	1.3	30.0	0.	16.25	18.50	22.25	14.25	22.25	16.25	14.00	16.75	9	3	1
1	90	.8	30.0	0.	16.25	18.25	22.25	14.50	20.50	16.25	14.00	16.50	5	2	1
2	90	1.4	30.0	0.	16.25	18.00	22.75	15.00	18.00	16.00	13.75	16.25	3	0	1
3	140	1.0	30.0	0.	15.75	18.00	22.00	14.25	20.25	16.00	13.25	16.00	3	0	2
4	140	2.0	30.0	0.	15.25	18.00	21.25	14.00	20.25	16.00	13.00	15.75	3	0	2
5	140	1.8	30.0	0.	15.25	18.25	20.75	13.25	21.00	15.75	13.00	15.50	2	0	2
6	140	1.2	30.0	0.	15.00	17.50	20.00	12.75	20.00	15.75	12.75	15.25	4	0	3
7	140	1.8	30.0	0.	15.50	18.50	19.25	12.00	19.50	16.00	13.00	15.00	3	0	3
8	140	1.4	30.0	0.	15.25	18.75	18.75	11.75	19.00	16.00	13.00	15.00	4	0	3
9	140	1.4	30.0	50.9	15.25	18.75	18.25	11.25	18.25	16.00	12.75	14.00	4	0	2
10	140	.8	30.0	142.8	15.50	19.00	18.00	11.00	18.00	15.75	12.25	12.50	6	0	2
11	240	1.8	30.0	252.1	15.25	18.75	17.25	11.25	17.25	16.00	12.25	11.75	3	0	2
12	270	1.5	30.0	323.4	15.25	19.00	17.00	10.75	16.75	16.00	12.25	12.50	5	2	2
13	330	.8	32.0	319.0	15.75	19.00	16.75	10.00	17.00	16.00	16.50	30.00	6	3	1
14	330	1.8	32.0	261.3	16.25	19.00	18.25	12.25	17.75	16.00	21.00	37.00	4	2	1
15	360	.8	31.0	161.0	16.50	19.00	19.75	14.00	17.50	16.50	20.50	31.00	3	0	1
16	130	1.0	30.0	33.8	16.25	18.75	20.00	13.50	19.25	16.75	19.25	21.00	3	0	2
17	130	.5	30.0	0.	16.50	19.00	19.50	12.50	19.50	17.00	16.75	18.50	5	0	1
18	90	2.0	30.0	0.	16.25	19.00	19.00	12.00	19.00	16.75	15.75	18.00	4	0	2
19	190	1.3	30.0	0.	16.00	18.75	18.50	12.50	16.25	16.25	14.75	17.25	4	0	2
20	180	1.3	30.0	0.	16.00	18.75	18.00	11.25	18.00	16.25	13.75	17.00	4	0	2
21	180	1.2	30.0	0.	15.75	18.75	17.50	11.25	17.50	16.25	13.25	16.50	3	0	2
22	210	1.4	30.0	0.	16.00	19.00	17.25	10.50	17.25	16.25	13.00	16.25	4	0	2
23	160	1.0	30.0	0.	15.75	18.50	16.75	12.00	16.25	16.25	13.00	16.25	3	0	1
TOT.				1544.3									98	12	43
AVG.	177	1.3	30.2	64.3	15.79	18.61	19.21	12.41	18.59	16.17	14.45	17.98	4	1	2

DATE
(01/10/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	3.2	29.0	0.	15.25	18.00	16.75	10.00	16.75	15.75	12.75	16.00	3	0	2
1	180	3.8	29.0	0.	15.25	18.00	16.25	10.00	16.25	15.50	12.75	15.50	4	0	2
2	140	1.4	29.0	0.	15.00	18.00	15.75	10.00	16.00	15.50	12.50	15.25	3	0	2
3	150	1.8	29.0	0.	15.00	18.00	15.50	8.75	15.75	15.50	12.50	15.00	3	0	2
4	150	2.6	29.0	0.	15.00	18.00	15.00	9.00	15.00	15.75	12.25	15.00	6	2	2
5	150	1.0	29.0	0.	15.00	18.00	15.00	8.50	15.25	15.25	12.25	14.75	6	3	2
6	180	1.1	29.0	0.	15.25	18.00	15.00	7.00	15.25	15.25	12.25	14.75	5	1	3
7	60	.3	29.0	0.	15.25	18.25	14.25	7.75	14.75	15.50	12.25	14.75	4	0	3
8	60	.5	29.0	0.	15.25	18.75	13.75	7.25	14.00	15.75	12.50	14.75	4	0	3
9	120	.7	29.0	44.3	15.50	19.00	13.25	7.00	13.25	15.75	12.75	14.75	4	0	3
10	290	1.1	30.0	98.8	15.25	19.00	12.50	6.75	13.00	15.50	12.00	19.00	5	0	1
11	360	2.1	31.0	133.2	15.25	19.00	13.25	9.75	13.75	16.00	16.25	33.00	3	0	1
12	330	2.2	34.0	149.7	15.50	18.75	15.00	9.75	14.00	15.50	18.25	38.25	6	1	1
13	330	2.8	37.0	129.9	15.75	19.00	16.25	11.25	16.25	16.00	19.75	41.00	7	3	0
14	270	1.8	36.0	83.1	16.50	19.00	18.25	14.25	16.00	16.25	21.00	34.50	4	2	1
15	300	.7	36.0	40.8	16.75	18.25	19.00	13.75	18.00	16.75	17.50	18.75	4	0	2
16	150	2.6	31.0	9.0	16.50	18.75	18.50	12.25	18.50	16.75	16.00	17.25	3	0	1
17	150	3.3	32.0	0.	16.00	18.50	18.00	11.00	18.25	16.75	15.25	16.75	4	0	1
18	150	2.5	32.0	0.	16.00	18.25	17.75	13.00	17.00	16.25	15.00	16.50	3	0	1
19	150	1.1	32.0	0.	16.00	18.25	17.25	11.00	17.50	16.25	14.50	16.00	4	0	1
20	150	.4	32.0	0.	15.25	18.00	16.50	9.75	16.75	15.75	14.00	15.25	4	0	1
21	170	.6	32.0	0.	15.25	18.25	16.50	11.25	16.00	15.75	13.75	15.25	10	3	1
22	180	.5	32.0	0.	15.25	18.00	16.75	12.25	16.00	15.50	13.25	15.00	7	3	1
23	90	1.0	33.0	0.	15.75	18.25	17.00	11.25	16.75	15.50	13.50	15.00	5	3	0
TOT.				688.8									107	22	37
AVG.	183	1.6	31.2	28.7	15.53	18.39	15.96	10.10	15.83	15.83	14.36	19.25	4	1	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	1.1	32.0	0.	16.00	17.50	17.75	10.50	18.00	15.25	13.25	14.75	5	3	1
1	330	1.1	32.0	0.	15.75	17.75	18.00	12.00	17.25	15.50	13.50	15.00	5	3	1
2	330	1.4	33.0	0.	16.00	17.75	18.00	11.25	18.25	16.00	13.50	15.00	5	3	1
3	330	2.0	32.0	0.	16.00	17.75	18.25	12.00	17.75	16.00	13.50	15.00	6	3	2
4	330	3.0	32.0	0.	16.00	17.75	18.25	12.00	18.00	16.00	13.75	15.00	5	3	2
5	340	1.8	33.0	0.	16.25	14.75	18.50	11.25	18.50	16.25	13.75	15.00	5	3	1
6	300	1.1	32.0	0.	16.25	18.00	18.75	13.00	18.25	16.25	14.00	15.25	7	3	2
7	360	1.1	32.0	0.	16.75	18.50	19.00	10.25	19.00	17.00	14.25	15.75	7	3	3
8	30	1.2	32.0	0.	17.00	19.00	18.75	12.25	18.50	17.00	14.50	16.00	4	1	2
9	360	1.4	32.0	58.2	17.00	19.00	18.50	11.75	18.75	17.00	14.75	15.75	3	0	2
10	330	1.5	33.0	129.6	16.75	19.00	18.00	11.00	18.00	17.00	14.50	15.75	4	0	2
11	330	2.0	34.0	179.1	16.75	19.50	17.50	12.00	17.50	17.00	14.75	15.00	3	0	1
12	360	1.5	38.0	201.4	16.50	19.50	17.25	10.25	17.50	16.75	14.25	15.00	4	2	1
13	110	1.7	37.0	194.8	16.75	19.25	17.25	11.25	17.25	16.75	14.25	15.00	6	3	2
14	140	2.2	38.0	159.6	17.00	18.75	17.50	12.25	17.25	16.75	14.50	14.75	12	3	2
15	150	1.5	37.0	99.1	17.50	19.25	17.75	11.50	18.00	17.00	14.75	15.25	5	2	1
16	180	2.5	37.0	22.9	18.00	19.25	17.75	12.25	17.00	17.50	15.00	16.25	3	0	2
17	240	1.5	38.0	0.	17.25	19.75	16.75	12.00	17.00	17.75	15.00	16.75	3	0	1
18	210	.6	37.0	0.	17.25	20.00	16.75	10.50	16.75	17.25	15.00	16.75	4	0	1
19	140	2.5	38.0	0.	17.00	19.25	16.50	11.50	16.75	17.00	15.00	16.75	3	0	1
20	140	5.2	37.0	0.	16.75	19.25	16.25	11.75	16.50	16.75	15.00	16.25	3	0	1
21	140	6.8	37.0	0.	16.25	19.00	16.25	12.25	16.25	16.50	14.75	16.25	8	1	1
22	140	7.0	37.0	0.	16.25	18.75	16.25	9.75	16.25	16.25	14.25	16.00	11	3	1
23	150	5.1	37.0	0.	16.50	18.50	16.25	12.00	16.25	16.50	14.50	16.00	11	3	1
TOT.				1044.7									133	44	33
AVG.	230	2.4	34.9	43.5	16.65	18.61	17.57	11.52	17.52	16.62	14.34	15.59	6	2	1

DATE
(01/12/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(kWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	6.5	38.0	0.	16.50	18.00	16.75	11.50	16.75	16.25	14.25	15.75	6	3	1
1	170	9.0	40.0	0.	16.50	18.00	17.00	14.00	16.25	16.25	14.25	15.50	6	3	2
2	170	8.5	40.0	0.	16.75	18.00	17.00	11.50	17.00	16.50	14.50	15.75	5	3	1
3	160	5.0	42.0	0.	16.75	18.00	17.25	11.00	17.25	16.75	14.75	15.75	5	3	1
4	180	8.2	41.0	0.	17.00	18.25	17.25	11.25	17.50	16.75	15.00	16.00	4	1	1
5	210	11.6	42.0	0.	17.00	18.25	17.25	11.50	17.50	17.00	15.00	16.00	2	0	1
6	270	5.0	41.0	0.	16.75	17.75	17.00	10.25	17.00	17.00	15.00	16.00	3	0	2
7	330	3.6	37.0	0.	17.00	18.25	16.25	11.00	16.75	17.25	15.00	16.00	3	0	2
8	360	2.5	37.0	0.	17.00	19.00	16.00	10.00	16.25	17.00	15.00	16.00	2	0	1
9	40	3.5	36.0	6.7	17.00	19.00	15.75	9.00	16.00	17.00	15.00	16.00	3	0	1
10	30	2.5	36.0	15.0	16.75	19.00	15.25	11.50	16.00	17.00	14.75	16.00	3	0	2
11	360	1.7	36.0	20.7	16.75	19.00	15.00	10.50	15.75	17.00	14.75	16.00	6	0	1
12	360	1.2	36.0	23.3	16.50	19.25	15.00	9.25	15.00	16.50	14.50	15.75	5	2	1
13	160	4.4	39.0	22.5	16.50	18.75	15.00	9.50	15.00	16.50	14.25	15.00	6	3	1
14	150	4.5	40.0	18.5	17.00	19.00	15.25	11.25	15.50	16.50	14.25	14.75	6	3	1
15	150	6.6	40.0	11.6	17.00	19.00	15.50	9.50	15.75	16.75	14.50	15.25	6	3	1
16	150	6.5	40.0	2.8	17.00	19.00	15.75	9.00	15.75	16.75	14.50	15.50	3	0	1
17	150	7.3	40.0	0.	16.75	19.00	15.00	9.75	15.50	16.75	14.75	16.00	5	0	2
18	150	8.0	40.0	0.	16.75	19.00	15.00	10.75	15.25	16.75	14.75	16.00	4	0	1
19	160	6.5	41.0	0.	16.50	19.00	14.75	11.75	15.25	16.50	14.75	16.00	2	0	1
20	180	7.0	41.0	0.	16.00	19.00	14.75	11.25	15.00	16.25	14.25	15.75	3	0	1
21	160	6.0	41.0	0.	16.25	19.00	14.50	8.75	14.75	16.25	14.50	15.75	3	1	1
22	160	5.0	41.0	0.	16.00	19.00	14.50	11.25	15.00	16.25	14.25	15.50	9	3	1
23	150	4.7	40.0	0.	16.50	19.00	15.00	12.50	15.00	16.25	14.25	15.75	6	3	0
TOT.				121.1									105	33	29
AVG.	189	5.7	39.4	5.0	16.69	18.69	15.74	10.73	15.95	16.66	14.61	15.74	4	1	1

DATE
(01/13/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.2	40.0	0.	16.50	18.25	15.75	8.75	15.75	16.00	14.25	15.50	5	3	1
1	150	6.2	40.0	0.	16.25	18.25	15.50	10.00	15.75	16.00	14.00	15.25	5	3	1
2	150	5.5	40.0	0.	16.50	18.00	16.00	9.25	16.00	16.00	14.25	15.25	5	3	1
3	150	6.0	40.0	0.	16.25	18.00	16.00	11.00	15.75	16.00	14.00	15.25	6	3	2
4	150	4.2	40.0	0.	16.50	18.00	16.00	11.00	16.25	16.25	14.00	15.25	3	1	1
5	150	5.0	40.0	0.	16.25	18.00	16.00	10.00	16.25	16.25	14.25	15.25	2	0	1
6	150	4.3	40.0	0.	16.00	18.00	15.50	9.00	15.75	16.25	14.25	15.25	3	0	2
7	150	1.1	40.0	0.	16.25	18.25	15.00	9.50	15.50	16.50	14.25	15.25	3	0	2
8	150	2.0	40.0	0.	16.25	18.75	14.50	9.00	15.00	16.50	14.25	15.25	3	0	2
9	150	4.7	41.0	5.1	16.25	18.75	14.25	7.75	14.50	16.50	14.25	15.50	2	0	2
10	210	1.1	42.0	11.2	16.25	19.00	14.00	7.75	14.00	16.50	14.25	15.25	3	0	2
11	30	1.8	43.0	15.5	16.25	19.00	13.75	9.75	14.50	16.75	14.25	15.00	3	0	1
12	30	2.1	43.0	17.4	16.25	19.00	13.25	8.00	13.75	16.50	14.00	7.75	4	2	1
13	30	1.4	46.0	16.9	16.75	19.00	14.00	9.25	14.25	16.50	14.00	17.00	8	3	1
14	360	1.3	46.0	13.9	17.00	18.75	14.25	9.25	14.50	16.50	14.00	15.75	7	3	1
15	90	2.2	43.0	8.7	17.00	18.75	14.50	9.00	15.00	16.25	14.50	16.50	5	2	2
16	150	1.8	42.0	2.2	17.00	19.25	14.50	10.25	15.00	17.00	15.00	16.50	2	0	1
17	180	1.1	42.0	0.	17.00	19.50	14.00	9.00	14.75	17.00	15.00	16.25	5	0	0
18	170	2.8	42.0	0.	16.75	19.75	14.00	14.00	15.25	17.00	15.00	16.00	2	0	0
19	180	2.0	42.0	0.	16.50	19.25	14.00	15.25	15.50	16.25	14.75	15.50	2	0	0
20	150	2.4	42.0	0.	16.25	18.75	14.00	15.50	15.25	16.00	14.75	15.25	2	0	1
21	150	3.6	41.0	0.	16.00	18.50	14.00	10.50	14.50	16.00	14.50	15.25	4	1	1
22	150	3.4	41.0	0.	16.00	18.50	14.00	9.75	14.25	16.00	14.25	15.00	6	3	1
23	150	3.8	41.0	0.	16.25	18.50	14.25	9.75	14.75	16.00	14.00	15.00	8	3	0
TOT.				90.9									98	32	26
AVG.	147	3.1	41.5	3.8	16.43	18.66	14.62	10.09	15.07	16.35	14.33	15.21	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.5	39.0	0.	16.25	18.25	15.00	8.25	15.00	15.75	14.00	15.00	6	3	1
1	90	1.4	40.0	0.	16.25	18.00	15.00	9.25	15.25	15.75	14.00	15.00	5	3	1
2	120	1.2	40.0	0.	16.25	18.00	15.25	10.00	15.50	16.00	14.00	15.25	6	3	1
3	150	1.5	40.0	0.	16.50	17.75	15.50	11.00	15.75	16.00	14.00	15.25	5	3	1
4	150	2.3	40.0	0.	16.75	18.00	15.75	10.00	16.00	16.25	14.00	15.50	5	3	1
5	150	3.1	39.0	0.	16.75	18.00	16.00	9.75	16.00	16.25	14.00	15.75	4	2	1
6	150	8.2	38.0	0.	16.50	17.75	16.00	9.25	16.25	16.25	14.00	15.75	3	0	2
7	150	8.0	38.0	0.	16.25	18.25	15.25	9.00	15.00	16.50	14.00	15.75	2	0	2
8	150	8.2	39.0	0.	16.25	18.00	15.00	10.00	15.00	16.50	14.00	15.50	3	0	2
9	160	5.0	41.0	9.7	16.25	18.25	14.75	9.25	15.00	16.50	14.00	15.75	2	0	2
10	180	3.6	41.0	21.4	16.25	18.25	14.00	9.50	15.00	16.50	14.00	15.50	3	0	2
11	180	3.2	42.0	29.5	16.25	18.25	14.00	9.00	14.50	16.50	14.25	15.75	2	0	1
12	270	.9	44.0	33.3	16.25	18.25	13.75	7.25	14.00	16.50	14.50	15.75	7	2	1
13	90	1.4	44.0	32.3	16.25	18.25	14.00	10.00	14.50	16.50	14.75	15.75	7	3	2
14	360	.9	46.0	26.7	17.00	18.25	14.25	9.75	14.75	16.75	14.75	16.00	6	3	1
15	130	2.0	46.0	16.9	17.00	18.25	14.25	8.00	14.50	16.75	15.00	16.00	4	2	1
16	150	2.5	44.0	4.4	17.00	18.75	14.50	11.50	15.25	16.75	15.00	16.25	1	0	1
17	120	1.8	43.0	0.	16.75	18.50	14.25	12.00	15.25	16.75	15.00	16.25	3	0	1
18	120	1.4	44.0	0.	16.75	18.50	14.00	12.25	15.25	16.75	15.00	16.00	5	0	1
19	150	3.0	43.0	0.	16.75	19.00	14.00	7.50	14.25	16.50	15.00	15.75	6	0	0
20	150	4.0	42.0	0.	16.25	19.00	13.75	13.25	15.00	16.25	15.00	15.75	3	0	0
21	150	3.5	42.0	0.	16.25	18.75	13.75	7.50	14.00	16.00	14.75	15.25	3	1	1
22	150	5.0	42.0	0.	16.25	18.75	13.75	10.50	14.50	16.00	14.75	15.25	7	3	1
23	150	6.0	42.0	0.	16.50	18.25	14.25	13.00	15.00	16.25	14.50	15.25	5	3	0
TOT.				174.2									100	36	25
AVG.	157	3.4	41.6	7.3	16.48	18.30	14.58	9.86	15.02	16.35	14.43	15.62	4	1	1

DATE
(01/15/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	41.0	0.	16.75	18.00	15.00	14.75	15.25	16.00	14.50	15.00	4	3	0
1	150	7.5	41.0	0.	16.50	17.75	15.25	15.25	15.25	16.00	14.25	15.25	5	3	0
2	150	8.5	41.0	0.	16.50	17.50	16.00	9.00	16.25	15.75	14.25	15.50	6	3	1
3	150	8.0	41.0	0.	16.75	17.75	16.00	11.25	16.25	16.00	14.25	15.75	6	3	1
4	150	7.2	41.0	0.	16.75	17.75	16.25	9.75	16.50	16.25	14.50	15.75	5	3	1
5	150	7.0	41.0	0.	17.00	17.50	16.75	11.75	16.50	16.25	14.75	16.00	4	2	1
6	150	4.5	42.0	0.	17.00	18.00	16.50	11.00	16.75	16.50	14.75	16.00	3	0	2
7	170	2.6	42.0	0.	17.00	18.25	15.75	11.00	16.25	17.00	15.00	16.25	2	0	2
8	150	3.3	43.0	0.	17.00	18.75	15.25	9.00	15.50	17.00	15.00	16.25	2	0	1
9	150	4.0	42.0	8.0	17.00	19.00	15.00	12.00	16.00	17.00	15.00	16.25	3	0	2
10	150	3.0	42.0	17.6	17.00	18.75	14.75	9.25	15.25	17.00	15.00	16.25	2	0	1
11	120	2.0	43.0	24.3	17.00	18.75	14.75	12.50	15.50	17.00	15.00	16.25	2	0	1
12	150	4.0	43.0	27.4	17.00	18.75	14.50	11.50	15.25	16.75	15.00	16.25	4	2	1
13	180	7.5	43.0	26.6	17.00	18.75	15.00	9.00	15.00	16.75	15.25	16.25	6	3	2
14	180	6.0	44.0	22.0	17.25	19.00	15.00	11.00	15.50	17.00	15.50	16.25	5	3	1
15	180	9.2	47.0	14.1	18.00	18.50	15.25	10.00	15.75	17.00	15.50	16.75	4	2	2
16	150	7.0	48.0	3.8	17.75	19.00	15.25	11.25	16.00	17.50	15.75	16.75	3	0	1
17	160	7.2	48.0	0.	17.50	19.00	15.00	9.00	15.25	17.50	16.00	16.75	3	0	1
18	180	4.8	48.0	0.	17.25	19.00	14.75	11.00	15.50	17.50	16.00	16.75	2	0	1
19	160	3.2	48.0	0.	17.25	19.00	14.50	9.25	15.00	17.25	15.75	16.75	3	0	1
20	190	4.0	48.0	0.	17.25	19.00	14.25	9.25	15.00	17.25	15.75	16.50	2	0	1
21	150	3.6	48.0	0.	17.25	19.25	14.00	11.50	15.25	17.25	15.75	16.50	3	1	1
22	160	5.0	48.0	0.	17.25	19.00	14.25	10.50	10.00	17.25	15.75	16.50	6	3	1
23	160	5.4	46.0	0.	17.75	19.00	14.75	10.25	15.25	17.25	15.75	16.50	5	3	0
TOT.				143.8									89	36	24
AVG.	158	5.4	44.1	6.0	17.11	18.54	15.16	10.83	15.42	16.83	15.17	16.21	4	1	1

DATE
(01/16/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	5.5	44.0	0.	17.75	18.50	15.25	14.75	16.00	17.00	15.50	16.25	5	3	0
1	160	4.0	44.0	0.	17.75	18.25	15.75	9.50	16.00	17.00	15.50	16.25	6	3	1
2	140	4.2	42.0	0.	17.50	18.25	16.00	10.00	16.25	17.00	15.50	16.25	6	3	1
3	140	3.5	42.0	0.	17.25	18.00	16.25	12.25	16.50	17.00	15.25	16.25	5	3	1
4	150	4.7	42.0	0.	17.25	18.00	16.75	13.50	16.75	17.00	15.25	16.25	6	3	1
5	150	5.4	41.0	0.	17.25	18.25	17.00	11.00	17.00	17.00	15.25	16.25	3	2	1
6	140	4.2	42.0	0.	17.25	17.75	16.75	12.00	17.00	17.00	15.00	16.50	3	0	2
7	150	3.8	42.0	0.	17.00	18.25	16.00	14.00	16.00	17.00	15.00	16.50	3	0	2
8	150	2.5	42.0	0.	17.00	18.75	15.50	10.50	16.00	17.25	15.00	16.25	2	0	1
9	150	2.3	42.0	4.2	17.00	19.00	15.25	9.25	15.50	17.25	15.00	16.50	2	0	1
10	150	4.2	42.0	9.2	17.00	18.75	15.00	10.00	15.50	17.25	15.00	16.25	3	0	2
11	150	4.5	43.0	12.7	17.00	19.00	14.75	10.00	15.25	17.25	15.25	16.25	2	0	1
12	150	6.3	43.0	14.4	17.00	19.00	14.50	9.50	15.00	17.25	15.00	16.25	4	2	2
13	150	7.0	43.0	14.0	17.00	19.00	14.75	10.50	15.25	17.00	15.25	16.50	5	3	2
14	150	6.0	43.0	11.6	17.75	19.00	15.00	9.50	15.25	17.25	15.25	16.25	6	3	1
15	150	5.8	44.0	7.4	17.75	19.00	15.00	8.75	15.25	17.25	15.50	16.50	4	2	1
16	150	5.0	46.0	2.1	17.75	19.00	15.00	9.00	15.25	17.50	15.50	16.50	2	0	1
17	150	5.0	48.0	0.	17.25	19.25	14.75	11.50	15.75	17.50	15.75	16.75	3	0	1
18	150	8.6	49.0	0.	17.25	19.00	14.25	8.50	14.75	17.25	15.50	16.25	3	0	1
19	160	8.8	48.0	0.	17.00	18.75	14.25	8.00	14.50	17.00	15.50	16.50	3	0	1
20	150	5.0	48.0	0.	17.00	18.75	14.00	7.50	14.00	17.25	15.50	16.25	2	0	1
21	160	6.0	48.0	0.	17.00	19.00	14.00	8.00	14.00	17.00	15.50	16.25	5	1	0
22	180	5.2	48.0	0.	17.00	19.00	14.25	8.00	15.50	17.00	15.25	16.25	11	3	1
23	160	7.2	49.0	0.	17.25	19.00	14.25	10.75	15.00	16.75	15.25	16.00	11	3	0
TOT.				75.6									107	36	25
AVG.	152	5.2	44.4	3.1	17.25	18.69	15.18	10.26	15.55	17.12	15.30	16.33	4	1	1

DATE
(01/17/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.0	49.0	0.	17.25	18.25	15.00	14.75	15.75	16.75	15.00	16.00	8	3	0
1	180	8.0	48.0	0.	17.00	18.00	15.25	15.50	16.00	16.50	15.00	16.00	7	3	0
2	180	8.2	49.0	0.	17.00	17.75	16.00	13.00	16.00	16.50	15.00	16.00	6	3	1
3	160	6.0	48.0	0.	17.25	18.00	16.25	9.50	16.75	16.75	15.25	16.25	4	3	0
4	160	5.5	48.0	0.	17.25	18.00	17.00	14.75	16.75	16.75	15.25	16.50	5	3	1
5	160	7.5	48.0	0.	17.50	18.00	17.00	13.50	17.00	17.00	15.50	16.75	4	2	1
6	160	6.0	48.0	0.	17.50	18.00	17.00	14.25	17.00	17.00	15.75	16.75	3	0	2
7	160	5.3	48.0	0.	17.50	18.50	16.25	11.25	16.75	17.75	16.00	17.00	2	0	1
8	160	5.5	48.0	0.	17.50	19.00	16.25	9.50	16.25	17.75	16.00	17.00	3	0	2
9	160	4.3	50.0	2.5	17.50	19.25	15.75	10.00	16.00	18.00	16.00	17.00	2	0	1
10	160	6.0	50.0	5.5	17.50	19.25	15.50	11.00	16.25	18.00	16.00	17.00	3	0	1
11	180	6.0	51.0	7.6	17.75	19.25	15.25	10.25	15.75	18.00	16.25	17.00	2	0	1
12	180	5.8	50.0	8.6	17.75	19.25	15.00	13.25	16.25	18.00	16.25	17.00	6	2	1
13	160	5.5	50.0	8.4	17.75	19.50	15.25	12.25	16.00	17.75	16.00	17.00	6	3	0
14	180	6.0	50.0	7.0	18.00	19.25	15.75	15.25	16.50	17.50	16.00	17.00	5	3	1
15	160	5.5	49.0	4.5	18.25	19.25	16.25	13.25	16.75	17.50	16.25	17.00	4	2	1
16	150	6.2	49.0	1.3	18.00	19.25	16.25	13.75	16.75	17.75	16.25	17.00	2	0	1
17	150	5.1	49.0	0.	17.75	19.00	16.25	14.00	16.75	17.75	16.25	17.00	3	0	0
18	180	4.8	50.0	0.	17.75	19.25	16.25	16.00	17.00	17.50	16.25	17.00	3	0	1
19	180	5.2	50.0	0.	17.75	19.25	16.00	13.75	16.75	17.50	16.00	17.00	5	0	0
20	150	4.0	50.0	0.	17.25	19.50	16.00	15.75	16.75	17.00	16.00	16.75	9	0	1
21	180	4.0	50.0	0.	17.25	19.50	15.75	13.50	16.25	17.00	16.00	16.75	7	1	0
22	170	4.5	50.0	0.	17.00	19.25	15.75	15.50	16.50	17.00	15.75	16.75	9	3	1
23	180	8.0	50.0	0.	17.75	19.50	16.25	12.00	16.50	17.00	15.75	16.75	8	3	0
TOT.				45.4									114	36	15
AVG.	167	5.8	49.2	1.9	17.53	18.87	15.97	13.15	16.46	17.33	15.82	16.76	5	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.5	50.0	0.	17.75	18.75	16.75	15.25	16.75	17.00	15.75	16.75	10	3	0
1	180	6.5	50.0	0.	18.00	18.25	17.00	16.00	16.75	17.00	15.75	16.75	7	3	0
2	180	5.2	50.0	0.	18.00	18.00	17.75	16.75	16.75	17.00	16.00	17.00	4	3	0
3	180	5.5	50.0	0.	18.00	18.00	18.25	16.75	16.75	17.00	16.00	17.00	5	3	1
4	180	7.0	50.0	0.	18.00	18.00	18.50	14.50	18.00	17.25	16.00	17.00	5	3	1
5	180	7.0	50.0	0.	18.25	18.25	19.00	14.75	18.25	17.50	16.25	17.25	5	3	1
6	180	11.0	50.0	0.	18.25	18.00	19.25	15.00	18.75	18.00	16.50	17.75	6	2	2
7	180	11.0	50.0	0.	18.75	18.50	19.00	13.00	19.25	18.25	16.75	17.75	2	0	1
8	180	7.3	50.0	0.	18.50	18.25	18.25	14.00	18.50	18.75	16.75	18.25	2	0	2
9	360	4.5	46.0	2.6	18.75	19.00	18.00	11.50	18.00	19.00	16.75	18.25	2	0	1
10	40	3.0	46.0	8.4	18.50	19.50	17.50	12.00	18.00	19.00	16.75	18.00	2	0	1
11	60	5.2	46.0	13.6	18.25	19.25	17.25	12.25	18.00	18.75	16.75	18.00	2	0	0
12	60	5.0	50.0	16.9	18.25	19.25	17.25	16.00	17.75	18.25	18.00	26.00	5	2	0
13	60	5.5	50.0	16.4	18.50	19.75	19.25	17.00	17.75	18.25	23.00	45.50	6	3	0
14	60	3.5	51.0	13.7	19.25	20.00	22.00	18.00	18.00	18.25	25.25	44.00	5	3	0
15	40	1.5	51.0	8.9	20.00	21.00	24.00	18.50	18.25	18.75	26.50	41.25	4	3	0
16	100	8.0	50.0	2.7	20.25	21.00	26.00	19.00	18.75	19.25	27.25	34.00	3	1	0
17	100	1.5	47.0	0.	20.00	21.00	26.25	19.50	19.25	19.25	25.00	23.25	10	0	0
18	90	2.5	45.0	0.	19.75	20.50	26.25	19.25	19.00	19.25	21.50	21.00	5	0	0
19	360	1.0	43.0	0.	19.25	20.00	26.25	18.75	18.50	18.75	19.75	20.50	5	0	0
20	360	1.7	42.0	0.	18.75	19.75	26.25	18.25	18.00	18.25	18.50	21.00	5	0	0
21	60	3.8	42.0	0.	18.25	19.50	26.00	18.00	17.75	18.00	17.75	20.00	8	0	0
22	90	1.6	42.0	0.	18.00	19.25	26.00	17.50	17.50	17.50	17.00	19.50	4	0	0
23	180	4.1	41.0	0.	18.00	19.25	26.00	17.25	17.00	17.25	16.50	18.75	6	0	0
TOT.				83.2									126	35	9
AVG.	152	5.1	47.6	3.5	18.64	19.25	21.17	16.20	17.97	18.15	18.83	22.69	5	1	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	350	1.0	40.0	0.	17.25	18.25	26.00	17.00	17.00	17.00	16.00	18.25	7	0	0
1	360	1.8	40.0	0.	17.25	18.75	26.00	17.00	16.50	17.00	15.75	18.00	2	0	0
2	60	2.0	40.0	0.	17.00	18.25	26.00	16.50	16.25	16.50	15.50	18.00	1	0	0
3	360	2.4	38.0	0.	17.00	17.50	26.00	16.50	16.25	16.50	15.25	17.75	2	0	1
4	180	3.0	36.0	0.	16.75	18.00	25.00	16.00	24.00	16.75	15.00	17.50	2	0	1
5	90	1.5	38.0	0.	16.75	17.75	24.50	16.00	21.75	17.00	15.25	17.25	2	0	1
6	120	2.5	38.0	0.	17.00	18.00	23.75	16.75	22.50	17.25	15.25	17.00	3	0	1
7	150	2.2	37.0	0.	17.00	17.75	23.25	15.00	23.25	17.50	15.25	17.00	5	3	1
8	180	3.0	36.0	0.	17.25	18.00	23.75	17.25	22.50	17.75	15.25	17.00	6	3	2
9	180	3.0	38.0	52.6	17.75	18.00	23.75	15.75	22.00	18.00	15.25	17.00	4	0	2
10	270	1.2	40.0	114.7	17.75	18.25	23.00	15.00	23.00	18.00	15.50	16.00	3	0	2
11	360	1.3	40.0	158.3	17.50	18.75	22.50	15.00	22.00	18.25	15.50	15.00	2	0	1
12	360	3.2	42.0	178.8	17.75	18.75	22.00	14.50	22.25	18.00	15.25	14.25	2	0	1
13	360	4.3	42.0	174.6	17.75	18.50	22.00	15.50	20.75	18.00	21.75	22.75	6	0	1
14	360	3.5	43.0	146.0	18.00	18.75	22.00	16.00	20.00	18.25	21.00	21.00	8	3	0
15	320	4.2	44.0	119.6	19.00	19.25	22.50	17.75	19.25	18.75	24.50	32.50	5	2	0
16	340	3.2	42.0	47.1	19.00	19.25	23.50	18.25	19.00	18.75	24.00	25.00	1	0	0
17	330	2.0	41.0	0.	18.50	19.00	23.50	18.25	18.50	18.50	20.25	20.00	6	0	0
18	340	1.1	40.0	0.	18.25	19.50	23.50	18.00	18.00	18.00	18.50	19.25	2	0	0
19	350	2.1	40.0	0.	18.00	19.75	23.50	17.75	17.75	17.75	17.50	19.00	3	0	1
20	350	1.8	38.0	0.	17.50	18.75	23.50	15.00	22.75	17.50	16.75	18.75	3	0	1
21	350	2.0	38.0	0.	17.25	19.00	23.25	14.50	21.50	17.50	16.25	18.25	3	0	1
22	350	2.2	36.0	0.	17.25	19.00	23.00	16.00	19.75	17.50	16.00	18.00	5	0	1
23	10	2.8	36.0	0.	17.00	19.00	22.75	16.00	19.50	17.50	15.75	17.75	3	0	0
TOT.				991.7									85	12	16
AVG.	270	2.4	39.3	41.3	17.56	18.57	23.69	16.30	20.25	17.65	17.18	18.84	4	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	40	1.3	38.0	0.	17.00	18.75	22.75	16.50	18.00	17.00	15.25	18.25	2	0	1
1	360	2.3	36.0	0.	16.75	18.00	22.25	14.75	21.50	17.00	15.00	18.00	1	0	1
2	330	3.5	36.0	0.	16.75	18.00	22.25	14.50	22.00	16.75	15.00	15.50	2	0	1
3	360	2.5	36.0	0.	16.25	17.50	22.00	14.75	21.50	17.00	15.00	16.25	2	0	1
4	360	2.5	35.0	0.	16.75	18.00	21.50	15.00	20.00	17.00	15.00	16.25	3	0	1
5	330	3.0	32.0	0.	16.50	17.50	21.25	14.25	20.25	17.00	15.00	16.25	2	0	2
6	360	3.2	32.0	0.	16.75	17.75	20.00	14.00	20.50	17.00	15.00	16.00	4	0	3
7	60	3.3	32.0	0.	16.75	19.00	20.00	14.00	20.00	17.50	15.00	16.00	5	2	2
8	360	2.5	33.0	0.	17.00	18.75	20.00	13.00	20.00	17.50	15.00	16.00	5	3	2
9	360	2.5	33.0	24.8	17.25	19.00	20.00	13.50	19.50	17.75	15.00	16.00	3	0	2
10	270	1.0	36.0	52.6	17.00	19.50	19.75	13.50	19.00	17.75	15.00	14.50	3	0	2
11	230	2.0	41.0	69.6	17.00	19.25	19.00	13.00	19.25	17.75	19.50	28.50	2	0	0
12	150	5.0	40.0	66.9	16.75	19.25	20.25	13.50	15.00	15.00	23.75	40.50	1	0	0
13	150	6.0	38.0	56.4	17.00	19.00	21.75	15.00	15.75	16.00	23.25	30.25	2	0	0
14	150	7.5	39.0	37.7	17.00	19.00	22.25	15.75	16.00	16.25	23.00	26.00	5	3	1
15	150	5.0	39.0	24.8	17.25	18.50	23.00	15.00	22.00	17.00	22.25	23.50	5	2	2
16	150	5.5	38.0	7.9	18.00	19.75	23.00	15.00	23.00	18.00	19.75	19.50	1	0	1
17	150	4.5	38.0	0.	18.00	19.25	22.50	13.25	22.25	18.00	17.50	18.50	5	0	1
18	150	5.5	38.0	0.	17.50	19.75	22.00	16.25	19.00	18.00	16.75	18.25	3	0	1
19	60	5.0	38.0	0.	17.50	19.00	22.00	15.00	20.00	17.50	15.25	18.00	3	0	1
20	150	3.8	41.0	0.	17.00	19.25	21.75	14.50	21.00	17.25	16.00	17.25	3	0	1
21	150	3.2	40.0	0.	17.00	18.75	21.25	14.75	20.00	17.25	15.75	17.00	3	0	2
22	150	3.2	39.0	0.	17.00	19.00	21.00	14.25	20.00	17.50	15.50	17.00	3	0	1
23	150	5.0	38.0	0.	17.00	18.75	20.75	14.00	19.75	17.25	15.50	16.75	2	0	1
TOT.				340.7									71	11	27
AVG.	213	3.7	36.9	14.2	17.03	18.76	21.34	14.42	19.80	17.17	17.08	19.52	3	0	1

DATE
(01/21/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	39.0	0.	16.75	18.00	20.25	13.75	20.00	17.00	15.25	16.50	3	0	1
1	180	2.5	40.0	0.	16.50	18.00	20.00	14.00	18.75	17.00	15.00	16.25	4	0	1
2	180	2.2	37.0	0.	16.50	17.75	19.75	13.00	19.75	17.00	15.00	16.25	2	0	1
3	270	1.7	38.0	0.	16.75	18.00	19.50	13.00	19.25	17.00	15.00	16.00	2	0	1
4	60	2.2	39.0	0.	16.75	18.00	19.25	13.75	18.50	17.00	15.00	16.00	2	0	1
5	30	2.0	40.0	0.	16.75	18.25	19.00	12.50	19.00	17.00	15.00	16.25	2	0	1
6	40	1.8	40.0	0.	16.75	18.25	18.75	11.00	19.00	17.00	15.00	16.00	4	0	3
7	60	8.0	42.0	0.	17.00	19.00	18.25	12.25	18.25	17.25	15.00	16.00	5	2	2
8	360	1.4	42.0	0.	17.25	19.25	18.25	11.50	18.50	17.25	15.00	16.00	11	3	1
9	360	3.0	42.0	21.2	17.75	19.50	18.25	14.00	18.00	17.50	15.25	16.25	5	0	1
10	360	3.8	42.0	57.8	17.25	19.50	18.25	12.50	18.00	17.25	15.25	16.25	3	0	1
11	360	3.8	45.0	101.8	17.00	19.50	17.75	12.25	18.00	17.25	18.00	31.00	2	0	1
12	360	5.5	46.0	131.5	17.00	19.50	18.25	12.75	16.75	16.25	21.50	40.00	1	0	0
13	360	7.0	46.0	130.6	17.50	19.75	20.00	15.50	16.75	16.75	24.00	46.00	1	0	0
14	360	5.5	47.0	110.5	18.00	19.75	22.00	16.75	17.25	17.25	25.75	45.00	4	3	0
15	360	5.0	46.0	73.4	19.00	19.75	25.00	17.75	17.75	18.00	27.25	42.50	4	2	0
16	360	4.2	43.0	24.1	19.50	20.00	26.50	18.00	18.25	18.25	27.75	34.00	1	0	0
17	60	2.6	42.0	0.	19.25	19.75	26.50	18.50	18.25	18.50	25.25	23.00	2	0	0
18	360	2.0	40.0	0.	18.75	19.50	26.50	17.00	26.25	18.25	20.00	20.75	3	0	1
19	360	1.6	40.0	0.	18.75	19.50	26.25	17.50	25.25	18.50	18.75	21.00	4	0	1
20	60	3.0	39.0	0.	18.25	19.50	26.00	17.25	24.00	18.50	18.00	20.75	7	0	0
21	60	3.0	38.0	0.	18.25	19.75	26.00	17.75	20.00	18.25	17.00	20.00	3	0	0
22	60	3.5	37.0	0.	18.00	19.25	26.00	17.50	18.25	18.00	16.75	19.50	3	0	0
23	60	4.0	38.0	0.	17.50	19.00	25.75	16.75	23.75	17.50	18.00	19.00	7	0	0
TOT.				650.9									85	11	17
AVG.	214	3.6	41.2	27.1	17.61	19.08	21.75	14.85	19.48	17.48	18.41	23.34	4	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	2.8	36.0	0.	17.00	18.25	25.75	15.75	19.00	17.00	15.75	16.25	9	0	1
1	30	1.8	35.0	0.	17.00	18.00	25.00	16.25	25.00	17.25	15.50	18.00	10	0	2
2	30	3.4	35.0	0.	17.00	18.25	24.00	16.00	21.75	17.50	15.25	17.50	9	0	2
3	50	4.6	34.0	0.	17.00	18.25	23.50	15.50	23.00	17.50	15.25	17.25	7	0	1
4	50	6.2	34.0	0.	17.00	18.25	23.00	15.00	23.00	17.50	15.00	17.00	3	0	1
5	50	6.0	35.0	0.	17.00	18.25	22.75	13.75	23.00	17.50	15.00	16.75	2	0	2
6	50	4.4	34.0	0.	17.00	18.25	22.75	23.00	21.75	17.50	15.00	16.75	3	0	2
7	50	3.6	34.0	0.	17.00	18.75	21.75	14.25	21.25	17.75	15.00	16.50	3	0	2
8	60	5.6	34.0	28.2	17.00	19.00	21.00	14.50	20.25	17.75	15.00	16.50	3	0	2
9	90	3.2	36.0	86.6	17.00	19.00	20.75	14.25	20.25	17.75	15.00	16.50	4	0	1
10	60	2.3	34.0	135.4	17.00	19.00	20.75	12.50	20.75	17.25	15.00	16.25	3	0	1
11	60	2.3	35.0	169.3	17.00	19.00	20.25	14.00	20.00	17.00	14.75	15.75	5	0	1
12	90	1.8	36.0	185.8	16.75	19.00	20.00	12.75	20.25	17.00	14.75	15.00	4	0	1
13	90	2.0	37.0	183.6	17.00	19.00	19.75	14.25	18.75	17.00	14.75	15.00	4	0	1
14	180	1.8	38.0	162.9	17.00	19.25	19.25	12.50	19.75	17.00	14.75	15.25	4	0	3
15	150	2.1	38.0	125.3	17.25	19.75	18.75	12.25	19.00	17.75	15.00	15.75	5	0	2
16	90	2.4	37.0	73.6	17.25	20.00	18.25	11.50	18.50	18.00	15.00	16.25	7	0	1
17	30	1.6	38.0	15.1	17.25	20.25	18.00	13.00	18.00	18.00	15.00	16.50	3	0	0
18	60	2.2	37.0	0.	17.00	20.25	18.00	15.25	17.00	17.25	15.00	16.75	4	0	0
19	60	2.0	37.0	0.	16.75	20.25	18.00	16.00	16.25	16.75	15.00	16.50	2	0	0
20	60	4.0	36.0	0.	16.50	20.00	18.00	16.00	16.00	16.25	14.75	16.50	4	0	1
21	60	4.3	36.0	0.	16.50	20.00	17.75	11.00	18.00	16.25	14.75	16.00	4	0	2
22	60	4.5	35.0	0.	16.50	20.25	17.25	10.75	17.75	16.75	14.75	16.00	4	0	2
23	60	5.0	34.0	0.	16.50	20.00	17.00	12.50	17.00	17.00	14.75	16.00	1	0	0
TOT.				1165.8									108	0	30
AVG.	67	3.3	35.6	48.6	16.93	19.18	20.47	14.27	19.80	17.26	14.99	16.44	4	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	3.8	35.0	0.	16.25	19.00	17.00	15.00	16.25	16.50	14.50	16.00	2	0	1
1	60	4.8	34.0	0.	16.00	18.50	16.75	11.25	17.00	16.25	14.25	15.75	2	0	1
2	60	4.2	34.0	0.	16.00	18.25	16.75	11.00	16.75	16.25	14.25	15.50	3	0	2
3	30	2.6	33.0	0.	16.00	18.25	16.25	10.50	16.75	16.50	14.25	15.50	2	0	2
4	60	2.2	33.0	0.	16.00	18.00	16.00	10.00	16.25	16.50	14.25	15.50	3	0	2
5	360	1.8	33.0	0.	16.00	18.25	15.50	10.00	16.00	16.50	14.25	15.50	2	0	2
6	330	2.8	32.0	0.	16.00	18.00	15.25	9.75	15.75	16.50	14.00	15.25	4	0	3
7	60	3.2	32.0	0.	16.25	18.25	14.75	8.50	15.00	16.75	14.25	15.25	4	0	3
8	360	3.0	32.0	2.6	16.75	18.75	14.25	8.00	14.25	16.75	14.50	15.50	4	0	3
9	360	2.4	33.0	8.2	16.75	19.00	13.75	7.75	14.00	17.00	14.75	15.75	5	0	3
10	60	2.5	33.0	12.9	17.00	19.50	13.00	7.25	13.25	17.25	14.75	15.50	4	0	3
11	30	2.6	32.0	16.2	17.00	19.75	12.50	6.50	12.75	17.00	14.50	15.25	4	0	3
12	60	2.0	32.0	17.8	17.00	20.00	12.00	6.25	12.25	17.00	14.25	14.50	4	0	3
13	30	2.2	32.0	17.6	16.75	20.00	11.50	7.00	12.00	17.00	14.25	14.00	3	0	1
14	60	2.2	32.0	15.6	17.25	19.75	11.25	10.75	14.00	17.00	12.25	13.75	3	0	1
15	30	2.0	33.0	11.9	17.50	19.25	11.25	11.75	12.50	17.00	11.50	11.75	4	0	2
16	360	.5	32.0	8.7	17.75	19.25	11.25	10.75	12.75	17.25	11.00	10.75	11	3	2
17	90	1.4	31.0	1.9	18.25	19.25	11.75	9.50	12.75	17.25	10.75	9.50	7	3	1
18	90	2.0	31.0	0.	17.75	19.00	11.75	15.25	12.25	17.00	13.75	15.25	7	3	2
19	90	.8	31.0	0.	17.25	18.75	12.00	16.00	12.50	16.75	14.00	15.75	8	3	3
20	30	1.6	31.0	0.	17.00	18.75	12.25	15.75	12.25	16.75	14.00	15.75	7	3	2
21	340	3.0	31.0	0.	17.00	18.75	12.25	15.50	12.75	16.50	14.00	15.50	8	3	2
22	320	2.7	31.0	0.	17.00	19.00	12.25	15.25	13.50	16.25	14.00	15.50	6	3	1
23	340	2.5	31.0	0.	16.75	18.50	12.75	15.25	13.75	16.25	14.00	15.25	5	3	1
TOT.				113.4									110	26	47
AVG.	153	2.4	32.2	4.7	16.80	18.91	13.50	11.02	14.05	16.74	13.76	14.73	5	1	2

DATE
(01/24/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	3.1	30.0	0.	16.75	18.25	12.50	8.00	13.00	16.00	13.75	15.00	3	0	2
1	330	2.5	30.0	0.	16.00	18.00	12.00	6.00	12.25	16.00	13.75	15.00	5	2	2
2	330	2.0	30.0	0.	15.75	18.00	12.00	6.25	12.50	15.75	13.50	15.00	7	3	2
3	330	1.8	30.0	0.	16.00	18.00	12.25	7.50	13.00	16.00	13.75	15.00	6	3	2
4	330	2.1	30.0	0.	16.25	18.00	12.25	6.50	12.75	16.00	13.25	15.00	6	3	2
5	50	2.2	60.0	0.	16.25	18.00	12.50	6.50	12.75	16.00	13.75	15.00	6	3	2
6	330	3.0	30.0	0.	16.25	18.00	12.25	6.25	12.75	16.00	13.75	15.00	7	3	3
7	330	2.0	30.0	0.	16.50	18.00	12.25	6.50	12.50	16.00	14.00	14.75	8	3	3
8	330	1.7	30.0	3.7	16.75	18.25	12.25	6.25	12.50	16.25	14.00	15.00	7	3	3
9	50	3.2	60.0	12.1	16.75	18.25	12.00	7.00	12.50	16.25	14.25	14.75	5	1	3
10	330	3.6	30.0	19.1	16.50	18.50	11.25	5.75	11.50	16.50	14.00	14.50	3	0	2
11	330	4.0	30.0	24.0	16.00	18.75	11.00	6.75	12.00	16.25	13.25	11.75	6	0	2
12	180	3.5	32.0	26.4	16.00	18.50	10.25	6.50	11.75	16.00	13.00	12.00	6	0	2
13	50	2.8	32.0	26.0	16.00	18.75	10.25	7.00	12.00	16.00	11.75	32.00	3	0	2
14	360	2.2	32.0	23.0	16.00	18.75	10.50	5.00	10.75	16.00	13.00	14.50	3	0	2
15	360	2.5	34.0	22.1	16.00	18.75	10.00	5.00	10.50	16.00	13.75	25.00	3	0	1
16	50	3.2	32.0	14.7	16.00	18.75	10.75	7.00	11.75	16.00	14.50	14.00	7	3	2
17	50	5.8	32.0	3.1	16.25	18.75	11.00	5.25	11.75	16.00	14.50	14.00	9	3	2
18	50	2.5	32.0	0.	16.75	19.00	11.25	5.50	11.50	16.00	14.00	16.50	6	3	1
19	40	8.8	32.0	0.	16.25	19.00	11.50	8.25	13.00	16.00	14.00	15.00	8	3	2
20	360	4.0	32.0	0.	16.75	19.00	11.75	6.25	12.25	16.00	14.00	14.75	7	3	2
21	360	3.2	32.0	0.	16.50	19.00	12.00	6.00	12.25	16.00	14.00	14.75	7	3	1
22	360	3.8	32.0	0.	16.00	19.00	12.00	6.00	12.50	15.75	13.75	14.50	5	2	2
23	360	4.0	31.0	0.	16.00	19.00	12.00	8.50	13.00	15.75	13.50	14.50	3	0	1
TOT.				174.2									136	47	46
AVG.	250	3.3	33.5	7.3	16.26	18.51	11.57	6.48	12.21	16.02	13.70	15.72	6	2	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	3.4	30.0	0.	15.25	18.50	12.00	5.50	12.25	15.25	13.00	14.25	7	3	2
1	50	2.6	30.0	0.	15.50	18.25	12.00	7.00	12.50	15.25	13.00	14.25	6	3	2
2	50	3.5	30.0	0.	15.50	18.00	12.25	6.00	12.25	15.25	13.00	14.00	7	3	3
3	50	3.0	30.0	0.	15.75	18.25	12.00	7.50	12.75	15.50	12.75	14.25	6	3	2
4	50	2.0	30.0	0.	15.75	18.25	12.00	6.50	12.00	15.50	13.00	14.00	7	3	2
5	50	1.8	30.0	0.	16.00	18.25	12.00	6.00	12.25	15.50	13.00	14.00	7	3	2
6	50	2.1	30.0	0.	16.00	18.25	12.00	5.00	12.25	15.50	13.00	14.00	8	3	3
7	50	1.5	30.0	0.	16.00	18.75	12.00	6.00	12.25	15.75	13.25	14.25	7	3	3
8	50	1.5	30.0	11.3	16.00	18.75	11.50	5.50	12.00	15.75	13.00	14.00	8	3	3
9	30	2.7	31.0	38.0	16.25	19.00	11.25	5.50	11.75	16.00	13.25	14.00	7	3	2
10	360	1.8	35.0	56.6	16.50	19.00	11.50	6.00	12.00	16.00	14.25	28.25	6	3	2
11	60	3.0	38.0	66.8	16.75	19.00	13.50	9.75	14.25	16.25	17.50	39.00	6	1	1
12	360	3.0	41.0	57.5	16.75	19.00	15.25	13.00	15.50	16.75	19.00	38.50	4	0	1
13	330	5.2	39.0	65.8	17.00	19.00	16.50	12.00	16.75	17.00	18.00	27.00	2	0	0
14	360	3.5	42.0	64.1	17.00	19.00	17.25	16.25	16.50	17.00	18.00	19.75	3	0	1
15	330	3.2	41.0	52.1	17.00	19.00	18.00	14.75	17.00	17.25	20.75	35.00	4	0	0
16	330	3.0	39.0	29.7	17.00	19.00	18.75	16.25	17.00	17.00	20.00	25.00	7	3	0
17	360	1.3	38.0	4.8	17.75	19.00	19.75	16.75	17.00	17.00	19.00	18.00	7	3	0
18	30	2.8	36.0	0.	17.25	19.00	20.25	16.75	16.75	17.00	17.25	16.25	9	3	1
19	90	1.1	34.0	0.	17.25	19.00	20.50	14.25	19.00	16.75	16.00	17.00	12	3	2
20	90	1.2	32.0	0.	17.25	19.00	20.25	14.00	19.50	17.00	15.75	17.00	11	3	1
21	110	1.3	31.0	0.	17.00	18.50	20.25	13.25	20.50	16.75	15.00	17.00	13	2	2
22	110	1.8	31.0	0.	17.00	19.25	20.00	13.25	20.00	17.00	15.00	16.75	5	0	1
23	110	.7	30.0	0.	16.50	18.75	19.25	13.25	18.75	16.75	14.75	16.25	2	0	0
TOT.				446.7									159	56	37
AVG.	145	2.4	33.7	18.6	16.50	18.74	15.42	10.46	15.11	16.28	15.44	19.66	7	2	2

DATE
(01/26/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	110	1.4	30.0	0.	16.25	18.00	19.25	12.25	19.00	16.25	14.00	16.00	3	0	1
1	110	1.1	30.0	0.	15.75	18.00	19.00	13.25	17.00	16.00	14.00	15.75	3	0	2
2	110	8.0	30.0	0.	15.50	18.00	18.50	12.50	18.00	16.00	13.75	15.50	3	0	2
3	80	1.6	30.0	0.	15.50	18.00	18.00	11.50	18.00	16.00	13.75	15.25	7	3	2
4	60	1.2	30.0	0.	16.00	18.00	18.25	11.25	18.25	16.00	13.50	15.00	7	3	2
5	60	1.0	30.0	0.	16.00	18.00	18.00	12.00	17.75	16.00	13.75	15.00	7	3	2
6	60	1.8	30.0	0.	16.25	18.00	18.00	11.25	18.00	16.25	14.00	15.00	8	3	3
7	60	2.1	30.0	0.	16.50	18.50	18.00	11.00	18.00	16.25	13.75	14.75	8	3	3
8	60	2.2	30.0	22.0	16.75	18.75	17.75	11.00	18.00	16.50	14.00	14.75	5	1	3
9	330	1.9	30.0	62.2	16.75	19.00	17.00	11.00	17.25	16.75	14.00	14.75	3	0	2
10	360	1.8	34.0	99.9	16.25	19.00	16.75	10.25	17.00	16.75	14.00	14.50	3	0	2
11	60	1.8	37.0	158.2	16.25	19.00	16.75	12.00	16.75	16.75	20.00	37.00	3	0	1
12	340	2.4	41.0	237.2	16.75	19.00	18.25	13.00	18.00	17.00	22.25	45.00	1	0	0
13	230	2.5	44.0	219.4	17.00	18.50	20.25	15.25	17.25	17.25	24.00	43.00	2	0	0
14	210	1.8	44.0	193.7	17.25	19.00	22.25	16.75	17.25	17.25	25.75	43.00	1	0	0
15	220	1.2	42.0	146.9	17.75	19.00	23.75	17.00	17.00	17.75	25.00	30.00	1	0	0
16	150	2.5	38.0	88.4	17.75	19.00	24.00	17.50	17.25	17.75	24.50	26.25	5	0	1
17	140	2.8	33.0	13.5	17.75	19.00	24.00	16.25	22.75	17.75	21.50	20.25	7	3	1
18	120	2.5	32.0	0.	18.00	19.00	24.50	16.00	23.00	17.75	18.25	19.00	7	3	1
19	100	2.0	32.0	0.	18.00	19.00	24.75	16.00	24.00	17.75	17.25	19.25	8	3	1
20	140	1.2	31.0	0.	18.00	19.00	25.00	16.25	24.75	17.75	18.50	19.00	6	1	1
21	140	1.3	31.0	0.	17.25	19.00	24.75	16.25	24.00	17.75	15.75	18.25	5	0	1
22	140	8.0	29.0	0.	17.00	18.75	24.25	16.00	21.75	17.00	15.25	18.00	2	0	1
23	140	1.4	29.0	0.	16.75	18.75	23.75	16.00	21.25	17.00	15.00	17.50	2	0	1
TOT.				1241.4									107	28	31
AVG.	146	2.3	33.2	51.7	16.79	18.64	20.61	13.81	19.22	16.89	17.23	21.74	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	1.4	29.0	0.	16.25	18.25	23.25	15.75	20.75	16.75	14.50	17.00	3	0	2
1	140	1.4	30.0	0.	16.25	18.25	22.75	15.00	22.00	16.75	14.50	16.50	3	0	2
2	140	1.0	30.0	0.	16.25	18.25	22.25	14.75	22.00	17.00	14.25	16.25	3	0	2
3	140	.6	30.0	0.	16.25	18.25	21.75	14.50	21.00	17.00	14.25	16.00	5	1	2
4	350	2.0	30.0	0.	16.25	18.25	21.50	14.25	21.00	17.00	14.25	15.75	6	3	2
5	30	.6	30.0	0.	16.75	18.25	21.50	14.00	21.50	17.00	14.25	15.75	7	3	3
6	90	1.2	30.0	0.	17.00	18.25	21.25	14.25	21.00	17.00	14.25	15.75	8	3	3
7	140	.7	30.0	0.	17.00	18.75	21.00	14.00	21.25	17.25	14.25	15.75	4	0	3
8	360	2.2	30.0	18.1	17.00	19.00	20.00	13.25	20.25	17.25	14.25	15.75	4	0	3
9	30	2.3	30.0	66.7	16.75	19.00	19.50	13.00	19.25	17.25	14.50	15.75	3	0	2
10	90	2.5	30.0	107.9	16.75	19.00	19.00	12.25	19.00	17.25	14.00	15.75	4	0	2
11	360	1.6	31.0	136.6	16.75	19.00	18.75	13.00	18.50	17.00	14.00	14.15	5	0	2
12	360	1.2	32.0	150.4	16.75	19.25	18.00	12.00	18.25	17.00	14.25	14.00	5	0	2
13	360	1.4	35.0	237.8	16.75	19.50	17.75	12.50	17.25	17.00	14.00	13.25	5	0	2
14	30	1.2	33.0	233.2	16.75	19.25	17.25	12.25	17.25	17.25	17.75	21.00	4	1	2
15	90	.9	33.0	180.8	17.00	19.25	17.25	11.25	17.50	17.00	16.25	19.00	6	3	1
16	140	1.4	32.0	98.3	17.00	19.00	17.75	11.50	16.00	17.25	18.00	21.00	7	3	2
17	270	1.6	31.0	11.6	17.25	19.25	18.00	12.00	18.00	17.25	16.25	18.25	7	3	1
18	240	1.0	29.0	0.	17.25	19.25	18.00	11.50	18.25	17.00	15.75	17.25	9	3	1
19	240	.8	31.0	0.	17.00	19.00	18.00	13.25	17.50	17.00	15.00	17.00	12	3	1
20	240	0.	31.0	0.	17.00	19.00	18.25	11.50	18.25	16.75	14.75	16.75	13	3	1
21	240	0.	31.0	0.	16.75	19.00	18.25	13.00	17.75	16.50	14.50	16.75	7	3	1
22	330	.8	31.0	0.	16.75	18.75	18.75	13.00	18.00	16.50	14.00	16.75	7	3	1
23	330	1.2	31.0	0.	16.75	18.75	18.75	12.50	18.50	16.25	14.00	16.75	2	0	0
TOT.				1241.4									135	38	42
AVG.	204	1.2	30.8	51.7	16.76	18.82	19.52	13.09	19.25	16.97	14.82	16.58	6	2	2

DATE
(01/28/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.2	31.0	0.	16.25	18.75	18.75	12.00	19.00	16.25	14.00	16.25	4	2	1
1	240	1.8	31.0	0.	16.25	18.25	18.75	10.50	19.00	16.25	14.00	16.25	6	3	1
2	160	2.5	30.0	0.	16.50	18.25	18.75	12.75	18.50	16.50	14.00	16.50	6	3	1
3	160	1.5	30.0	0.	16.50	18.25	19.00	12.25	18.75	16.50	14.25	16.50	6	3	1
4	160	0.	30.0	0.	16.75	18.00	19.00	13.75	18.25	16.75	14.00	16.50	5	3	2
5	160	0.	30.0	0.	16.75	18.25	19.25	13.00	18.50	16.75	14.00	16.75	6	3	2
6	160	0.	30.0	0.	16.75	18.25	19.25	13.00	17.50	16.75	14.25	16.75	7	3	2
7	160	0.	30.0	0.	17.00	18.50	19.00	12.25	19.25	16.75	14.25	16.75	4	0	3
8	160	0.	30.0	5.7	16.75	18.75	18.00	11.75	18.25	17.00	14.00	17.00	3	0	2
9	160	0.	30.0	21.8	16.50	19.00	18.00	11.00	18.00	17.00	13.50	17.00	3	0	2
10	120	8.0	30.0	35.6	16.50	19.00	17.25	10.00	17.50	17.00	13.50	16.75	3	0	2
11	360	.4	32.0	45.1	16.50	19.00	17.00	11.25	17.00	16.75	14.00	16.25	7	0	2
12	60	1.7	32.0	49.8	16.50	19.00	16.75	10.25	17.00	16.75	14.25	16.00	6	0	2
13	360	1.0	33.0	49.1	16.50	19.00	16.25	11.50	14.50	16.75	14.25	16.00	5	0	2
14	360	1.8	34.0	43.2	16.50	19.00	16.00	10.00	16.25	17.00	14.50	16.00	6	1	2
15	360	2.2	33.0	32.5	16.75	19.00	15.75	10.50	16.25	17.00	14.75	16.25	8	3	2
16	360	2.0	33.0	17.9	17.25	19.25	16.00	10.00	16.00	17.25	15.00	16.50	8	3	2
17	360	1.8	32.0	2.1	17.25	19.50	16.00	8.25	16.25	17.75	15.00	16.50	10	3	2
18	360	2.2	32.0	0.	17.25	20.00	16.25	11.25	16.50	17.50	15.00	16.50	6	3	1
19	60	3.3	32.0	0.	17.50	20.00	16.75	11.50	16.75	17.25	14.75	16.75	7	3	2
20	60	4.0	31.0	0.	17.25	20.00	16.75	10.75	17.00	17.25	14.75	16.50	7	3	2
21	60	3.2	31.0	0.	17.25	19.75	16.75	13.00	15.75	17.25	14.75	16.75	6	2	2
22	360	5.0	31.0	0.	17.00	20.00	16.75	12.00	17.00	17.25	14.50	16.50	3	0	3
23	360	4.5	31.0	0.	16.75	19.75	16.75	13.00	16.75	17.00	14.25	16.50	3	0	0
TOT.				302.8									137	43	42
AVG.	228	2.0	31.2	12.6	16.78	19.02	17.45	11.48	17.31	16.93	14.31	16.50	6	2	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	2.0	32.0	0.	16.00	19.00	16.50	15.00	16.00	16.25	14.00	16.00	4	2	0
1	360	3.0	31.0	0.	16.25	18.50	16.75	15.00	16.00	16.00	14.00	16.00	5	3	1
2	360	2.2	31.0	0.	16.50	18.25	16.75	11.25	17.00	16.00	13.75	16.00	6	3	1
3	360	2.2	31.0	0.	16.50	18.25	17.25	10.75	17.25	16.25	14.00	16.00	6	3	1
4	360	1.7	32.0	0.	16.50	18.25	17.25	10.25	17.25	16.50	14.00	16.25	6	3	2
5	360	8.0	31.0	0.	16.75	18.25	17.50	10.75	17.50	16.50	14.00	16.25	6	3	1
6	40	1.5	31.0	0.	16.75	18.25	17.50	12.00	17.25	16.75	14.00	16.25	7	3	3
7	100	2.0	31.0	0.	16.75	18.50	17.25	10.75	17.50	16.75	14.00	16.25	4	0	3
8	330	2.5	31.0	2.1	17.00	19.25	16.50	11.00	16.75	17.25	14.25	16.50	3	0	2
9	340	3.0	31.0	8.4	17.00	19.50	15.75	9.75	16.25	17.25	14.25	16.25	3	0	2
10	330	4.2	31.0	13.8	17.00	19.50	15.50	9.50	15.75	17.25	14.25	16.25	4	0	2
11	330	5.0	31.0	22.0	16.75	19.75	15.00	9.00	15.75	17.25	14.75	16.00	3	0	2
12	330	3.2	32.0	24.2	17.00	19.75	14.75	10.00	15.25	17.25	15.50	20.75	3	0	2
13	330	3.5	32.0	27.7	17.00	19.75	14.75	9.00	15.25	17.25	18.00	33.00	3	0	2
14	330	3.5	33.0	24.3	17.25	19.75	15.00	9.50	15.50	17.50	16.50	21.00	4	1	2
15	360	3.0	32.0	18.2	17.25	19.75	15.00	9.25	15.75	17.75	17.25	25.50	5	3	1
16	360	3.5	31.0	9.9	17.75	19.75	16.25	10.75	16.50	18.00	16.75	19.25	6	3	2
17	360	3.5	31.0	.9	18.00	19.75	16.25	12.00	16.75	18.00	15.00	17.50	9	3	1
18	30	4.0	31.0	0.	17.75	19.75	16.75	11.00	17.00	17.50	15.00	17.00	6	3	0
19	360	2.5	29.0	0.	17.00	19.75	17.25	14.50	16.50	17.00	15.00	16.75	6	3	0
20	360	1.8	30.0	0.	16.75	19.50	17.75	15.75	16.25	16.75	14.75	16.75	7	3	0
21	330	2.0	30.0	0.	16.50	19.25	18.25	15.75	16.00	16.50	14.25	16.75	4	2	0
22	330	2.2	30.0	0.	16.00	19.00	18.50	15.75	15.75	16.00	14.00	16.75	3	0	1
23	360	1.5	30.0	0.	16.00	19.00	18.25	14.25	17.00	16.00	14.00	16.75	2	0	0
TOT.				151.5									116	43	31
AVG.	311	3.0	31.0	6.3	16.83	19.17	16.59	11.77	16.41	16.90	14.69	17.99	5	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	2.5	30.0	0.	15.75	18.75	18.25	15.00	16.00	15.75	13.75	16.25	7	2	1
1	330	2.4	30.0	0.	15.75	18.50	18.25	11.25	18.25	15.75	13.50	16.25	8	3	1
2	330	2.4	30.0	0.	16.00	18.25	18.25	12.00	16.25	16.00	13.25	16.25	9	3	2
3	300	2.5	30.0	0.	16.25	18.25	18.25	13.00	18.00	16.25	13.75	16.00	6	3	2
4	90	1.8	30.0	0.	16.25	18.00	18.25	11.75	18.25	16.25	13.75	16.25	6	3	2
5	120	2.5	30.0	0.	16.50	18.00	18.25	11.50	18.75	16.50	13.75	16.25	6	3	2
6	150	1.7	30.0	0.	16.50	18.00	18.25	11.75	18.50	16.25	14.00	16.25	6	3	2
7	150	2.2	30.0	0.	16.50	18.25	18.25	12.00	18.25	16.75	13.75	16.25	4	0	3
8	160	2.4	30.0	7.4	16.25	18.25	17.25	11.75	17.50	16.75	13.75	16.50	3	0	2
9	150	3.0	30.0	31.8	16.25	18.50	17.00	10.75	17.00	16.75	13.75	16.25	3	0	2
10	180	6.0	30.0	52.7	16.25	18.50	16.50	10.25	16.75	16.75	14.00	16.00	5	0	1
11	150	4.5	30.0	67.2	16.00	18.75	16.50	11.00	16.50	16.50	13.50	15.75	7	0	2
12	140	5.2	30.0	74.2	16.00	18.75	16.00	10.50	16.50	16.25	14.25	14.75	7	0	1
13	90	3.8	36.0	73.2	16.00	19.00	16.00	11.00	16.25	16.25	18.25	27.50	4	0	1
14	120	6.0	39.0	64.2	16.50	19.00	16.50	10.00	16.75	16.75	17.25	20.50	2	0	1
15	150	8.2	41.0	47.9	16.50	18.75	16.75	10.25	16.75	17.00	17.00	19.00	2	0	1
16	150	7.8	40.0	32.3	16.75	19.00	16.50	11.50	16.75	17.00	18.00	22.00	4	2	1
17	150	6.0	38.0	3.3	17.00	18.75	17.00	12.25	17.00	17.25	17.00	18.75	7	3	2
18	150	6.2	37.0	0.	17.25	19.00	17.00	12.25	17.25	17.25	15.25	17.00	7	3	1
19	150	4.0	34.0	0.	17.50	19.00	17.25	11.00	17.50	17.50	15.25	16.75	8	3	1
20	150	3.2	37.0	0.	17.50	19.00	17.25	12.00	17.50	17.00	15.00	16.75	13	3	2
21	130	2.0	37.0	0.	17.75	18.00	17.50	10.00	17.75	17.00	14.50	16.75	15	3	2
22	150	1.9	36.0	0.	17.25	18.75	17.25	10.25	17.25	17.25	14.25	17.00	13	3	2
23	140	3.2	34.0	0.	17.25	19.00	17.25	12.00	17.25	17.00	14.50	16.75	5	0	0
TOT.				454.2									152	42	37
AVG.	177	3.8	33.3	18.9	16.56	18.58	17.31	11.46	17.27	16.66	14.83	17.41	6	2	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	8.5	34.0	0.	16.50	18.50	17.00	11.00	17.25	16.50	14.00	16.25	6	2	1
1	150	6.0	35.0	0.	16.25	18.00	17.00	14.00	16.75	16.50	14.00	16.25	6	3	2
2	150	5.2	36.0	0.	16.75	18.00	17.25	12.00	17.00	16.50	14.00	16.25	6	3	2
3	150	1.5	38.0	0.	17.00	18.25	17.50	11.25	17.75	17.00	14.25	16.25	6	3	1
4	150	3.5	37.0	0.	17.00	18.25	17.75	11.00	18.00	16.75	14.25	16.50	5	3	1
5	150	4.2	40.0	0.	17.00	18.25	18.00	12.00	18.00	17.00	14.50	16.50	6	3	2
6	130	2.0	39.0	0.	17.00	18.25	18.00	13.00	17.75	17.00	14.75	16.75	6	3	2
7	160	3.0	40.0	0.	17.25	18.50	18.00	11.75	18.00	17.25	14.75	16.75	3	0	2
8	150	4.5	41.0	7.5	17.00	18.75	17.25	11.25	17.25	17.25	14.75	17.00	2	0	2
9	150	4.8	42.0	33.8	17.00	19.00	17.00	10.50	17.00	17.00	14.75	16.75	3	0	2
10	150	4.6	42.0	56.4	17.00	19.00	16.75	10.25	17.00	17.25	15.00	16.50	3	0	1
11	150	4.5	43.0	72.1	17.00	19.00	16.50	9.25	16.75	17.25	15.00	16.75	4	0	1
12	150	3.0	43.0	79.6	16.75	19.00	16.00	11.00	16.50	17.25	15.00	16.50	5	0	1
13	150	4.3	44.0	78.5	17.00	19.00	16.00	13.00	16.25	17.00	15.00	16.25	2	0	1
14	150	5.5	44.0	68.8	16.75	19.00	16.00	11.00	16.25	16.75	15.00	16.25	2	0	1
15	150	6.5	44.0	51.2	16.75	18.75	15.75	12.00	16.25	16.75	15.00	16.50	4	0	2
16	150	6.5	44.0	27.2	17.00	19.00	15.50	10.25	15.75	17.00	15.00	16.50	4	2	0
17	150	4.4	44.0	2.0	16.75	19.00	15.75	11.00	16.00	17.00	15.00	16.50	7	3	2
18	150	2.4	42.0	0.	17.25	19.25	16.00	11.50	16.75	17.25	15.25	16.75	6	3	1
19	150	3.0	42.0	0.	17.50	19.25	16.50	11.00	16.75	17.00	15.25	16.75	6	3	1
20	150	3.4	42.0	0.	17.75	19.25	16.75	11.00	17.00	17.00	15.25	16.50	6	3	0
21	150	3.5	42.0	0.	17.25	19.00	17.25	15.50	16.50	17.00	15.00	16.75	5	3	1
22	150	4.0	42.0	0.	17.50	19.00	17.25	14.25	17.00	16.75	15.00	16.75	11	0	2
23	150	4.0	42.0	0.	17.00	19.25	17.00	12.00	17.00	17.00	15.00	16.75	5	0	0
TOT.				477.1									119	39	26
AVG.	152	4.3	40.9	19.9	17.00	18.77	16.82	11.70	16.94	16.96	14.78	16.55	5	2	1

DATE
(02/01/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.0	42.0	0.									7	1	1
1	150	3.2	42.0	0.									5	3	1
2	150	1.8	42.0	0.									5	3	1
3	150	2.2	42.0	0.									5	3	1
4	150	4.1	42.0	0.									5	3	1
5	150	3.5	42.0	0.									6	3	1
6	150	4.4	42.0	0.									2	0	1
7	150	4.2	42.0	0.									9	0	2
8	150	4.0	42.0	.5									5	0	1
9	150	3.2	44.0	6.4									10	0	1
10	150	2.7	47.0	11.8									11	0	1
11	150	2.0	46.0	15.6									2	0	1
12	60	3.0	46.0	17.4									2	0	1
13	360	1.8	48.0	17.1									5	0	1
14	330	1.5	48.0	18.4									3	0	0
15	320	4.0	46.0	13.0									2	0	1
16	330	3.2	44.0	5.8									6	2	1
17	360	2.0	42.0	0.	17.25	19.00	16.50	13.75	16.75	17.00	16.00	17.50	6	3	0
18	30	1.8	42.0	0.	17.00	19.00	17.00	15.25	16.75	17.00	15.75	17.00	5	3	0
19	330	2.6	42.0	0.	17.50	19.00	17.75	16.25	16.50	16.75	15.75	17.00	6	3	1
20	340	1.5	42.0	0.	17.75	19.00	18.00	13.25	17.75	16.75	15.50	17.00	5	3	0
21	340	3.0	42.0	0.	17.50	19.00	18.50	11.50	18.50	16.75	15.25	16.75	5	3	0
22	340	2.8	41.0	0.	17.50	19.00	18.75	15.25	18.75	17.00	15.25	17.00	2	0	1
23	360	2.6	41.0	0.	17.00	19.00	18.50	14.50	18.00	16.75	15.00	17.00	7	0	0
TOT.				106.0									129	35	18
AVG.	221	2.9	43.3	4.4	17.36	19.00	17.86	14.25	17.57	16.86	15.50	17.04	5	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.6	41.0	0.	16.50	19.00	18.75	15.75	16.75	16.75	14.75	17.00	4	1	0
1	360	2.6	41.0	0.	16.50	18.85	18.50	16.00	16.25	16.25	14.75	17.00	5	3	1
2	360.	2.8	40.0	0.	16.75	18.50	19.00	13.75	18.00	16.50	14.50	16.75	5	3	1
3	360	3.0	40.0	0.	17.00	18.25	19.00	12.50	19.50	16.50	14.75	16.75	5	3	1
4	360	3.0	40.0	0.	17.00	18.25	19.25	13.00	18.75	16.75	14.75	17.00	6	3	2
5	360	3.0	40.0	0.	17.25	18.25	19.50	13.00	19.00	17.00	14.75	17.00	5	3	1
6	330	3.0	40.0	0.	17.00	18.25	19.25	12.50	19.50	17.00	14.75	17.00	3	0	2
7	330	2.0	39.0	0.	16.50	18.00	18.25	12.75	18.25	17.00	14.50	17.00	2	0	2
8	330	2.5	40.0	1.2	16.50	18.00	17.75	11.75	18.00	16.75	14.25	16.50	2	0	1
9	360	3.5	41.0	13.3	16.25	18.25	17.25	11.25	17.75	16.75	14.25	16.00	2	0	1
10	330	3.5	42.0	25.3	16.50	18.25	17.00	11.00	17.50	16.75	18.25	24.50	2	0	0
11	330	6.0	42.0	34.7	16.50	18.25	17.75	14.50	17.00	17.00	21.25	31.00	2	0	0
12	330	5.5	42.0	39.0	17.00	18.25	19.75	16.00	17.00	17.00	24.00	46.00	2	0	0
13	350	3.8	47.0	38.3	17.75	18.50	22.25	16.75	17.00	17.25	26.00	46.00	2	0	0
14	330	4.5	48.0	33.2	18.00	19.00	24.50	17.25	17.25	17.50	27.50	45.75	1	0	0
15	310	2.9	48.0	23.7	18.75	19.50	26.00	17.75	17.75	18.00	28.50	44.00	1	0	0
16	270	2.4	45.0	10.8	18.25	20.00	27.25	16.00	16.00	16.25	28.50	36.00	2	1	0
17	270	1.8	40.0	0.	18.75	20.00	28.00	16.50	16.75	17.00	27.75	27.00	6	3	0
18	270	2.0	38.0	0.	19.00	19.75	28.50	17.25	17.25	17.50	23.00	21.50	4	1	0
19	240	2.0	37.0	0.	18.50	20.00	28.25	17.50	17.00	17.50	19.50	21.00	4	0	0
20	270	.6	36.0	0.	17.75	20.25	28.25	17.25	17.00	17.25	18.25	22.50	3	0	0
21	90	.4	36.0	0.	17.50	20.00	28.25	17.00	17.00	17.00	16.75	22.50	4	0	0
22	90	.5	36.0	0.	17.50	20.25	28.50	17.00	16.75	17.00	16.00	22.00	3	0	0
23	140	.3	34.0	0.	17.25	20.00	29.00	17.00	16.75	17.00	15.50	21.50	2	0	0
TOT.				219.5									82	22	12
AVG.	297	2.6	40.5	9.1	17.34	18.98	22.49	15.04	17.49	16.97	19.03	25.05	3	1	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INSTR. HEATER	HEAT PUMP
0	270	1.3	32.0	0.	17.00	19.50	28.75	17.00	16.75	17.00	15.00	21.00	2	0	0
1	300	.4	32.0	0.	17.00	19.00	28.75	16.50	16.50	16.75	15.00	20.25	2	0	1
2	200	.8	30.0	0.	17.00	18.50	28.75	18.25	25.25	16.75	14.75	19.50	3	0	1
3	200	2.5	30.0	0.	17.00	18.25	28.00	18.25	27.75	17.00	15.00	18.75	2	0	1
4	200	.6	30.0	0.	17.25	18.25	27.75	17.50	25.00	17.50	15.00	18.75	3	0	2
5	200	.6	30.0	0.	17.25	18.50	27.00	17.25	24.00	17.75	15.00	18.50	3	0	2
6	200	.9	30.0	0.	17.25	18.50	26.50	17.25	25.00	18.00	15.25	18.25	3	0	2
7	200	1.2	30.0	0.	17.00	18.75	26.00	17.00	20.75	18.00	15.25	18.00	3	0	2
8	200	4.2	30.0	6.6	17.25	19.00	25.50	16.75	24.25	18.00	15.25	18.00	3	0	2
9	190	1.6	36.0	59.8	17.25	19.00	25.00	16.50	23.00	18.00	15.00	17.25	3	0	1
10	190	3.5	36.0	156.8	17.50	19.25	24.50	16.25	23.00	18.00	26.50	37.00	2	0	0
11	190	5.0	38.0	252.1	17.75	19.25	25.75	17.25	19.75	18.25	26.50	30.50	5	0	0
12	190	2.6	44.0	296.2	18.00	19.25	26.00	18.00	19.00	18.25	28.75	46.25	3	0	0
13	270	2.5	50.0	291.3	18.50	19.75	28.25	18.25	18.50	18.50	30.75	49.75	2	0	0
14	200	2.6	50.0	253.3	19.00	20.50	29.75	18.50	18.50	18.75	32.00	50.00	1	0	0
15	180	3.0	50.0	181.4	19.75	21.00	31.25	19.00	19.00	19.25	32.75	46.00	2	0	0
16	150	2.2	48.0	84.4	20.00	21.00	32.00	19.50	19.50	19.50	33.25	41.00	3	0	0
17	130	2.5	41.0	.1	20.25	21.50	32.25	19.75	19.75	19.75	32.00	31.25	3	0	0
18	140	3.7	41.0	0.	20.00	21.25	32.25	19.50	19.50	19.75	25.50	24.25	4	0	0
19	150	2.8	41.0	0.	19.75	20.75	32.00	19.25	19.00	19.50	21.50	24.00	5	0	0
20	140	4.2	40.0	0.	19.25	20.75	32.00	18.75	18.50	19.00	20.00	24.00	3	0	0
21	120	5.2	40.0	0.	18.75	21.00	32.25	18.25	18.25	18.50	18.50	22.75	4	0	0
22	150	3.4	40.0	0.	18.50	21.50	32.25	18.00	18.00	18.00	17.25	21.25	3	0	0
23	180	2.6	40.0	0.	18.75	21.75	32.00	18.00	18.00	18.00	17.00	21.00	3	0	0
TOT.				1582.0									68	0	12
AVG.	189	2.5	37.9	65.9	18.21	19.82	28.94	17.94	20.69	18.24	21.36	27.39	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	4.0	40.0	0.	18.50	21.25	32.00	18.00	17.75	18.00	16.75	20.00	4	0	0
1	150	4.2	40.0	0.	18.25	21.00	32.00	18.00	17.75	18.00	16.50	19.25	2	0	0
2	150	2.7	40.0	0.	18.00	20.25	32.00	17.75	17.50	17.75	16.50	18.75	1	0	0
3	180	1.4	40.0	0.	17.75	19.75	32.00	17.50	17.25	17.50	16.00	18.50	1	0	0
4	180	1.8	40.0	0.	17.75	19.25	32.00	17.50	17.25	17.25	16.25	18.50	2	0	1
5	140	5.2	40.0	0.	18.00	18.75	32.00	17.50	27.50	17.75	16.25	18.75	2	0	1
6	160	7.0	40.0	0.	18.00	19.00	31.25	18.25	27.00	18.00	16.25	19.00	2	0	1
7	150	5.5	40.0	0.	18.00	19.00	30.75	18.00	25.00	18.50	16.25	19.00	2	0	2
8	150	4.5	40.0	8.7	18.25	19.00	30.00	18.25	26.50	18.75	16.75	19.00	2	0	2
9	200	2.5	40.0	69.6	18.25	19.25	29.75	18.00	26.75	19.00	16.75	18.50	2	0	1
10	200	4.5	43.0	124.2	18.50	19.25	29.50	19.00	28.25	19.00	16.75	18.00	3	0	1
11	270	2.5	47.0	162.3	18.50	19.50	29.25	18.50	26.50	19.00	30.75	37.50	4	0	0
12	210	4.8	50.0	226.4	19.00	19.50	30.00	19.00	21.50	19.25	32.00	44.75	1	0	0
13	210	4.0	51.0	284.4	19.50	19.50	30.75	19.25	20.25	19.50	31.75	37.50	1	0	0
14	200	6.0	51.0	273.9	19.75	19.75	31.25	19.50	20.00	19.75	32.25	42.00	1	0	0
15	180	3.0	51.0	205.3	20.25	20.00	32.00	20.00	20.00	20.00	34.00	46.50	1	0	0
16	150	3.8	50.0	98.2	20.75	20.50	33.00	20.00	20.00	20.25	34.25	42.00	1	0	0
17	150	3.0	48.0	.4	21.00	20.50	33.50	20.50	20.50	20.50	32.50	31.00	1	0	0
18	150	2.0	46.0	0.	20.75	20.00	33.25	20.00	20.25	20.00	26.00	25.00	4	0	0
19	140	2.5	43.0	0.	20.25	20.00	33.25	20.00	19.75	20.00	22.75	25.50	6	0	0
20	150	2.2	40.0	0.	20.00	20.25	33.25	19.25	19.25	19.50	20.50	25.25	2	0	0
21	120	1.8	39.0	0.	19.50	20.25	33.25	19.00	19.00	19.00	19.00	24.50	3	0	0
22	120	2.0	38.0	0.	19.00	20.00	33.25	18.75	18.50	18.75	18.00	23.50	1	0	0
23	150	1.0	39.0	0.	18.75	19.75	33.00	18.25	18.25	18.25	17.25	23.00	1	0	0
TOT.				1453.4									50	0	8
AVG.	169	3.4	43.2	60.6	19.01	19.80	31.76	18.74	21.34	18.89	22.17	26.47	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	2.2	38.0	0.	18.25	19.00	33.00	18.00	18.25	18.00	16.75	22.00	1	0	0
1	150	2.0	34.0	0.	18.25	18.25	33.00	19.75	24.50	18.00	16.75	21.50	2	0	1
2	90	1.8	35.0	0.	18.00	18.00	32.75	18.00	23.75	18.00	16.50	21.00	2	0	1
3	90	2.0	33.0	0.	18.00	17.75	32.50	18.25	23.25	18.25	16.25	20.50	2	0	2
4	140	1.2	33.0	0.	18.00	17.75	32.00	18.25	25.00	18.25	16.00	20.00	3	0	1
5	150	2.0	33.0	0.	18.00	18.00	31.25	17.50	24.50	18.25	16.00	19.50	2	0	2
6	180	1.5	35.0	0.	17.75	18.00	31.00	18.00	25.50	18.25	16.00	19.00	3	0	2
7	120	1.1	36.0	0.	17.75	18.75	30.25	18.25	27.00	18.75	15.75	18.50	3	0	2
8	150	2.2	37.0	7.4	18.00	19.00	30.00	16.75	24.75	18.50	16.00	18.50	3	0	2
9	240	2.5	40.0	53.2	18.00	19.00	29.75	18.00	26.75	18.75	15.75	16.75	3	0	1
10	180	6.8	43.0	93.9	18.00	19.50	29.00	18.25	26.75	19.00	27.50	32.00	5	0	0
11	180	7.0	45.0	134.8	18.75	19.50	29.75	18.50	21.50	19.00	32.00	49.50	2	0	0
12	180	6.5	46.0	159.8	19.00	19.50	30.75	19.00	20.00	19.25	31.50	36.50	2	0	0
13	170	6.0	48.0	164.0	19.50	19.50	32.00	19.50	19.75	19.50	34.25	52.00	1	0	0
14	220	2.6	51.0	145.9	20.00	19.50	32.50	19.75	19.75	19.75	32.75	34.75	1	0	0
15	180	2.0	51.0	105.6	20.25	19.25	32.75	20.00	20.00	20.00	32.50	32.00	1	0	1
16	210	.9	51.0	51.0	20.50	19.25	32.75	19.25	24.00	20.25	33.00	37.75	1	0	0
17	140	1.5	47.0	.5	21.00	19.00	32.75	22.00	29.75	20.75	32.00	30.00	4	0	1
18	150	4.0	46.0	0.	20.50	19.25	32.50	18.75	26.00	20.75	25.00	25.00	6	0	6
19	140	7.0	46.0	0.	20.25	19.75	32.25	19.50	22.00	20.50	22.25	25.50	4	0	0
20	140	4.0	45.0	0.	20.00	20.00	32.50	19.50	20.75	20.00	20.75	25.50	2	0	0
21	140	4.0	44.0	0.	19.75	20.00	32.25	19.50	20.00	19.75	19.25	24.00	2	0	0
22	140	4.5	43.0	0.	19.50	19.75	32.25	19.00	19.25	19.25	18.50	22.75	2	0	0
23	140	3.5	42.0	0.	19.25	19.25	32.25	20.00	28.25	19.00	18.00	21.75	5	0	0
TOT.				916.1									61	0	16
AVG.	156	3.3	41.7	38.2	19.01	19.02	31.74	18.89	23.37	19.16	22.54	26.93	3	0	1

DATE
(02/06/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	2.8	41.0	0.	19.00	19.00	32.00	19.25	21.75	19.00	17.50	21.50	3	0	0
1	140	3.8	40.0	0.	19.00	19.00	32.00	18.75	19.75	18.75	17.25	21.00	2	0	1
2	140	2.8	40.0	0.	18.50	18.50	31.75	19.00	20.50	18.75	17.50	21.25	2	0	1
3	140	2.8	41.0	0.	18.50	18.50	31.25	18.25	24.25	18.75	17.25	21.00	3	0	1
4	140	3.2	41.0	0.	18.25	18.25	31.00	18.25	25.75	19.00	17.00	20.75	2	0	1
5	140	3.0	41.0	0.	18.50	18.50	30.75	19.25	26.25	19.00	17.00	20.50	2	0	1
6	140	2.0	40.0	0.	18.50	18.50	30.00	18.25	24.00	19.00	16.75	19.00	3	0	2
7	180	.5	40.0	0.	18.25	18.75	29.75	18.00	20.00	19.00	16.75	18.75	3	0	2
8	360	.8	43.0	14.2	18.50	19.00	29.25	18.00	26.50	19.00	16.75	18.75	2	0	1
9	270	1.8	44.0	92.9	18.50	19.00	29.00	18.50	26.50	19.25	28.25	29.50	3	0	1
10	110	2.5	51.0	162.3	18.75	19.25	29.00	18.25	25.00	19.50	30.00	38.50	1	0	0
11	360	2.5	51.0	210.7	18.50	18.50	30.00	19.25	21.75	20.00	32.00	43.75	1	0	0
12	360	2.5	51.0	233.9	20.00	19.50	31.25	19.75	21.00	20.00	33.75	53.00	1	0	0
13	300	2.5	51.0	158.5	20.75	20.00	32.00	20.00	20.25	20.25	32.75	35.75	1	0	0
14	360	1.8	51.0	137.7	21.00	19.50	32.00	20.25	20.50	20.50	32.25	32.50	1	0	0
15	110	1.8	51.0	100.1	21.00	19.25	32.00	20.50	20.50	20.50	31.25	30.00	2	0	1
16	240	1.5	51.0	61.8	21.00	19.25	32.00	19.00	25.00	20.75	31.00	31.25	1	0	1
17	150	1.7	48.0	1.3	21.00	19.00	32.00	19.25	25.50	21.00	29.75	28.00	2	0	1
18	120	1.8	44.0	0.	21.00	19.00	31.75	19.25	25.75	21.00	23.50	24.00	3	0	1
19	120	4.4	43.0	0.	20.50	19.25	31.25	18.75	24.25	20.75	21.50	25.00	5	0	0
20	90	3.8	44.0	0.	20.00	19.00	31.25	19.25	21.45	20.25	20.00	24.50	3	0	0
21	90	1.5	41.0	0.	19.25	18.50	30.75	19.00	19.75	19.25	18.75	23.25	5	0	0
22	90	1.6	40.0	0.	18.75	18.25	30.50	20.00	30.00	18.75	17.75	22.25	7	0	0
23	80	1.5	40.0	0.	18.50	18.50	30.25	17.75	21.00	28.50	17.00	21.75	5	0	0
TOT.				1173.4									64	0	13
AVG.	182	2.3	44.5	48.9	19.40	18.91	30.95	18.99	23.71	20.02	23.05	26.90	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	110	1.8	40.0	0.	18.25	18.00	30.25	18.00	19.00	18.25	16.50	21.00	2	0	1
1	140	4.0	40.0	0.	18.00	17.50	30.00	17.50	24.25	18.00	16.25	20.50	2	0	1
2	100	2.5	40.0	0.	17.75	17.50	29.50	18.00	28.50	16.00	16.00	20.00	2	0	1
3	90	2.0	40.0	0.	17.75	17.75	29.00	17.50	24.50	18.00	16.00	19.00	2	0	1
4	90	2.5	37.0	0.	17.50	17.50	29.00	17.50	28.50	18.00	16.00	18.75	2	0	1
5	30	2.2	34.0	0.	17.50	17.25	28.50	17.75	24.50	18.00	15.75	18.50	2	0	1
6	60	8.0	34.0	0.	17.50	17.50	28.00	17.25	25.50	18.00	15.75	18.50	3	0	2
7	60	4.0	36.0	0.	17.25	18.00	27.75	16.75	23.00	18.00	15.50	18.00	3	0	2
8	360	1.8	38.0	9.1	17.50	18.25	27.00	16.75	25.00	18.00	15.50	18.00	2	0	1
9	300	1.5	43.0	54.4	17.50	18.50	27.00	17.25	25.75	18.25	25.25	28.00	2	0	1
10	240	2.5	50.0	93.4	18.00	18.50	27.25	17.00	24.00	18.50	29.00	43.00	2	0	0
11	150	4.0	56.0	119.2	18.75	18.50	29.00	18.25	20.75	19.00	31.00	47.75	1	0	0
12	180	5.2	58.0	128.8	19.25	18.75	30.00	19.00	20.00	19.25	32.75	54.75	2	0	0
13	190	6.2	59.0	114.0	20.25	19.00	32.00	19.50	20.00	19.75	34.25	52.25	1	0	0
14	190	6.5	55.0	90.0	20.50	19.50	33.00	20.00	20.00	20.00	33.50	36.25	1	0	0
15				56.8	21.00	19.75	33.50	20.25	20.25	20.25	34.00	41.00	2	0	0
16				22.6	21.25	19.50	33.75	20.50	20.50	20.50	34.00	35.00	3	0	0
17				.6	21.25	19.50	34.00	20.75	20.75	20.75	32.00	29.50	2	0	0
18				0.	22.00	20.50	34.50	21.25	21.00	21.25	25.50	26.00	5	0	0
19				0.	21.00	21.00	34.25	20.50	20.25	20.50	23.00	27.00	2	0	0
20				0.	20.00	21.00	33.75	19.75	19.50	20.00	20.50	25.75	3	0	0
21				0.	20.00	21.00	33.75	19.50	19.25	19.50	19.25	24.50	2	0	0
22				0.	19.50	20.50	33.50	19.25	19.00	19.25	18.75	23.00	2	0	0
23				0.	19.25	20.00	33.50	19.00	18.75	19.00	18.25	22.00	1	0	0
TOT.				688.9									49	0	12
AVG.	153	3.6	44.0	28.7	19.10	18.95	30.91	18.70	22.19	19.08	23.09	28.67	2	0	1

DATE
(02/08/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.00	19.50	33.75	19.00	18.50	19.00	18.00	21.50	1	0	0
1				0.	19.00	19.00	33.50	18.75	18.25	18.50	17.75	21.25	1	0	0
2				0.	19.00	18.75	33.50	18.25	18.00	18.25	17.25	21.50	1	0	0
3				0.	18.50	18.00	33.25	18.00	18.00	18.00	17.00	21.75	1	0	0
4				0.	18.25	17.75	33.25	18.00	17.75	18.00	17.00	21.25	1	0	1
5				0.	18.25	17.75	33.00	17.75	23.00	18.00	16.75	20.75	1	0	1
6				0.	18.25	17.75	32.75	20.00	29.00	18.25	16.75	20.25	3	0	2
7				0.	18.25	18.25	32.00	19.50	24.00	18.50	16.50	20.00	3	0	2
8				24.6	18.25	18.25	31.50	16.75	25.25	18.75	16.50	19.25	2	0	1
9				123.6	18.25	18.25	31.25	20.75	22.50	18.75	16.00	15.00	3	0	1
10				182.8	18.50	18.25	31.00	17.50	20.50	19.00	30.00	37.75	8	0	1
11				235.9	19.00	18.50	31.50	18.75	23.25	19.25	33.75	49.75	5	0	0
12				208.3	20.00	18.75	33.00	19.50	21.25	20.00	35.25	51.75	5	0	0
13				205.2	20.75	18.75	34.00	20.00	20.75	20.25	35.25	42.25	6	0	0
14				178.9	21.00	18.75	34.50	20.25	20.50	20.50	35.00	37.75	4	0	0
15				131.3	21.00	18.75	34.50	20.50	20.50	20.75	34.00	33.00	7	0	0
16				83.7	21.00	18.50	34.50	20.50	20.50	21.00	32.25	30.00	8	0	0
17				3.4	21.00	18.50	34.25	20.75	20.50	20.75	25.50	25.00	9	0	0
18				0.	20.75	18.75	34.25	20.25	19.75	20.25	22.50	25.00	4	0	0
19				0.	20.00	19.00	34.25	19.75	19.50	20.00	20.75	24.50	4	0	0
20				0.	20.00	18.75	34.25	19.50	19.25	19.50	19.75	23.50	7	0	0
21				0.	19.75	18.75	34.00	19.25	19.00	19.25	18.75	22.25	6	0	0
22				0.	19.50	19.00	34.25	19.00	19.00	19.00	18.50	21.75	2	0	0
23				0.	19.25	19.00	34.00	19.00	18.75	19.00	18.00	21.25	1	0	0
TOT.				1377.7									94	0	7
AVG.				57.4	19.44	18.55	33.33	19.18	20.72	19.27	22.86	27.00	4	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.25	19.00	34.00	18.75	18.50	19.00	18.00	21.00	2	0	0
1				0.	19.00	18.50	34.00	19.00	18.50	19.00	17.75	20.75	1	0	0
2				0.	19.00	18.25	34.00	18.75	18.50	18.75	17.50	20.50	1	0	0
3				0.	19.00	18.00	34.00	18.75	18.50	18.75	17.50	20.25	1	0	0
4				0.	19.00	17.50	33.75	18.75	18.50	18.75	17.25	20.50	0	0	0
5				0.	19.00	17.25	33.75	18.50	18.25	18.50	17.25	20.25	1	0	0
6				0.	18.75	17.00	33.50	17.75	27.00	18.25	17.00	20.25	2	0	1
7				0.	19.00	17.75	32.75	17.25	26.50	18.75	17.25	20.00	2	0	1
8				11.5	19.00	17.75	32.25	18.00	23.25	19.00	17.25	20.00	2	0	1
9				59.4	19.00	18.00	32.00	17.00	24.50	19.25	17.25	19.25	1	0	1
10				100.8	19.00	18.75	31.75	15.00	25.25	19.50	17.25	18.50	5	0	2
11				162.7	19.25	18.75	31.25	18.00	25.50	19.75	30.00	26.25	7	0	0
12				208.5	19.50	18.50	31.25	19.00	21.75	20.00	31.50	34.75	5	0	1
13				177.4	20.00	19.00	31.25	19.00	23.00	20.00	32.75	45.00	3	0	0
14				123.5	20.75	19.25	32.25	18.75	21.25	20.50	34.00	43.00	4	0	0
15				91.1	21.00	19.75	33.25	20.25	21.00	21.00	33.00	33.25	2	0	0
16				47.0	21.50	19.50	33.00	21.00	21.00	21.00	31.75	30.00	2	0	0
17				2.2	21.25	19.25	33.00	21.00	21.00	21.00	27.50	26.25	2	0	0
18				0.	21.00	19.25	33.00	20.75	20.50	21.00	23.50	25.00	2	0	0
19				0.	21.00	19.50	33.00	20.50	20.25	20.75	21.75	25.50	3	0	0
20				0.	20.50	19.50	33.00	20.00	20.00	20.25	20.50	25.00	3	0	0
21				0.	20.00	19.75	33.00	19.75	19.50	20.00	19.50	24.00	2	0	0
22				0.	20.00	20.00	33.00	19.50	19.25	19.50	19.00	23.00	3	0	0
23				0.	20.00	20.00	33.00	19.25	19.00	19.25	18.75	22.50	2	0	0
TOT.				984.1									69	0	7
AVG.				41.0	19.78	18.74	32.87	18.93	21.26	19.65	22.28	25.20	3	0	0

DATE
(02/10/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.75	20.00	32.75	19.25	19.00	19.25	18.25	22.00	4	0	0
1				0.	19.25	19.50	33.00	19.00	18.75	19.00	18.00	21.50	3	0	0
2				0.	19.25	19.25	32.75	18.75	18.50	18.75	18.00	21.00	1	0	0
3				0.	19.00	18.75	32.50	18.50	18.25	18.50	17.50	20.75	2	0	0
4				0.	19.00	18.50	32.50	18.50	18.25	18.50	17.50	20.50	1	0	0
5				0.	19.00	18.00	32.50	18.50	18.25	18.50	17.25	20.25	1	0	0
6				0.	19.00	17.75	32.50	18.50	18.00	18.50	17.25	20.00	2	0	1
7				0.	19.00	18.00	32.00	17.25	26.50	18.50	17.25	20.00	3	0	2
8				12.2	19.00	18.00	32.00	17.50	26.25	19.00	17.25	19.50	3	0	2
9				58.8	19.25	18.50	31.00	17.00	26.50	19.50	17.25	19.50	4	0	1
10				98.9	19.25	18.25	30.25	17.25	26.00	19.75	30.00	30.25	5	0	0
11				109.6	19.50	18.25	30.25	16.00	27.50	19.75	31.00	34.00	5	0	1
12				96.6	19.75	18.00	30.50	18.00	22.00	20.00	28.25	27.00	2	0	0
13				95.2	19.50	18.00	30.25	19.00	20.25	19.50	20.50	21.25	2	0	1
14				83.3	19.25	17.75	30.25	17.50	24.00	19.50	18.00	20.25	2	0	1
15				61.7	20.00	17.50	30.00	18.00	23.00	19.75	28.25	24.50	2	0	1
16				32.3	20.00	17.50	30.00	18.50	22.75	20.00	23.25	23.00	2	0	1
17				2.4	19.75	17.50	29.50	18.75	29.00	20.00	19.50	21.00	6	0	1
18				0.	20.50	18.50	30.00	15.75	29.00	21.00	19.75	22.50	3	0	1
19				0.	20.25	18.50	29.50	19.25	24.00	20.50	19.00	21.75	3	0	1
20				0.	20.00	18.25	29.00	19.00	22.50	20.00	18.25	21.00	2	0	0
21				0.	19.75	18.50	28.75	18.00	26.50	19.75	18.00	20.00	4	0	2
22				0.	19.50	18.75	28.25	18.00	25.00	20.00	18.00	19.75	2	0	1
23				0.	19.50	18.25	28.00	18.25	23.50	19.75	17.75	19.75	1	0	0
TOT.				651.0									66	0	18
AVG.				27.1	19.50	18.32	30.75	18.08	23.05	19.47	20.21	22.12	3	0	1

DATE
(02/11/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.25	18.50	28.00	18.75	20.25	19.50	17.25	19.50	1	0	0
1				0.	19.00	18.25	28.00	18.50	19.25	19.00	17.25	19.25	1	0	0
2				0.	19.00	18.00	28.00	18.25	26.00	18.75	17.00	19.00	2	0	1
3				0.	19.00	18.00	27.75	18.25	25.25	19.00	17.00	18.75	1	0	0
4				0.	18.75	18.00	27.75	18.00	25.25	19.00	17.00	18.75	1	0	1
5				0.	18.75	18.00	27.50	18.00	26.75	19.00	17.00	18.50	1	0	1
6				0.	18.75	18.00	27.25	17.75	27.00	19.00	17.00	18.75	2	0	1
7				0.	18.50	18.00	27.00	17.50	27.00	19.00	17.00	18.50	3	0	2
8				6.0	19.00	19.00	26.25	17.25	26.75	19.00	17.00	18.25	3	0	2
9				27.3	19.00	19.00	26.00	16.50	25.50	19.25	16.75	16.00	3	0	1
10				45.6	19.25	19.00	26.00	18.00	21.25	19.25	22.25	22.00	2	0	1
11				58.3	19.00	19.50	25.50	18.25	21.00	19.50	26.00	28.00	3	0	0
12				64.5	19.50	19.50	25.50	19.00	20.25	19.50	25.50	25.75	1	0	0
13				63.6	19.50	19.50	25.50	17.00	25.00	19.50	22.25	22.25	2	0	1
14				55.7	19.50	19.50	25.50	17.75	23.25	19.75	19.75	20.50	2	0	1
15				41.4	19.50	19.50	25.00	17.75	23.00	19.75	18.50	19.75	2	0	1
16				22.0	19.50	19.50	25.00	17.50	22.50	19.75	18.25	19.50	3	0	1
17				1.6	19.25	19.75	24.50	17.25	22.75	19.50	18.00	19.25	2	0	0
18				0.	19.25	19.75	24.75	18.50	20.25	19.25	18.00	19.25	2	0	0
19				0.	19.25	19.50	24.50	19.00	19.50	19.25	18.00	19.25	2	0	0
20				0.	19.00	19.50	24.75	19.00	19.00	19.00	17.75	19.25	2	0	0
21				0.	19.00	19.50	24.50	18.75	18.75	18.75	17.50	19.25	1	0	0
22				0.	19.00	19.25	24.75	18.75	18.50	18.50	17.25	19.00	2	0	0
23				0.	18.75	19.25	24.50	18.25	18.25	18.25	17.00	18.75	1	0	0
TOT.				386.0									44	0	12
AVG.				16.1	19.09	18.97	25.99	18.06	22.59	19.17	18.59	19.87	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.25	19.25	24.50	18.25	18.00	18.00	17.00	18.50	1	0	0
1				0.	18.25	19.00	24.50	18.00	18.00	18.00	16.75	18.50	1	0	0
2				0.	18.25	18.75	24.50	18.00	17.75	17.75	16.75	18.25	1	0	0
3				0.	18.25	18.25	24.50	17.75	17.75	17.75	16.75	18.00	1	0	0
4				0.	18.25	18.25	24.50	17.75	17.75	17.75	16.75	18.00	1	0	0
5				0.	18.25	18.00	24.50	17.75	17.75	17.75	16.75	18.00	0	0	0
6				0.	18.25	17.75	24.50	18.00	17.75	17.75	16.75	18.00	1	0	0
7				0.	18.00	18.00	24.25	15.75	24.50	18.00	16.75	18.00	4	0	3
8				6.3	18.50	18.50	24.50	15.50	23.75	18.50	16.75	18.00	3	0	2
9				27.0	18.75	19.00	23.00	16.25	21.75	19.00	17.00	17.75	8	0	0
10				44.7	19.00	19.50	23.00	16.25	21.75	19.00	17.75	17.75	2	0	0
11				49.2	19.00	19.25	23.00	14.50	22.50	19.00	20.00	20.50	5	0	0
12				43.3	19.00	19.25	23.00	17.50	20.00	19.00	18.75	19.50	4	0	0
13				42.7	19.00	19.25	22.75	15.75	22.25	19.00	18.00	19.00	2	0	1
14				37.5	19.00	19.00	22.25	16.25	21.25	19.00	17.50	18.75	2	0	1
15				28.0	19.25	19.25	22.25	14.50	21.75	19.00	19.25	19.75	1	0	1
16				15.1	19.25	19.25	21.75	14.75	22.00	19.50	18.25	19.50	2	0	1
17				1.3	19.50	19.50	21.50	15.50	21.25	19.50	18.00	19.25	1	0	1
18				0.	19.25	19.25	21.50	15.00	21.00	19.25	18.00	19.00	2	0	1
19				0.	19.00	19.25	21.00	15.50	20.75	19.25	17.75	19.00	1	0	1
20				0.	19.00	19.50	21.00	14.00	21.00	19.25	17.50	18.75	2	0	2
21				0.	18.75	19.50	20.50	13.50	20.75	19.25	17.25	18.75	2	0	2
22				0.	19.00	19.50	20.25	15.00	20.00	19.00	17.25	18.75	4	0	0
23				0.	19.00	19.25	20.25	17.25	19.00	19.00	17.00	18.50	3	0	0
TOT.				295.1									55	0	15
AVG.				12.3	18.75	18.97	22.80	16.18	20.42	18.68	17.51	18.56	2	0	1

DATE
(02/13/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0				0.	18.75	19.00	20.25	18.25	18.75	18.50	17.00	18.50	1	0	0
1				0.	18.50	18.25	20.25	18.25	18.25	18.25	17.00	18.25	1	0	0
2				0.	18.25	18.00	20.00	14.50	19.75	18.00	16.50	18.00	1	0	1
3				0.	18.00	18.00	20.00	14.50	19.50	18.00	16.50	18.00	1	0	1
4				0.	18.00	18.00	19.75	14.75	19.25	18.00	15.25	17.75	1	0	1
5				0.	17.75	17.75	19.50	14.75	18.75	18.00	16.00	17.50	2	0	1
6				0.	17.50	17.75	19.25	13.75	19.00	17.75	15.75	17.25	2	0	1
7				0.	17.25	18.00	19.00	12.25	19.00	17.50	15.75	17.00	4	0	3
8				3.2	17.50	18.75	18.25	13.25	18.25	18.00	15.25	16.75	3	0	2
9				12.9	17.25	19.25	17.75	11.50	18.00	18.00	18.50	33.25	2	0	1
10				23.4	18.00	19.25	18.75	13.25	18.50	18.25	21.50	37.25	5	0	1
11				31.8	18.25	19.25	20.25	16.25	18.75	18.75	23.50	43.00	5	0	0
12				38.0	18.75	19.00	22.25	18.00	18.75	18.75	25.00	49.25	5	0	0
13				37.5	19.50	19.50	25.00	18.75	18.75	19.25	27.00	51.00	1	0	0
14				33.0	20.00	19.75	26.50	19.25	19.25	19.50	29.25	47.50	1	0	0
15				24.7	20.50	20.00	28.25	19.50	19.50	19.50	30.00	43.75	1	0	0
16				13.6	20.75	20.00	29.25	20.00	19.75	19.75	30.50	38.00	1	0	0
17				1.4	21.00	19.75	29.75	20.00	20.00	20.00	29.50	28.50	3	0	0
18				0.	20.50	19.75	29.50	20.00	20.00	20.00	24.75	23.75	9	0	0
19				0.	20.00	19.50	29.50	19.50	19.50	19.50	21.25	22.25	8	0	0
20				0.	19.75	19.25	29.50	19.25	19.00	19.00	20.00	22.25	3	0	0
21				0.	19.25	19.00	29.50	18.75	18.75	18.75	19.00	21.50	5	0	0
22				0.	19.00	18.75	29.50	18.50	18.25	18.25	18.00	21.00	5	0	0
23				0.	18.75	18.75	29.25	18.25	18.25	18.25	17.50	20.50	2	0	1
TOT.				219.5									74	0	13
AVG.				9.1	18.86	18.93	23.78	16.87	18.98	18.85	20.93	27.57	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.50	18.50	29.25	18.25	24.25	18.00	17.00	19.75	2	0	1
1				0.	18.50	18.50	28.75	19.25	24.00	18.50	16.75	19.75	2	0	1
2				0.	18.25	18.50	28.00	17.50	25.50	18.50	16.50	19.00	2	0	1
3				0.	18.25	18.50	27.75	18.25	25.75	18.50	16.50	18.75	2	0	1
4				0.	18.00	18.50	27.25	17.75	25.75	18.50	16.25	18.50	2	0	1
5				0.	17.75	18.50	27.00	17.25	27.00	18.50	16.00	18.25	2	0	2
6				0.	18.00	18.50	26.50	17.25	23.75	18.50	15.75	18.00	2	0	1
7				0.	17.75	18.75	26.00	17.00	26.25	18.25	15.75	17.75	4	0	3
8				40.2	17.75	19.00	25.75	16.75	23.25	18.50	15.75	17.50	2	0	2
9				148.9	17.75	19.25	25.00	16.75	23.50	18.50	24.50	38.50	2	0	1
10				227.4	18.25	19.00	26.00	17.50	22.50	19.00	23.25	44.50	6	0	1
11				288.4	19.00	19.25	27.25	18.25	23.00	19.50	30.00	50.00	6	0	0
12				317.9	19.75	19.25	29.25	19.25	21.00	19.75	31.50	53.75	5	0	0
13				284.5	20.25	19.50	30.25	19.75	20.50	20.00	32.00	45.50	4	0	0
14				250.4	20.75	19.75	31.25	19.75	20.00	20.25	33.50	52.00	1	0	0
15				188.5	21.50	20.00	32.75	20.00	20.25	20.00	34.50	48.50	2	0	0
16				103.9	21.75	20.50	33.75	20.25	20.50	20.50	34.00	45.50	2	0	0
17				12.1	21.75	20.75	33.75	20.50	20.75	20.75	32.75	30.75	2	0	0
18				0.	21.50	20.25	33.75	20.50	20.50	20.50	26.25	25.75	3	0	0
19				0.	21.00	20.00	33.75	20.00	20.50	20.25	22.75	26.00	3	0	0
20				0.	20.25	20.00	33.75	19.50	19.50	19.50	21.00	26.50	2	0	0
21				0.	19.75	19.75	33.75	19.25	19.00	19.25	19.25	25.75	2	0	0
22				0.	19.50	19.50	33.75	18.75	18.50	19.00	18.25	24.25	5	0	0
23				0.	19.00	19.25	33.75	18.50	18.25	18.50	17.50	23.25	2	0	0
TOT.				1862.2									69	0	14
AVG.				77.6	19.35	19.30	29.92	18.66	22.24	19.21	22.80	30.41	3	0	1

DATE
(02/15/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.75	18.75	33.50	18.00	18.25	18.25	17.00	22.50	1	0	0
1				0.	18.25	18.25	33.50	17.75	17.75	18.00	16.50	22.00	1	0	0
2				0.	18.25	17.75	33.25	17.50	17.50	17.50	16.25	21.00	1	0	1
3				0.	18.25	17.25	33.25	18.25	25.00	17.75	16.25	20.25	2	0	1
4				0.	18.25	17.25	33.00	20.50	28.50	18.25	16.25	20.00	1	0	1
5				0.	18.25	17.50	32.50	21.00	29.00	18.25	16.25	19.75	2	0	1
6				0.	18.25	17.25	32.25	18.25	25.50	18.25	16.25	19.25	2	0	1
7				0.	18.00	18.00	31.75	17.25	27.50	18.50	16.25	19.75	4	0	3
8				41.4	18.00	18.25	31.00	17.00	23.50	18.50	16.25	18.75	2	0	1
9				121.8	18.25	18.75	30.75	18.00	26.25	18.75	15.00	12.00	2	0	1
10				197.0	18.25	19.00	30.25	17.00	25.75	19.00	15.75	14.75	3	0	1
11				249.3	18.50	19.25	30.25	18.00	23.00	19.25	32.00	46.75	2	0	1
12				274.5	19.50	19.50	31.25	18.75	23.00	19.75	33.50	51.25	1	0	0
13				271.0	20.00	19.25	32.50	19.75	21.25	20.00	33.75	42.00	1	0	0
14				238.8	20.50	19.25	32.75	18.25	26.00	20.25	33.50	40.00	1	0	0
15				180.4	20.50	19.25	33.50	18.75	21.00	19.75	34.00	37.00	2	0	0
16				100.7	20.75	19.25	33.50	18.75	26.50	20.00	32.25	31.25	2	0	1
17				13.3	21.00	19.50	33.50	17.75	25.50	20.75	28.75	27.50	5	0	0
18				0.	20.75	19.25	33.25	19.25	22.00	20.75	23.50	24.50	3	0	0
19				0.	20.50	19.25	33.25	20.00	21.00	20.25	21.75	25.00	3	0	0
20				0.	20.25	19.00	33.25	19.75	20.00	20.00	20.25	24.75	5	0	0
21				0.	20.00	19.00	33.25	19.50	19.75	19.75	19.25	23.75	4	0	0
22				0.	19.50	18.75	33.00	19.25	19.25	19.25	18.50	22.75	4	0	0
23				0.	19.25	18.25	33.00	19.75	18.75	18.75	18.00	22.25	1	0	0
TOT.				1688.2									58	0	14
AVG.				70.3	19.24	18.61	32.55	18.62	22.98	19.15	22.00	26.20	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER HEATER	HEAT PUMP
0				0.	19.00	17.75	32.75	18.50	18.50	18.50	17.75	21.75	1	0	0
1				0.	18.75	17.25	32.75	18.25	18.25	18.25	17.25	21.25	1	0	1
2				0.	18.75	17.25	32.50	20.00	26.00	18.50	17.00	20.75	2	0	1
3				0.	18.75	17.00	32.00	17.00	29.00	18.75	17.00	20.50	2	0	1
4				0.	18.75	17.25	31.50	17.25	30.50	18.75	17.00	20.00	2	0	1
5				0.	18.75	17.25	31.00	18.00	25.75	19.00	17.00	19.75	2	0	1
6				0.	19.00	17.00	32.00	17.00	25.50	19.00	17.00	19.25	2	0	1
7				0.	18.75	17.50	31.50	17.50	26.00	19.00	17.00	19.25	3	0	2
8				16.2	19.00	18.25	31.25	17.75	25.50	19.50	17.25	19.00	2	0	1
9				57.5	19.25	18.25	31.25	17.75	26.50	19.50	17.50	18.50	3	0	2
10				92.3	19.25	18.25	30.75	18.25	26.00	19.75	17.50	17.50	2	0	1
11				146.1	19.50	18.50	30.00	18.00	25.25	19.75	17.75	17.00	2	0	1
12				186.2	19.75	18.75	29.75	18.25	24.00	20.00	30.50	47.75	1	0	0
13				158.7	20.75	18.50	29.25	19.50	21.75	20.50	33.00	53.00	2	0	0
14				111.7	20.75	19.75	29.00	19.50	20.50	19.75	34.25	51.75	1	0	0
15				84.7	21.25	20.00	28.75	19.50	20.00	19.75	35.25	47.00	2	0	0
16				59.9	21.75	20.00	30.25	20.50	20.75	20.50	34.50	36.75	2	0	0
17				10.2	22.00	20.00	32.00	21.00	21.00	21.00	33.25	31.00	2	0	0
18				0.	21.75	19.75	33.50	21.00	21.00	21.00	26.75	26.00	2	0	0
19				0.	21.50	20.00	34.00	20.75	20.75	20.75	23.50	26.25	4	0	0
20				0.	21.00	19.50	34.00	20.00	20.00	20.25	21.50	26.00	3	0	0
21				0.	20.50	19.75	34.00	19.75	19.75	19.00	19.75	25.00	3	0	0
22				0.	20.00	19.50	34.00	19.50	19.50	19.75	19.25	23.50	2	0	0
23				0.	20.00	19.25	34.00	19.25	19.25	19.50	18.50	22.75	7	0	0
TOT.				923.5									54	0	13
AVG.				38.5	19.94	18.59	31.74	18.91	22.96	19.58	22.37	27.14	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.50	19.00	33.75	18.75	18.75	19.00	18.25	21.75	6	0	0
1				0.	19.25	18.75	33.75	18.75	18.50	18.75	18.00	21.00	4	0	0
2				0.	19.25	18.25	33.75	18.50	18.50	18.50	17.75	20.75	1	0	0
3				0.	19.00	18.00	33.75	18.50	18.25	18.50	17.25	20.50	0	0	0
4				0.	19.00	17.50	33.75	18.25	18.25	18.25	17.25	20.25	1	0	1
5				0.	19.00	17.25	33.50	20.00	24.75	18.50	17.00	20.00	2	0	1
6				0.	19.00	17.25	33.00	18.50	22.25	18.75	17.25	20.00	1	0	1
7				0.	19.00	17.50	32.25	17.25	26.50	19.00	17.25	20.00	4	0	2
8				24.1	19.00	17.50	31.75	18.25	25.25	19.25	17.25	19.75	4	0	1
9				82.1	19.25	17.50	31.75	18.25	24.75	19.25	17.25	18.75	2	0	0
10				130.9	19.75	17.25	31.50	19.00	27.75	19.25	17.00	18.00	3	0	1
11				164.8	20.00	17.50	31.25	18.25	25.00	19.75	17.25	17.00	2	0	1
12				181.2	21.00	17.50	31.00	19.25	24.25	20.25	17.75	18.75	2	0	1
13				179.0	20.75	17.75	30.50	17.50	26.75	20.75	18.00	19.25	2	0	1
14				158.2	20.75	17.75	30.25	18.25	24.00	20.75	27.75	28.25	1	0	1
15				120.4	20.75	17.75	30.25	19.00	24.75	20.75	28.75	25.50	3	0	2
16				68.7	20.50	18.25	29.75	18.25	23.50	21.00	25.75	25.25	2	0	1
17				11.1	20.50	18.75	29.25	16.50	24.75	20.75	21.25	22.75	5	0	1
18				0.	20.50	18.75	29.25	19.00	21.75	20.50	20.25	22.75	3	0	0
19				0.	20.25	18.75	29.25	19.50	21.75	20.25	19.75	22.50	2	0	1
20				0.	20.00	18.75	29.25	19.50	26.00	20.00	19.00	21.50	2	0	1
21				0.	20.00	19.00	29.00	19.50	26.00	20.00	18.75	21.00	2	0	1
22				0.	20.00	19.00	28.75	19.00	27.00	20.00	18.50	20.50	2	0	1
23				0.	20.00	19.00	28.50	19.25	23.25	20.00	18.25	20.00	1	0	0
TOT.				1120.5									59	0	16
AVG.				46.7	19.83	18.09	31.20	18.61	23.43	19.66	19.27	21.20	2	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.75	18.50	28.50	19.50	20.75	19.75	18.25	20.00	1	0	0
1				0.	19.75	18.25	28.50	19.25	20.00	19.50	18.00	19.75	1	0	0
2				0.	19.25	17.75	28.25	19.25	19.25	19.25	17.75	19.50	1	0	0
3				0.	19.25	17.50	28.25	19.00	19.00	19.00	17.75	19.50	1	0	0
4				0.	19.00	17.25	28.25	18.75	18.75	18.75	17.50	19.25	1	0	1
5				0.	19.00	17.25	28.25	18.50	23.00	19.00	17.25	19.25	2	0	1
6				0.	19.00	17.25	28.00	18.25	25.25	18.75	17.25	19.25	2	0	1
7				0.	18.75	17.75	27.50	18.00	27.75	19.00	17.00	19.50	4	0	3
8				5.7	18.75	18.75	26.75	18.00	25.50	19.25	17.75	19.00	2	0	1
9				18.6	19.00	19.00	26.75	18.00	23.00	19.50	28.25	36.50	3	0	0
10				30.3	19.75	19.00	27.50	18.75	22.25	19.75	30.00	45.50	2	0	0
11				38.6	20.00	19.25	29.25	20.00	21.25	20.25	32.00	51.75	3	0	0
12				43.0	21.25	19.75	31.25	20.25	21.00	20.75	34.00	56.00	3	0	0
13				42.5	22.00	20.25	33.25	21.00	21.25	21.00	35.75	57.75	1	0	0
14				37.8	23.00	21.50	35.25	21.50	21.50	21.50	37.50	55.75	1	0	0
15				28.9	23.50	21.75	36.75	22.00	22.00	22.00	38.50	51.50	1	0	0
16				16.6	24.00	22.25	37.75	22.75	22.50	22.50	39.00	46.75	1	0	0
17				2.9	24.25	22.25	38.00	23.00	22.75	23.00	37.50	36.00	3	0	0
18				0.	24.25	22.25	38.00	22.75	22.75	23.00	31.25	30.00	2	0	0
19				0.	22.75	22.00	38.00	22.25	22.25	22.50	26.25	28.25	3	0	0
20				0.	23.50	21.75	37.75	21.75	21.75	22.00	24.00	31.25	2	0	0
21				0.	22.25	21.25	37.75	21.00	21.00	21.00	21.00	31.75	2	0	0
22				0.	21.75	20.75	37.75	20.75	20.75	20.75	19.50	31.00	2	0	0
23				0.	26.25	20.00	37.75	20.25	20.25	20.50	18.50	30.00	2	0	0
TOT.				264.9									43	0	6
AVG.				11.0	21.25	19.72	32.29	20.19	21.90	20.51	25.48	33.11	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	20.75	19.75	37.75	19.00	20.00	20.00	18.00	29.00	2	0	0
1				0.	20.25	19.25	37.75	19.50	19.50	19.75	17.50	28.25	2	0	0
2				0.	20.00	19.00	37.50	19.25	19.25	19.25	17.00	27.75	1	0	0
3				0.	19.75	18.25	37.50	28.75	18.75	32.00	17.00	26.50	1	0	0
4				0.	19.25	18.25	37.00	30.00	18.75	32.00	16.75	25.75	1	0	0
5				0.	19.00	18.25	36.50	31.00	18.25	33.25	16.50	24.00	1	0	0
6				0.	18.75	18.25	36.25	32.75	18.00	35.25	16.25	23.00	2	0	0
7				0.	18.25	18.25	35.75	32.50	17.75	35.25	15.75	22.00	1	0	1
8				44.3	18.00	18.25	35.25	31.75	17.25	34.50	14.50	19.25	3	0	0
9				111.8	18.00	18.50	34.75	29.25	17.25	31.25	15.25	17.50	3	0	0
10				175.9	18.50	18.25	34.75	21.25	18.00	22.75	33.00	35.00	4	0	0
11				220.4	19.50	18.25	35.25	20.00	18.50	20.75	36.50	46.25	3	0	0
12				303.7	20.50	19.00	36.50	20.00	19.50	20.50	38.75	56.75	7	0	0
13				347.4	21.50	20.00	38.25	20.50	20.25	20.25	40.00	57.00	3	0	0
14				339.5	22.75	21.00	40.25	21.25	21.00	21.25	42.25	60.00	2	0	0
15				260.1	23.50	21.25	41.50	22.00	21.75	21.75	42.25	49.00	1	0	0
16				151.4	24.00	21.50	42.25	22.50	22.25	22.25	43.00	49.00	1	0	0
17				28.9	24.50	21.75	42.25	23.00	22.75	23.00	41.25	39.00	2	0	0
18				0.	24.50	21.75	42.25	23.00	22.75	23.00	35.50	33.00	2	0	0
19				0.	23.75	21.50	42.25	22.50	22.50	22.50	28.00	30.25	1	0	0
20				0.	23.25	21.25	42.25	22.25	22.00	22.00	25.25	30.25	2	0	0
21				0.	22.50	21.00	42.25	21.50	21.50	21.75	22.25	29.50	5	0	0
22				0.	22.00	20.50	42.00	21.25	21.25	21.50	21.50	27.75	2	0	0
23				0.	21.75	20.50	42.00	21.00	21.00	21.25	20.75	27.00	2	0	0
TOT.				1983.4									52	0	2
AVG.				82.6	21.02	19.73	38.75	23.99	19.99	24.87	26.45	33.86	2	0	0

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	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	21.50	20.00	41.75	20.50	20.50	20.50	20.00	26.25	1	0	0
1				0.	21.25	19.75	41.75	20.25	20.50	20.50	19.75	25.50	1	0	0
2				0.	21.00	19.25	41.75	20.00	20.00	20.25	19.50	24.25	1	0	0
3				0.	20.75	18.75	41.75	20.00	20.00	20.00	19.25	23.75	1	0	0
4				0.	20.75	18.50	41.75	19.75	19.75	19.75	19.00	23.00	1	0	0
5				0.	20.50	18.25	41.75	19.75	19.75	19.75	19.00	22.75	1	0	0
6				0.	20.50	17.50	41.50	19.50	19.75	19.75	18.75	22.75	1	0	0
7				0.	20.00	17.75	41.25	37.00	19.50	19.50	17.75	22.50	1	0	0
8				36.9	20.25	17.75	40.75	29.75	19.50	32.00	18.00	22.25	1	0	0
9				113.0	20.25	18.00	40.25	34.25	19.50	37.00	18.75	21.50	2	0	0
10				176.7	20.50	18.00	40.25	24.50	20.00	26.00	18.50	20.25	1	0	0
11				221.0	20.75	18.00	40.25	21.75	20.00	22.75	19.00	19.50	1	0	0
12				242.5	20.50	17.75	40.00	33.25	20.00	35.50	18.25	19.25	1	0	0
13				239.6	20.50	17.75	39.75	31.50	20.00	32.00	18.25	20.50	1	0	0
14				212.6	20.50	18.00	39.50	31.00	20.00	33.50	18.00	21.75	1	0	0
15				163.5	20.50	18.00	39.25	29.00	20.00	32.75	18.25	22.50	1	0	0
16				96.1	20.25	18.00	39.00	33.25	19.75	35.50	18.25	22.00	3	0	0
17				19.7	20.50	18.00	38.75	27.75	20.00	30.00	18.25	20.50	5	0	0
18				0.	20.50	17.50	38.50	26.25	19.75	25.50	18.75	21.75	6	0	0
19				0.	20.25	18.00	38.25	21.75	19.75	22.75	18.75	23.00	5	0	0
20				0.	20.25	18.00	38.25	21.75	19.75	22.75	18.75	23.50	5	0	0
21				0.	20.00	18.25	38.25	20.25	19.50	19.50	18.50	23.50	3	0	0
22				0.	20.00	18.25	38.00	19.50	19.50	19.50	18.00	23.25	3	0	0
23				0.	19.75	18.75	38.00	19.00	19.00	19.00	18.00	23.00	2	0	0
TOT.				1521.6									50	0	2
AVG.				63.4	20.48	18.24	40.01	25.05	19.82	25.25	18.64	22.45	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.50	18.50	38.00	18.75	18.75	19.00	17.50	22.25	2	0	0
1				0.	19.25	18.25	37.75	18.50	18.50	18.75	17.25	22.00	1	0	0
2				0.	18.75	17.75	37.75	31.00	18.25	32.00	17.00	21.75	1	0	0
3				0.	18.75	17.75	37.25	29.75	18.00	34.25	16.50	21.00	1	0	0
4				0.	18.25	17.75	36.50	31.25	17.75	33.50	16.25	20.25	1	0	0
5				0.	18.00	17.50	36.50	32.75	17.50	35.75	16.00	20.00	1	0	0
6				0.	17.75	17.75	36.00	31.00	17.25	34.75	15.75	19.75	1	0	0
7				0.	17.75	18.00	35.50	32.25	17.25	35.00	15.50	19.25	1	0	1
8				4.0	17.50	18.25	35.00	32.00	17.50	34.50	15.50	19.00	1	0	1
9				11.9	17.50	17.75	34.50	31.75	17.00	34.00	15.50	18.25	1	0	1
10				18.4	17.50	18.00	34.25	31.25	17.25	33.75	15.25	17.75	3	0	0
11				23.0	17.75	18.25	33.75	31.00	17.50	33.25	15.50	15.50	2	0	0
12				25.2	18.25	18.25	33.50	30.75	18.00	33.00	28.50	23.25	6	0	1
13				24.9	18.75	18.00	33.00	21.50	28.50	34.25	32.00	31.25	3	0	1
14				22.1	19.50	18.00	32.75	19.00	29.75	21.50	26.50	26.25	2	0	1
15				17.1	19.75	18.00	32.25	19.75	31.00	21.00	21.00	22.00	2	0	1
16				10.1	19.75	18.00	31.75	19.75	27.00	20.75	19.50	21.00	3	0	1
17				2.2	20.00	18.00	31.25	20.00	30.75	20.50	19.00	20.25	13	0	1
18				0.	19.75	18.25	31.00	20.75	29.50	20.00	18.50	20.75	10	0	0
19				0.	19.50	17.75	30.75	20.25	29.00	19.75	18.00	21.25	9	0	1
20				0.	19.50	17.25	30.25	20.00	28.75	19.50	17.50	20.75	11	0	2
21				0.	19.25	17.00	29.75	19.25	27.00	19.50	17.00	20.00	10	0	1
22				0.	19.25	17.50	29.25	19.25	28.75	19.25	17.00	19.75	10	0	1
23				0.	19.00	17.00	28.75	18.75	25.50	19.25	16.75	19.25	8	0	0
TOT.				158.9									104	0	17
AVG.				6.6	18.77	17.85	33.62	25.01	22.75	26.95	18.53	20.94	4	0	1

DATE
(02/22/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.75	16.50	28.25	18.50	25.25	19.00	16.50	19.00	7	0	6
1				0.	18.75	16.75	28.00	18.50	24.00	19.00	16.25	18.75	3	0	1
2				0.	18.75	16.75	27.75	18.00	27.75	19.00	16.50	18.75	2	0	1
3				0.	18.75	17.00	27.25	18.00	26.25	19.25	16.50	18.50	3	0	2
4				0.	18.75	16.75	26.75	18.25	24.00	19.25	16.50	18.25	2	0	1
5				0.	18.75	16.75	26.50	16.00	26.25	19.25	16.50	18.50	2	0	1
6				0.	18.75	16.75	26.25	18.00	26.25	19.00	16.50	18.25	3	0	2
7				4.0	18.75	17.25	25.50	16.75	25.75	19.00	16.50	18.25	4	0	3
8				15.2	18.25	18.00	24.50	16.25	21.75	18.75	16.00	17.25	3	0	2
9				25.5	19.00	18.00	24.25	16.25	24.25	19.00	16.00	17.25	4	0	2
10				33.8	20.25	18.00	24.00	14.75	23.50	19.75	16.50	17.25	5	0	1
11				39.4	20.50	18.25	23.25	16.00	23.50	20.25	17.00	17.75	5	0	1
12				41.9	20.00	18.25	23.25	15.25	21.50	20.25	17.25	17.25	3	0	1
13				41.2	19.75	18.25	23.00	18.25	20.75	20.00	23.00	24.00	3	0	0
14				37.3	19.50	18.00	23.00	18.75	20.00	19.75	22.00	28.00	1	0	1
15				30.5	19.25	18.25	23.25	17.25	12.25	19.50	25.00	32.50	1	0	0
16				20.9	19.25	18.25	23.75	18.50	20.00	19.50	24.75	30.00	3	0	1
17				17.6	19.25	18.00	23.75	18.00	21.00	19.50	19.75	22.75	1	0	0
18				.5	19.25	18.25	23.75	16.50	22.00	19.25	19.50	21.25	2	0	1
19				0.	19.00	18.25	23.75	15.75	23.25	19.25	18.50	20.75	2	0	1
20				0.	18.75	18.25	22.75	16.00	22.75	19.00	18.00	20.00	3	0	1
21				0.	18.50	18.00	23.00	15.75	22.25	19.00	17.25	19.25	7	0	2
22				0.	18.25	18.00	22.50	15.50	21.50	18.50	16.75	19.50	7	0	1
23				0.	18.25	18.00	22.25	16.50	24.75	18.25	16.25	19.25	2	0	0
TOT.				317.8									77	0	24
AVG.				13.2	19.04	17.69	24.59	17.01	22.94	19.26	18.14	20.51	3	0	1

DATE
(02/23/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.75	17.75	21.75	15.25	20.75	18.25	16.00	19.00	2	0	1
1				0.	17.50	17.25	21.75	15.50	19.75	18.00	15.25	18.75	2	0	1
2				0.	17.25	17.50	21.50	15.00	20.50	17.50	15.25	18.25	2	0	1
3				0.	17.25	17.25	21.25	15.50	19.25	17.25	15.00	18.25	2	0	1
4				0.	17.00	17.75	20.75	14.00	21.00	17.00	15.00	17.75	2	0	1
5				0.	17.00	17.25	20.25	14.00	20.25	17.00	14.75	17.75	2	0	2
6				0.	16.50	17.25	20.00	13.75	19.25	16.75	14.50	17.50	3	0	2
7				8.8	16.50	18.00	19.75	13.00	20.00	16.75	14.25	17.00	4	0	3
8				35.4	16.75	18.50	19.00	12.25	19.25	17.00	14.50	16.75	3	0	2
9				59.5	16.75	18.75	19.85	12.00	19.00	17.00	20.50	34.00	3	0	1
10				77.9	17.25	18.50	19.75	14.25	18.75	17.75	23.25	41.25	1	0	0
11				85.0	17.75	18.50	21.75	16.75	18.25	18.00	25.50	47.75	1	0	0
12				76.9	18.25	18.50	24.25	17.75	18.25	18.50	27.75	52.50	3	0	0
13				65.3	19.00	19.00	26.75	18.25	18.50	18.75	29.75	53.00	7	0	0
14				47.1	19.50	19.00	28.50	18.75	19.00	19.00	30.75	50.50	3	0	0
15				38.5	20.00	19.00	30.00	19.50	19.50	19.50	31.50	45.25	8	0	0
16				26.7	20.25	19.25	30.75	20.00	20.00	20.00	31.50	37.25	7	0	0
17				16.0	20.50	19.00	30.75	20.00	20.00	20.00	30.25	28.75	4	0	0
18				.4	20.25	19.00	30.75	19.75	19.75	20.00	23.25	23.75	5	0	0
19				0.	20.25	18.50	30.75	19.50	19.25	19.75	21.00	23.00	2	0	0
20				0.	19.50	18.50	30.75	19.00	19.00	19.25	20.00	22.25	7	0	0
21				0.	19.00	18.50	30.50	18.50	19.00	19.00	18.50	21.50	9	0	0
22				0.	18.75	18.50	30.50	18.25	19.25	19.25	18.75	20.50	8	0	0
23				0.	19.25	19.25	30.50	17.75	17.75	17.75	18.25	20.00	4	0	0
TOT.				537.5									94	0	15
AVG.				22.4	18.32	18.34	25.09	16.59	19.39	18.29	21.04	25.43	4	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.00	18.00	30.25	20.00	27.50	17.75	16.75	19.25	3	0	1
1				0.	17.50	17.50	29.50	19.25	27.50	18.00	16.50	19.00	3	0	1
2				0.	17.75	17.50	29.25	19.00	25.00	18.00	16.00	18.50	3	0	1
3				0.	17.50	17.50	28.50	18.75	23.00	18.00	16.00	18.25	3	0	2
4				0.	17.50	17.50	28.25	18.00	25.00	18.00	15.50	18.00	2	0	2
5				0.	17.25	17.50	28.00	18.00	25.50	18.00	15.50	17.75	2	0	1
6				0.	17.00	17.75	27.50	18.00	27.75	18.00	15.25	17.75	3	0	2
7				24.2	17.00	17.25	27.00	17.50	27.00	17.75	15.00	17.25	4	0	3
8				112.1	17.00	18.50	26.00	17.00	26.25	18.00	15.25	17.00	4	0	2
9				196.2	17.50	19.00	25.25	16.75	24.00	18.25	26.75	36.50	2	0	1
10				263.0	18.00	18.75	26.50	17.00	24.50	18.75	28.75	46.25	2	0	1
11				305.9	18.75	19.00	28.00	18.50	26.50	19.25	30.25	53.25	2	0	1
12				323.5	19.50	18.75	29.75	19.25	25.75	20.00	32.25	57.00	1	0	0
13				293.0	20.25	18.75	31.75	20.00	22.25	20.50	34.25	58.00	2	0	0
14				194.5	21.00	19.25	33.50	20.50	21.50	20.75	35.00	47.00	1	0	0
15				126.4	21.25	19.25	34.25	20.50	21.25	21.00	35.50	44.00	1	0	0
16				87.3	21.50	19.00	34.50	21.00	21.25	21.25	35.00	39.25	3	0	0
17				41.3	21.75	19.00	34.75	21.25	21.25	21.25	34.00	32.75	9	0	0
18				.8	21.25	18.50	34.75	21.00	21.00	21.00	26.00	26.00	9	0	0
19				0.	20.75	18.75	34.75	20.50	20.25	20.25	22.50	25.00	5	0	0
20				0.	20.25	18.50	34.75	19.75	19.75	19.75	20.75	24.50	2	0	0
21				0.	20.00	18.00	34.50	19.25	19.25	19.25	19.50	23.25	2	0	0
22				0.	19.50	18.25	34.50	23.00	31.50	19.25	18.50	22.00	3	0	1
23				0.	19.50	18.00	34.00	22.00	29.75	19.25	18.25	21.75	3	0	1
TOT.				1968.2									74	0	20
AVG.				82.0	19.05	18.32	30.82	19.41	24.55	19.22	23.29	29.97	3	0	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	19.25	17.75	33.50	20.75	26.25	19.75	18.00	21.50	2	0	1
1				0.	19.25	17.50	33.00	21.50	27.50	19.50	17.75	21.00	2	0	1
2				0.	19.00	18.00	32.50	22.25	30.50	19.50	17.25	20.50	3	0	2
3				0.	19.00	18.00	32.00	21.00	29.00	19.50	17.25	20.00	2	0	1
4				0.	18.75	17.75	31.75	21.50	28.75	19.25	17.00	20.00	3	0	2
5				0.	18.75	18.00	31.25	20.50	29.00	19.25	17.00	19.50	2	0	1
6				0.	18.75	17.75	31.00	20.25	27.25	19.25	17.00	19.25	2	0	1
7				20.3	18.75	18.25	30.50	20.00	28.50	19.25	17.00	19.25	2	0	1
8				94.1	18.75	17.75	30.25	20.00	30.00	19.25	16.75	19.00	3	0	2
9				162.7	18.50	17.50	30.00	20.00	27.50	19.25	16.75	18.25	2	0	1
10				217.7	18.50	17.50	29.25	19.50	29.50	19.25	16.50	18.00	3	0	2
11				255.1	18.50	17.75	29.00	19.25	26.25	19.25	16.50	18.00	5	0	1
12				272.1	18.50	18.00	28.50	19.75	24.00	19.25	16.25	16.75	6	0	1
13				267.6	18.50	18.00	28.25	18.50	25.00	19.25	16.50	17.00	6	0	2
14				241.9	18.75	18.50	27.50	18.25	27.50	19.25	16.75	18.00	4	0	2
15				196.6	18.75	19.50	27.00	18.25	26.00	19.50	17.00	18.50	1	0	0
16				170.0	18.75	18.50	27.00	17.75	27.00	19.25	16.75	18.25	3	0	2
17				91.7	18.75	18.75	26.50	18.00	24.50	19.25	17.00	18.25	3	0	1
18				.9	18.75	18.00	26.00	18.00	22.25	19.25	16.75	18.75	3	0	1
19				0.	18.50	18.00	26.00	14.75	25.00	19.00	16.75	18.50	3	0	1
20				0.	18.50	18.50	26.50	17.00	24.50	18.75	16.75	18.50	3	0	1
21				0.	18.25	18.50	26.25	16.50	25.25	18.75	16.50	18.25	3	0	2
22				0.	18.25	18.50	25.00	16.75	22.75	18.50	16.25	18.00	4	0	1
23				0.	17.75	18.75	24.50	17.00	26.00	18.25	16.00	17.75	5	0	1
TOT.				1990.9									75	0	30
AVG.				83.0	18.66	18.12	28.87	19.00	26.66	19.19	16.83	18.78	3	0	1

DATE
(02/26/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.50	18.25	24.25	17.50	21.00	18.00	16.00	18.00	3	0	1
1				0.	17.75	18.50	24.00	15.75	23.50	18.00	16.00	17.50	3	0	1
2				0.	17.50	18.25	23.25	15.50	22.50	18.00	15.75	17.25	3	0	1
3				0.	17.25	18.50	23.00	16.00	21.50	18.00	15.50	17.00	2	0	1
4				0.	17.25	18.25	22.50	15.25	21.50	18.00	15.50	17.00	2	0	1
5				0.	17.25	18.25	22.25	14.25	22.75	18.00	15.50	17.00	2	0	2
6				0.	17.25	18.25	21.75	15.00	21.00	17.75	15.50	17.75	2	0	1
7				2.0	17.25	18.50	21.25	14.25	21.75	18.00	15.50	17.00	3	0	2
8				9.8	17.25	18.75	21.00	17.00	20.00	17.75	15.25	16.75	2	0	1
9				17.2	17.25	18.75	20.50	14.00	20.50	18.00	15.25	16.50	4	0	1
10				23.1	17.25	18.50	20.25	15.00	19.25	17.75	15.25	16.00	2	0	0
11				27.1	17.25	18.25	20.25	16.50	18.00	17.25	15.00	14.25	2	0	1
12				29.0	17.00	18.25	20.25	14.50	19.50	17.25	20.75	26.00	2	0	1
13				28.5	17.25	18.00	20.25	14.25	19.75	17.50	20.75	31.00	2	0	1
14				25.8	17.50	18.25	20.00	14.00	20.00	18.00	18.25	19.75	2	0	1
15				20.9	17.75	18.25	20.00	13.50	20.00	18.00	19.00	27.25	2	0	1
16				14.3	17.75	18.75	19.75	14.50	19.25	18.25	18.00	19.25	1	0	1
17				6.6	18.00	18.50	19.50	13.00	19.75	18.25	17.25	18.75	3	0	2
18				0.	17.75	18.25	19.25	14.50	19.00	18.00	17.00	18.50	2	0	1
19				0.	18.00	18.75	19.00	12.50	19.25	18.00	16.75	18.00	3	0	1
20				0.	18.00	18.50	19.00	14.25	18.50	18.00	16.50	18.00	3	0	1
21				0.	18.00	18.75	18.75	13.25	18.75	18.00	16.25	17.75	3	0	1
22				0.	17.75	18.75	18.25	12.00	18.50	17.75	16.25	17.25	3	0	1
23				0.	17.50	18.50	18.25	13.00	18.25	17.75	16.00	17.25	2	0	0
TOT.				204.3									55	0	25
AVG.				8.5	17.51	18.44	20.69	14.55	20.16	17.89	16.61	18.78	2	0	1

DATE
(02/27/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.25	18.00	18.25	11.50	18.25	17.25	16.00	17.25	2	0	1
1				0.	17.25	18.00	18.50	13.00	18.25	17.50	15.75	17.00	5	3	1
2				0.	18.00	18.25	18.75	13.50	18.00	17.25	15.75	17.00	5	3	1
3				0.	18.00	18.00	19.00	12.00	19.00	17.75	15.75	17.00	5	3	1
4				0.	18.25	18.25	19.25	14.00	18.50	17.75	15.75	17.00	4	3	1
5				0.	18.00	18.25	19.25	12.75	19.50	18.00	16.00	17.00	4	1	1
6				0.	18.00	18.25	19.25	14.00	18.75	18.00	16.00	17.00	1	0	1
7				3.7	17.75	18.25	18.50	12.75	18.75	18.00	16.00	17.00	2	0	1
8				20.1	17.75	18.25	18.25	14.00	18.00	18.00	16.00	17.25	1	0	1
9				35.6	17.75	18.50	18.00	12.00	18.25	18.00	16.00	17.25	3	0	1
10				48.0	17.75	18.75	18.00	12.25	18.00	18.00	16.00	17.25	8	6	1
11				56.5	17.75	18.75	17.75	15.75	17.50	18.00	16.25	16.50	7	6	0
12				60.3	17.50	19.00	18.00	16.75	17.50	17.50	16.00	16.75	3	0	0
13				59.4	17.50	18.00	18.00	17.25	17.25	17.50	16.00	17.00	1	0	0
14				53.6	17.75	18.00	18.00	17.25	17.25	17.50	17.00	19.25	1	0	0
15				43.5	17.75	17.75	18.00	17.50	17.25	17.50	18.00	21.00	1	0	0
16				29.7	18.00	17.75	18.00	17.75	17.25	17.50	17.50	18.25	5	0	0
17				13.4	17.75	17.50	17.75	17.75	17.25	17.75	17.00	18.00	7	0	0
18				0.	17.75	17.50	18.00	17.75	17.00	17.25	16.75	18.00	6	0	1
19				0.	17.75	18.00	17.50	14.00	17.50	17.50	16.50	17.75	2	0	0
20				0.	17.50	18.25	17.50	16.25	17.50	17.50	16.50	17.75	6	0	0
21				0.	17.25	18.00	17.75	17.00	17.00	17.25	16.25	17.25	9	0	1
22				0.	17.25	18.50	17.00	12.00	17.25	17.25	16.00	17.00	7	0	0
23				0.	17.25	18.25	17.00	15.50	17.00	17.25	16.25	17.00	6	0	0
TOT.				423.8									103	14	13
AVG.				17.7	17.69	18.17	18.14	14.76	17.82	17.61	16.29	17.48	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.00	18.00	17.00	16.50	17.00	17.00	16.00	17.00	2	0	0
1				0.	17.00	17.75	17.25	16.75	16.75	17.00	16.00	17.00	5	3	1
2				0.	17.25	17.50	17.50	13.25	17.50	17.00	15.75	17.00	5	3	1
3				0.	17.75	17.50	18.00	14.00	17.50	17.00	15.75	17.00	5	3	1
4				0.	17.75	17.25	18.50	14.25	17.75	17.00	15.75	16.75	5	3	1
5				0.	18.00	17.00	19.00	11.50	19.00	17.25	15.75	17.00	3	1	1
6				0.	17.50	17.50	18.75	12.25	19.00	17.25	16.00	17.00	2	0	1
7				2.2	17.00	18.00	17.75	11.00	17.75	17.25	15.50	17.00	3	0	2
8				13.2	17.00	18.00	17.50	12.25	17.50	17.50	15.50	17.00	2	0	1
9				23.7	17.00	18.00	17.25	12.00	17.00	17.25	15.50	16.75	2	0	1
10				32.0	17.00	18.00	16.75	12.00	17.00	17.25	15.25	16.75	4	0	1
11				37.8	17.00	18.00	16.75	13.25	17.00	17.00	15.25	16.25	3	0	0
12				32.2	17.00	17.75	17.00	15.50	16.75	17.00	18.50	38.00	2	0	0
13				39.7	17.00	18.00	17.25	13.00	17.25	16.75	17.25	18.00	4	0	3
14				41.5	17.00	19.00	16.75	12.25	17.00	17.25	17.00	17.75	2	0	1
15				33.6	17.00	18.50	16.50	11.00	16.75	17.50	16.50	17.75	2	0	1
16				22.9	17.25	18.00	16.25	11.00	16.75	17.50	16.00	28.00	3	0	1
17				8.8	17.00	18.25	16.25	12.00	16.75	17.25	16.00	17.25	2	0	1
18				0.	17.00	18.00	16.25	11.75	16.50	17.25	16.00	17.00	3	0	0
19				0.	17.00	18.00	16.25	15.00	16.75	17.25	15.75	17.00	4	0	0
20				0.	17.00	18.00	16.25	16.25	16.75	17.00	15.50	16.75	4	0	1
21				0.	16.75	17.75	16.25	10.00	16.50	16.50	15.25	16.25	8	0	1
22				0.	16.50	17.25	16.00	11.75	16.00	16.25	15.00	16.25	5	0	0
23				0.	16.25	17.25	16.00	14.25	16.00	16.00	14.50	16.00	2	0	0
TOT.				287.6									84	15	17
AVG.				12.0	17.08	17.84	17.04	13.03	17.10	17.05	15.89	18.27	3	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.00	17.00	15.75	16.25	15.50	15.75	14.25	15.75	3	0	1
1				0.	16.00	17.25	16.00	9.50	16.00	16.00	14.25	15.75	5	3	1
2				0.	16.25	17.25	16.25	12.00	16.00	16.00	14.00	15.75	5	3	1
3				0.	16.50	17.25	16.25	10.25	16.50	16.25	14.25	15.75	5	3	1
4				0.	16.75	17.00	16.75	12.25	16.25	16.25	14.25	15.75	5	3	1
5				0.	16.75	17.50	16.75	10.25	16.75	16.25	14.25	15.75	3	1	1
6				0.	16.50	17.50	16.75	12.00	16.75	16.50	14.25	15.75	2	0	1
7				0.	16.00	17.25	16.00	11.00	16.25	16.25	14.25	15.75	3	0	2
8				13.7	16.25	18.00	15.75	10.00	16.00	16.50	14.25	15.75	2	0	2
9				30.2	16.25	18.00	15.25	9.25	15.50	16.75	14.25	15.50	3	0	1
10				43.6	16.25	17.75	15.25	8.75	15.25	16.75	14.25	15.25	2	0	1
11				52.8	16.25	18.00	15.00	10.00	15.25	16.50	14.25	15.25	3	0	2
12				57.2	16.25	18.00	14.25	9.25	15.00	16.50	14.00	15.00	3	0	1
13				56.5	17.00	18.25	14.50	8.00	14.50	16.75	14.75	15.75	3	0	2
14				50.6	17.00	19.00	13.75	8.50	14.25	17.00	15.25	16.75	2	0	1
15				40.0	16.00	19.00	13.50	9.25	14.00	15.50	13.00	16.00	3	0	2
16				25.5	16.25	19.00	13.25	9.50	14.25	16.00	14.00	16.00	3	0	1
17				8.5	16.25	18.75	13.00	7.00	13.25	16.25	14.25	16.00	3	0	1
18				0.	16.25	18.75	12.75	12.25	14.75	16.25	14.75	16.25	0	0	0
19				0.	16.00	18.50	12.75	14.50	15.00	16.00	14.25	15.75	3	0	0
20				0.	15.50	18.00	12.25	14.75	15.00	15.25	14.00	15.00	5	0	0
21				0.	15.25	18.00	12.25	14.75	14.75	15.00	14.00	14.75	6	1	0
22				0.	15.00	17.50	12.50	14.75	14.75	15.00	13.50	14.25	7	3	0
23				0.	15.25	17.00	13.25	14.75	14.50	14.75	13.25	14.00	5	3	1
TOT.				378.6									95	22	25
AVG.				15.8	16.16	17.90	14.57	11.20	15.25	16.08	14.16	15.55	4	1	1

DATE
(03/02/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	15.25	16.75	13.75	9.75	14.00	14.50	13.00	14.00	6	3	2
1				0.	15.25	16.75	13.75	7.25	14.00	15.00	13.00	14.00	5	3	1
2				0.	15.25	16.75	14.00	9.75	14.25	15.25	13.00	14.25	6	3	2
3				0.	15.25	17.00	14.00	8.00	14.25	15.00	13.00	14.25	5	3	2
4				0.	15.75	16.75	14.00	7.75	14.25	15.25	13.00	14.25	6	3	1
5				0.	15.75	17.00	14.25	10.00	14.50	15.25	13.00	14.25	5	3	2
6				0.	15.75	17.00	14.25	10.75	14.50	15.25	13.00	14.50	6	3	1
7				0.	16.00	17.00	14.75	8.25	14.75	15.25	13.25	14.50	5	3	2
8				11.3	16.00	17.25	14.25	8.00	14.75	15.75	13.25	14.75	6	3	2
9				24.3	16.00	17.25	14.25	9.25	14.75	15.75	13.25	14.75	5	3	2
10				34.9	16.00	17.50	14.50	8.25	14.75	15.75	13.50	14.75	6	3	1
11				42.1	16.00	17.00	14.25	9.00	14.75	15.75	13.50	14.75	6	2	2
12				45.6	16.25	17.50	14.75	10.25	15.00	16.00	13.75	15.00	4	0	2
13				45.0	15.75	17.75	13.75	7.50	14.00	16.00	13.75	15.00	3	0	2
14				40.3	16.25	18.50	14.00	8.50	14.75	16.75	14.25	15.50	3	0	2
15				31.9	16.25	18.50	14.00	8.50	14.25	16.50	14.25	15.75	2	0	1
16				20.4	16.00	18.25	13.50	10.00	14.50	16.25	14.25	15.75	5	0	1
17				7.1	16.25	18.25	13.25	9.25	14.00	16.00	14.25	15.50	5	0	1
18				0.	16.00	18.25	13.00	10.00	14.25	16.25	14.25	15.50	7	0	1
19				0.	16.00	18.50	13.00	7.75	13.25	16.00	14.25	15.00	6	0	1
20				0.	16.00	18.50	12.75	10.00	14.00	16.00	14.25	15.25	4	0	1
21				0.	16.00	18.50	12.50	7.50	13.00	16.00	14.25	15.00	3	1	1
22				0.	16.00	18.00	12.50	6.50	13.00	15.75	14.00	15.00	6	3	2
23				0.	16.25	18.00	12.75	9.25	13.75	16.00	14.00	15.00	4	3	0
TOT.				302.9									120	44	34
AVG.				12.6	15.89	17.60	13.74	8.75	14.22	15.72	13.64	14.64	5	2	1

DATE
(03/03/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.00	17.25	13.75	13.25	14.50	15.75	14.00	15.00	5	3	1
1				0.	16.25	17.50	13.75	11.00	14.50	15.75	14.00	15.00	6	3	2
2				0.	16.25	17.50	14.00	8.25	14.25	15.75	14.00	14.75	5	3	1
3				0.	16.50	17.75	14.00	7.75	14.25	16.00	14.00	15.00	6	3	2
4				0.	16.50	18.00	14.00	7.75	14.00	16.00	14.00	15.00	6	3	2
5				0.	16.50	18.00	14.25	9.00	14.50	16.25	14.00	15.00	5	3	1
6				0.	16.75	18.00	14.25	9.00	14.50	16.25	14.25	15.00	5	3	1
7				0.	16.75	18.00	14.50	9.00	14.75	16.25	14.25	15.00	6	3	2
8				4.5	17.00	18.25	14.50	12.00	15.25	16.50	14.25	15.75	6	3	2
9				9.4	16.75	18.00	14.75	8.50	15.00	16.25	14.25	15.25	6	3	2
10				13.5	17.00	18.00	15.00	10.75	15.50	16.75	14.50	15.25	5	3	0
11				16.3	17.00	18.00	15.75	14.25	15.75	16.50	19.25	44.75	2	0	0
12				17.6	16.50	18.00	16.00	11.75	16.00	16.50	17.25	17.00	2	0	1
13				17.4	16.50	18.00	16.00	9.75	16.00	16.50	16.25	17.00	2	0	0
14				15.6	16.50	18.00	16.00	14.25	16.25	16.75	15.25	17.00	1	0	1
15				12.3	16.75	18.00	16.00	10.50	16.25	16.50	15.25	16.75	3	0	1
16				10.0	16.50	18.00	15.25	10.50	16.00	16.75	15.25	15.50	3	0	1
17				4.5	16.50	17.75	15.00	12.00	15.75	16.75	15.00	16.50	2	0	1
18				0.	16.50	18.00	15.00	11.50	15.00	16.50	15.00	16.50	4	0	1
19				0.	16.50	18.00	14.75	10.50	15.25	16.25	14.75	15.75	9	0	1
20				0.	16.25	18.00	14.75	11.50	15.25	16.25	14.50	15.75	5	0	0
21				0.	16.00	17.75	14.75	14.00	15.00	16.00	14.25	15.75	-5	1	2
22				0.	15.75	17.75	14.75	8.25	14.75	15.75	14.00	15.25	7	3	2
23				0.	16.25	18.00	14.75	10.00	15.00	16.00	14.00	15.25	6	3	1
TOT.				121.1									111	42	26
AVG.				5.0	16.49	17.90	14.81	10.62	15.14	16.27	14.91	16.91	5	2	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.25	17.50	15.00	10.50	15.50	15.75	13.75	15.00	7	3	2
1				0.	16.25	17.50	15.25	9.00	15.25	15.75	13.75	15.00	5	3	1
2				0.	16.25	17.75	15.25	10.25	13.50	15.75	13.75	15.00	7	3	2
3				0.	16.25	17.50	15.25	9.50	15.50	16.00	14.00	14.75	6	3	2
4				0.	16.25	18.00	15.25	9.00	15.50	16.00	13.75	15.00	6	3	2
5				0.	16.25	17.50	15.25	10.50	15.50	16.00	13.75	15.00	6	3	2
6				0.	16.25	18.00	15.25	9.25	15.50	15.75	14.00	14.75	6	3	2
7				.4	16.50	18.00	15.50	8.25	15.50	16.00	13.75	15.00	7	3	3
8				22.0	16.50	18.25	15.00	10.00	15.25	16.00	14.00	14.75	5	2	2
9				36.4	16.75	18.50	15.00	9.00	15.25	16.00	14.00	14.50	3	0	2
10				51.7	16.25	18.50	14.50	7.50	14.75	16.25	14.00	13.00	2	0	2
11				62.2	16.00	18.50	14.25	9.00	14.50	16.25	14.00	12.75	4	0	2
12				67.1	16.25	18.75	14.00	10.50	15.00	16.50	14.00	14.00	4	0	2
13				66.2	16.50	19.00	13.50	7.50	14.00	16.50	14.50	15.25	5	0	3
14				59.4	17.00	20.00	13.00	7.50	13.50	17.00	15.00	16.00	3	0	1
15				47.2	17.00	20.00	13.00	8.25	14.00	17.25	15.00	16.00	10	0	2
16				30.6	17.00	19.75	12.50	10.00	14.25	17.25	15.25	16.25	8	0	1
17				11.1	17.00	20.00	12.25	6.50	12.75	17.00	15.25	16.25	5	0	1
18				0.	17.00	20.00	12.25	11.00	14.25	17.00	15.00	16.50	3	0	1
19				0.	16.75	20.00	12.00	7.25	12.75	16.75	15.25	16.50	4	0	1
20				0.	16.75	20.00	12.00	11.50	14.25	16.75	15.00	16.50	2	0	0
21				0.	16.25	19.50	12.00	14.25	15.00	16.25	15.00	16.25	4	1	0
22				0.	16.25	19.00	12.00	15.25	15.00	16.00	14.50	16.00	5	3	1
23				0.	16.25	18.50	12.75	10.00	13.75	15.75	14.50	15.75	5	3	0
TOT.				454.3									121	35	35
AVG.				18.9	16.49	18.75	13.83	9.64	14.58	16.31	14.36	15.24	5	1	1

DATE
(03/05/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.75	18.25	13.00	13.75	14.75	15.75	14.25	15.50	5	3	1
1				0.	16.25	18.00	13.50	11.00	14.25	15.75	14.25	15.25	6	3	1
2				0.	16.00	17.50	13.75	8.00	13.75	15.25	14.00	15.00	5	3	1
3				0.	16.00	17.00	13.75	8.00	14.00	15.25	13.25	14.50	6	3	2
4				0.	15.50	17.00	13.75	9.25	14.00	15.00	13.00	14.25	6	3	2
5				0.	15.75	17.25	13.50	8.00	14.00	15.00	13.00	14.25	6	3	2
6				0.	15.75	17.00	13.75	7.50	14.00	15.00	13.00	14.00	5	3	2
7				.5	15.25	17.00	13.75	7.25	14.00	15.00	13.00	14.00	7	3	3
8				16.1	16.00	17.75	13.75	7.25	13.75	15.00	13.00	14.00	5	2	2
9				26.2	15.75	17.75	13.75	9.00	14.00	15.25	12.00	26.00	3	0	2
10				37.0	15.25	17.50	14.00	9.25	14.00	15.75	17.25	36.25	5	0	1
11				44.4	16.00	18.00	15.25	12.00	15.25	16.00	19.00	39.75	1	0	0
12				47.9	16.00	18.00	17.00	14.75	17.00	16.25	20.50	40.75	3	0	0
13				47.2	16.50	18.00	18.00	16.00	18.00	16.75	19.25	23.00	5	0	1
14				42.4	16.75	18.50	17.75	14.00	17.75	17.00	19.00	25.50	1	0	0
15				33.8	17.00	18.00	17.75	15.75	18.00	17.00	19.25	18.00	6	0	0
16				22.0	16.75	18.25	18.00	16.25	18.00	16.75	17.75	23.00	1	0	0
17				8.2	16.75	18.00	18.00	16.50	18.00	16.75	16.75	17.75	2	0	1
18				0.	17.00	18.00	18.00	15.25	18.00	16.75	16.25	17.50	3	0	1
19				0.	17.00	18.00	17.75	12.50	17.75	17.00	16.25	17.50	6	0	0
20				0.	16.75	18.25	17.75	15.00	17.75	16.75	15.75	17.00	3	0	1
21				0.	16.75	18.00	17.50	15.00	17.50	16.75	15.50	16.75	5	1	1
22				0.	16.50	17.75	17.75	12.00	17.75	16.75	15.25	16.75	7	3	1
23				0.	17.00	17.25	18.00	14.50	18.00	16.50	15.25	16.75	10	3	0
TOT.				325.7									112	35	21
AVG.				13.6	16.29	17.75	15.78	11.99	15.97	16.04	15.66	20.12	5	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)						ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.00	17.00	18.50	15.25	16.00	16.25	14.75	16.25	12	3	1
1				0.	16.75	17.00	18.75	13.00	17.75	16.00	15.00	16.25	11	3	0
2				0.	17.00	17.00	19.00	13.00	17.50	16.00	15.00	16.25	11	3	1
3				0.	17.00	17.50	19.25	14.25	17.50	16.25	15.00	16.50	7	3	0
4				0.	17.00	18.00	19.50	12.75	19.25	16.25	15.00	16.50	5	3	1
5				0.	17.00	17.75	19.75	13.50	19.25	16.50	15.00	16.50	4	3	1
6				0.	17.00	17.25	19.75	14.50	17.50	16.75	15.00	16.25	5	3	1
7				1.8	17.25	18.00	20.00	11.00	20.00	16.75	15.00	16.50	6	3	1
8				45.1	17.25	18.00	20.00	13.75	19.25	17.25	15.25	17.00	4	2	1
9				90.1	17.25	18.00	20.00	13.50	19.75	17.00	15.00	16.75	1	0	1
10				126.7	17.00	18.25	20.00	16.00	19.00	17.25	15.25	15.50	5	0	1
11				151.8	17.00	18.00	19.25	15.00	18.25	17.25	18.00	26.00	2	0	1
12				163.5	17.00	18.50	19.25	13.00	19.00	17.25	18.25	19.25	1	0	0
13				161.1	17.25	18.00	19.25	15.75	18.00	17.50	18.50	18.50	0	0	0
14				144.5	17.25	17.50	19.00	17.00	17.50	17.50	17.00	18.00	1	0	1
15				115.6	17.25	17.25	19.00	13.50	18.75	17.50	16.25	17.75	1	0	1
16				75.7	17.25	17.00	19.00	14.75	18.25	17.50	16.00	17.25	3	0	2
17				28.9	17.25	17.75	18.50	12.00	18.75	17.25	16.00	17.00	3	0	2
18				0.	17.25	18.50	18.00	13.00	18.00	17.50	15.75	17.00	4	0	1
19				0.	17.00	18.25	18.00	14.50	17.50	17.25	15.75	17.00	2	0	1
20				0.	17.00	18.75	17.75	14.25	17.25	17.25	15.50	16.75	5	0	1
21				0.	16.75	18.50	17.75	14.00	17.00	17.00	15.25	16.50	3	0	1
22				0.	16.75	18.25	17.25	13.00	17.25	17.00	15.00	16.25	3	0	1
23				0.	16.50	18.25	17.25	14.25	16.75	16.75	15.00	16.00	3	1	0
TOT.				1105.1									104	27	18
AVG.				46.0	17.04	17.84	18.91	13.94	18.12	16.95	15.73	17.23	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0				0.	16.75	18.00	17.75	15.50	16.50	16.50	15.00	11.25	5	3	1
1				0.	17.00	17.50	18.00	13.00	17.50	16.50	15.00	11.00	5	3	1
2				0.	17.25	17.50	18.25	13.75	17.50	16.50	15.00	11.00	5	3	1
3				0.	17.25	17.50	18.75	12.25	18.75	16.75	15.00	11.00	5	3	1
4				0.	17.25	17.25	18.75	13.50	18.25	16.75	15.00	11.00	5	3	1
5				0.	17.25	17.25	19.25	12.50	19.00	16.75	15.00	11.00	5	3	1
6				0.	17.25	17.25	19.25	13.75	18.50	17.00	15.00	11.00	5	2	1
7				.8	17.25	17.25	19.50	12.75	19.75	17.00	15.00	11.25	3	0	2
8				16.7	17.00	18.50	18.75	12.00	19.00	17.25	15.25	11.25	2	0	1
9				32.9	17.00	18.75	18.75	11.75	18.75	17.25	15.25	15.00	2	0	1
10				46.0	17.00	18.75	18.25	14.00	18.00	17.50	20.00	31.00	2	0	1
11				49.9	17.25	18.75	19.25	14.25	18.75	17.75	21.00	28.25	2	0	1
12				37.0	18.00	19.00	20.00	13.50	20.00	18.25	20.75	25.00	2	0	1
13				36.4	18.25	18.75	20.00	15.25	19.50	18.50	20.50	21.75	2	0	0
14				32.8	18.25	18.50	20.00	13.25	20.00	18.75	18.50	18.75	2	0	1
15				26.2	18.25	18.75	19.75	15.00	19.25	18.75	17.00	18.50	3	0	1
16				17.3	18.25	18.25	19.25	12.50	19.50	18.50	16.75	18.00	4	0	2
17				6.7	18.25	18.25	19.00	13.25	19.00	18.75	16.75	18.00	2	0	1
18				0.	18.00	18.75	18.75	14.50	18.50	18.25	16.50	18.00	2	0	1
19				0.	17.75	18.75	18.75	12.00	18.75	17.75	16.00	17.75	3	0	1
20				0.	17.50	18.50	18.50	13.25	18.25	17.75	16.00	17.50	3	0	1
21				0.	17.25	18.75	18.25	11.50	18.25	17.25	15.75	17.00	3	0	1
22				0.	17.25	18.25	18.00	11.25	18.00	17.25	15.50	17.00	5	0	1
23				0.	17.25	18.25	17.75	12.75	17.75	17.50	15.25	17.00	1	0	0
TOT.				302.7									78	22	25
AVG.				12.6	17.49	18.21	18.85	13.21	18.62	17.53	16.53	16.59	3	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.00	17.25	17.25	11.00	17.50	16.75	15.00	15.50	2	0	1
1				0.	16.75	17.00	17.00	12.00	17.00	17.00	15.00	15.50	4	2	2
2				0.	17.00	17.00	17.25	11.00	17.25	17.00	15.00	15.25	5	3	1
3				0.	17.25	16.75	17.25	11.50	17.50	17.00	15.00	15.50	6	3	2
4				0.	17.25	17.00	17.50	12.00	17.25	17.00	15.00	15.00	5	3	1
5				0.	17.25	16.75	17.50	10.75	17.75	17.00	15.00	15.00	5	3	1
6				0.	17.25	17.00	17.75	13.00	17.25	17.00	15.00	15.25	2	0	2
7				1.5	17.00	17.25	17.25	11.00	17.25	16.75	14.75	15.00	4	0	2
8				22.2	16.75	18.00	16.25	10.00	16.50	17.00	15.00	15.00	3	0	2
9				42.9	16.50	18.00	16.00	9.75	16.25	16.75	14.75	15.25	3	0	2
10				59.7	16.75	18.00	15.50	11.00	16.00	17.00	14.75	14.75	2	0	2
11				71.2	16.75	18.50	15.25	10.25	16.00	17.00	14.75	14.00	5	0	1
12				76.6	16.50	18.50	15.00	8.50	15.25	16.75	14.25	13.75	4	0	1
13				75.5	16.50	18.25	15.00	11.25	15.50	17.00	16.25	20.00	3	0	2
14				67.9	16.75	18.25	15.00	10.50	15.75	17.00	15.75	17.75	2	0	2
15				54.4	17.00	18.25	14.75	9.00	15.00	17.00	15.75	17.00	3	0	2
16				36.0	17.00	19.00	14.25	11.00	15.25	17.25	15.75	16.75	3	0	2
17				14.4	17.00	19.00	14.00	8.00	14.25	17.25	15.50	16.25	2	0	1
18				0.	17.00	18.75	13.75	10.00	15.00	17.00	15.00	16.25	3	0	2
19				0.	17.00	18.00	13.75	8.50	14.00	17.00	15.25	16.25	3	0	2
20				0.	17.00	18.00	13.25	11.25	14.75	17.50	15.25	16.25	3	0	1
21				0.	17.00	18.00	13.00	7.00	13.25	17.25	15.00	16.00	3	0	1
22				0.	16.75	18.25	13.00	11.00	14.50	17.00	15.00	16.00	4	1	1
23				0.	16.50	17.75	13.00	11.75	14.50	16.25	14.75	15.50	5	3	1
TOT.				522.3									82	18	35
AVG.				21.8	16.90	17.85	15.40	10.46	15.85	16.98	15.10	15.78	3	1	1

DATE
(03/09/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.75	17.50	13.50	8.50	14.25	16.25	14.25	15.50	6	3	1
1				0.	16.75	17.00	14.00	8.25	14.00	16.25	14.25	15.25	6	3	2
2				0.	17.00	17.75	14.25	10.00	15.00	16.25	14.25	15.25	6	3	1
3				0.	17.00	17.50	14.50	9.00	14.75	16.25	14.25	15.25	5	3	1
4				0.	16.50	17.25	14.25	8.25	14.00	16.00	14.00	15.00	6	3	2
5				0.	16.50	17.00	14.25	9.50	15.00	16.00	14.00	15.25	6	3	2
6				0.	16.75	17.00	14.50	8.75	15.00	16.25	14.25	15.25	5	3	2
7				.9	17.00	17.25	14.75	8.25	15.00	16.25	14.25	15.50	5	2	3
8				10.7	17.00	18.00	14.00	7.75	14.25	16.50	14.25	15.50	7	0	3
9				20.5	16.75	18.00	13.25	7.00	13.50	16.75	14.25	15.75	4	0	2
10				28.3	16.75	18.25	13.00	6.00	13.75	16.75	14.25	16.00	4	0	3
11				33.7	16.75	19.00	12.25	6.50	12.75	16.75	14.75	16.00	4	0	2
12				36.2	17.00	18.25	12.00	5.75	12.25	17.00	13.25	18.50	6	0	3
13				35.7	17.25	18.75	11.50	11.00	12.00	17.00	12.50	24.50	8	0	2
14				32.1	17.25	19.00	11.50	5.75	11.75	17.25	14.00	24.00	5	0	2
15				25.8	17.50	19.25	11.25	5.50	11.25	17.25	15.00	16.75	6	0	2
16				17.1	17.50	19.25	11.00	5.25	11.00	17.25	15.25	17.00	10	0	2
17				8.8	17.50	19.25	10.25	4.75	10.75	17.25	15.75	17.25	8	0	2
18				0.	17.25	18.25	10.00	7.00	11.25	17.00	15.25	16.75	10	0	1
19				0.	17.00	18.00	9.50	4.25	10.00	17.00	15.00	16.00	10	0	1
20				0.	17.00	18.25	9.25	5.50	10.25	16.50	15.00	16.00	11	0	1
21				0.	17.00	19.25	10.00	6.00	11.00	17.00	15.25	16.00	11	2	1
22				0.	16.50	19.00	10.25	4.50	10.50	16.50	14.75	15.50	11	3	1
23				0.	16.25	19.25	10.25	7.75	12.00	16.25	14.50	15.25	6	3	0
TOT.				249.8									168	32	45
AVG.				10.4	16.94	18.22	12.22	7.20	12.72	16.65	14.44	16.62	7	1	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	16.75	18.25	11.25	12.75	14.00	16.00	14.00	14.75	5	3	1
1				0.	16.50	18.00	11.25	7.00	12.25	15.75	14.00	15.00	5	3	2
2				0.	16.25	18.00	11.50	8.50	12.75	15.75	14.00	15.00	6	3	2
3				0.	16.50	18.00	11.75	6.50	12.25	15.75	14.00	14.75	6	3	2
4				0.	16.25	18.00	11.75	5.75	12.00	15.50	13.75	14.75	5	3	1
5				0.	16.25	17.50	12.00	6.50	12.50	15.75	13.50	14.50	6	3	2
6				0.	16.25	18.00	12.25	8.00	13.00	15.75	13.50	14.75	7	3	2
7				1.8	16.25	18.00	12.00	6.00	12.25	15.50	13.75	14.50	8	3	3
8				18.2	16.75	18.50	12.00	6.25	12.25	16.00	14.00	14.75	6	3	2
9				34.1	16.75	19.00	12.25	10.00	12.75	16.25	14.75	28.00	10	3	2
10				46.6	17.00	18.75	13.75	8.00	14.50	16.75	16.75	36.50	5	3	0
11				55.4	17.25	19.00	16.25	9.75	16.50	17.00	19.25	44.75	3	1	0
12				58.6	17.75	19.00	18.25	15.00	17.00	17.25	22.00	50.50	2	0	0
13				58.5	18.00	19.00	20.50	16.50	17.25	17.75	23.75	50.00	1	0	0
14				53.1	18.25	19.25	22.25	17.25	17.75	18.25	25.00	42.00	1	0	0
15				42.7	18.75	19.75	24.25	18.00	18.00	18.50	27.00	46.00	1	0	0
16				28.3	19.00	20.00	26.25	18.25	18.25	18.75	28.00	41.25	1	0	0
17				11.3	19.25	20.00	27.00	18.75	18.50	18.75	27.25	28.50	2	0	0
18				0.	19.25	19.75	27.00	18.75	18.25	18.75	24.75	23.00	3	0	0
19				0.	19.00	19.75	26.75	18.75	18.25	18.50	20.25	20.75	2	0	0
20				0.	18.75	19.75	26.75	18.00	18.00	18.25	19.00	20.50	4	0	0
21				0.	18.25	19.25	26.75	17.75	17.50	18.00	18.00	20.00	4	0	0
22				0.	18.00	19.25	26.75	17.50	17.00	17.25	17.00	19.25	3	0	0
23				0.	17.50	19.00	26.75	17.00	16.75	17.25	16.50	18.75	5	0	0
TOT.				408.6									100	36	19
AVG.				17.0	17.52	18.86	18.64	12.77	15.40	17.04	18.49	25.94	4	2	1

DATE
(03/11/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.25	18.75	26.75	16.75	16.75	17.00	16.00	18.25	2	1	0
1				0.	17.00	18.25	26.75	16.50	16.50	17.00	15.75	17.75	4	2	1
2				0.	17.25	18.25	27.00	16.75	22.25	17.00	15.75	17.75	4	2	1
3				0.	17.50	18.25	27.00	17.25	26.75	17.25	15.75	17.50	4	2	1
4				0.	17.75	18.00	26.75	17.00	23.25	17.25	15.75	17.75	4	3	1
5				0.	17.75	18.25	27.00	17.25	26.25	17.50	15.75	17.50	4	2	1
6				0.	17.75	18.00	27.00	17.25	23.00	17.75	15.75	17.50	5	2	1
7				12.8	18.00	18.00	27.00	17.25	26.25	18.00	15.75	17.75	4	0	3
8				108.7	17.75	19.00	25.75	16.75	25.50	18.00	15.75	16.75	2	0	1
9				201.7	17.75	19.25	25.00	16.50	24.50	18.25	15.50	13.00	3	0	2
10				276.8	18.00	18.00	25.25	17.00	23.75	18.75	27.00	40.50	4	0	1
11				328.1	18.50	18.50	26.25	17.25	25.50	19.00	28.00	43.00	3	0	0
12				351.8	18.75	18.75	27.25	18.50	21.25	19.25	29.00	40.00	2	0	0
13				346.3	19.25	19.25	28.00	19.25	20.25	19.50	28.25	29.75	2	0	0
14				312.1	19.25	19.25	28.25	19.25	20.00	19.75	28.50	30.00	1	0	0
15				251.4	19.25	19.25	28.00	19.50	19.50	19.75	22.25	22.75	3	0	0
16				168.8	19.25	19.25	28.00	19.25	19.25	19.25	20.00	20.75	8	0	0
17				71.4	19.00	19.00	28.25	18.75	18.75	19.00	19.25	20.50	6	0	0
18				0.	19.00	19.00	28.00	18.50	18.50	18.50	18.75	21.75	3	0	0
19				0.	18.75	18.75	28.00	18.00	18.25	18.50	18.00	22.00	3	0	2
20				0.	19.00	19.00	27.50	18.25	26.75	19.00	18.00	22.00	5	0	1
21				0.	19.00	18.75	27.25	18.50	24.00	19.00	17.50	21.75	3	0	1
22				0.	19.00	19.00	27.00	19.00	23.75	19.00	17.25	21.50	3	0	1
23				0.	18.75	18.75	26.75	19.00	23.50	19.00	17.00	21.25	2	0	0
TOT.				2429.9									85	15	15
AVG.				101.2	18.35	18.69	27.07	17.84	22.25	18.43	19.43	22.87	4	1	1

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	18.50	18.50	26.75	18.25	20.00	18.75	16.75	21.00	2	0	1
1				0.	18.25	18.25	26.50	17.25	26.00	18.25	16.50	20.50	2	0	1
2				0.	18.00	18.00	26.25	17.50	24.00	18.25	16.25	20.00	2	0	1
3				0.	18.00	18.25	26.25	17.50	22.25	18.50	16.25	20.00	2	0	1
4				0.	18.00	18.00	26.00	16.75	23.50	18.25	16.25	20.00	3	0	2
5				0.	18.00	18.00	25.25	16.75	24.50	18.00	16.00	19.50	2	0	1
6				0.	18.00	18.00	25.00	17.00	22.75	18.25	15.75	19.25	3	0	1
7				6.7	17.75	17.75	24.75	16.00	25.00	18.00	15.75	19.00	4	0	3
8				39.8	18.00	18.75	24.00	16.00	24.00	18.00	16.00	18.75	3	0	1
9				73.0	18.00	19.00	23.50	15.50	22.75	18.25	16.00	17.50	4	0	1
10				99.8	17.75	18.75	23.25	15.50	22.50	18.00	16.00	18.00	2	0	1
11				118.0	17.75	19.00	23.00	16.00	21.00	18.00	15.75	17.50	2	0	1
12				126.4	17.75	19.00	23.00	16.50	19.75	18.00	19.00	22.00	1	0	1
13				124.4	17.75	18.50	23.00	15.00	22.25	17.75	23.50	40.00	1	0	0
14				112.2	18.00	18.00	24.00	17.00	19.50	18.00	22.25	27.25	3	0	2
15				90.5	18.00	18.75	23.75	16.25	22.00	18.50	19.25	20.75	3	0	2
16				61.0	18.00	19.00	23.00	15.50	22.50	18.25	18.25	20.75	2	0	1
17				26.3	18.00	18.75	22.25	15.00	22.00	18.50	17.25	20.00	3	0	2
18				0.	18.00	19.00	22.00	15.00	21.75	18.25	17.00	18.00	4	0	1
19				0.	18.25	19.00	21.75	14.50	21.75	18.25	16.50	19.75	7	0	1
20				0.	18.00	19.25	21.50	14.75	21.25	18.00	16.00	19.50	6	0	1
21				0.	17.50	19.00	21.25	15.00	20.00	18.00	15.25	19.25	4	0	1
22				0.	17.25	19.25	20.75	14.00	20.75	18.00	15.00	19.00	3	0	1
23				0.	17.25	18.75	20.50	15.00	18.75	18.00	14.75	18.75	2	0	1
TOT.				878.1									68	0	26
AVG.				36.6	17.91	18.60	23.64	15.98	22.10	18.17	16.97	20.67	3	0	1

DATE
(03/13/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	17.00	18.25	20.25	14.25	19.25	17.25	14.75	18.25	3	0	1
1				0.	16.75	17.75	20.00	13.75	19.50	17.00	14.25	18.00	3	0	1
2				0.	16.75	17.75	20.00	14.00	19.00	17.25	14.50	18.00	4	0	1
3				0.	16.75	17.75	19.75	13.75	19.00	17.00	14.25	17.75	3	0	1
4				0.	16.25	17.75	19.50	12.50	19.25	17.00	14.25	17.00	3	0	1
5				0.	16.50	18.00	19.00	13.00	19.00	17.00	14.25	17.25	3	0	2
6				0.	16.25	17.75	18.75	11.50	18.75	16.75	14.00	17.00	3	0	2
7				2.4	16.25	17.75	18.25	11.25	18.25	16.75	14.00	16.75	4	0	3
8				15.7	16.25	18.25	17.50	10.50	17.75	17.50	14.00	17.00	5	0	2
9				28.4	16.50	18.50	17.00	10.75	17.25	17.25	14.25	16.25	7	0	2
10				48.5	16.50	19.00	16.75	10.25	17.00	17.25	19.00	35.00	4	0	1
11				73.1	16.75	18.75	17.00	13.00	17.00	17.25	18.00	17.50	1	0	0
12				87.1	17.00	18.00	17.75	15.25	16.75	17.00	21.25	46.25	1	0	0
13				77.0	17.00	17.75	19.50	16.50	16.75	17.25	23.25	46.00	1	0	0
14				54.4	17.50	17.75	21.25	16.75	17.00	17.50	24.25	42.25	1	0	0
15				44.0	18.00	17.25	23.00	17.50	17.25	17.75	25.50	41.00	1	0	0
16				29.8	18.25	17.25	24.00	17.75	17.25	18.00	25.00	30.75	1	0	0
17				16.7	18.00	17.00	24.00	17.75	17.75	17.75	21.00	24.00	1	0	1
18				0.	18.00	17.00	24.00	15.50	24.00	17.50	19.00	20.50	5	0	3
19				0.	18.00	18.25	23.25	15.00	23.00	18.00	17.75	20.25	4	0	2
20				0.	17.75	19.00	22.25	15.00	22.25	18.50	17.00	20.00	4	0	2
21				0.	17.50	19.00	21.75	14.75	21.00	18.25	16.75	19.25	3	0	1
22				0.	17.25	19.00	21.50	14.00	21.50	18.25	16.25	18.75	4	0	2
23				0.	17.25	19.00	21.00	14.50	20.00	18.00	15.75	18.50	3	0	1
TOT.				477.1									70	0	29
AVG.				19.9	17.08	18.06	20.29	14.11	18.98	17.46	17.54	23.89	3	0	1

DATE
(03/14/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0				0.	17.00	18.25	20.75	14.75	19.50	17.50	15.25	18.00	3	0	1
1				0.	17.00	18.50	20.25	14.25	19.50	17.75	15.00	18.00	2	0	1
2				0.	17.00	18.25	20.00	14.50	18.75	17.25	15.00	17.50	3	0	2
3				0.	16.75	18.00	19.75	13.75	19.25	17.50	15.00	17.25	2	0	1
4				0.	16.75	18.25	19.50	12.25	19.50	17.25	15.00	17.00	3	0	2
5				0.	16.75	18.00	19.00	12.00	19.25	17.25	14.75	16.75	2	0	1
6				0.	16.50	18.00	18.75	12.00	18.50	17.00	14.75	16.75	3	0	2
7				9.5	16.50	18.25	18.25	12.00	18.00	17.00	14.50	16.50	4	0	3
8				63.2	16.75	19.00	17.75	11.00	17.75	17.25	15.00	16.75	3	0	2
9				114.4	16.75	19.25	17.00	12.50	17.00	17.25	14.75	16.75	3	0	2
10				155.7	17.00	19.00	16.75	11.00	16.75	17.25	15.00	16.75	3	0	2
11				183.8	17.00	19.00	16.25	10.00	16.75	17.00	15.00	16.75	3	0	2
12				196.7	17.00	19.25	16.25	11.00	15.50	17.25	15.00	16.25	6	0	2
13				193.6	17.00	19.25	15.75	9.50	16.00	17.50	15.25	16.25	4	0	1
14				174.6	17.00	19.50	15.25	9.00	15.50	17.25	15.25	16.50	2	0	1
15	150	5.8	35.0	141.2	17.00	19.25	15.00	10.75	15.50	17.25	15.00	16.75	3	0	2
16	160	7.0	39.0	95.6	17.00	19.00	14.75	10.50	15.25	17.00	15.25	16.50	2	0	2
17	180	7.5	40.0	41.9	16.75	19.00	14.75	8.25	14.75	17.00	15.00	16.75	3	0	1
18	180	5.6	38.0	0.	16.75	18.75	14.25	8.00	14.25	17.00	15.00	16.25	5	0	2
19	180	5.5	39.0	0.	16.75	18.50	14.00	10.50	14.75	16.75	15.00	16.00	2	0	1
20	160	4.6	38.0	0.	16.75	18.75	14.00	7.50	14.00	16.50	14.75	15.75	4	0	1
21	160	5.5	38.0	0.	16.25	19.00	13.50	8.25	14.00	16.50	14.50	15.75	8	0	1
22	140	3.0	37.0	0.	16.25	18.75	13.25	10.00	14.00	16.25	14.25	15.75	11	0	1
23	160	5.3	38.0	0.	16.00	18.00	13.25	9.25	13.75	16.25	14.00	15.25	13	0	1
TOT.				1370.2									96	0	38
AVG.	163	5.5	38.0	57.1	16.76	18.70	16.58	10.94	16.57	17.07	14.89	16.60	4	0	2

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	3.0	38.0	0.	16.50	18.00	13.75	10.75	14.25	16.00	14.00	15.00	11	3	2
1	120	2.0	36.0	0.	16.75	18.00	13.75	7.75	14.00	16.00	14.25	15.25	9	3	1
2	150	2.5	36.0	0.	16.50	18.25	14.00	10.00	14.50	16.00	14.00	15.25	7	3	2
3	150	2.0	36.0	0.	16.75	18.50	14.25	9.00	14.75	16.25	14.25	15.25	6	3	1
4	150	2.2	36.0	0.	16.75	18.25	14.50	8.00	14.50	16.25	14.25	15.25	6	3	2
5	90	2.0	36.0	0.	16.75	18.50	14.50	10.50	14.75	16.50	14.25	15.25	6	3	2
6	60	1.2	36.0	0.	16.75	18.25	14.75	9.00	15.00	16.50	14.25	15.25	6	3	1
7	90	.9	36.0	2.1	16.75	18.25	15.00	8.75	15.00	16.50	14.25	15.50	8	3	3
8	10	1.2	36.0	11.5	17.00	19.25	14.75	8.25	14.75	17.00	15.00	15.50	7	3	1
9	360	1.2	36.0	20.3	17.00	19.00	15.00	8.50	15.00	17.00	15.00	15.75	9	0	1
10	360	1.7	36.0	27.4	17.00	19.25	14.50	10.50	15.00	17.00	15.00	16.00	10	0	1
11	360	2.2	36.0	32.3	16.75	19.00	14.00	9.00	14.25	16.75	14.75	15.75	8	0	1
12	350	2.0	38.0	34.5	16.75	19.25	13.75	8.00	14.25	16.75	13.50	28.50	8	0	1
13	340	2.8	40.0	33.9	16.50	19.00	13.75	11.75	14.75	16.75	14.75	16.75	7	0	0
14	360	3.0	40.0	30.6	16.25	19.00	13.50	14.25	15.25	16.25	14.00	21.00	5	0	1
15	360	4.0	40.0	24.8	15.50	19.00	13.75	8.75	13.50	14.75	12.00	15.50	4	0	1
16	360	4.5	42.0	17.0	15.50	19.25	13.75	7.25	14.00	14.75	12.50	15.50	5	0	1
17	360	5.0	41.0	7.7	15.75	19.00	13.25	8.50	14.00	15.25	13.75	16.00	5	0	1
18	350	5.0	41.0	0.	16.00	19.00	13.25	10.00	14.00	15.75	14.00	16.00	5	0	1
19	360	5.2	40.0	0.	16.00	19.00	13.00	7.00	13.25	16.00	14.00	16.00	7	0	2
20	330	6.2	40.0	0.	16.50	19.75	12.75	9.50	14.00	16.50	14.50	16.25	6	0	2
21	330	6.5	39.0	0.	16.75	20.00	12.25	6.50	12.50	16.75	14.50	16.25	7	0	0
22	330	7.5	38.0	0.	16.25	20.00	12.25	12.50	14.50	16.25	14.25	16.00	3	1	0
23	250	3.3	38.0	0.	16.00	19.25	12.25	14.25	14.75	15.75	14.00	15.75	5	3	0
TOT.				242.1									157	33	28
AVG.	256	3.2	38.0	10.1	16.46	18.92	13.76	9.51	14.35	16.22	14.12	16.44	7	1	1

DATE
(03/16/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	100	4.0	34.0	0.	16.00	18.75	13.00	7.00	13.50	15.25	13.75	15.50	6	3	1
1	60	4.0	33.0	0.	16.25	18.50	13.25	8.25	14.00	15.50	13.75	15.25	6	3	2
2	60	.6	33.0	0.	16.50	18.25	13.50	9.25	14.25	15.75	14.00	15.25	6	3	2
3	60	1.0	33.0	0.	16.50	18.50	13.75	7.75	14.00	16.25	14.00	15.00	5	3	1
4	40	1.4	32.0	0.	16.25	18.25	14.00	7.50	14.00	16.00	14.00	15.00	6	3	2
5	50	2.0	33.0	0.	16.25	18.00	14.00	8.50	14.25	16.00	13.75	15.00	6	3	2
6	10	.3	32.0	0.	16.50	18.25	14.00	8.25	14.25	16.00	14.00	15.00	6	3	1
7	50	.9	33.0	3.9	16.75	18.25	14.00	8.00	14.25	16.25	14.00	15.00	6	3	3
8	50	.9	33.0	21.0	16.75	18.75	14.00	7.75	14.25	16.50	14.25	15.00	5	2	2
9	360	1.0	33.0	38.3	16.75	18.75	13.75	8.25	14.00	16.75	14.00	12.25	4	0	2
10	360	1.2	32.0	52.8	16.25	19.00	14.00	11.25	14.75	17.00	17.25	35.50	2	0	1
11	50	3.2	34.0	62.0	16.75	19.25	15.00	9.00	15.25	17.00	18.75	43.00	2	0	1
12	30	3.2	32.0	67.2	16.75	19.00	16.75	14.25	16.00	17.00	20.00	47.00	6	0	0
13	340	4.6	38.0	66.6	17.25	19.00	18.75	14.25	17.75	17.50	23.00	46.25	3	0	0
14	40	4.0	40.0	60.2	17.25	19.25	19.75	16.00	17.25	17.25	20.00	26.00	2	0	0
15	40	5.0	41.0	48.9	17.50	19.25	20.50	17.00	17.25	17.75	21.25	26.75	1	0	0
16	30	5.2	42.0	33.3	17.75	19.50	21.50	17.25	17.25	17.75	24.25	38.25	3	0	0
17	30	5.8	43.0	15.0	18.00	19.25	22.25	17.75	17.75	17.75	23.50	28.00	3	0	0
18	30	4.0	42.0	0.	17.75	19.00	22.50	17.50	17.25	17.75	20.00	21.25	5	0	1
19	30	4.0	42.0	0.	18.00	19.00	22.25	16.00	20.00	17.75	18.25	19.75	2	0	0
20	30	2.6	43.0	0.	17.25	19.25	22.25	16.75	18.25	17.25	17.25	19.25	3	0	0
21	330	3.5	41.0	0.	17.00	19.25	22.25	16.75	17.25	17.00	16.25	19.00	3	0	0
22	330	1.4	41.0	0.	16.75	18.75	22.25	15.00	20.75	16.75	15.75	18.25	1	0	0
23	340	.4	39.0	0.	16.25	18.25	22.00	14.25	20.50	16.50	15.00	17.75	0	0	0
TOT.				469.2									91	28	21
AVG.	119	2.7	36.6	19.5	16.87	18.80	17.47	12.23	16.17	16.76	17.08	23.09	4	1	1

DATE
(03/17/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	.9	38.0	0.	16.00	17.75	22.25	15.25	17.25	16.25	14.75	17.25			
1	60	.5	38.0	0.	16.00	17.75	21.75	15.75	19.75	16.00	14.50	17.00			
2	90	1.0	35.0	0.	16.00	17.50	21.25	14.00	20.25	16.25	14.25	16.50			
3	120	1.4	35.0	0.	16.00	17.50	20.75	13.50	20.25	16.25	14.25	16.25			
4	130	.8	33.0	0.	16.25	17.25	21.00	13.50	21.00	16.25	14.25	16.00			
5	140	.8	32.0	0.	16.50	17.00	21.00	13.75	20.25	16.50	14.25	15.75			
6	150	1.6	32.0	0.	16.50	17.00	21.00	14.00	19.75	16.75	14.25	15.75			
7	150	4.0	32.0	1.1	16.25	17.25	20.00	13.00	20.00	16.50	14.25	15.75			
8	150	4.2	32.0	5.0	16.25	18.25	19.25	13.25	19.00	17.00	14.50	15.50			
9	150	5.0	32.0	10.8	16.25	18.25	19.00	12.50	18.75	17.00	14.25	15.00			
10	150	5.7	33.0	16.8	16.50	18.75	18.75	11.75	18.75	17.00	14.25	12.25			
11	150	6.2	32.0	23.1	16.25	17.75	18.75	14.75	17.00	16.75	20.75	33.25			
12	150	5.0	34.0	26.4	16.50	17.25	20.25	15.75	16.50	16.75	24.25	50.25			
13	150	5.2	36.0	22.7	17.00	17.50	22.75	16.50	16.75	17.00	26.75	49.00			
14	150	5.2	40.0	16.1	17.25	17.75	24.00	17.00	17.00	17.25	25.75	32.25			
15	150	6.0	41.0	10.4	17.50	17.75	24.50	17.25	17.00	17.50	25.75	31.00			
16	150	5.0	46.0	7.2	18.00	18.25	24.50	16.25	24.00	18.00	24.25	25.00			
17	180	4.5	48.0	4.2	18.00	19.00	24.25	16.75	22.00	18.25	19.75	20.25			
18	150	3.3	48.0	0.	18.00	19.25	24.00	16.00	23.75	18.50	18.25	20.00			
19	150	4.6	48.0	0.	18.00	19.00	23.50	16.00	22.00	18.50	17.75	20.00			
20	180	2.7	48.0	0.	18.00	18.75	23.25	13.50	23.00	18.50	17.25	20.00			
21	60	3.5	45.0	0.	18.00	19.25	22.75	16.00	21.00	18.50	17.00	20.00			
22	130	4.4	42.0	0.	18.00	19.00	22.25	15.00	21.50	18.25	16.75	19.25			
23	180	4.2	42.0	0.	17.75	19.00	22.00	15.00	21.00	18.00	16.25	19.00			
TOT.				143.8											
AVG.	135	3.6	38.4	6.0	16.96	18.07	21.78	14.83	19.90	17.23	17.84	22.18			

DATE
(03/18/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.2	42.0	0.	17.25	18.25	22.00	16.25	18.25	17.50	16.00	18.75			
1	180	7.0	42.0	0.	17.25	17.75	22.00	13.50	22.00	17.00	15.50	18.50			
2	150	3.5	40.0	0.	17.00	17.50	22.00	14.00	21.75	17.25	15.25	18.25			
3	180	6.0	40.0	0.	17.00	17.50	21.25	15.00	20.00	17.25	15.25	18.00			
4	160	6.0	40.0	0.	17.00	17.25	21.25	15.00	20.00	17.25	15.25	18.00			
5	160	6.0	40.0	0.	17.00	17.75	21.00	14.25	20.25	17.25	15.25	17.50			
6	180	7.0	40.0	0.	17.00	17.50	20.75	14.75	19.25	17.25	15.25	17.50			
7	190	4.5	40.0	7.6	17.00	17.75	20.25	13.25	20.25	17.00	15.25	17.25			
8	210	5.0	40.0	33.1	17.00	19.00	19.75	13.50	19.25	17.75	15.50	17.00			
9	150	3.4	40.0	71.0	17.25	19.00	19.25	12.25	19.25	18.00	15.75	15.25			
10	150	5.0	40.0	109.6	17.50	19.25	19.75	14.25	18.75	18.25	22.00	37.25			
11	150	5.5	40.0	141.3	18.00	19.50	20.00	14.00	19.50	18.50	20.75	27.00			
12	160	5.5	41.0	160.7	18.00	19.00	20.25	16.50	18.50	18.50	21.25	33.00			
13	170	6.5	41.0	148.1	18.50	19.00	21.75	17.50	18.25	18.25	25.75	45.00			
14	180	6.5	43.0	134.0	18.75	18.75	22.75	18.00	18.25	18.75	24.00	29.00			
15	150	5.0	43.0	99.0	18.50	19.00	23.00	18.25	18.25	18.50	21.00	22.00			
16	190	5.6	48.0	59.1	18.50	18.75	23.00	18.25	18.25	18.25	20.25	21.25			
17	210	5.0	50.0	27.9	18.25	18.50	23.00	18.00	18.00	18.25	18.50	19.50			
18	210	5.8	50.0	.3	18.00	18.75	23.00	18.00	17.75	17.75	17.50	19.00			
19	360	3.0	46.0	0.	18.00	18.50	23.00	16.00	20.25	17.75	17.00	19.00			
20	40	3.0	45.0	0.	18.00	18.25	22.75	17.00	18.75	17.50	16.75	18.75			
21	10	3.8	42.0	0.	17.25	18.00	22.75	17.00	17.75	17.25	16.25	18.50			
22	30	3.8	41.0	0.	17.25	18.00	22.25	15.25	21.00	17.25	16.00	18.00			
23	40	5.0	42.0	0.	17.25	18.00	22.00	15.00	21.00	17.25	16.00	17.75			
TOT.				991.7											
AVG.	157	5.2	42.3	41.3	17.60	18.35	21.61	15.61	19.35	17.73	17.80	21.71			

DATE
(03/19/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	4.5	42.0	0.	17.00	17.50	22.00	16.25	18.00	17.00	15.50	17.75			
1	90	1.5	41.0	0.	17.00	17.00	21.75	14.50	21.50	16.75	15.50	17.00			
2	180	3.0	41.0	0.	17.00	17.00	21.25	15.00	19.50	17.00	15.25	17.00			
3	200	5.2	42.0	0.	17.00	16.75	21.25	14.00	21.25	17.00	15.25	17.00			
4	200	8.5	41.0	0.	16.75	16.75	21.00	14.00	20.00	17.00	15.25	16.75			
5	200	9.5	40.0	0.	16.75	16.75	20.25	14.00	19.75	17.00	15.00	17.00			
6	200	8.5	40.0	0.	16.75	17.00	20.00	13.50	20.00	17.00	15.00	16.75			
7	200	7.2	40.0	10.0	16.50	17.00	20.00	12.75	20.00	17.00	15.00	16.25			
8	180	5.5	40.0	47.1	16.75	17.50	19.50	12.75	19.25	17.25	15.00	16.25			
9	210	4.5	38.0	79.8	16.75	17.75	18.75	12.50	18.75	17.25	15.00	14.00			
10	180	2.0	38.0	106.0	17.00	18.25	19.00	13.00	18.50	17.75	18.25	18.50			
11	150	2.5	38.0	123.8	17.00	18.00	19.00	13.25	18.50	17.25	21.75	44.50			
12	30	3.5	38.0	131.8	17.25	18.00	20.50	16.00	18.00	17.75	23.75	45.25			
13	50	3.6	40.0	111.9	17.75	18.00	22.00	17.00	17.75	18.00	23.75	31.00			
14	60	2.5	40.0	80.7	18.00	18.00	22.75	17.50	18.00	18.00	25.00	36.25			
15	60	3.5	42.0	65.9	18.25	18.00	23.75	18.00	17.75	18.25	25.50	37.00			
16	60	6.0	42.0	45.7	18.25	17.75	24.75	18.00	18.00	18.25	26.25	35.00			
17	360	4.5	43.0	21.9	18.25	17.75	25.00	18.25	18.00	18.25	25.00	25.25			
18	30	4.0	45.0	.4	18.25	18.25	24.75	16.25	24.50	18.25	19.75	21.00			
19	60	3.0	48.0	0.	18.25	18.75	24.25	16.50	20.00	18.50	18.75	20.00			
20	60	2.8	47.0	0.	18.25	18.75	24.00	16.00	23.00	18.75	18.00	19.75			
21	60	3.0	46.0	0.	18.25	19.00	23.50	15.50	23.00	18.75	17.25	19.50			
22	60	1.4	45.0	0.	18.00	18.75	23.25	15.25	22.50	18.25	17.00	19.00			
23	60	.7	42.0	0.	18.00	18.75	22.50	15.25	21.50	18.25	16.75	18.75			
TOT.				825.0											
AVG.	125	4.2	41.6	34.4	17.46	17.79	21.86	15.21	19.87	17.69	18.69	23.19			

DATE
(03/20/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.8	43.0	0.	17.50	17.75	22.50	16.75	18.75	18.00	16.25	18.25			
1	170	3.8	40.0	0.	17.25	17.25	22.25	15.50	20.00	17.50	16.00	18.00			
2	150	7.0	40.0	0.	17.00	17.00	22.00	14.50	22.00	17.25	15.50	17.75			
3	150	6.2	40.0	0.	17.00	17.00	21.75	15.00	19.50	17.25	15.25	17.25			
4	150	7.0	40.0	0.	17.00	17.25	21.25	14.25	21.00	17.00	15.25	17.00			
5	150	9.2	38.0	0.	16.75	17.00	21.00	13.50	21.00	17.00	15.00	17.00			
6	150	5.8	38.0	0.	16.75	17.00	20.75	12.00	20.25	17.00	15.00	16.75			
7	150	5.3	37.0	16.0	16.75	17.50	20.00	13.25	20.25	17.00	15.00	16.50			
8	150	5.2	38.0	61.2	17.00	18.25	19.75	11.25	19.75	17.75	15.00	15.75			
9	150	5.0	38.0	102.7	17.25	18.75	19.25	12.75	19.00	17.75	15.00	14.50			
10	150	5.0	38.0	135.9	17.00	19.00	18.75	12.00	18.75	18.00	15.25	14.25			
11	150	6.2	39.0	158.4	17.25	18.75	18.25	13.75	18.00	18.00	17.75	26.75			
12	180	8.5	40.0	134.4	17.50	19.00	18.25	12.00	18.25	18.00	17.00	19.75			
13	200	9.0	42.0	132.1	17.25	19.00	18.00	13.50	18.00	18.00	16.50	18.50			
14	200	8.5	43.0	119.6	17.50	19.00	17.75	12.25	18.00	18.00	16.25	18.00			
15	200	7.2	44.0	97.7	17.75	19.00	17.25	11.00	17.75	18.00	16.25	18.00			
16	200	8.2	44.0	68.1	17.75	19.00	17.00	10.00	17.25	18.00	16.25	18.00			
17	200	4.4	42.0	33.0	17.75	19.00	17.00	13.25	17.25	18.25	16.50	18.00			
18	200	1.1	44.0	.9	18.00	19.00	16.75	11.25	17.00	18.25	16.50	18.00			
19	200	10.2	44.0	0.	18.00	19.00	16.50	10.00	16.50	18.00	16.25	17.75			
20	200	10.0	43.0	0.	18.00	19.00	16.25	11.25	16.75	18.00	16.25	17.25			
21	170	9.0	42.0	0.	17.75	18.75	16.00	15.00	16.75	17.50	16.00	17.00			
22	150	7.6	42.0	0.	17.50	18.25	16.00	15.00	16.25	17.25	15.75	17.00			
23	150	7.5	43.0	0.	17.00	18.25	15.75	11.00	16.00	17.00	15.75	17.00			
TOT.				1060.0											
AVG.	178	6.6	40.9	44.2	17.34	18.28	18.75	12.92	18.50	17.66	15.90	17.67			

DATE
(03/21/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.1	44.0	0.	17.00	17.25	16.00	15.00	16.25	17.00	15.50	17.00			
1	180	11.1	44.0	0.	17.25	17.00	16.25	11.25	16.25	17.00	15.50	17.00			
2	180	11.8	44.0	0.	17.75	17.25	16.50	10.00	16.50	17.00	15.50	16.75			
3	180	13.2	44.0	0.	17.75	17.25	16.75	12.75	16.75	17.25	15.50	16.75			
4	180	12.2	42.0	0.	17.75	17.00	17.00	13.00	16.00	17.25	15.50	16.75			
5	180	12.0	42.0	0.	17.75	17.00	17.00	11.25	17.00	17.25	15.75	17.00			
6	180	11.0	42.0	0.	17.00	17.00	16.75	13.00	16.75	17.25	15.50	17.00			
7	180	10.5	42.0	5.0	17.25	17.25	16.25	10.00	16.25	17.25	15.50	16.75			
8	180	8.5	42.0	18.2	17.50	18.00	15.75	10.00	16.00	18.00	16.00	17.00			
9	180	10.0	42.0	30.3	17.50	18.25	15.25	9.00	15.25	18.00	16.00	17.00			
10	180	10.2	42.0	39.9	17.50	18.25	15.00	12.50	15.00	18.00	16.00	17.00			
11	180	10.2	42.0	46.5	17.50	18.00	14.50	11.00	15.50	18.00	15.25	20.00			
12	180	10.7	43.0	49.4	17.75	18.50	14.50	8.50	14.75	18.00	15.50	16.75			
13	180	11.0	44.0	48.6	18.00	19.00	14.25	11.00	15.00	18.00	16.00	17.00			
14	180	12.0	46.0	44.0	17.75	18.25	14.00	11.50	15.25	17.75	16.00	17.25			
15	180	13.0	46.0	36.0	17.75	19.25	14.00	8.25	14.25	18.00	17.00	32.00			
16	180	10.0	45.0	25.2	18.00	18.75	15.00	14.75	16.50	18.00	17.25	28.50			
17	180	11.0	45.0	12.4	18.00	19.25	15.00	11.25	15.75	18.00	17.00	17.25			
18	180	14.0	47.0	.5	18.00	19.00	15.00	15.50	17.00	18.00	16.00	18.75			
19	180	15.0	48.0	0.	18.00	18.75	15.00	16.75	17.00	18.00	16.00	18.00			
20	180	13.0	49.0	0.	17.75	19.00	15.00	13.75	16.00	17.75	16.00	17.25			
21	180	11.5	48.0	0.	17.25	18.75	15.00	15.75	16.25	17.25	16.00	17.00			
22	180	9.0	48.0	0.	17.25	19.00	15.00	16.25	16.50	17.00	15.75	16.75			
23	180	7.5	46.0	0.	17.00	18.75	15.00	16.25	16.25	16.75	15.50	16.50			
TOT.				356.0											
AVG.	180	11.1	44.5	14.8	17.58	18.16	15.41	12.43	16.00	17.57	15.90	18.29			

DATE
(03/22/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	5.5	44.0	0.	16.75	18.25	15.00	16.25	16.25	16.25	15.25	16.25			
1	150	4.8	43.0	0.	16.75	18.25	15.00	16.25	16.00	16.25	15.00	16.00			
2	150	4.8	42.0	0.	17.00	17.75	15.75	9.50	16.00	16.00	15.00	16.00			
3	150	5.0	42.0	0.	17.00	17.75	16.00	10.00	16.00	16.25	15.00	16.00			
4	150	4.2	41.0	0.	17.25	17.50	16.25	12.00	16.25	16.25	15.00	16.00			
5	150	3.3	42.0	0.	17.00	17.25	16.50	13.00	16.25	16.50	15.00	16.00			
6	150	3.5	41.0	4.2	16.75	17.50	16.50	11.00	16.50	16.50	15.00	16.00			
7	150	3.8	41.0	18.6	16.50	17.25	16.00	11.00	16.25	16.75	15.00	16.00			
8	150	3.5	41.0	32.8	16.75	18.00	15.25	9.50	15.25	16.75	15.00	16.00			
9	150	4.0	41.0	45.1	16.75	18.75	15.00	11.00	15.25	17.00	14.50	17.50			
10	150	5.5	41.0	54.8	17.00	18.75	15.25	9.50	15.25	17.00	17.00	28.75			
11	150	4.8	41.0	61.1	17.25	18.75	16.50	11.00	16.75	17.75	19.50	38.00			
12	150	4.2	42.0	63.6	17.75	19.00	18.00	15.75	17.25	18.00	21.00	40.00			
13	150	4.0	45.0	62.2	18.25	19.00	19.50	17.00	17.75	18.25	22.50	43.00			
14	150	7.0	50.0	56.9	18.75	19.25	21.50	14.00	18.25	18.75	24.25	39.50			
15	180	8.7	50.0	48.1	19.00	19.50	22.25	18.50	18.50	19.00	23.25	26.25			
16	180	7.0	54.0	36.5	19.25	19.50	22.25	18.75	18.75	19.00	22.75	23.75			
17	180	7.5	54.0	22.7	19.25	19.75	22.25	19.00	19.00	19.00	21.75	20.25			
18	180	8.0	55.0	8.1	19.00	19.50	22.50	18.75	18.50	18.75	19.50	19.75			
19	180	6.0	54.0	0.	19.00	19.25	22.25	18.50	18.25	18.50	18.75	19.75			
20	180	6.0	53.0	0.	18.75	20.00	22.25	18.25	18.00	18.25	18.00	19.50			
21	180	4.8	50.0	0.	18.25	20.00	22.25	18.00	17.75	18.00	17.25	19.25			
22	180	6.1	48.0	0.	18.00	19.25	22.25	17.75	17.75	17.75	17.00	19.00			
23	180	3.8	43.0	0.	18.00	19.00	22.25	17.00	17.00	17.25	16.50	18.50			
TOT.				514.7											
AVG.	161	5.2	45.7	21.4	17.75	18.70	18.69	14.80	17.03	17.49	17.86	22.37			

DATE
(03/23/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	2.5	42.0	0.	17.75	18.25	22.25	17.00	17.00	17.00	16.00	18.25			
1	200	5.3	42.0	0.	17.25	18.00	22.25	17.00	16.75	17.00	16.00	18.00			
2	180	7.2	41.0	0.	17.25	17.75	22.25	17.00	16.75	17.00	16.00	17.75			
3	180	7.3	41.0	0.	17.25	17.75	22.00	15.00	20.25	17.00	15.75	17.50			
4	170	6.6	41.0	0.	17.00	18.00	21.75	14.25	21.75	17.00	15.75	17.25			
5	170	7.0	41.0	0.	17.25	17.75	21.25	15.00	20.50	17.25	15.75	17.25			
6	170	6.5	41.0	6.7	17.25	17.75	21.00	15.00	19.75	17.25	15.75	17.25			
7	170	6.8	41.0	31.9	17.25	17.50	20.75	14.50	20.25	17.75	15.75	17.25			
8	170	6.8	41.0	56.8	17.25	18.00	20.50	13.75	20.50	17.75	16.50	16.00			
9	170	7.2	40.0	78.6	17.50	18.00	20.50	15.00	19.50	18.00	22.00	31.00			
10	170	6.2	40.0	95.6	17.75	18.25	21.50	15.25	20.50	18.25	23.25	34.50			
11	170	5.6	41.0	133.9	18.25	18.25	22.25	16.00	20.50	18.50	23.00	26.00			
12	170	7.0	43.0	161.5	18.50	18.00	22.50	17.00	20.00	18.75	24.00	32.25			
13	170	9.0	45.0	174.1	18.75	18.00	23.25	18.25	19.25	19.00	25.00	37.00			
14	180	10.0	48.0	159.3	19.00	18.25	24.25	17.50	21.00	19.00	24.25	24.50			
15	180	8.5	47.0	134.6	19.00	18.25	24.25	16.75	22.50	19.25	21.50	21.00			
16	180	8.0	47.0	92.3	19.00	18.00	24.75	18.25	20.25	19.25	26.75	36.50			
17	180	8.5	48.0	49.4	19.25	18.00	25.50	19.00	19.75	19.50	26.00	27.75			
18	210	8.5	52.0	13.6	19.25	18.00	25.50	19.00	19.50	19.25	21.75	21.50			
19	170	9.0	51.0	0.	19.00	18.00	25.25	18.75	19.00	19.00	19.50	20.50			
20	180	10.0	46.0	0.	18.75	17.75	25.25	18.75	18.75	18.75	18.50	20.25			
21	170	9.5	43.0	0.	18.50	17.50	25.50	18.25	18.25	18.25	18.00	19.75			
22	180	10.6	42.0	0.	18.25	18.00	25.25	16.75	23.25	18.25	17.00	19.25			
23	160	7.7	41.0	0.	18.00	18.25	24.75	17.00	20.75	18.50	16.75	19.00			
TOT.				1188.3											
AVG.	176	7.6	43.5	49.5	18.09	17.97	23.09	16.67	19.84	18.19	19.60	22.80			

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	9.0	40.0	0.	18.00	18.00	24.25	16.00	23.75	18.25	16.50	18.50			
1	180	10.8	40.0	0.	18.00	17.75	24.25	16.00	24.00	18.25	16.25	18.25			
2	180	10.5	39.0	0.	17.75	18.00	24.00	15.75	23.00	18.25	16.25	18.00			
3	180	10.2	38.0	0.	17.75	17.50	23.75	16.00	21.25	18.00	16.00	17.75			
4	180	9.8	38.0	0.	17.25	17.50	23.25	13.00	22.50	18.00	16.00	17.75			
5	180	7.8	38.0	0.	17.25	17.75	23.00	14.75	23.00	18.00	16.00	17.25			
6	180	8.5	38.0	8.1	17.25	17.75	22.50	15.25	21.25	18.00	16.00	17.25			
7	180	7.8	38.0	37.5	17.25	18.00	22.00	15.00	21.25	18.00	15.75	17.25			
8	180	8.5	38.0	61.3	17.25	18.75	21.50	14.00	21.75	18.00	15.50	15.00			
9	180	7.8	38.0	85.1	17.75	19.25	21.25	14.25	21.25	18.50	23.00	34.25			
10	180	5.0	38.0	103.7	18.25	19.25	22.25	14.50	22.50	18.75	25.00	40.50			
11	180	7.8	39.0	127.8	18.75	19.25	24.00	17.50	20.50	19.25	27.00	49.00			
12	180	8.8	42.0	148.3	19.50	19.50	26.00	18.75	20.00	19.75	29.00	53.25			
13	180	10.5	45.0	148.8	20.00	20.00	28.25	19.25	20.00	19.75	31.00	56.25			
14	180	11.8	46.0	136.1	20.50	20.00	30.00	20.00	20.00	20.00	32.00	52.00			
15	180	11.2	49.0	114.9	21.00	20.00	31.75	20.25	20.25	20.25	33.75	52.25			
16	180	11.0	50.0	84.5	21.50	20.00	33.00	20.75	20.75	20.75	34.25	45.25			
17	180	12.3	50.0	46.8	21.50	20.00	33.50	20.75	20.75	20.75	32.25	30.25			
18	180	12.0	49.0	9.8	21.25	19.75	33.25	20.75	20.50	20.75	26.00	25.75			
19	180	10.8	49.0	0.	21.00	19.50	33.25	20.25	20.00	20.25	22.75	25.00			
20	180	8.8	50.0	0.	20.50	19.75	33.25	20.00	19.75	20.00	21.00	25.25			
21	180	4.2	44.0	0.	20.00	19.50	33.25	19.25	19.25	19.75	19.75	24.75			
22	240	2.5	42.0	0.	19.50	19.50	33.00	18.75	19.00	19.00	18.50	23.25			
23	210	4.2	41.0	0.	19.00	19.25	33.00	18.75	18.75	18.75	18.00	22.50			
TOT.				1112.7											
AVG.	184	8.8	42.5	46.4	19.07	18.98	27.40	17.48	21.04	19.12	22.40	29.85			

DATE
(03/25/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	5.0	40.0	0.	19.00	18.75	33.00	18.25	18.25	18.75	17.25	21.50			
1	110	4.0	40.0	0.	18.75	18.50	33.00	18.25	18.25	18.25	17.25	21.00			
2	90	3.0	39.0	0.	18.50	18.00	33.00	18.00	18.00	18.00	17.00	20.50			
3	120	2.5	38.0	0.	18.25	18.00	33.00	21.25	30.00	18.00	16.75	20.00			
4	150	1.6	38.0	0.	18.00	18.00	32.25	21.25	30.25	18.25	16.75	20.00			
5	150	2.0	38.0	0.	18.25	18.00	32.00	20.25	28.00	18.75	16.75	19.75			
6	150	3.0	37.0	12.2	18.25	17.75	31.75	20.00	26.25	19.00	16.75	19.25			
7	150	2.5	38.0	69.3	18.25	18.00	31.25	20.00	27.75	19.00	16.75	19.25			
8	150	2.2	38.0	126.5	18.25	18.75	30.75	20.25	30.00	19.25	17.00	18.50			
9	120	1.5	38.0	176.5	18.25	18.75	30.25	20.00	30.25	19.25	16.75	18.00			
10	120	3.2	38.0	215.7	18.75	19.00	30.00	20.00	28.25	19.75	30.75	39.75			
11	170	4.0	38.0	241.3	19.00	19.00	30.25	19.75	23.00	20.00	31.00	39.25			
12	170	4.0	40.0	251.7	19.50	18.75	31.00	20.00	26.00	20.25	32.25	43.50			
13	140	5.0	41.0	246.2	20.00	18.75	31.75	20.25	22.75	20.50	32.50	39.00			
14	140	5.4	45.0	225.1	20.25	18.50	32.25	19.75	20.75	20.00	33.00	38.50			
15	140	6.0	46.0	189.9	19.00	18.50	32.25	17.75	18.25	18.00	32.25	33.00			
16	140	7.5	48.0	142.9	19.25	18.25	32.75	18.50	18.75	18.75	33.00	34.50			
17	190	8.5	47.0	87.5	19.75	18.25	32.50	21.25	29.00	19.25	29.50	28.00			
18	190	9.0	48.0	28.7	20.00	18.25	32.25	21.50	29.50	20.00	22.75	23.75			
19	190	9.8	48.0	0.	20.00	18.25	32.00	21.00	27.00	20.50	21.00	24.50			
20	190	11.0	48.0	0.	20.00	18.25	32.00	20.25	22.75	20.25	20.00	24.00			
21	190	10.0	46.0	0.	19.75	18.00	32.00	19.75	21.00		19.25	23.25			
22	190	9.8	43.0	0.	19.75	18.00	31.50	21.00	26.75	19.75	18.50	22.00			
23	190	9.0	42.0	0.	19.50	18.00	31.25	19.75	26.00	19.75	18.25	21.25			
TOT.				2013.5											
AVG.	161	5.4	41.7	83.9	19.09	18.34	31.83	19.92	24.86	19.27	22.62	26.25			

DATE
(03/26/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.5	42.0	0.	19.00	17.75	31.25	20.75	31.25	19.50	18.00	20.50			
1	180	9.8	41.0	0.	19.00	17.50	31.00	20.75	30.00	19.75	17.75	20.00			
2	180	8.9	40.0	0.	19.00	18.50	30.75	20.25	30.75	19.75	17.50	20.00			
3	180	10.0	40.0	0.	19.00	17.75	30.75	19.00	30.25	19.75	17.50	19.75			
4	180	7.3	40.0	0.	19.00	18.00	30.00	20.00	29.75	19.75	17.75	19.50			
5	180	10.6	41.0	0.	19.00	18.00	30.00	19.75	28.75	19.75	17.50	19.25			
6	180	12.5	41.0	4.7	19.00	18.00	29.75	19.75	29.75	19.75	17.25	19.25			
7	180	10.5	41.0	29.7	19.00	18.25	29.25	19.50	29.25	19.50	17.25	19.25			
8	180	11.0	41.0	54.9	19.00	18.75	29.00	19.25	28.00	19.75	17.25	18.75			
9	180	8.5	41.0	77.0	19.00	18.25	28.75	19.00	25.00	19.75	17.25	17.75			
10	180	8.8	41.0	94.2	19.00	18.25	28.25	17.25	28.25	20.00	17.25	16.50			
11	180	10.0	42.0	105.6	19.25	18.50	28.25	18.25	28.25	20.00	17.25	17.00			
12	180	13.5	42.0	110.2	19.25	18.50	27.75	18.50	27.00	20.00	17.75	18.00			
13	180	15.0	44.0	107.8	19.25	18.75	27.25	18.25	26.00	20.00	17.75	18.25			
14	180	14.5	44.0	98.5	19.25	18.50	27.25	18.50	25.00	20.00	17.75	19.00			
15	180	11.5	45.0	83.0	19.50	18.50	27.00	18.25	24.75	20.00	21.25	17.75			
16	180	13.5	44.0	62.4	19.50	17.75	26.75	18.50	26.00	20.00	19.00	18.75			
17	180	16.0	45.0	38.0	19.50	19.25	26.00	17.25	25.00	20.00	18.25	19.00			
18	180	4.5	45.0	12.1	19.50	18.00	25.75	17.50	23.50	20.00	18.00	19.25			
19	180	16.2	46.0	0.	19.50	18.00	25.00	16.75	25.00	20.00	18.00	19.50			
20	180	17.5	46.0	0.	19.75	17.75	24.75	18.00	23.75	20.00	18.00	19.50			
21	180	17.0	47.0	0.	19.75	17.25	24.00	16.00	24.00	20.00	18.00	19.50			
22	180	18.0	47.0	0.	19.75	17.00	23.50	18.50	22.00	20.00	18.00	19.50			
23	180	18.5	47.0	0.	19.50	17.25	23.00	16.00	22.25	19.75	17.75	19.25			
TOT.				878.1											
AVG.	180	12.2	43.0	36.6	19.26	18.08	27.71	18.48	26.81	19.86	17.87	18.95			

DATE
(03/27/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	20.0	46.0	0.	19.00	16.50	23.00	17.75	20.00	19.25	17.00	19.00			
1	180	19.0	46.0	0.	18.75	16.75	22.75	15.00	22.25	19.00	17.00	19.00			
2	180	18.0	43.0	0.	18.50	16.25	22.00	15.25	21.50	19.00	17.00	18.50			
3	180	6.0	42.0	0.	18.25	16.75	21.75	16.50	21.00	18.75	16.75	18.50			
4	180	15.0	42.0	0.	18.25	16.75	21.50	14.25	21.25	18.50	16.25	18.00			
5	180	15.0	41.0	0.	18.00	17.00	21.00	15.25	20.00	18.50	16.25	18.00			
6	180	14.0	39.0	1.3	17.75	17.00	21.00	13.75	21.00	18.00	16.00	17.75			
7	180	10.6	38.0	8.2	17.50	17.25	20.25	14.00	20.00	18.25	16.00	17.25			
8	180	8.5	38.0	11.3	17.50	18.00	20.00	13.75	19.75	18.25	15.00	14.25			
9	180	5.5	37.0	12.7	17.75	18.00	19.25	12.50	19.50	18.25	19.25	25.50			
10	180	8.5	35.0	15.6	17.75	18.25	19.25	13.00	19.25	18.50	18.50	20.00			
11	180	5.5	34.0	25.4	18.00	18.25	19.75	14.50	18.75	18.50	23.00	45.75			
12	180	9.5	39.0	33.4	18.00	18.25	21.00	16.75	18.25	18.50	23.25	39.00			
13	180	11.5	39.0	31.9	18.75	18.75	23.00	17.75	18.25	18.75	26.75	52.00			
14	180	9.5	40.0	27.9	18.75	18.75	24.25	18.25	18.50	19.00	26.00	33.00			
15	180			22.0	19.00	19.00	26.00	18.75	18.75	19.00	28.50	47.00			
16	180	9.0	43.0	16.5	19.25	18.50	26.75	19.00	18.75	19.00	27.00	29.00			
17	120	6.2	44.0	10.0	19.25	18.25	27.00	19.00	18.75	19.25	26.00	25.00			
18	120	4.0	48.0	3.1	19.25	18.00	27.00	19.00	18.75	19.00	20.75	21.50			
19	60	4.9	49.0	0.	19.00	18.00	26.75	17.75	26.50	18.75	19.25	20.75			
20	170	4.0	52.0	0.	19.00	18.50	27.00	18.25	21.00	18.75	18.75	21.00			
21	200	4.5	50.0	0.	18.25	18.25	26.75	18.00	19.00	18.25	17.50	20.75			
22	220	8.2	48.0	0.	18.00	18.00	26.50	17.25	18.00	18.00	17.00	20.00			
23	270	8.5	50.0	0.	17.50	17.75	26.50	17.25	17.50	17.25	16.25	19.25			
TOT.				219.3											
AVG.	176	9.8	42.7	9.1	18.37	17.78	23.33	16.35	19.84	18.59	19.79	24.99			

DATE
(03/28/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	270	4.4	41.0	0.	17.25	17.25	26.25	16.75	26.00	17.00	15.75	18.50			
1	260	4.4	40.0	0.	17.25	17.25	25.50	16.75	24.00	17.25	15.75	18.00			
2	170	4.4	40.0	0.	17.25	17.00	25.00	17.00	24.00	17.75	15.75	18.00			
3	170	7.5	40.0	0.	17.00	17.00	24.50	16.25	23.00	18.00	15.75	17.75			
4	170	7.5	38.0	0.	17.25	17.25	24.25	13.50	23.00	18.00	15.75	17.75			
5	170	9.0	38.0	0.	17.25	17.25	23.75	15.25	23.75	17.75	15.50	17.00			
6	170	7.5	38.0	5.6	17.00	17.25	23.25	15.25	22.00	18.00	15.25	17.25			
7	170	8.0	37.0	45.5	17.00	17.50	23.00	15.50	22.00	17.75	15.25	17.00			
8	170	7.0	38.0	84.3	17.00	18.00	22.25	15.00	21.50	18.00	15.00	14.00			
9	170	6.5	38.0	119.3	17.00	18.25	21.75	14.75	21.25	18.00	15.00	12.25			
10	160	7.5	38.0	140.8	17.25	18.50	21.75	14.00	21.75	18.25	23.75	32.00			
11	130	3.0	37.0	158.1	17.75	18.25	22.00	16.50	19.50	18.25	23.00	26.00			
12	120	2.2	36.0	154.9	18.00	18.75	22.50	16.50	20.00	18.75	24.25	31.00			
13	150	3.5	40.0	161.7	18.25	18.50	24.25	17.50	19.25	18.75	26.50	39.00			
14	150	2.5	42.0	147.7	18.50	18.25	25.50	18.25	19.00	18.75	28.50	52.25			
15	270	2.2	42.0	129.5	19.00	18.50	27.50	18.75	18.75	19.00	30.00	48.75			
16	360	2.0	42.0	99.3	19.25	19.00	29.00	19.00	19.00	19.25	29.50	32.75			
17	270	3.0	46.0	59.7	19.50	19.00	29.00	19.25	19.25	19.50	29.75	32.25			
18	360	4.0	48.0	18.1	20.00	18.75	29.25	19.25	19.25	19.75	28.50	26.50			
19	320	5.0	50.0	0.	19.50	18.50	29.25	19.25	25.25	19.50	22.50	22.50			
20	360	4.0	50.0	0.	19.50	18.50	29.00	19.00	21.25	19.25	20.25	22.00			
21	360	3.2	52.0	0.	19.00	18.25	29.00	18.50	19.50	18.75	19.00	22.00			
22	20	3.5	48.0	0.	18.50	18.25	28.75	18.75	24.00	18.25	18.00	21.25			
23	60	2.6	48.0	0.	18.25	18.25	28.25	18.25	24.50	18.50	17.25	20.25			
TOT.				1324.5											
AVG.	207	4.8	42.0	55.2	18.06	18.05	25.60	17.03	21.91	18.42	20.65	24.83			

DATE
(03/29/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	4.0	48.0	0.	17.75	18.00	28.25	18.00	26.00	18.25	16.50	19.75			
1	180	1.3	40.0	0.	17.75	18.00	27.50	17.75	27.50	18.25	16.25	19.25			
2	150	4.8	40.0	0.	17.75	17.75	27.00	15.25	27.00	18.25	16.25	18.75			
3	150	3.3	38.0	0.	17.50	18.00	26.75	17.25	24.50	18.25	16.00	18.25			
4	150	5.0	37.0	0.	17.25	18.00	26.25	17.00	26.00	18.25	16.00	18.00			
5	150	5.5	38.0	0.	17.25	18.00	26.00	16.75	22.25	18.25	15.75	17.75			
6	150	4.5	37.0	5.2	17.25	18.25	25.25	16.50	24.50	18.25	15.75	17.50			
7	150	4.5	37.0	42.6	17.25	18.00	25.00	16.25	22.75	18.25	15.75	17.25			
8	150	2.8	38.0	65.4	17.50	19.00	24.50	16.00	24.25	18.25	15.75	16.50			
9	150	2.0	38.0	93.0	17.50	18.75	24.00	15.25	23.50	18.25	15.50	15.50			
10	180	1.4	38.0	114.7	17.75	19.00	24.00	16.25	22.00	18.50	26.25	41.75			
11	190	.8	38.0	161.8	18.25	18.75	25.00	15.00	21.50	18.75	26.00	32.25			
12	200	.8	40.0	216.0	18.50	18.75	26.25	17.75	21.25	19.00	27.50	33.75			
13	60	2.5	43.0	165.6	19.00	19.00	27.50	19.00	20.00	19.25	28.75	36.00			
14	30	4.5	43.0	120.5	19.25	18.75	28.00	19.00	19.50	19.50	28.25	29.50			
15	30	5.0	45.0	127.0	18.75	18.75	28.00	17.50	17.75	18.00	28.00	28.00			
16	360	5.2	48.0	120.9	18.00	18.25	28.00	16.75	17.00	17.00	28.00	31.50			
17	360	5.5	48.0	82.5	18.50	18.75	28.00	18.00	22.75	18.00	28.25	29.25			
18	360	5.2	48.0	24.7	19.00	18.25	28.00	18.25	28.00	18.75	25.25	24.25			
19	360	4.4	48.0	0.	19.00	18.75	28.00	18.75	22.25	19.00	20.50	21.50			
20	330	7.5	48.0	0.	19.00	18.75	27.75	19.00	22.75	19.25	19.50	21.75			
21	330	8.0	48.0	0.	18.75	18.75	28.00	18.50	20.00	19.00	18.50	21.50			
22	330	8.0	47.0	0.	18.25	18.25	27.75	18.00	19.00	18.50	17.75	21.00			
23	330	4.6	46.0	0.	18.25	18.25	27.75	17.75	18.25	18.00	17.00	20.25			
TOT.				1339.9											
AVG.	209	4.2	42.5	55.8	18.12	18.45	26.77	17.31	22.51	18.46	20.79	23.78			

DATE
(03/30/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	1.8	43.0	0.	17.75	18.00	27.75	17.50	17.50	17.75	16.50	19.75			
1	60	4.8	44.0	0.	17.75	17.75	27.50	17.25	24.75	17.50	16.25	19.25			
2	40	4.0	44.0	0.	17.50	17.50	27.00	17.25	22.00	18.00	16.00	19.00			
3	50	2.4	42.0	0.	17.25	18.00	26.50	17.00	24.25	18.00	16.00	18.50			
4	50	2.5	42.0	0.	17.25	17.25	26.25	17.00	25.00	18.00	16.00	18.25			
5	50	2.2	40.0	0.	17.00	17.75	25.50	16.50	24.00	18.00	15.75	18.00			
6	40	2.2	40.0	3.2	17.00	17.50	25.50	16.00	22.00	18.00	15.25	17.50			
7	30	1.2	38.0	35.8	17.00	18.00	25.00	16.25	25.00	18.00	15.25	17.00			
8	40	1.5	38.0	70.0	17.00	18.25	24.25	15.75	23.00	18.25	17.00	13.00			
9	30	.8	37.0	99.5	17.75	18.75	24.25	16.00	24.50	18.75	26.25	39.75			
10	60	1.6	38.0	122.3	18.25	18.50	25.75	17.50	20.25	19.00	28.25	48.50			
11	360	1.4	40.0	134.6											
12	330	4.4	40.0	123.4	19.25	20.00	29.75	16.25	17.00	17.00	31.75	50.50			
13	10	4.0	43.0	120.8	19.75	20.00	31.50	17.50	17.75	18.00	34.00	57.50			
14	30	5.0	43.0	110.3	20.50	20.25	33.25	18.50	19.00	18.75	35.25	55.00			
15	30	5.0	51.0	92.6	21.75	21.00	35.00	18.75	19.00	19.00	36.50	52.75			
16	30	5.5	52.0	68.9	22.00	22.25	36.00	20.00	20.00	20.00	37.00	45.25			
17	30	5.5	52.0	43.6	22.00	22.75	36.25	20.50	20.75	21.00	36.50	38.00			
18	30	4.4	52.0	12.2	22.25	22.75	36.25	21.25	21.25	21.25	35.00	33.00			
19	30	4.8	52.0	0.	22.00	22.00	36.00	21.25	21.25	21.25	29.00	27.75			
20	300	6.0	53.0	0.	21.75	21.25	36.25	21.00	21.00	21.25	24.50	27.00			
21	300	4.0	52.0	0.	21.25	21.00	36.00	20.25	20.00	20.50	22.00	26.75			
22	360	.8	51.0	0.	20.75	21.25	36.00	20.00	19.75	20.25	20.25	26.00			
23	90	.4	47.0	0.	20.25	21.00	36.00	19.75	19.25	19.75	19.25	24.00			
TOT.				1037.2											
AVG.	100	3.2	44.7	43.2	19.35	19.68	30.59	18.22	21.23	19.01	24.33	30.96			

DATE
(03/31/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	10	.6	46.0	0.	20.00	20.75	36.00	19.50	19.00	19.50	19.00	23.00			
1	40	1.4	46.0	0.	19.75	20.25	36.00	19.00	19.00	19.25	18.25	22.50			
2	100	1.8	46.0	0.	19.50	20.00	35.75	19.00	18.75	19.00	18.00	22.00			
3	50	2.2	44.0	0.	19.25	19.25	36.00	18.75	18.50	18.75	17.75	21.50			
4	90	2.8	44.0	0.	19.00	18.75	35.50	18.50	18.00	18.50	17.25	21.00			
5	60	2.0	42.0	0.	19.00	18.75	35.25	23.25	31.50	18.50	17.00	21.00			
6	50	3.0	42.0	4.6	19.00	18.25	34.75	22.00	28.50	19.25	17.25	21.00			
7	110	2.8	42.0	64.0	19.00	18.25	34.25	23.25	32.00	19.50	17.50	20.75			
8	100	3.0	42.0	127.2	19.25	19.25	33.50	23.00	33.00	20.00	17.75	19.25			
9	150	4.5	42.0	182.8	19.50	19.25	33.00	21.75	29.25	20.25	17.50	17.75			
10	150	5.0	40.0	226.6	19.50	19.00	33.00	21.00	27.00	20.25	20.00	17.00			
11	150	5.2	40.0	255.5	19.75	19.00	32.75	20.00	22.25	20.00	22.25	21.00			
12	160	6.5	42.0	267.5	19.50	19.00	32.75	19.75	20.75	20.00	19.75	20.50			
13	180	8.5	42.0	261.9	19.50	19.00	32.75	19.50	20.00	19.50	18.75	20.00			
14	180	9.0	44.0	239.0	19.50	19.00	32.75	19.25	19.50	19.25	18.25	19.25			
15	180	6.5	45.0	200.4	19.25	19.00	32.75	19.00	19.25	19.00	18.00	18.75			
16	180	4.0	46.0	148.7	19.00	19.00	32.75	19.00	19.00	19.00	18.00	18.50			
17	120	3.2	48.0	87.7	19.00	19.00	32.25	21.50	30.00	19.00	17.75	18.75			
18	30	4.0	48.0	23.5	19.25	19.00	32.00	21.25	28.50	19.50	18.00	19.25			
19	30	5.0	48.0	0.	19.25	19.00	32.00	20.00	22.75	19.50	18.00	20.25			
20	30	4.5	48.0	0.	19.25	19.00	32.00	19.50	20.75	19.50	18.00	21.00			
21	30	5.5	45.0	0.	19.95	19.00	31.75	19.00	19.50	19.00	17.50	21.00			
22	30	2.8	42.0	0.	19.95	19.00	31.50	19.75	25.00	19.00	17.50	20.25			
23	40	1.5	42.0	0.	19.95	19.00	31.50	20.75	29.50	19.25	17.25	20.00			
TOT.				2089.4											
AVG.	94	4.0	44.0	87.1	19.41	19.11	33.44	20.30	23.80	19.34	18.18	20.22			

DATE
(04/01/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.5	42.0	0.	19.00	18.50	31.25	19.25	22.50	19.25	17.25	19.75			
1	150	3.3	42.0	0.	19.00	18.25	31.25	19.00	20.50	19.00	17.25	19.75			
2	180	4.5	42.0	0.	19.00	18.25	31.00	19.00	28.50	19.00	17.25	19.50			
3	180	3.8	42.0	0.	18.75	18.25	30.50	20.00	28.00	19.25	17.25	19.50			
4	210	3.0	43.0	0.	18.75	18.25	30.00	20.00	30.00	19.25	17.00	19.25			
5	220	3.0	42.0	0.	19.00	18.25	30.00	20.00	28.00	19.25	17.00	19.25			
6	240	2.2	41.0	0.	19.00	18.25	29.50	19.25	25.00	19.25	17.00	19.00			
7	270	3.3	42.0	6.0	19.00	18.25	29.00	19.50	26.25	19.75	17.25	19.00			
8	300	3.8	42.0	15.0	19.00	18.50	29.00	19.25	29.00	19.50	17.25	18.50			
9	330	3.0	42.0	23.1	19.00	18.75	28.75	19.00	25.00	19.75	17.00	17.00			
10	30	1.6	42.0	29.6	19.00	19.00	28.50	19.00	23.50	19.75	27.50	29.50			
11	60	2.2	42.0	34.0	19.50	19.00	29.00	19.50	21.00	19.75	30.00	38.50	2	0	0
12	60	3.0	42.0	28.6	19.75	18.75	29.00	20.00	20.50	20.00	29.50	31.50	1	0	0
13	30	2.6	42.0	40.7	20.00	18.50	29.25	20.00	20.00	20.00	30.25	36.25	1	0	0
14	360	2.5	48.0	40.8	20.00	18.50	30.00	20.00	20.00	20.25	30.75	38.00	1	0	0
15	30	3.8	48.0	35.9	20.75	18.50	30.75	20.00	20.00	20.25	32.00	41.50	1	0	0
16	20	3.0	48.0	25.8	21.00	19.00	31.75	20.00	20.00	20.00	33.25	43.50	2	0	0
17	360	3.5	50.0	13.9	21.00	19.00	32.50	20.25	20.25	20.25	33.00	35.75	9	0	0
18	360	4.0	51.0	1.9	21.00	19.00	32.25	20.50	20.50	20.50	31.25	29.50	8	0	0
19	360	4.7	52.0	0.	21.00	19.00	32.50	20.50	20.50	20.50	25.00	24.50	9	0	0
20	360	6.4	52.0	0.	20.75	19.00	32.50	20.00	20.00	20.00	22.00	24.00	6	0	0
21	360	7.5	50.0	0.	20.00	19.00	32.25	21.00	27.25	20.00	22.25	24.00	2	0	0
22	360	3.0	48.0	0.	20.00	19.00	32.50	20.00	22.25	19.75	19.50	23.00	2	0	0
23	360	1.6	46.0	0.	19.75	18.75	32.25	20.75	28.50	19.50	18.50	22.00	1	0	0
TOT.				295.3									46		
AVG.	220	3.4	45.0	12.3	19.71	18.65	30.64	19.82	23.71	19.74	23.18	26.33	2		

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	1.2	42.0	0.	19.25	18.50	32.00	19.50	22.00	19.25	18.00	21.25	1	0	0
1	90	1.0	42.0	0.	19.00	18.00	32.25	16.50	26.00	19.00	17.50	21.00	0	0	0
2	120	1.8	42.0	0.	18.75	18.00	32.00	19.75	24.00	19.00	17.25	20.00	1	0	0
3	120	1.8	40.0	0.	18.50	17.75	31.25	20.00	26.75	19.00	17.00	19.75	1	0	0
4	150	3.0	38.0	0.	18.50	18.00	31.00	20.00	28.25	19.00	17.00	19.75	1	0	0
5	150	4.0	39.0	0.	18.25	17.75	30.75	20.50	28.75	19.00	16.75	19.25	1	0	0
6	150	5.0	78.0	0.	18.25	17.50	30.00	19.75	27.25	19.00	16.50	19.00	1	0	0
7	150	2.3	37.0	26.0	18.00	17.50	30.00	20.00	30.00	19.00	16.50	18.25	1	0	0
8	150	3.0	36.0	63.6	18.25	17.50	29.00	19.00	28.25	19.25	16.50	17.75	1	0	0
9	150	3.0	36.0	97.5	18.50	18.50	28.75	18.75	27.50	19.25	16.50	19.00	1	0	0
10	150	6.5	37.0	124.4	18.50	18.00	29.00	19.00	29.00	19.00	30.00	40.50	3	0	0
11	150	5.2	38.0	142.4	19.00	18.00	29.25	19.50	22.50	19.75	30.25	39.75	3	0	0
12	150	4.8	39.0	119.7	19.50	18.00	30.00	19.75	21.00	20.00	32.25	52.50	1	0	0
13	150	5.5	43.0	117.4	20.50	18.25	32.25	20.00	20.75	20.25	34.25	55.00	2	0	0
14	160	6.0	48.0	106.6	21.00	18.50	33.75	20.50	21.00	20.75	35.25	51.00	1	0	0
15	180	6.7	50.0	88.2	21.50	18.75	34.50	21.00	21.00	21.00	36.25	49.00	2	0	0
16	180	4.0	52.0	63.5	22.00	19.00	35.25	21.00	21.00	21.25	36.00	43.00	3	0	0
17	180	5.5	54.0	43.2	22.25	19.00	35.75	21.25	21.50	21.50	35.00	34.00	2	0	0
18	180	5.8	55.0	6.8	22.00	19.00	35.50	21.50	21.50	21.50	33.75	31.25	2	0	0
19	190	4.2	58.0	0.	22.00	19.00	35.50	23.75	30.00	21.75	27.00	27.00	2	0	0
20	180	6.8	58.0	0.	21.75	19.25	35.50	22.00	25.00	21.75	24.00	27.00	3	0	0
21	180	5.2	54.0	0.	21.25	19.00	35.25	21.50	22.75	21.50	21.00	26.00	2	0	0
22	220	4.0	51.0	0.	21.25	19.00	35.00	23.00	29.25	21.25	20.75	25.75	2	0	0
23	180	4.0	50.0	0.	21.00	19.00	35.00	23.00	29.50	21.00	20.00	24.25	3	0	0
TOT.				999.3									39	0	0
AVG.	156	4.4	46.5	41.6	19.95	18.36	32.44	20.44	25.19	20.12	24.39	30.04	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	3.5	50.0	0.	21.00	18.75	34.50	21.50	24.00	21.00	19.75	23.75	1	0	0
1	180	4.5	48.0	0.	20.75	18.50	34.75	21.00	22.00	21.00	19.50	23.00	1	0	0
2	220	5.5	48.0	0.	20.50	18.25	34.50	24.00	33.00	20.25	19.25	22.50	1	0	0
3	180	6.0	48.0	0.	20.50	18.25	34.00	23.75	34.00	20.75	19.00	22.00	1	0	0
4	180	5.8	48.0	0.	20.25	18.00	34.00	21.25	25.00	20.50	18.75	22.00	1	0	0
5	180	5.4	48.0	0.	20.00	18.00	33.75	22.25	29.75	20.25	18.75	21.75	0	0	0
6	220	5.0	47.0	0.	20.00	18.00	33.50	21.75	28.25	20.50	18.50	21.75	1	0	0
7	180	4.4	47.0	26.5	20.00	18.00	33.25	18.50	33.00	20.50	18.25	20.50	0	0	0
8	180	4.0	46.0	63.3	20.00	19.00	32.75	22.00	31.00	20.50	18.00	17.00	1	0	0
9	180	4.0	44.0	111.5	20.00	19.00	32.25	21.75	28.25	21.00	32.50	35.50	1	0	0
10	220	5.0	43.0	166.9	21.00	19.25	32.25	22.00	26.75	21.50	32.75	36.50	2	0	0
11	170	3.2	44.0	204.1	21.50	19.00	33.25	22.00	24.00	22.00	35.00	52.00	1	0	0
12	190	3.0	48.0	221.1	22.25	19.25	35.25	22.25	23.25	22.00	37.75	61.50	1	0	0
13	260	3.0	51.0	216.7	23.25	19.50	37.50	22.50	23.00	22.50	40.00	64.00	1	0	0
14	270	2.8	52.0	198.2	24.00	19.75	39.75	23.00	23.00	23.00	41.50	61.50	2	0	0
15	360	3.6	56.0	164.2	24.75	20.00	41.00	23.50	23.50	23.50	41.50	56.25	4	0	0
16	30	5.2	56.0	118.5	25.00	20.00	42.00	24.00	24.00	24.00	43.00	52.00	3	0	0
17	360	6.1	58.0	64.8	25.50	20.25	42.25	24.25	24.00	24.00	42.50	43.00	3	0	0
18	360	5.6	58.0	11.0	25.50	20.50	42.50	24.50	24.25	24.25	40.50	37.25	6	0	0
19	330	6.0	58.0	0.	25.00	20.50	42.50	24.50	24.50	24.50	37.25	34.00	6	0	0
20	320	7.0	59.0	0.	24.75	20.75	42.25	24.00	23.75	24.00	28.50	29.00	2	0	0
21	320	6.8	58.0	0.	24.00	20.75	42.00	23.00	23.00	23.25	26.00	31.75	2	0	0
22	310	5.0	58.0	0.	23.25	20.75	42.00	22.50	22.00	22.75	23.50	30.75	2	0	0
23	360	1.7	52.0	0.	23.00	20.25	42.00	22.00	21.75	22.00	21.50	29.00	1	0	0
TOT.				1566.8									44	0	0
AVG.	239	4.6	51.0	65.3	22.32	19.34	37.24	22.57	25.79	22.06	28.90	35.34	2	0	0

DATE
(04/04/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	2.0	50.0	0.	22.00	19.75	42.00	21.50	21.25	21.50	20.75	27.75	1	0	0
1	60	1.3	48.0	0.	22.00	19.50	42.00	21.00	21.00	21.00	20.00	26.75	1	0	0
2	70	7.0	46.0	0.	21.25	19.00	42.00	20.50	20.50	21.00	20.00	25.00	1	0	0
3	60	2.0	47.0	0.	21.00	18.50	41.75	20.25	20.00	20.25	19.25	25.25	1	0	0
4	30	1.4	46.0	0.	20.75	18.00	41.50	35.25	19.75	38.75	19.00	24.50	0	0	0
5	40	2.0	44.0	0.	20.00	18.00	41.00	30.25	19.50	33.00	18.25	24.00	1	0	0
6	30	.8	42.0	0.	20.00	18.00	40.75	36.00	19.25	38.25	18.00	23.50	2	0	0
7	50	1.8	42.0	40.8	20.00	17.75	40.00	36.00	19.00	39.25	17.75	22.00	1	0	0
8	60	1.2	40.0	104.0	19.75	18.25	40.00	36.00	18.75	38.25	17.00	18.75	1	0	0
9	330	.8	40.0	159.0	20.00	18.25	39.25	34.00	19.00	35.50	39.75	47.75	1	0	0
10	50	2.2	40.0	201.7	21.00	18.25	40.00	26.25	20.00	28.25	41.50	57.25	1	0	0
11	50	2.8	40.0	230.1	22.25	18.50	41.50	24.00	21.00	25.00	43.25	63.50	1	0	0
12	360	2.5	42.0	242.3	23.50	19.00	43.25	22.75	21.75	23.50	45.00	67.25	1	0	0
13	360	3.6	44.0	237.5	24.50	19.75	45.00	23.25	22.75	23.50	46.50	67.00	4	0	0
14	360	4.5	52.0	215.9	25.00	19.75	46.00	23.50	23.00	23.75	47.25	67.25	2	0	0
15	30	5.0	54.0	179.0	26.00	20.25	47.75	24.50	24.25	24.50	48.75	60.25	1	0	0
16	330	5.0	58.0	129.6	26.75	21.00	48.50	25.25	24.75	25.00	49.00	56.25	1	0	0
17	330	5.2	58.0	71.5	27.00	21.25	49.00	25.50	25.25	25.50	48.00	48.00	1	0	0
18	330	7.0	58.0	13.0	27.25	21.25	48.50	26.00	26.00	26.00	35.50	34.75	1	0	0
19	330	6.5	58.0	0.	27.00	21.00	48.00	25.50	25.50	25.75	29.75	32.75	4	0	0
20	330	7.0	58.0	0.	27.00	21.25	48.00	25.50	25.50	25.50	27.25	32.50	3	0	0
21	50	5.2	58.0	0.	26.75	21.75	48.00	25.00	25.25	25.25	25.50	32.25	1	0	0
22	330	2.6	58.0	0.	26.25	21.75	47.75	25.00	25.00	25.00	24.75	31.50	2	0	0
23	330	1.4	55.0	0.	26.25	21.25	47.75	25.00	25.00	25.00	24.00	30.75	2	0	0
TOT.				1824.4									38	0	1
AVG.	180	3.4	49.1	76.0	23.47	19.62	44.14	26.57	22.21	27.43	31.07	39.48	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	340	1.1	51.0	0.	26.00	21.00	47.75	24.50	24.75	24.75	23.00	30.00	2	0	0
1	30	1.4	50.0	0.	25.50	20.75	47.50	24.00	24.25	24.25	22.25	29.50	2	0	0
2	360	1.6	48.0	0.	25.25	20.00	47.50	23.75	24.00	24.00	22.00	29.00	2	0	0
3	360	1.4	48.0	0.	25.00	19.75	47.25	23.25	23.50	23.50	21.25	28.25	1	0	0
4	90	1.5	46.0	0.	24.75	19.00	47.00	23.00	23.25	23.25	21.00	28.00	1	0	0
5	90	.6	43.0	0.	24.75	19.00	47.00	23.00	23.00	23.00	20.75	27.75	1	0	0
6	90	1.1	42.0	.2	24.00	18.50	46.75	34.75	22.75	37.75	20.50	27.00	1	0	0
7	90	.6	42.0	52.1	23.50	18.25	46.50	39.00	22.25	43.50	20.25	26.00	1	0	0
8	120	.8	42.0	121.1	23.00	18.25	46.00	34.00	21.50	37.50	20.00	23.00	1	0	0
9	150	.4	42.0	184.0	22.00	18.25	46.00	26.25	20.00	29.00	43.25	47.00	2	0	0
10	160	.6	42.0	232.7	23.00	18.50	46.25	23.50	21.00	25.00	47.75	62.25	1	0	0
11	360	1.6	42.0	265.2	24.00	18.75	47.75	21.00	20.50	22.00	49.00	68.50	1	0	0
12	330	2.0	42.0	279.1	26.75	19.00	49.50	22.00	22.00	22.75	51.00	72.50	1	0	0
13	330	1.0	42.0	273.4	26.50	20.00	51.50	23.00	23.00	23.25	52.50	74.00	1	0	0
14	360	3.8	54.0	248.6	27.75	20.75	53.00	23.75	23.50	24.00	54.00	71.50	1	0	0
15	30	3.2	57.0	206.4	28.25	21.25	54.25	25.50	25.25	25.50	55.00	67.00	1	0	0
16	30	3.2	60.0	149.8	28.75	21.75	55.00	26.50	26.00	26.50	55.00	61.25	1	0	0
17	360	3.6	68.0	83.3	29.00	22.00	55.00	27.00	27.00	27.00	54.00	53.50	1	0	0
18	360	3.6	68.0	16.1	29.00	22.25	55.00	27.50	27.00	27.25	51.25	47.25	1	0	0
19	360	3.2	70.0	0.	29.00	22.75	55.00	27.25	27.00	27.25	36.00	37.50	2	0	0
20	320	4.5	71.0	0.	28.50	22.75	54.75	27.00	26.75	27.00	31.00	35.50	2	0	0
21	310	3.9	70.0	0.	28.00	22.75	54.50	26.50	26.25	26.50	28.50	34.50	2	0	0
22	330	2.2	70.0	0.	27.25	22.25	54.25	26.00	25.75	26.00	27.00	33.25	4	0	0
23	270	1.6	62.0	0.	26.75	21.75	54.00	25.50	25.25	25.75	26.00	32.25	2	0	0
TOT.				2112.0									33	0	3
AVG.	235	2.0	53.0	88.0	26.09	20.34	50.37	26.15	23.98	26.93	35.51	43.59	1	0	0

DATE
(04/06/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	1.0	62.0	0.	26.25	21.00	54.00	25.00	25.00	25.25	25.50	31.25	2	0	0
1	360	.4	56.0	0.	26.00	21.00	53.75	25.00	24.75	25.00	24.25	30.75	1	0	0
2	260	1.8	52.0	0.	25.50	20.00	53.50	24.25	24.00	24.50	23.50	30.00	1	0	0
3	180	1.0	52.0	0.	24.75	19.50	53.25	23.50	23.50	24.00	22.75	29.50	1	0	0
4	170	1.1	50.0	0.	24.25	19.00	53.00	23.25	23.00	23.50	22.00	29.00	1	0	0
5	150	3.0	50.0	0.	24.00	18.75	53.00	23.00	23.00	23.25	21.75	28.50	1	0	0
6	150	5.0	48.0	.5	24.00	18.25	53.00	23.00	22.50	23.00	21.25	28.00	1	0	0
7	150	7.0	48.0	45.4	23.75	18.00	52.75	22.50	22.25	22.75	21.00	27.75	2	0	0
8	150	7.5	47.0	87.2	23.50	18.00	52.50	22.50	22.25	22.50	21.00	23.00	3	0	0
9	150	6.8	44.0	150.5	23.75	18.00	52.50	22.50	22.50	22.50	47.50	48.50	4	0	0
10	150	3.6	44.0	223.4	24.00	18.25	52.25	22.25	22.00	22.25	52.75	65.50	3	0	0
11	180	2.3	50.0	272.0	23.25	17.75	53.25	17.75	18.00	18.00	54.00	71.00	1	0	0
12	180	4.5	48.0	296.0	25.00	19.50	54.75	20.25	20.25	20.75	55.75	74.75	1	0	0
13	180	4.5	52.0	288.1	26.25	20.00	56.50	21.50	21.50	21.75	57.25	76.00	1	0	0
14	180	4.0	56.0	260.6	27.75	20.50	57.75	22.00	22.25	22.50	58.50	75.00	1	0	0
15	180	4.5	60.0	214.9	29.00	21.25	59.00	25.50	25.00	25.50	59.25	70.00	1	0	0
16	240	3.3	68.0	154.2	30.00	22.00	59.25	27.00	26.25	27.00	59.25	64.25	1	0	0
17	260	3.0	70.0	86.5	30.00	22.25	59.50	27.75	27.25	27.75	58.00	56.25	1	0	0
18	220	4.0	71.0	17.7	30.50	23.00	59.25	28.00	27.75	28.00	55.25	50.75	1	0	0
19	250	3.5	74.0	0.	30.25	23.00	59.25	28.25	28.00	28.25	41.00	42.00	1	0	0
20	230	4.0	74.0	0.	30.50	24.25	59.75	28.75	28.25	29.00	33.75	45.00	1	0	0
21	220	3.2	74.0	0.	30.25	24.75	59.75	28.50	28.00	28.50	31.00	45.00	1	0	0
22	180	1.6	70.0	0.	29.25	24.25	59.50	28.00	27.50	28.00	29.00	43.25	1	0	0
23	120	2.2	68.0	0.	29.00	24.00	59.25	27.25	27.00	27.75	27.50	41.25	1	0	0
TOT.				2097.0									32	0	3
AVG.	201	3.4	57.8	87.4	26.70	20.68	55.84	24.47	24.24	24.64	38.45	46.93	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.5	62.0	0.	28.25	23.25	59.00	26.75	26.75	27.00	26.00	39.00	1	0	0
1	210	1.3	56.0	0.	28.00	23.00	59.00	26.50	26.50	26.75	25.75	36.75	1	0	0
2	240	1.3	52.0	0.	27.50	22.25	58.75	26.00	26.00	26.50	25.25	35.25	1	0	0
3	240	1.6	59.0	0.	27.00	21.50	58.50	25.75	25.75	26.00	25.50	33.75	1	0	0
4	240	.4	58.0	0.	26.75	21.75	58.25	25.50	25.50	25.75	24.25	32.75	1	0	0
5	270	.2	47.0	0.	26.25	20.00	58.00	25.00	25.00	25.25	24.00	32.00	1	0	0
6	270	.2	47.0	.8	26.00	19.75	58.00	25.00	24.75	25.00	23.50	31.00	1	0	0
7	240	.4	43.0	45.0	26.00	19.00	57.75	25.00	24.75	25.00	23.25	29.75	1	0	0
8	270	1.0	43.0	108.2	25.50	18.75	57.75	24.75	24.50	25.00	23.00	24.50	1	0	0
9	300	1.5	42.0	171.1	26.00	18.50	57.75	25.00	25.00	25.00	54.25	56.75	2	0	0
10	300	2.2	44.0	230.3	27.00	18.75	57.75	26.00	25.50	25.75	58.25	69.00	4	0	0
11	330	3.2	42.0	267.6	28.25	19.00	58.75	26.50	26.25	26.25	59.50	75.25	1	0	0
12	240	3.0	47.0	284.6	29.50	19.75	60.00	27.50	27.25	27.50	61.00	78.25	5	0	0
13	180	8.0	50.0	276.9	30.25	20.00	61.50	28.25	28.00	28.00	62.25	77.75	5	0	0
14	180	8.0	52.0	250.6	30.75	21.00	62.75	28.25	28.00	28.50	63.00	76.25	6	0	0
15	180	7.2	80.0	206.9	31.75	21.75	63.50	29.25	29.00	29.25	63.50	71.00	3	0	0
16	180	8.0	67.0	151.0	32.25	22.25	63.25	30.00	29.75	30.00	63.00	64.75	6	0	0
17	180	8.8	70.0	85.3	32.75	22.50	63.50	30.50	30.25	30.50	61.25	57.50	6	0	0
18	180	8.5	70.0	18.4	32.25	22.50	63.25	30.50	30.25	30.50	44.50	44.00	8	0	0
19	180	8.5	70.0	0.	31.50	22.25	63.00	30.00	29.75	30.00	37.00	46.00	8	0	0
20	180	9.3	70.0	0.	31.00	22.00	63.00	29.00	29.00	29.25	31.75	52.25	6	0	0
21	180	8.0	68.0	0.	30.00	22.00	62.75	28.25	28.25	28.75	28.00	50.00	6	0	0
22	180	6.5	60.0	0.	29.50	21.50	62.25	27.75	27.75	28.00	26.00	45.25	4	0	0
23	180	9.0	56.0	0.	28.75	21.00	62.00	27.00	27.00	27.50	25.25	41.00	3	0	0
TOT.				2096.7									82	0	2
AVG.	221	4.5	56.5	87.4	28.86	21.00	60.42	27.25	27.10	27.37	39.96	49.99	3	0	0

DATE
(04/08/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.0	50.0	0.	28.00	20.50	62.00	26.50	26.50	27.00	25.00	36.50	1	0	0
1	180	8.0	48.0	0.	27.75	20.00	61.75	26.00	26.00	26.50	24.75	33.75	1	0	0
2	180	9.0	48.0	0.	27.50	20.00	61.50	26.00	26.00	26.25	24.25	32.75	1	0	0
3	180	10.5	48.0	0.	27.00	19.75	61.25	25.50	25.50	26.00	24.00	32.00	1	0	0
4	180	8.8	48.0	0.	26.75	19.75	61.00	25.50	25.25	25.75	24.00	31.75	1	0	0
5	180	10.5	48.0	0.	26.75	19.25	61.00	25.00	25.00	25.25	23.75	31.25	1	0	0
6	180	7.5	48.0	1.2	26.25	19.00	61.00	25.00	24.75	25.25	23.50	31.25	1	0	0
7	180	6.2	48.0	42.4	26.00	18.75	60.75	25.00	24.75	25.00	23.50	30.50	1	0	0
8	180	6.0	48.0	90.5	26.00	18.75	60.50	24.75	24.50	25.00	23.00	29.50	1	0	0
9	180	7.0	48.0	133.4	26.75	18.00	60.25	24.50	24.25	24.75	23.00	27.75	2	0	0
10	180	7.8	48.0	167.3	26.75	18.00	60.25	51.25	24.00	59.00	22.25	25.75	1	0	0
11	180	8.0	47.0	189.8	24.75	18.25	59.50	45.00	23.00	58.00	21.25	23.00	3	0	0
12	180	8.2	47.0	199.4	25.00	18.25	59.00	42.00	23.25	47.00	21.75	20.00	5	0	0
13	180	9.6	46.0	283.6	25.00	18.25	58.75	39.50	24.25	44.00	35.00	30.75	4	0	0
14	180	10.2	47.0	303.7	26.25	18.50	58.50	30.00	25.25	32.00	57.50	67.00	3	0	0
15	180	11.5	48.0	263.8	27.25	19.00	58.75	28.00	26.25	29.00	58.00	62.25	1	0	0
16	180	12.0	50.0	198.1	28.25	19.25	58.25	27.75	27.00	28.25	56.50	54.00	1	0	0
17	180	9.5	50.0	114.5	28.00	19.25	58.75	27.25	27.00	27.75	36.50	34.00	2	0	0
18	180	11.5	52.0	26.0	27.75	19.25	58.25	27.00	26.50	27.00	31.25	39.25	1	0	0
19	180	11.0	53.0	0.	27.25	19.00	58.25	26.25	26.00	26.50	29.00	49.50	1	0	0
20	180	11.0	53.0	0.	26.75	18.75	58.00	26.00	26.00	26.25	23.50	51.50	3	0	0
21	180	11.5	55.0	0.	26.25	19.00	57.75	25.25	25.00	25.75	19.75	50.25	3	0	0
22	180	11.4	54.0	0.	25.75	18.75	57.75	25.00	25.00	25.25	19.00	49.00	3	0	0
23	180	12.0	48.0	0.	25.50	18.50	57.75	24.25	24.25	25.00	19.00	48.50	2	0	0
TOT.				2013.7									46	0	2
AVG.	180	9.3	49.2	83.9	26.64	18.99	59.60	29.09	25.22	30.73	28.71	38.41	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.5	48.0	0.	25.00	18.25	57.25	38.25	23.75	42.00	18.50	48.00	1	0	0
1	180	10.0	47.0	0.	25.00	18.00	57.00	35.25	23.75	42.50	18.50	47.00	1	0	0
2	180	9.5	46.0	0.	24.75	18.25	56.25	45.00	23.50	49.25	18.50	46.25	1	0	0
3	180	8.5	44.0	0.	24.25	18.25	55.75	41.00	23.25	45.50	18.50	45.50	1	0	0
4	180	9.0	44.0	0.	24.00	18.50	55.25	44.00	23.00	49.00	18.00	45.00	1	0	0
5	180	10.0	43.0	0.	23.75	18.25	55.00	48.25	23.00	53.75	18.00	44.00	1	0	0
6	180	9.0	43.0	.7	23.75	18.25	54.25	39.00	22.75	43.00	18.00	43.75	1	0	0
7	180	9.5	42.0	17.7	23.00	18.25	53.75	47.00	22.25	52.00	18.00	41.00	1	0	0
8	180	10.5	42.0	37.2	23.00	18.50	53.25	45.00	22.25	52.25	19.25	35.50	1	0	0
9	180	10.6	42.0	54.5	23.00	18.50	52.75	40.00	22.25	45.00	20.00	29.25	2	0	0
10	180	10.5	42.0	68.1	23.00	18.50	52.50	35.50	22.50	36.00	20.75	26.75	1	0	0
11	180	13.0	43.0	96.8	23.00	18.50	52.00	44.50	22.50	50.00	20.75	21.00	4	0	0
12	180	12.5	43.0	117.7	24.00	18.75	52.00	39.00	23.25	43.00	51.50	58.25	1	0	0
13	180	11.0	43.0	115.2	25.25	18.75	52.25	38.00	24.00	42.00	52.50	60.00	1	0	0
14	180	10.5	44.0	115.7	26.75	19.00	53.50	30.00	25.25	31.25	54.50	70.00	1	0	0
15	180	11.6	48.0	102.9	27.50	19.25	54.00	40.00	26.75	44.00	53.25	55.00	1	0	0
16	180	11.8	50.0	78.8	28.00	19.00	54.00	30.75	26.75	32.50	52.50	53.25	1	0	0
17	180	11.5	50.0	46.4	27.75	19.25	53.75	37.50	26.25	42.00	36.50	35.00	3	0	0
18	180	13.0	52.0	11.3	27.00	19.25	53.25	37.00	26.00	40.00	30.50	34.25	4	0	0
19	180	11.0	50.0	0.	26.75	19.25	53.00	29.25	26.00	31.00	28.75	42.00	1	0	0
20	180	12.0	50.0	0.	26.00	19.25	53.00	35.50	25.00	38.50	26.00	45.00	2	0	0
21	180	10.0	50.0	0.	25.50	19.25	52.50	38.25	24.25	43.00	22.50	43.00	3	0	0
22	180	8.5	49.0	0.	25.00	19.00	52.00	42.00	24.00	45.50	20.75	41.00	5	0	0
23	180	6.5	44.0	0.	24.75	19.25	52.00	39.00	24.00	31.00	20.00	40.75	7	0	0
TOT.				863.0									46	0	1
AVG.	180	10.3	45.8	36.0	24.99	18.72	53.76	39.12	24.01	42.67	28.17	43.77	2	0	0

DATE
(04/10/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.5	43.0	0.	24.50	19.00	51.75	25.75	23.75	26.50	20.00	40.00	1	0	0
1	180	7.5	42.0	0.	24.00	19.00	51.50	34.00	23.25	47.00	19.50	34.25	1	0	0
2	180	6.6	42.0	0.	23.50	18.75	51.25	39.50	22.50	43.50	19.25	38.00	1	0	0
3	180	6.5	41.0	0.	23.00	18.50	51.00	35.00	22.25	42.00	19.00	38.00	1	0	0
4	180	6.5	41.0	0.	22.25	18.50	50.50	42.00	21.75	45.50	18.50	36.00	1	0	0
5	150	5.3	38.0	0.	22.25	18.50	50.00	40.00	21.75	38.00	18.50	35.50	1	0	0
6	150	5.5	38.0	2.0	21.75	18.50	49.50	41.50	21.25	45.25	18.50	34.25	2	0	0
7	150	5.2	39.0	36.8	21.75	18.75	49.00	43.75	21.00	48.00	18.50	32.25	2	0	0
8	150	5.0	39.0	75.8	21.75	19.00	48.50	35.00	21.00	40.75	19.00	28.25	1	0	0
9	150	3.8	39.0	110.5	21.50	19.25	48.00	43.00	21.00	47.00	19.25	25.25	3	0	0
10	150	4.2	40.0	137.8	21.50	20.00	47.25	41.00	21.00	45.50	19.25	21.75	5	0	0
11	150	4.2	42.0	156.0	22.00	19.50	47.00	27.50	21.50	29.75	20.00	21.50	1	0	0
12	150	5.0	42.0	163.5	22.50	19.25	47.00	24.50	21.75	25.50	20.25	23.75	1	0	0
13	180	5.0	46.0	160.1	22.25	19.00	47.00	30.00	22.00	32.50	33.00	30.00	1	0	0
14	180	6.0	48.0	145.8	22.75	19.00	46.75	34.50	22.25	37.50	29.50	26.25	1	0	0
15	180	8.0	48.0	121.7	22.50	19.00	46.25	40.50	22.00	44.00	24.00	25.00	1	0	0
16	180	7.5	48.0	89.5	22.50	19.00	46.00	34.00	22.00	37.25	27.50	26.00	2	0	0
17	180	7.0	50.0	51.7	22.75	19.00	45.75	36.00	22.00	40.00	22.00	27.25	2	0	0
18	180	7.2	49.0	12.9	22.50	19.00	45.25	36.00	22.00	39.50	21.75	30.00	1	0	0
19	180	7.2	48.0	0.	22.50	19.00	45.00	31.50	22.00	34.00	21.50	32.25	3	0	0
20	180	8.2	48.0	0.	22.50	19.00	45.00	30.00	22.00	32.00	21.00	32.25	5	0	0
21	180	10.0	48.0	0.	22.50	19.00	45.00	32.00	22.00	35.00	21.00	32.25	2	0	0
22	180	10.0	46.0	0.	22.50	19.00	45.00	29.00	22.00	31.50	20.50	32.00	2	0	0
23	180	7.5	46.0	0.	22.25	19.00	44.50	29.00	22.00	34.00	20.00	32.00	2	0	0
TOT.				1264.1									43	0	2
AVG.	167	6.5	43.8	52.7	22.49	18.98	47.66	34.79	21.92	38.40	21.09	30.79	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.2	46.0	0.	22.00	19.00	44.25	36.50	21.50	39.00	20.00	31.50	2	0	0
1	180	7.0	45.0	0.	22.00	19.00	44.00	32.00	21.75	35.00	19.75	31.25	1	0	0
2	180	8.2	46.0	0.	22.00	19.00	44.00	30.00	21.50	41.00	19.50	31.00	2	0	0
3	180	5.5	46.0	0.	21.50	19.00	43.00	35.00	21.25	37.00	19.50	31.00	2	0	0
4	270	.8	42.0	0.	21.50	19.00	43.00	35.00	21.00	38.25	19.00	30.00	1	0	0
5	180	2.2	42.0	0.	21.50	19.00	43.00	34.75	21.75	42.00	19.00	29.50	1	0	0
6	270	.8	42.0	1.0	21.00	18.75	42.00	33.00	20.25	42.00	18.75	29.00	1	0	0
7	50	2.0	42.0	14.4	21.00	19.00	42.00	37.00	20.00	41.00	18.50	28.25	1	0	0
8	60	4.0	42.0	28.0	20.75	19.00	42.00	35.50	20.00	37.50	18.50	21.25	1	0	0
9	60	3.6	42.0	38.9	21.00	19.00	41.50	34.00	20.25	37.00	41.00	51.50	1	0	0
10	40	1.6	42.0	48.5	22.50	19.00	42.75	26.25	21.75	28.00	44.00	62.75	2	0	0
11	360	2.2	44.0	54.8	24.00	19.25	44.00	24.75	22.50	25.75	45.00	52.25	2	0	0
12	360	3.8	47.0	59.8	25.00	19.50	45.00	24.50	23.50	25.00	45.50	56.00	2	0	0
13	360	3.5	48.0	61.0	25.25	19.75	45.25	24.50	24.00	24.75	45.75	48.50	1	0	0
14	360	5.0	50.0	56.3	25.75	20.00	46.00	22.50	22.50	23.00	47.00	63.00	1	0	0
15	360	3.5	50.0	47.0	26.00	20.00	47.00	23.50	23.75	23.50	48.00	59.00	1	0	0
16	360	3.0	52.0	34.7	26.50	20.25	47.50	25.00	24.50	24.75	48.00	53.00	1	0	0
17	360	3.0	50.0	19.9	27.00	20.50	47.50	25.25	25.00	25.00	45.25	45.00	1	0	0
18	300	4.2	53.0	5.0	26.25	20.50	47.50	25.00	25.00	25.00	33.00	35.75	0	0	0
19	350	1.1	47.0	0.	26.00	20.50	47.25	24.50	24.50	24.75	28.75	42.25	1	0	0
20	40	1.8	46.0	0.	25.25	20.50	47.00	24.00	23.75	24.00	24.00	44.75	4	0	0
21	50	2.2	44.0	0.	24.75	20.25	47.00	23.00	23.00	23.50	13.50	44.50	2	0	0
22	50	0.	43.0	0.	24.00	20.50	47.00	22.50	22.50	23.00	13.00	44.50	2	0	0
23	50	.6	41.0	0.	23.25	20.00	46.75	22.00	22.00	22.25	12.00	44.00	1	0	0
TOT.				469.3									35	0	2
AVG.	210	3.2	45.5	19.6	23.57	19.59	44.84	28.87	22.40	30.50	29.43	42.06	1	0	0

DATE
(04/12/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	1.6	39.0	0.	23.00	19.50	46.50	21.50	21.50	21.00	11.00	43.75	2	0	0
1	120	1.1	38.0	0.	22.50	19.00	46.25	21.00	21.00	21.50	10.50	43.25	1	0	0
2	140	1.8	37.0	0.	22.00	18.50	46.25	21.00	21.00	21.00	10.00	43.00	2	0	0
3	60	1.0	38.0	0.	21.50	18.00	45.50	33.50	20.25	37.00	9.50	43.00	1	0	0
4	150	1.1	36.0	0.	21.00	18.00	45.00	35.50	20.50	44.00	9.00	42.75	2	0	0
5	120	1.8	36.0	0.	21.00	18.00	44.50	31.50	20.00	34.25	9.50	42.50	1	0	0
6	130	1.9	36.0	4.7	21.50	18.00	44.00	37.50	19.75	41.25	8.75	42.00	1	0	0
7	150	1.6	40.0	56.3	20.00	18.00	43.00	39.00	19.75	42.25	10.50	41.75	1	0	1
8	150	5.2	46.0	112.1	20.00	18.50	42.50	35.00	19.50	39.00	15.00	28.50	2	0	0
9	150	6.0	50.0	161.6	20.50	18.75	42.25	38.00	20.00	41.75	38.50	50.75	2	0	0
10	180	5.7	54.0	200.6	21.50	18.50	42.50	35.50	20.75	38.75	43.50	52.00	2	0	0
11	180	7.0	55.0	180.4	23.00	18.75	43.50	33.00	22.00	34.00	45.50	58.00	1	0	0
12	180	8.0	56.0	189.0	24.00	18.75	44.00	29.00	22.75	31.00	44.00	51.75	1	0	0
13	180	8.0	57.0	231.9	24.50	19.25	44.25	30.00	23.25	31.50	45.75	53.00	1	0	0
14	180	7.0	60.0	211.4	24.50	20.00	45.00	27.00	24.00	28.00	45.50	53.00	1	0	0
15	180	8.0	61.0	176.8	26.00	20.00	45.50	26.00	24.75	26.50	44.50	45.00	1	0	0
16	180	7.0	61.0	130.7	26.00	20.50	45.50	25.75	25.00	26.00	45.50	49.75	1	0	0
17	180	5.0	60.0	76.6	26.00	20.75	45.50	25.50	25.00	25.50	33.50	34.00	1	0	0
18	200	4.5	60.0	16.4	26.00	21.00	45.50	25.00	25.00	25.00	29.50	34.00	1	0	0
19	200	5.3	53.0	0.	25.50	21.00	45.25	24.75	24.25	24.75	27.00	34.00	1	0	0
20	180	6.5	52.0	0.	25.00	21.00	45.25	24.25	24.00	24.00	25.25	32.75	1	0	0
21	180	5.8	46.0	0.	24.75	21.00	45.25	23.75	23.50	23.75	24.25	35.00	2	0	0
22	180	7.0	43.0	0.	24.50	21.25	45.25	23.25	23.25	23.50	22.50	35.25	2	0	0
23	180	8.0	43.0	0.	24.00	21.00	45.00	23.25	23.00	23.25	21.50	35.00	1	0	0
TOT.				1748.5									34	0	2
AVG.	160	4.8	48.2	72.9	23.26	19.46	44.71	28.73	22.24	30.35	26.25	42.66	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	10.0	44.0	0.	23.00	20.75	45.00	22.75	22.50	23.00	20.50	34.25	2	0	0
1	180	10.0	43.0	0.	23.50	20.00	45.00	22.75	22.50	22.75	20.25	33.25	2	0	0
2	180	9.5	42.0	0.	23.50	20.00	45.00	22.25	22.25	22.50	20.25	32.00	2	0	0
3	180	10.0	42.0	0.	23.25	19.50	44.75	22.00	22.00	22.25	20.00	31.00	2	0	1
4	180	9.5	42.0	0.	23.00	19.00	44.75	22.00	22.00	22.25	20.25	30.00	2	0	0
5	180	9.0	42.0	0.	23.00	18.75	44.50	22.00	22.00	22.00	20.25	28.75	2	0	0
6	180	8.0	42.0	3.6	22.75	18.50	44.50	22.00	21.75	22.00	20.25	27.00	1	0	0
7	180	9.5	42.0	35.2	22.25	18.00	44.50	22.00	21.50	22.00	20.25	25.25	1	0	0
8	180	9.0	44.0	80.0	22.00	18.00	44.50	37.00	21.00	40.00	20.00	20.00	1	0	0
9	180	7.2	44.0	114.7	22.00	18.00	44.25	38.50	21.50	43.25	20.00	19.25	3	0	0
10	360	4.2	46.0	142.0	22.00	18.00	44.00	27.75	21.50	29.75	20.00	18.75	2	0	0
11	60	7.5	42.0	176.4	22.50	18.00	44.00	25.50	22.00	25.50	20.00	20.00	8	0	0
12	60	7.5	41.0	184.6	22.50	18.00	44.00	23.00	21.75	23.50	20.00	20.50	5	0	0
13	60	10.0	41.0	180.6	22.25	18.00	44.00	22.00	21.75	22.75	20.00	22.25	1	0	0
14	60	8.5	42.0	164.7	22.50	18.25	44.00	22.00	21.75	22.50	45.00	54.00	1	0	0
15	60	10.0	41.0	137.9	23.25	18.25	44.00	22.25	22.25	22.50	38.00	40.25	1	0	0
16	60	9.3	41.0	92.7	23.00	18.25	44.25	22.25	22.00	22.50	28.75	35.25	1	0	0
17	60	7.5	41.0	47.2	23.00	18.25	44.00	39.75	22.00	43.25	25.00	31.00	1	0	0
18	60	7.5	41.0	10.5	22.25	18.75	44.00	28.50	21.25	30.75	23.00	30.00	4	0	0
19	60	6.8	40.0	0.	22.00	18.75	43.75	31.00	21.25	33.75	22.00	30.00	1	0	0
20	60	5.8	38.0	0.	22.00	18.50	43.50	31.00	21.50	34.00	21.00	29.75	8	0	0
21	120	2.5	37.0	0.	21.75	18.50	43.00	39.00	21.50	42.50	20.75	29.00	8	0	0
22	150	3.0	38.0	0.	21.50	18.75	43.00	35.50	21.00	39.50	20.00	29.00	5	0	0
23	140	4.0	37.0	0.	21.50	18.50	42.75	25.50	21.00	37.50	20.00	29.00	1	0	0
TOT.				1370.1									62	0	3
AVG.	132	7.7	41.4	57.1	22.51	18.64	44.12	27.01	21.73	28.84	22.73	29.15	3	0	0

DATE
(04/14/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	3.5	36.0	0.	21.50	18.50	42.75	22.50	21.00	23.75	19.50	29.00	1	0	0
1	120	3.5	36.0	0.	21.00	18.00	42.50	29.00	21.50	30.25	19.00	28.50	1	0	0
2	120	4.0	36.0	0.	21.50	18.00	42.00	31.50	20.00	39.75	18.75	28.00	1	0	0
3	140	2.5	34.0	0.	20.50	18.00	41.75	33.50	20.00	39.75	18.25	27.50	1	0	0
4	140	2.6	36.0	0.	20.00	17.75	41.50	31.75	19.75	38.00	18.00	27.00	1	0	0
5	140	4.0	34.0	0.	20.00	18.00	41.00	32.50	19.25	35.75	17.50	26.50	1	0	0
6	130	4.2	34.0	3.1	19.50	18.00	40.75	46.50	19.25	39.25	17.50	26.00	1	0	0
7	150	5.6	40.0	24.0	19.50	18.00	40.50	36.25	19.25	40.00	17.25	25.00	1	0	1
8	150	5.5	41.0	46.4	19.50	18.25	40.00	34.00	19.00	38.00	17.25	20.00	1	0	1
9	180	6.0	43.0	57.1	19.75	18.50	40.00	30.00	19.50	32.25	38.25	47.00	1	0	0
10	190	6.5	45.0	70.6	20.50	18.50	40.00	32.25	20.00	35.00	37.75	53.00	2	0	0
11	190	6.8	47.0	83.3	21.25	18.50	40.50	33.25	20.50	37.00	34.25	37.00	1	0	0
12	180	8.0	47.0	86.2	22.00	18.50	41.00	26.00	21.25	27.50	40.25	51.25	4	0	0
13	210	6.5	48.0	64.8	22.50	18.75	41.00	37.00	21.75	38.00	39.00	51.00	2	0	0
14	180	6.0	50.0	74.1	23.00	18.75	41.25	27.00	22.00	29.00	40.00	51.00	4	0	0
15	180	6.5	50.0	62.1	23.50	18.75	41.25	24.75	22.50	25.50	35.00	38.00	3	0	0
16	180	5.0	48.0	46.1	23.50	19.00	41.25	23.75	22.50	24.25	30.50	34.00	4	0	0
17	130	3.5	48.0	27.4	23.25	19.00	41.25	23.00	22.50	23.25	26.50	32.00	1	0	0
18	120	2.5	47.0	7.9	22.75	19.00	41.00	22.50	22.00	22.50	24.00	29.00	1	0	0
19	90	1.6	44.0	0.	22.50	19.00	41.25	22.00	22.00	22.25	22.50	28.00	1	0	1
20	90	2.0	43.0	0.	22.00	19.25	41.00	22.00	21.50	22.00	22.00	28.00	2	0	0
21	100	1.6	42.0	0.	22.00	19.25	41.00	21.25	21.25	21.50	21.00	22.50	1	0	0
22	120	1.8	42.0	0.	21.75	19.00	41.00	21.25	21.00	21.00	20.75	27.00	2	0	0
23	150	3.0	42.0	0.	21.25	18.25	41.00	20.75	20.75	21.00	20.00	26.75	2	0	0
TOT.				613.1									40	0	2
AVG.	146	4.3	42.2	25.5	21.44	18.52	41.10	28.09	20.83	30.27	25.61	33.04	2	0	0

DATE
(04/15/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	5.2	42.0	0.	21.25	18.50	40.75	20.50	20.50	21.00	20.00	26.50	1	0	0
1	180	5.8	42.0	0.	21.00	18.50	40.25	32.50	20.00	35.25	19.50	26.00	1	0	0
2	150	4.5	42.0	0.	21.00	18.25	40.00	31.00	20.25	31.00	19.25	26.00	1	0	0
3	150	4.5	41.0	0.	21.00	18.00	40.00	31.00	20.25	28.00	19.00	26.00	1	0	0
4	150	5.0	41.0	0.	21.00	17.50	40.00	22.50	20.50	23.75	19.00	25.75	1	0	0
5	150	2.7	41.0	0.	21.00	17.25	40.00	21.25	20.50	22.00	19.25	25.75	1	0	0
6	120	2.8	41.0	4.6	20.50	17.00	39.75	34.75	20.00	39.00	19.00	25.00	1	0	0
7	150	2.2	42.0	34.2	20.25	17.25	39.50	35.50	19.75	38.75	18.75	25.50	1	0	0
8	360	1.1	43.0	65.2	20.00	18.00	38.75	35.00	19.25	38.00	18.25	24.25	1	0	0
9	150	3.0	43.0	92.5	20.00	18.25	38.50	31.25	19.25	33.00	18.00	23.25	2	0	0
10	160	4.8	44.0	114.0	20.00	18.25	38.25	34.00	19.50	37.50	18.25	22.00	1	0	0
11	150	4.5	48.0	128.1	20.00	18.25	38.00	24.50	20.00	26.50	18.50	21.00	4	0	0
12	150	8.5	51.0	133.9	20.50	18.50	38.00	28.00	20.00	30.00	36.00	47.50	1	0	0
13	180	6.5	50.0	164.3	20.50	19.00	37.50	30.00	20.00	32.50	27.00	32.00	1	0	0
14	220	6.0	53.0	173.6	21.00	19.25	37.50	24.00	21.50	26.00	23.25	27.25	1	0	0
15	220	5.6	56.0	145.7	21.75	19.25	38.00	23.00	21.25	23.50	38.00	49.50	1	0	0
16	200	8.0	52.0	108.5	22.00	19.50	38.25	22.50	21.50	22.75	30.00	33.25	2	0	0
17	160	7.0	47.0	56.0	22.50	19.50	38.25	22.25	21.75	22.25	26.00	30.00	1	0	0
18	150	5.5	47.0	13.3	22.00	19.50	38.25	22.00	22.00	22.00	23.75	27.75	1	0	0
19	150	5.2	46.0	0.	22.00	19.25	38.00	22.00	21.50	22.00	22.25	27.00	1	0	0
20	180	7.0	43.0	0.	22.00	19.00	38.00	21.75	21.50	21.75	21.50	26.25	2	0	0
21	300	4.0	44.0	0.	21.50	19.00	38.00	21.50	21.00	21.50	21.00	25.50	2	0	0
22	60	2.2	42.0	0.	21.50	19.00	38.00	20.50	21.00	21.00	21.00	25.00	2	0	0
23	150	2.0	42.0	0.	21.25	19.00	38.00	20.75	20.75	21.00	20.00	25.00	1	0	0
TOT.				1233.9									30	0	1
AVG.	173	4.7	45.1	51.4	21.06	18.53	38.73	26.33	20.56	27.50	22.35	28.04	1	0	0

DATE
(04/16/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	3.0	41.0	0.	21.00	19.00	38.00	21.00	20.25	21.00	19.75	25.00	1	0	0
1	180	3.5	41.0	0.	21.00	18.75	38.00	21.00	20.00	20.50	19.75	24.25	1	0	0
2	150	4.0	41.0	0.	21.00	18.25	38.00	20.50	20.00	20.50	19.50	24.00	1	0	0
3	90	2.2	41.0	0.	21.00	18.00	37.75	20.25	20.00	20.25	19.25	23.75	1	0	0
4	30	7.0	38.0	0.	20.50	17.50	37.75	20.00	20.00	20.00	19.00	23.50	1	0	3
5	60	5.0	37.0	0.	20.00	17.25	37.75	34.00	20.00	34.00	18.75	23.00	1	0	0
6	70	4.8	36.0	2.1	20.00	17.25	37.50	31.00	19.50	33.00	18.50	23.00	1	0	6
7	130	6.0	38.0	19.8	19.75	17.25	37.00	34.00	19.00	36.75	18.00	22.25	1	0	2
8	150	6.4	39.0	41.0	19.00	18.00	36.50	33.50	18.50	36.00	17.00	21.75	1	0	5
9	150	6.0	42.0	61.8	19.00	18.50	36.00	33.00	18.50	35.50	16.50	15.75	1	0	5
10	150	5.5	46.0	76.0	19.00	18.75	35.75	29.00	18.75	29.75	34.25	47.00	4	0	0
11	150	4.5	48.0	85.4	20.00	18.75	36.25	26.00	19.50	26.00	38.25	52.00	3	0	0
12	200	7.5	50.0	83.6	21.00	19.00	37.00	30.00	20.00	31.50	35.00	45.00	1	0	0
13	200	1.2	50.0	74.1	21.50	18.75	38.00	24.25	21.00	25.50	40.00	60.50	1	0	0
14	200	15.0	50.0	67.6	22.50	18.75	40.00	23.25	21.75	23.75	41.25	57.75	1	0	0
15	200	9.3	48.0	62.6	21.75	19.00	41.25	20.25	21.00	21.00	41.50	48.00	2	0	0
16	360	4.0	53.0	49.9	23.25	18.75	41.25	21.50	21.50	21.75	40.00	37.25	2	0	0
17	30	4.7	42.0	32.1	24.25	18.75	41.00	23.00	22.75	23.00	38.50	35.25	3	0	0
18	50	4.8	42.0	10.2	25.00	18.25	41.00	23.50	23.75	23.75	37.00	33.25	1	0	0
19	90	1.3	40.0	0.	24.00	18.00	41.00	22.75	23.00	23.00	28.75	28.00	2	0	0
20	90	1.0	38.0	0.	23.25	18.00	41.00	22.25	22.25	22.50	25.50	30.00	1	0	0
21	150	5.0	39.0	0.	22.25	17.50	41.00	28.50	21.50	34.00	23.00	29.25	1	0	0
22	160	5.0	39.0	0.	21.25	18.00	40.00	35.00	20.50	37.00	26.00	27.50	1	0	0
23	150	4.7	38.0	0.	21.00	18.00	40.00	30.00	20.00	32.00	19.50	26.50	5	0	0
TOT.				666.2									57	0	23
AVG.	140	5.1	42.4	27.8	21.34	18.25	38.70	26.15	20.54	27.17	27.02	32.65	2	0	1

DATE
(04/17/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	4.6	36.0	0.	20.50	18.00	39.50	32.50	20.00	34.50	18.75	25.00	2	0	0
1	140	3.8	36.0	0.	20.00	18.25	39.00	33.00	19.50	34.00	18.00	24.00	1	0	0
2	150	5.3	38.0	0.	19.50	18.00	38.50	34.75	19.00	38.00	17.50	23.00	1	0	0
3	150	4.5	37.0	0.	19.50	18.25	38.00	34.25	18.50	37.25	17.25	22.00	1	0	0
4	150	3.8	36.0	0.	19.00	18.50	37.50	31.00	18.50	37.00	16.75	21.50	1	0	0
5	150	4.0	35.0	0.	19.00	18.50	37.00	33.75	18.25	36.00	16.50	21.00	1	0	0
6	150	5.2	36.0	7.7	18.75	18.25	36.00	33.25	18.00	36.00	16.50	20.50	1	0	0
7	140	2.7	38.0	35.9	18.75	18.50	36.00	29.00	18.25	32.00	16.00	19.00	1	0	0
8	180	2.3	44.0	66.5	18.75	18.50	35.75	29.75	18.25	31.25	16.00	15.00	1	0	0
9	180	2.0	43.0	93.4	19.00	18.50	35.50	32.50	18.75	35.00	25.00	26.00	1	0	0
10	180	3.4	50.0	132.7	19.50	18.75	35.50	24.00	19.00	26.00	37.00	54.00	1	0	0
11	180	5.0	50.0	175.1	20.50	19.00	37.00	22.00	20.00	23.00	39.50	56.00	1	0	0
12	210	5.5	50.0	198.4	21.50	19.00	38.50	21.75	21.00	22.00	40.00	55.00	4	0	0
13	210	5.6	51.0	195.5	23.00	19.50	40.75	22.00	21.50	22.00	42.50	60.00	1	0	0
14	200	4.8	53.0	179.5	23.75	19.50	42.00	22.50	22.00	22.50	43.50	58.75	1	0	0
15	180	5.5	54.0	150.9	24.50	19.75	43.50	23.00	22.75	23.00	44.75	57.25	4	0	0
16	180	6.0	54.0	112.9	25.00	19.75	44.25	23.50	23.25	23.50	44.75	49.00	1	0	0
17	180	6.7	52.0	68.3	24.00	19.75	44.50	21.50	21.50	22.00	38.00	37.00	2	0	0
18	180	7.8	47.0	21.6	23.25	19.50	44.50	21.75	21.75	22.00	28.50	31.00	3	0	0
19	180	9.0	47.0	0.	23.00	19.50	44.25	21.75	22.00	22.00	26.00	31.75	3	0	0
20	180	8.8	44.0	0.	23.00	19.00	44.00	21.75	22.00	22.00	23.50	29.50	2	0	0
21	180	9.5	42.0	0.	22.50	19.50	44.00	21.50	21.50	21.75	22.00	28.75	2	0	0
22	180	8.5	41.0	0.	22.50	19.00	44.00	21.00	21.00	21.25	21.00	29.00	2	0	0
23	180	8.5	41.0	0.	22.00	19.00	44.00	21.00	20.75	21.00	20.50	27.25	2	0	0
TOT.				1438.4									35	0	0
AVG.	172	5.5	44.0	59.9	21.28	18.91	40.15	26.36	20.29	27.71	27.07	34.22	1	0	0

DATE
(04/14/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	21.50	18.75	44.00	21.00	20.75	21.00	20.00	26.50	1	0	0
1				0.	21.50	18.25	43.50	21.00	20.50	21.00	20.00	25.00	1	0	0
2				0.	21.25	18.00	43.50	21.00	20.50	21.00	19.50	25.00	1	0	0
3				0.	21.00	17.25	43.50	20.50	20.00	21.00	19.25	24.25	1	0	0
4	180	7.0	41.0	0.	21.00	17.00	43.25	20.50	20.25	21.50	19.25	24.00	1	0	0
5	180	6.0	41.0	0.	21.00	17.00	43.25	20.25	20.00	21.50	19.00	23.50	1	0	0
6	150	3.0	41.0	6.3	20.50	17.00	43.00	38.25	20.00	42.00	18.75	23.00	1	0	0
7	100	4.5	45.0	54.6	20.00	17.25	42.25	38.00	19.50	41.50	18.50	21.00	1	0	0
8	120	2.0	48.0	111.3	19.50	18.25	41.75	37.25	19.00	41.00	17.25	18.00	1	0	0
9	60	3.0	48.0	159.7	19.50	19.00	41.00	37.00	19.00	40.50	40.00	50.00	1	0	0
10	60	3.5	48.0	198.3	20.00	19.50	41.50	37.25	18.50	41.00	43.00	60.50	1	0	0
11	270	3.5	49.0	222.1	20.50	19.25	42.75	27.00	20.75	29.00	40.00	44.50	1	0	0
12	270	3.5	42.0	231.7	23.50	19.25	43.50	24.75	22.00	25.00	45.25	56.00	4	0	0
13	30	3.0	50.0	223.2	24.50	19.50	45.25	24.00	23.00	24.75	46.25	57.50	1	0	0
14	30	4.0	50.0	203.8	25.00	20.00	45.25	24.00	23.50	24.25	41.50	42.50	1	0	0
15	30	4.5	52.0	167.2	25.00	20.00	45.25	24.00	23.75	24.00	44.50	46.00	1	0	0
16	360	3.8	52.0	120.2	25.00	21.00	45.75	23.75	23.75	24.00	42.00	41.00	2	0	0
17	360	3.2	50.0	73.1	25.00	21.75	45.50	23.75	23.50	24.00	30.25	30.25	1	0	0
18	60	3.3	48.0	22.4	24.50	22.00	45.50	23.50	23.00	23.50	27.00	30.00	1	0	0
19	60	5.0	47.0	0.	24.00	21.50	45.25	22.75	22.25	23.00	25.00	30.00	1	0	0
20	60	6.4	46.0	0.	23.50	21.00	45.25	22.25	22.00	22.25	23.25	20.50	1	0	0
21	60	4.8	44.0	0.	23.00	20.00	45.25	22.00	21.50	22.00	22.50	35.50	1	0	0
22	60	5.3	43.0	0.	23.00	20.00	45.25	22.00	21.50	22.00	21.00	36.00	1	0	0
23	60	6.0	42.0	0.	22.50	19.50	45.00	21.50	21.50	21.75	19.75	35.50	2	0	0
TOT.				1743.9									32	0	1
AVG.	128	4.3	46.3	74.7	22.32	19.25	43.67	25.72	21.25	26.81	28.45	35.00	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	5.2	43.0	0.	22.25	19.00	45.00	21.25	21.00	21.50	19.00	35.25	1	0	0
1	80	5.3	42.0	0.	22.00	18.75	45.00	21.25	21.00	21.00	18.75	35.00	2	0	0
2	90	2.2	42.0	0.	21.75	18.50	44.75	21.00	20.75	21.00	18.50	34.50	1	0	0
3	150	2.2	42.0	0.	21.50	18.50	44.75	21.00	20.50	21.00	18.50	34.00	1	0	0
4	150	3.5	40.0	0.	21.50	17.50	44.75	20.75	20.50	21.00	18.00	34.00	1	0	0
5	150	4.5	39.0	0.	21.00	17.25	44.50	34.00	20.00	35.00	17.75	33.00	1	0	0
6	150	3.8	40.0	12.4	21.00	17.25	44.50	32.50	20.00	36.00	18.00	32.50	1	0	0
7	150	3.5	40.0	61.2	20.50	17.25	44.00	39.50	20.00	43.00	17.25	34.00	1	0	0
8	180	3.3	44.0	88.3	20.25	18.00	44.50	37.00	19.50	42.75	17.25	28.00	1	0	0
9	150	2.8	48.0	122.9	20.25	18.50	43.00	31.75	19.75	34.50	18.00	20.00	1	0	0
10	150	2.5	50.0	150.1	21.00	18.75	43.00	36.75	20.25	40.00	44.00	55.00	1	0	0
11	300	3.6	50.0	167.9	22.25	18.75	43.50	27.00	21.50	28.75	43.75	48.50	1	0	0
12	360	3.2	50.0	175.1	23.00	18.75	43.50	24.50	22.00	25.50	33.00	32.00	3	0	0
13	360	2.5	51.0	171.1	24.00	18.75	44.25	24.00	23.00	24.50	44.25	47.00	1	0	0
14	60	3.0	52.0	156.3	24.75	19.00	44.50	24.00	23.25	24.25	45.00	53.50	3	0	0
15	50	4.0	52.0	131.7	25.00	19.00	45.00	24.00	24.00	24.00	45.75	52.00	1	0	0
16	360	2.8	52.0	124.1	25.00	19.25	45.25	24.50	24.00	24.00	35.50	34.25	1	0	0
17	360	2.5	52.0	87.9	25.00	19.25	45.00	24.00	24.00	24.00	28.50	28.00	1	0	0
18	360	1.8	48.0	34.8	24.25	19.50	45.00	23.75	23.50	23.50	25.50	28.75	1	0	0
19	50	2.8	48.0	0.	24.00	19.50	45.00	23.00	23.00	23.00	24.50	30.00	5	0	0
20	50	1.5	43.0	0.	23.50	19.50	45.00	23.00	22.00	23.00	23.50	31.25	4	0	0
21	60	1.8	43.0	0.	23.00	19.25	45.00	22.50	22.25	22.50	22.50	34.50	10	0	0
22	60	1.3	42.0	0.	23.00	19.00	44.75	22.00	21.75	22.00	21.50	35.00	10	0	0
23	60	1.8	42.0	0.	22.25	18.50	44.75	21.75	21.25	22.00	20.00	34.50	7	0	0
TOT.				1483.8									64	0	0
AVG.	166	3.0	45.6	61.8	22.58	18.64	44.51	26.03	21.61	26.99	26.59	36.02	3	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	50	2.5	42.0	0.	22.00	18.50	44.75	21.50	21.25	21.50	19.00	34.00	1	0	0
1	50	2.5	40.0	0.	22.00	18.00	44.75	21.25	21.00	21.25	18.50	33.75	2	0	0
2	60	2.5	40.0	0.	21.50	17.75	44.50	21.00	20.75	21.00	18.25	33.25	1	0	0
3	360	1.0	38.0	0.	21.00	17.00	44.75	39.00	20.00	42.00	18.00	32.50	2	0	0
4	360	1.0	37.0	0.	21.00	17.00	44.50	31.00	20.00	34.00	17.75	32.00	1	0	0
5	360	1.1	37.0	0.	20.50	17.00	44.00	35.50	20.00	39.00	17.25	31.50	1	0	0
6	50	3.0	38.0	8.6	20.00	17.25	44.75	39.00	19.75	42.50	17.50	31.00	1	0	0
7	330	4.0	41.0	39.5	20.00	17.25	43.50	35.00	19.75	38.00	17.00	28.50	1	0	0
8	330	4.5	47.0	70.6	20.00	17.75	43.00	35.00	19.50	38.00	17.50	16.00	1	0	0
9	330	6.0	48.0	97.8	20.50	17.75	43.25	36.00	20.00	38.00	43.00	51.00	1	0	0
10	330	4.8	52.0	119.2	22.00	18.00	43.75	27.75	21.00	30.00	44.75	60.00	2	0	0
11	330	5.6	54.0	133.2	23.25	18.25	45.00	25.00	22.25	26.00	46.00	59.75	1	0	0
12	330	5.2	58.0	138.8	25.00	19.50	46.00	24.50	23.50	25.00	47.50	61.25	1	0	0
13	310	6.5	58.0	135.6	26.00	20.00	47.75	25.00	24.25	25.00	49.25	62.25	1	0	0
14	300	6.5	58.0	123.9	27.00	20.00	49.00	25.50	25.00	25.50	49.75	57.50	1	0	0
15	300	5.8	58.0	104.5	27.00	20.00	49.50	26.00	25.25	25.50	49.00	51.00	1	0	0
16	300	5.5	58.0	78.7	27.25	20.00	49.25	26.00	25.25	26.00	48.50	48.50	1	0	0
17	300	5.5	58.0	60.7	27.75	20.00	49.00	26.00	26.00	26.00	46.00	44.00	1	0	0
18	300	4.8	53.0	24.3	27.00	20.00	49.00	26.00	26.00	26.00	33.00	34.00	1	0	0
19	300	1.9	51.0	0.	27.50	20.25	49.00	25.75	25.50	25.25	29.50	34.00	5	0	0
20	40	2.3	50.0	0.	26.00	20.00	49.00	25.00	25.00	25.00	22.00	33.00	9	0	0
21	330	1.1	49.0	0.	26.00	20.00	49.00	24.75	24.75	24.75	25.75	36.00	7	0	0
22	270	1.0	48.0	0.	25.00	19.50	49.00	24.00	24.00	24.00	21.00	44.00	6	0	0
23	170	1.0	49.0	0.	25.00	19.50	48.75	24.00	24.75	24.00	18.75	43.50	1	0	0
TOT.				1135.4									50	0	0
AVG.	258	3.6	48.4	47.3	23.76	18.76	46.45	27.90	22.69	28.89	30.60	41.34	2	0	0

DATE
(04/21/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	1.4	48.0	0.	24.50	19.00	48.50	23.25	23.00	23.50	18.00	43.00	1	0	0
1	170	1.8	47.0	0.	24.00	18.75	48.50	23.00	23.00	23.00	18.50	42.00	1	0	0
2	150	3.2	47.0	0.	24.00	18.50	48.50	22.50	22.50	23.00	18.50	41.25	1	0	0
3	180	2.0	47.0	0.	23.50	18.00	48.00	22.50	22.50	22.50	18.00	41.00	1	0	0
4	160	2.8	48.0	0.	23.25	18.00	48.00	22.25	22.00	22.50	18.00	40.50	1	0	0
5	150	5.7	48.0	0.	23.00	18.25	48.00	39.00	21.75	43.00	18.00	40.00	1	0	0
6	150	6.0	42.0	14.5	22.75	18.25	48.00	40.00	21.75	42.75	18.00	38.00	1	0	0
7	150	9.0	53.0	62.1	23.00	18.00	48.25	32.50	22.00	35.50	19.25	27.00	1	0	0
8	200	6.2	53.0	109.6	23.00	17.50	48.25	26.25	22.50	28.00	20.25	19.00	1	0	0
9	200	6.5	53.0	151.4	23.25	17.50	48.00	24.50	23.00	25.00	20.75	18.50	1	0	0
10	180	5.2	55.0	184.1	23.25	17.00	48.00	24.50	22.50	23.75	38.00	29.50	4	0	0
11	150	4.0	60.0	205.4	24.00	17.50	48.25	24.00	23.00	23.75	47.50	52.00	1	0	0
12	170	5.0	60.0	213.9	25.00	17.75	48.25	24.25	23.50	24.00	46.25	46.00	7	0	0
13	180	5.5	58.0	209.0	25.75	17.75	47.00	24.75	24.25	24.50	42.00	40.50	5	0	0
14	150	3.5	56.0	191.0	25.50	18.50	47.00	25.00	24.50	24.50	30.00	29.00	5	0	0
15	60	3.5	55.0	161.2	25.00	18.25	47.00	24.50	24.25	24.00	27.00	27.50	7	0	0
16	150	3.0	57.0	121.7	25.00	18.75	47.00	24.25	24.00	24.00	25.25	26.50	5	0	0
17	150	3.0	56.0	75.3	24.75	19.00	46.75	24.00	23.25	24.00	24.25	28.00	4	0	0
18	140	2.4	54.0	26.6	24.75	19.75	46.25	32.00	23.25	35.00	24.25	38.50	4	0	0
19	120	1.3	53.0	0.	24.75	19.75	46.25	27.00	23.75	28.25	23.50	34.75	2	0	0
20	90	3.0	52.0	0.	25.00	20.00	46.00	25.25	23.25	26.00	23.25	32.50	2	0	0
21	90	2.8	52.0	0.	24.50	20.00	46.00	24.50	23.50	25.00	23.00	31.75	3	0	0
22	130	1.7	52.0	0.	24.50	19.75	46.00	24.00	23.25	24.00	22.75	31.00	3	0	0
23	150	.8	50.0	0.	24.00	19.75	46.00	23.75	23.00	23.75	22.25	30.00	2	0	0
TOT.				1725.8									62	0	0
AVG.	150	3.7	52.3	71.9	24.17	18.55	47.41	26.15	23.05	26.80	25.27	34.49	3	0	0

DATE
(04/22/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(kWh)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	2.0	51.0	0.	24.00	20.00	45.75	23.00	23.00	23.25	22.00	29.75	1	0	0
1	90	1.0	48.0	0.	23.75	19.50	45.50	23.00	22.50	23.00	22.00	29.25	1	0	0
2	90	1.0	48.0	0.	23.50	19.25	45.50	23.00	22.50	23.00	21.50	29.00	1	0	0
3	100	1.1	46.0	0.	23.25	18.75	45.25	22.50	22.00	22.50	21.25	29.00	1	0	0
4	120	2.1	45.0	0.	23.00	18.75	45.25	22.25	22.00	22.25	21.00	28.25	1	0	0
5	150	1.0	46.0	.6	22.50	18.75	45.25	37.00	21.75	43.00	20.75	27.75	1	0	0
6	120	1.6	43.0	8.3	22.75	18.25	45.00	27.00	21.75	29.00	20.75	27.00	1	0	0
7	360	1.5	50.0	17.7	22.25	19.00	45.00	40.50	21.75	44.00	20.25	22.00	1	0	0
8	360	2.6	55.0	26.7	22.00	19.25	44.50	34.00	21.50	37.50	20.00	16.00	1	0	0
9	360	3.2	58.0	34.4	23.00	19.00	44.50	30.00	22.00	32.00	45.00	55.25	1	0	0
10	30	3.5	52.0	50.7	24.75	19.50	45.50	31.50	23.00	34.00	46.75	62.25	1	0	0
11	300	5.0	57.0	71.0	26.00	19.75	47.00	28.00	24.75	29.00	48.50	67.00	1	0	0
12	300	5.5	70.0	81.7	27.25	20.00	49.00	27.00	26.00	27.75	50.50	69.00	3	0	0
13	300	5.8	70.0	79.9	28.00	21.00	50.50	27.00	26.50	27.00	51.75	67.00	2	0	0
14	300	6.2	72.0	73.7	29.00	22.00	52.00	27.00	27.00	27.25	52.75	65.00	2	0	0
15	300	5.5	73.0	63.7	29.50	22.25	53.00	28.00	27.50	27.50	53.50	63.25	1	0	0
16	300	4.5	74.0	48.3	29.75	23.00	53.50	29.00	27.50	27.75	53.50	58.00	1	0	0
17	300	3.8	77.0	31.2	30.00	23.75	53.50	29.50	28.00	28.00	52.00	50.00	1	0	0
18				14.7	30.00	24.00	53.25	28.75	28.50	28.50	50.25	47.50	2	0	0
19				2.9	30.00	24.00	53.25	28.75	28.50	28.50	37.50	39.00	4	0	0
20				0.	29.75	23.75	53.25	28.50	28.00	28.00	32.50	39.00	2	0	0
21				0.	29.00	23.50	53.00	27.75	27.50	27.50	30.00	34.25	2	0	0
22				0.	28.50	23.00	53.00	27.25	27.00	27.25	28.75	39.00	2	0	0
23				0.	28.25	22.50	53.00	27.00	27.00	27.00	27.50	37.50	1	0	0
TOT.				605.5									33	0	0
AVG.	222	3.2	57.5	25.2	26.24	20.94	48.93	28.14	24.90	28.94	35.43	43.17	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	270	2.5	57.0	0.	27.75	22.75	52.75	26.50	26.50	26.50	26.50	37.00	1	0	0
1	150	2.5	54.0	0.	27.25	22.25	53.00	26.25	26.00	26.25	25.75	36.00	1	0	0
2	150	7.0	51.0	0.	27.00	22.00	52.75	26.00	26.00	26.00	25.00	35.25	1	0	0
3	150	5.8	50.0	0.	26.50	21.75	52.50	25.50	25.25	25.75	24.25	35.00	1	0	0
4	130	4.0	48.0	0.	26.50	21.75	52.50	25.00	25.00	25.25	24.00	34.00	1	0	0
5	140	4.0	48.0	2.7	26.00	21.00	52.00	25.00	24.75	25.00	23.50	33.50	1	0	0
6	150	1.8	50.0	55.8	25.50	21.00	52.25	24.50	24.25	24.50	23.00	32.00	1	0	0
7	150	2.0	53.0	120.2	25.25	21.00	52.00	24.00	24.00	24.25	23.00	28.00	1	0	0
8	210	1.6	60.0	181.6	25.25	20.25	52.00	24.25	24.00	24.25	22.75	21.00	2	0	0
9	270	1.8	62.0	234.9	25.50	20.00	52.00	24.50	24.25	24.50	46.00	46.00	1	0	0
10	60	3.0	62.0	250.7	26.00	20.75	52.00	25.50	25.00	25.50	53.00	62.00	2	0	0
11	60	2.2	63.0	237.5	28.00	21.00	53.00	26.50	26.00	26.25	53.75	63.00	3	0	0
12	360	3.0	69.0	195.7	28.75	21.75	53.75	27.00	26.75	26.00	53.75	60.00	2	0	0
13	300	3.8	70.0	191.4	29.50	22.00	54.25	27.75	27.50	27.50	55.00	66.00	1	0	0
14	270	3.7	72.0	176.6	30.00	22.00	55.00	28.25	27.00	27.00	55.00	60.25	3	0	0
15	240	2.2	73.0	152.4	30.00	22.75	55.00	28.50	28.25	28.25	54.50	55.25	2	0	0
16	150	3.2	72.0	120.4	30.50	22.50	55.00	29.00	28.50	28.50	53.00	50.50	3	0	0
17	120	2.8	72.0	82.8	30.50	22.25	55.00	29.00	29.00	28.75	51.25	47.50	1	0	0
18	90	1.0	70.0	42.6	30.25	22.75	54.75	29.00	28.75	29.00	37.00	38.25	1	0	0
19	300	2.0	64.0	6.1	30.00	23.00	54.50	28.75	28.50	28.50	33.00	42.00	1	0	0
20	300	1.8	63.0	0.	29.50	23.00	54.25	28.25	28.00	28.00	30.25	41.75	1	0	0
21	360	.8	62.0	0.	29.00	22.50	54.25	28.00	27.50	28.00	29.00	40.75	3	0	0
22	360	1.0	60.0	0.	28.75	22.25	54.25	27.50	27.25	27.50	27.75	44.00	1	0	0
23	330	1.4	58.0	0.	28.50	22.00	54.00	27.25	27.00	27.00	26.00	43.25	1	0	0
TOT.				2051.4									35	0	0
AVG.	211	2.7	61.0	85.5	27.99	21.84	53.45	26.74	26.46	26.58	36.50	43.44	1	0	0

DATE
(04/24/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.5	56.0	0.	28.00	22.00	54.00	27.00	26.75	26.75	25.00	43.00	1	0	0
1	360	1.5	55.0	0.	28.00	22.00	53.75	26.50	26.50	26.75	24.25	42.00	1	0	0
2	240	1.4	52.0	0.	27.50	22.00	53.75	26.25	26.25	26.25	24.00	41.25	1	0	0
3	150	2.0	50.0	0.	27.00	21.50	53.25	26.00	26.00	26.00	23.25	40.00	1	0	0
4	150	3.5	48.0	0.	27.00	21.25	53.25	26.00	25.50	25.75	23.00	39.50	1	0	0
5	150	4.2	52.0	1.0	26.50	21.00	53.00	25.25	25.00	25.50	22.50	38.00	1	0	0
6	150	5.0	52.0	15.6	26.25	20.50	53.00	25.00	25.00	25.00	22.75	34.00	1	0	0
7	180	4.0	54.0	54.7	26.00	20.00	53.00	25.00	25.00	25.00	23.00	26.50	1	0	0
8	150	2.8	60.0	88.6	26.00	20.00	53.00	25.00	24.50	25.00	23.00	19.00	2	0	0
9	270	2.5	62.0	119.7	25.50	20.00	53.00	25.00	25.00	25.00	53.00	60.00	2	0	0
10	330	3.5	65.0	135.2	27.50	20.25	54.00	26.25	26.00	26.00	54.75	85.50	3	0	0
11	330	4.0	68.0	139.1	29.00	21.00	55.00	27.00	26.75	27.00	56.00	70.00	3	0	0
12	330	3.5	71.0	89.8	30.00	22.00	56.50	28.00	27.25	28.00	57.50	74.00	3	0	0
13	330	3.6	72.0	140.7	30.75	22.50	58.00	29.00	28.50	28.75	59.00	74.50	3	0	0
14	330	4.6	74.0	138.5	31.25	23.25	59.00	29.25	29.00	29.25	60.00	72.50	1	0	0
15	330	4.5	73.0	124.5	32.00	23.25	60.00	30.00	29.50	29.75	60.25	68.75	1	0	0
16	330	2.5	75.0	98.2	32.50	24.00	60.50	30.25	30.00	30.25	60.25	62.25	1	0	0
17	330	2.5	75.0	64.6	32.75	24.25	60.50	30.75	30.00	30.75	58.50	55.00	1	0	0
18	330	3.0	70.0	28.0	32.75	24.50	60.25	30.75	30.25	30.75	53.00	49.00	1	0	0
19	330	2.0	60.0	3.2	32.00	24.50	60.00	30.25	30.00	30.25	40.00	44.50	2	0	0
20	330	2.5	51.0	0.	31.50	24.50	60.00	30.00	29.50	30.00	34.25	50.00	1	0	0
21	50	2.3	58.0	0.	31.00	24.50	60.00	29.50	29.00	29.25	30.50	50.50	2	0	0
22	50	3.3	58.0	0.	30.25	24.50	59.75	28.50	28.50	28.75	28.00	50.25	2	0	0
23	50	2.8	58.0	0.	29.75	25.00	59.50	28.00	28.00	28.25	28.00	48.75	1	0	0
TOT.				1241.4									35	0	0
AVG.	247	3.0	61.6	51.7	29.24	22.43	56.50	27.69	27.41	27.67	39.24	50.82	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	1.8	57.0	0.	29.50	25.00	59.00	27.75	27.50	28.00	25.25	47.00	2	0	0
1	330	.8	57.0	0.	29.00	24.00	59.00	27.50	27.50	28.00	25.00	45.25	1	0	0
2	120	1.0	55.0	0.	29.00	23.00	59.00	27.25	27.00	27.50	25.00	44.00	1	0	0
3	120	3.0	52.0	0.	28.50	23.50	58.50	27.00	26.50	27.00	24.75	43.00	2	0	0
4	180	2.5	52.0	0.	28.00	23.00	58.25	26.75	26.50	27.00	24.25	42.00	1	0	0
5	140	3.5	52.0	1.2	28.00	22.75	58.00	26.75	26.00	26.50	24.25	40.50	1	0	0
6	130	3.8	52.0	38.0	27.50	22.00	58.00	26.25	26.00	26.25	24.00	37.50	1	0	0
7	180	8.5	55.0	84.3	27.25	22.00	58.00	26.25	26.00	26.50	24.50	31.25	0	0	0
8	130	1.0	56.0	128.4	27.25	22.00	57.75	26.25	25.75	26.25	24.75	23.00	1	0	0
9	140	11.5	58.0	166.7	27.50	21.00	57.50	26.25	26.00	26.25	51.00	48.00	1	0	0
10	190	1.2	52.0	196.5	28.00	21.25	57.50	27.00	26.75	27.00	52.00	49.00	1	0	0
11	140	8.0	62.0	215.8	29.00	21.50	57.25	27.50	27.25	27.25	54.00	58.00	1	0	0
12	200	8.5	68.0	223.3	29.50	21.50	57.00	28.00	28.00	28.00	56.00	60.25	1	0	0
13	200	8.5	68.0	218.3	30.00	21.75	57.00	28.00	27.75	28.00	56.00	61.00	1	0	0
14	200	8.5	68.0	201.3	30.50	22.00	57.00	29.00	28.75	28.75	57.25	62.00	1	0	0
15	180	9.2	68.0	173.5	31.00	23.00	57.00	29.50	29.00	29.50	56.25	55.25	3	0	0
16	200	12.5	66.0	136.6	31.00	23.25	57.00	29.75	29.25	29.50	54.00	51.00	1	0	0
17	200	17.0	62.0	93.4	31.00	23.00	57.00	29.75	29.50	29.75	42.00	39.50	1	0	0
18	180	11.5	50.0	47.2	30.25	23.00	57.00	29.00	28.75	29.00	35.50	45.00	1	0	0
19	180	10.0	48.0	5.7	30.00	23.00	56.50	28.50	28.25	28.75	29.50	48.00	4	0	0
20	170	7.0	48.0	0.	29.00	22.25	56.25	27.75	27.75	28.00	25.00	47.00	2	0	0
21	140	3.5	47.0	0.	28.75	21.50	56.00	27.00	27.00	27.50	23.25	45.00	1	0	0
22	150	1.8	48.0	0.	28.25	21.75	56.00	26.75	26.50	27.00	22.75	43.25	1	0	0
23	180	2.2	48.0	0.	27.50	22.00	56.00	26.25	26.00	26.75	23.00	41.50	1	0	0
TOT.				1930.2									30	0	0
AVG.	175	6.1	56.2	80.4	28.97	22.46	57.40	27.57	27.30	27.67	35.80	46.14	1	0	0

DATE
(04/26/77)

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	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	150	3.0	48.0	0.	27.25	21.75	55.75	26.00	25.00	26.25	23.00	40.00	1	0	0
1	150	5.0	48.0	0.	27.25	21.25	55.50	25.75	25.75	26.00	23.00	38.00	1	0	0
2	150	6.0	48.0	0.	26.50	21.00	55.25	25.25	25.25	25.75	23.00	36.50	1	0	0
3	150	6.0	48.0	0.	26.25	20.25	55.00	25.00	25.00	25.25	23.00	35.00	1	0	0
4	150	3.2	47.0	0.	26.00	19.75	55.00	25.00	24.75	25.00	22.95	33.00	1	0	0
5	150	5.5	47.0	.3	25.75	19.75	55.00	24.75	24.50	24.75	23.00	31.50	1	0	0
6	190	7.0	48.0	13.1	25.75	19.00	55.00	24.50	24.25	24.75	23.00	30.00	1	0	0
7	180	9.0	50.0	29.6	25.25	19.25	54.75	24.25	24.00	24.50	22.50	23.25	2	0	0
8	180	9.5	52.0	45.2	25.25	19.25	54.50	36.00	24.00	40.00	22.00	20.00	1	0	0
9	180	11.0	54.0	58.9	25.25	19.25	54.25	46.00	24.25	52.00	23.00	20.00	3	0	0
10	200	10.5	58.0	69.5	25.00	19.25	54.00	30.00	24.00	32.50	53.00	84.00	4	0	0
11	150	9.5	58.0	95.8	27.00	19.50	55.00	27.75	25.25	37.75	55.25	66.00	3	0	0
12	180	7.5	58.0	99.1	28.00	20.00	55.50	27.50	26.50	28.00	55.75	59.50	2	0	0
13	180	8.5	58.0	132.0	29.00	20.50	56.00	27.00	27.00	27.50	56.00	52.50	1	0	0
14	240	6.0	60.0	126.9	26.50	21.50	56.50	25.00	24.25	25.00	56.25	56.50	1	0	0
15	240	6.0	61.0	112.1	27.75	21.25	56.50	25.25	25.25	26.00	56.00	57.25	3	0	0
16	240	5.6	62.0	88.2	29.00	21.25	56.75	25.75	26.75	27.00	56.00	57.00	1	0	0
17	190	5.2	60.0	56.2	30.00	21.25	56.50	25.00	28.00	25.25	55.00	52.00	1	0	0
18	180	5.0	58.0	23.9	30.00	21.50	56.50	28.00	28.00	28.25	41.50	40.25	1	0	0
19	180	4.2	56.0	3.1	29.25	21.50	56.25	25.00	28.00	28.00	34.50	42.50	1	0	0
20	270	2.2	52.0	0.	29.00	22.00	56.00	27.50	27.50	27.50	30.50	45.00	2	0	0
21	360	1.0	47.0	0.	28.50	22.00	55.75	27.00	27.00	27.00	26.50	47.00	2	0	0
22	50	2.3	48.0	0.	28.00	22.00	55.75	26.50	26.50	26.50	24.00	45.50	1	0	0
23	60	1.5	48.0	0.	27.50	21.75	55.50	26.00	26.00	26.25	22.00	43.25	1	0	0
TOT.				953.9									35	0	0
AVG.	181	5.8	53.1	39.7	27.29	20.66	55.52	27.57	25.74	28.74	35.45	43.05	1	0	0

DATE
(04/27/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	.8	46.0	0.	27.00	21.25	55.25	25.50	25.50	26.00	21.25	44.00	1	0	0
1	340	1.0	47.0	0.	26.50	21.75	55.25	25.00	25.00	25.50	21.25	43.00	1	0	0
2	60	1.5	44.0	0.	26.00	20.00	55.00	24.75	24.75	25.00	21.00	41.75	1	0	0
3	360	1.0	43.0	0.	25.75	20.00	55.00	24.50	24.25	24.50	20.75	40.25	1	0	0
4	350	.5	42.0	0.	25.25	19.25	55.00	24.00	24.00	24.25	20.50	39.00	1	0	0
5	60	1.1	42.0	.5	25.00	19.00	54.75	23.75	23.50	24.00	20.25	37.75	1	0	0
6	60	1.8	43.0	26.9	24.75	18.50	54.50	23.50	23.50	24.00	20.50	35.50	1	0	0
7	60	2.0	44.0	61.9	24.50	18.25	54.50	23.50	23.00	23.50	21.00	26.00	1	0	0
8	60	3.2	46.0	95.1	24.25	18.25	54.50	23.25	23.00	23.50	21.50	23.75	1	0	0
9	360	3.5	54.0	124.0	24.50	18.25	54.25	23.50	23.25	23.50	31.00	24.50	3	0	0
10	360	4.0	58.0	146.5	25.00	18.50	54.50	24.25	24.25	24.50	55.00	66.50	1	0	0
11	330	6.0	61.0	160.0	27.25	19.00	55.50	25.75	25.25	25.75	56.50	72.50	1	0	0
12	330	6.0	62.0	164.7	28.75	19.50	57.00	27.00	26.50	26.75	58.00	75.00	1	0	0
13	330	7.5	62.0	161.1	30.00	20.25	58.75	27.75	27.50	27.75	58.50	76.00	2	0	0
14	330	9.0	62.0	147.3	30.75	20.75	60.00	28.75	28.25	28.75	60.25	74.00	1	0	0
15	330	6.0	65.0	124.9	31.25	21.50	61.00	29.25	29.00	29.00	61.00	70.00	1	0	0
16	330	8.0	66.0	95.6	32.00	22.25	61.25	30.00	29.50	29.75	61.00	63.00	1	0	0
17	330	8.0	62.0	62.3	32.00	23.00	61.00	30.00	30.00	30.00	58.75	50.50	1	0	0
18	330	6.5	58.0	26.3	32.00	23.00	61.00	30.00	30.00	30.00	46.00	43.00	1	0	0
19	330	2.0	58.0	3.3	31.50	23.00	60.75	30.00	29.50	30.00	37.50	45.00	3	0	0
20	300	1.4	53.0	0.	31.75	22.75	60.75	29.00	29.00	29.25	30.00	55.75	2	0	0
21	330	.2	50.0	0.	30.00	22.00	60.50	28.50	28.25	28.75	27.00	50.50	1	0	0
22	60	3.0	50.0	0.	29.50	22.00	60.25	28.00	27.75	28.00	25.50	48.00	1	0	0
23	330	1.0	50.0	0.	29.00	21.75	60.00	27.25	27.00	27.75	25.00	44.75	1	0	0
TOT.				1400.4									28	0	0
AVG.	255	3.5	52.8	58.3	28.09	20.57	57.51	26.53	26.31	26.66	37.04	49.58	1	0	0

DATE
(04/28/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	.7	48.0	0.	28.00	21.25	60.00	27.00	26.75	26.00	25.00	41.50	1	0	0
1	60	1.4	48.0	0.	28.00	21.25	59.50	26.50	26.25	26.75	24.50	40.00	1	0	0
2	90	.5	46.0	0.	27.50	20.50	59.50	26.00	26.00	26.25	24.00	37.00	1	0	0
3	90	.6	44.0	0.	27.00	20.25	59.25	25.25	25.50	26.00	24.00	35.50	1	0	0
4	120	.2	42.0	0.	26.75	20.00	59.25	25.25	25.25	25.50	23.50	34.50	1	0	0
5	150	.6	43.0	.7	26.25	19.50	59.00	25.00	25.00	25.25	23.00	33.00	1	0	0
6	150	.6	48.0	56.3	26.00	18.00	59.00	25.00	24.50	25.00	23.00	31.25	1	0	0
7	360	1.4	54.0	118.5	26.00	18.00	59.00	24.75	24.50	25.00	23.00	28.50	1	0	0
8	360	2.5	58.0	158.0	26.00	18.00	58.75	25.00	24.75	25.00	22.75	19.00	1	0	0
9	60	3.5	58.0	164.5	27.00	19.00	58.75	25.50	25.25	25.50	58.00	62.50	1	0	0
10	360	3.0	60.0	194.6	28.50	19.75	59.00	27.00	26.25	26.75	59.50	70.00	2	0	0
11	60	3.5	62.0	214.1	29.25	20.00	59.50	27.00	27.00	27.25	60.00	72.50	1	0	0
12	330	4.0	65.0	221.6	30.50	21.00	60.50	28.00	28.00	28.25	61.00	73.00	3	0	0
13	330	5.8	63.0	216.7	31.00	21.00	61.00	29.00	28.50	29.00	61.00	65.00			
14	280	6.0	58.0	199.6	32.00	22.00	62.00	29.50	29.50	29.75	62.25	72.50			
15	330	5.5	68.0	171.6	32.25	22.25	62.25	30.00	30.00	30.25	62.25	66.00			
16	330	4.5	68.0	134.6	32.75	22.75	62.25	30.50	30.00	30.25	62.00	62.00			
17	270	2.3	68.0	91.2	33.00	22.75	62.25	31.00	30.50	31.00	59.50	55.75			
18	210	4.0	64.0	44.8	33.00	22.75	62.00	31.00	30.50	31.00	57.50	52.50			
19	120	4.0	60.0	4.0	32.50	23.00	62.00	31.00	30.50	30.75	43.00	42.25			
20	150	5.8	58.0	0.	32.00	22.75	62.00	30.00	30.00	30.25	34.25	57.75			
21	150	6.0	58.0	0.	31.25	22.75	62.00	29.25	29.00	29.25	24.75	56.50			
22	150	5.5	56.0	0.	30.25	22.75	61.50	28.50	28.50	29.00	26.00	49.00			
23	180	5.5	52.0	0.	30.00	22.25	61.50	28.25	28.00	28.25	26.50	45.00			
TOT.				1990.8									15		
AVG.	202	3.2	56.2	82.9	29.45	20.98	60.49	27.72	27.50	27.80	40.43	50.06	1		

DATE
(04/29/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	8.2	52.0	0.	29.25	22.00	60.50	27.75	27.75	28.00	26.25	41.75			
1	160	8.0	50.0	0.	29.00	22.00	61.25	27.00	27.00	27.25	26.00	39.00			
2	150	8.0	50.0	0.	28.75	21.25	61.00	26.75	26.75	27.00	25.50	36.00			
3	150	6.3	50.0	0.	28.00	20.75	61.00	26.50	26.25	27.00	25.25	34.00			
4	150	4.4	51.0	0.	28.00	20.50	60.75	26.00	26.00	26.50	25.25	33.00			
5	150	4.2	50.0	.2	27.50	20.00	60.50	26.00	26.00	26.25	25.00	32.00			
6	150	4.0	50.0	23.7	27.25	19.75	60.50	26.00	25.75	26.00	24.75	31.25			
7	150	4.0	52.0	55.8	27.00	19.75	60.25	25.50	25.75	26.00	24.25	25.00			
8	190	4.3	58.0	86.6	27.00	19.50	60.00	25.75	25.50	25.75	24.25	20.25			
9	200	4.2	60.0	113.4	27.50	19.50	60.00	26.00	26.00	26.00	53.50	52.00			
10	200	5.3	62.0	134.3	28.50	19.50	60.00	27.00	26.75	27.00	60.00	70.50			
11	200	4.5	66.0	147.8	29.75	20.00	61.00	28.00	27.50	28.00	61.25	73.00			
12	150	4.5	68.0	153.0	31.75	20.00	62.00	29.00	28.50	28.00	63.00	81.00			
13	210	4.5	68.0	239.6	31.75	21.00	63.25	29.75	29.00	29.50	64.00	79.25			
14	220	5.0	70.0	245.6	32.00	21.25	64.75	29.25	29.25	29.50	65.00	77.50			
15	240	5.5	70.0	216.4	33.00	22.00	65.00	30.00	30.00	30.25	65.25	72.50			
16	240	4.5	72.0	169.5	33.25	22.50	65.50	31.00	30.50	31.00	65.25	66.00			
17	300	7.0	68.0	106.9	33.75	22.75	65.25	31.50	31.25	31.25	63.00	59.50			
18	350	3.5	61.0	44.2	34.00	22.75	65.00	31.75	31.50	31.50	53.25	48.50			
19	360	3.0	58.0	4.2	33.50	22.50	65.00	31.50	31.00	31.25	41.25	50.00			
20	60	3.2	57.0	0.	32.75	22.75	65.00	30.75	30.50	31.00	34.75	57.00			
21	60	1.8	52.0	0.	32.00	23.00	64.75	30.00	29.75	30.00	29.00	56.00			
22	60	1.8	52.0	0.	31.25	22.75	64.25	29.00	29.00	29.50	27.00	53.00			
23	30	1.2	52.0	0.	31.75	22.50	64.00	28.75	28.75	29.00	26.00	50.00			
TOT.				1741.2											
AVG.	140	4.6	58.3	72.5	30.34	21.26	62.52	28.35	28.17	28.44	41.58	51.58			

DATE
(04/30/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(kWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INTER. HEATER	HEAT PUMP
0	50	2.4	50.0	0.	30.00	22.00	64.00	28.00	28.00	28.75	26.00	45.00			
1	50	1.6	50.0	0.	29.50	22.00	64.00	28.00	28.00	28.00	26.00	41.00			
2	50	1.5	48.0	0.	29.25	22.00	63.75	27.75	27.25	28.00	26.00	37.50			
3	360	.8	46.0	0.	29.00	21.25	63.50	27.00	27.00	27.25	26.00	35.00			
4	360	.6	45.0	0.	28.50	21.00	63.25	27.00	26.75	27.00	25.75	34.00			
5	360	.8	47.0	.1	28.00	20.75	63.00	29.00	28.25	61.75	25.00	33.25			
6	330	2.5	50.0	36.3	27.75	20.25	62.75	29.25	26.25	37.00	25.00	32.75			
7	330	4.0	52.0	87.4	27.50	20.75	62.25	38.75	26.50	42.00	25.00	29.50			
8	330	4.5	56.0	137.1	28.00	20.75	62.00	31.25	27.00	32.50	25.00	21.00			
9	330	7.0	58.0	179.9	28.75	21.00	62.00	29.50	28.00	30.00	55.00	60.00			
10	330	5.3	62.0	213.2	30.25	21.00	62.00	29.50	28.75	29.50	62.50	74.00			
11	330	5.0	65.0	233.2	31.50	21.00	63.00	30.00	29.25	29.50	63.75	79.75			
12	330	6.0	66.0	240.3	32.75	22.00	64.50	31.50	30.00	31.25	65.00	79.00			
13	330	7.5	66.0	223.9	33.50	22.25	65.50	31.00	30.75	31.00	66.00	77.50			
14	330	8.5	68.0	185.2	34.25	22.75	66.50	32.00	31.25	32.00	66.75	74.00			
15	330	6.0	68.0	144.2	34.75	23.25	67.00	32.25	32.00	32.25	67.00	74.25			
16	330	4.4	68.0	97.4	35.00	24.00	67.25	33.00	32.25	32.75	67.00	65.50			
17	300	3.8	66.0	65.5	35.25	24.25	67.25	33.00	32.75	33.00	63.00	57.75			
18	320	3.6	62.0	31.5	35.00	24.00	67.00	33.00	32.75	33.50	45.00	44.50			
19	360	2.5	60.0	2.2	34.25	24.00	67.00	32.25	32.00	31.75	37.75	35.50			
20	360	.5	58.0	0.	34.00	23.75	66.75	32.00	31.25	31.50	32.00	59.00			
21	330	.6	58.0	0.	33.00	24.00	66.50	31.00	31.00	31.00	30.00	56.75			
22	60	.8	58.0	0.	32.50	23.75	66.25	30.00	30.00	30.25	28.50	53.25			
23	300	1.0	56.0	0.	32.00	23.50	66.00	30.00	29.75	30.00	28.25	48.25			
TOT.				1877.4											
AVG.	287	3.4	57.6	78.2	31.43	22.30	64.71	30.67	29.35	32.56	41.97	53.12			

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	360	6.0	56.0	0.	31.25	23.25	66.00	29.25	29.00	29.50	28.00	44.00			
1	360	1.4	52.0	0.	31.00	23.25	66.00	29.00	28.75	29.25	28.00	41.25			
2	30	.8	50.0	0.	30.25	23.00	65.75	28.50	28.25	28.75	27.75	39.25			
3	30	.8	50.0	0.	30.00	22.25	65.25	28.25	28.00	28.50	27.25	37.00			
4	360	.8	49.0	0.	29.75	22.00	65.25	27.75	27.50	28.00	27.00	35.50			
5	120	.8	48.0	0.	29.00	21.75	65.00	27.25	27.25	27.75	26.25	34.50			
6	90	.5	50.0	24.0	29.00	21.25	65.00	27.25	27.00	27.25	26.00	34.00			
7	270	.8	54.0	72.5											
8	310	1.0	55.0	119.9											
9	360	1.5	58.0	161.3	28.75	21.25	64.75	27.00	27.00	27.25	26.00	32.75			
10	300	5.0	58.0	193.6	28.75	21.00	64.75	27.00	27.00	27.00	25.75	26.25			
11	60	3.5	58.0	214.6	28.75	21.00	64.75	27.25	27.00	27.00	26.00	27.00			
12	330	3.5	60.0	222.9	28.75	21.00	64.25	27.25	27.00	27.00	26.00	28.00			
13	360	1.3	60.0	217.8	29.00	21.00	64.00	27.50	27.00	27.25	26.00	28.50			
14	210	2.2	62.0	199.8	28.75	21.00	64.00	27.25	27.00	27.25	26.25	29.25			
15	210	3.5	62.0	170.1	28.75	21.00	63.75	27.50	27.00	27.50	26.25	30.00			
16	200	2.5	62.0	130.7	29.00	21.50	63.50	27.50	27.00	27.75	26.50	29.50			
17	200	3.2	61.0	84.5	29.00	21.75	63.25	27.75	27.25	27.25	26.75	29.50			
18	140	4.2	60.0	35.5	29.00	21.75	63.00	27.75	27.00	27.50	26.75	29.00			
19	170	6.0	58.0	.1	29.00	22.00	63.00	27.75	27.00	27.50	26.75	31.00			
20	150	7.0	58.0	0.	28.75	21.75	63.00	27.50	27.00	27.50	26.75	32.50			
21	150	6.0	58.0	0.	29.00	21.25	62.75	27.25	27.00	27.25	27.00	34.75			
22	180	6.5	58.0	0.	28.25	21.00	62.25	27.00	26.75	27.00	26.50	36.00			
23	180	7.5	56.0	0.	28.25	21.25	62.25	27.00	26.75	27.00	26.25	36.75			
TOT.				1847.3											
AVG.	216	3.2	56.4	77.0	29.18	21.65	64.16	27.51	27.30	27.64	26.62	32.83			

DATE
(05/02/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	7.2	52.0	0.	28.25	21.25	62.00	27.00	26.75	27.00	26.25	36.00			
1	180	8.0	52.0	0.	28.00	21.25	62.00	27.00	26.75	27.00	26.00	34.25			
2	180	8.0	52.0	0.	28.00	20.75	61.50	26.75	26.50	26.75	25.75	33.25			
3	180	8.0	51.0	0.	28.00	20.75	61.75	26.75	26.50	26.75	25.50	33.00			
4	180	6.5	51.0	0.	27.75	20.00	61.50	26.50	26.25	26.75	25.25	32.25			
5	180	7.2	60.0	0.	27.25	20.00	61.25	26.25	26.25	26.25	25.00	31.00			
6	180	8.5	50.0	5.0	27.00	19.75	61.25	26.00	26.00	26.25	25.00	30.00			
7	180	10.0	50.0	14.7	26.25	20.00	60.25	44.00	25.25	49.00	24.00	31.00			
8	180	7.6	50.0	24.1	26.50	20.50	60.00	48.00	25.75	53.00	24.00	30.50			
9	180	8.0	50.0	32.4	26.75	20.25	59.75	38.50	26.00	43.00	24.25	29.75			
10	180	10.5	52.0	38.8	26.25	20.25	59.00	50.50	26.00	57.00	24.00	28.00			
11	180	9.0	52.0	43.0	26.50	20.75	58.75	43.25	26.00	48.00	24.00	27.00			
12	180	10.0	52.0	44.6	27.00	21.00	58.75	49.50	26.50	55.50	24.50	26.50			
13	180	9.0	54.0	43.6	27.00	21.25	58.25	46.00	26.25	51.00	24.50	25.75			
14	180	8.5	52.0	40.0	27.25	21.00	58.00	32.25	27.00	34.25	24.75	25.25	1	0	0
15	180	7.5	52.0	34.1	27.25	21.00	57.75	28.50	26.50	29.50	24.25	26.25	5	0	0
16	150	6.8	54.0	26.2	27.00	20.50	57.50	27.25	26.25	28.00	24.50	27.50	5	0	0
17	150	7.0	52.0	17.0	27.00	20.50	57.25	27.00	26.25	27.25	24.50	26.25	2	0	0
18	120	4.3	52.0	7.3	27.00	21.00	57.00	26.25	26.00	26.75	24.25	25.75	1	0	0
19	120	3.8	50.0	0.	27.00	20.75	57.00	26.00	26.00	26.50	24.00	27.00	1	0	0
20	160	3.8	52.0	0.	26.75	20.50	56.50	26.00	25.75	26.00	24.50	30.00	3	0	0
21	150	5.3	50.0	0.	26.50	20.50	56.75	26.00	25.75	26.00	24.50	32.75	8	0	0
22	150	3.5	50.0	0.	26.25	20.75	56.50	20.75	25.50	26.00	24.25	33.25	5	0	0
23	100	3.0	49.0	0.	26.00	20.75	56.00	20.00	25.00	25.75	24.00	33.00	4	0	0
TOT.				370.8									36	0	0
AVG.	166	7.1	51.7	15.4	27.02	20.62	59.01	31.42	26.11	34.14	24.55	29.72	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	3.2	48.0	0.	26.00	20.25	55.75	25.00	25.00	25.00	23.50	31.75	1	0	0
1	210	4.2	48.0	0.	25.50	20.25	55.25	24.75	24.75	25.00	23.25	30.75	1	0	0
2	210	6.5	47.0	0.	25.25	19.75	55.25	24.50	24.25	25.00	23.00	30.00	1	0	0
3	180	5.8	44.0	0.	25.25	19.50	55.00	24.50	24.25	24.75	23.00	29.50	0	0	0
4	140	4.2	44.0	0.	25.00	19.00	55.00	24.25	24.25	24.25	22.75	29.00	1	0	0
5	160	6.0	46.0	0.	25.00	19.00	54.75	24.25	24.00	24.00	22.75	28.25	0	0	0
6	180	7.2	44.0	4.8	25.00	18.75	54.75	24.00	24.00	24.00	22.25	27.25	1	0	0
7	180	9.2	46.0	11.9	24.25	18.75	54.75	39.50	23.25	43.50	22.00	27.00	1	0	0
8	180	1.1	48.0	19.5	24.25	18.50	54.25	41.50	23.50	46.00	21.75	24.00	1	0	0
9	180	1.1	50.0	26.1	24.25	18.25	54.00	42.00	23.75	46.50	21.75	21.75	1	0	0
10	190	1.3	48.0	36.2	24.50	18.25	53.75	36.75	24.00	41.00	49.00	43.00	1	0	0
11	180	1.5	60.0	47.2	25.25	18.25	53.25	36.50	24.50	40.25	41.50	37.50	4	0	0
12	180	14.5	52.0	52.4	26.00	18.50	53.00	29.50	25.50	31.00	47.00	48.00	5	0	0
13	180	15.5	52.0	47.9	27.50	19.00	54.50	28.00	26.25	28.75	55.25	70.00	3	0	0
14	180	11.5	52.0	37.4	28.00	19.25	55.75	27.25	25.75	28.00	56.50	71.00	3	0	0
15	270	5.0	53.0	27.5	29.00	19.50	57.00	27.50	27.25	28.00	57.75	66.00	4	0	0
16	360	3.5	48.0	21.2	29.75	20.00	58.00	28.00	27.75	28.00	57.75	59.00	4	0	0
17	180	8.5	50.0	16.0	30.00	20.50	58.25	28.50	28.25	28.50	57.75	59.00	4	0	0
18	150	10.0	48.0	7.6	30.25	21.00	58.00	29.00	28.50	29.00	47.50	44.00	4	0	0
19	180	8.5	44.0	0.	30.00	21.00	58.00	28.25	28.00	28.50	34.00	35.00	4	0	0
20	180	9.9	43.0	0.	29.25	21.25	58.00	28.00	27.75	28.00	31.00	36.00	3	0	0
21	180	9.0	42.0	0.	29.00	21.00	57.75	27.25	27.25	27.25	29.25	42.00	4	0	0
22	180	6.5	42.0	0.	28.25	20.00	57.50	26.75	26.75	27.00	26.25	42.25	2	0	0
23	180	6.3	41.0	0.	27.75	20.00	57.50	26.25	26.25	26.50	24.75	39.75	1	0	0
TOT.				355.7									53	0	0
AVG.	190	6.7	47.5	14.8	26.84	19.56	55.79	29.24	25.66	30.32	35.05	40.49	2	0	0

DATE
(05/04/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	10.5	42.0	0.	27.00	19.75	57.25	26.00	26.00	26.25	24.00	36.00	1	0	0
1	180	9.5	41.0	0.	26.75	19.00	57.25	25.25	25.25	25.75	23.50	33.00	0	0	0
2	180	9.0	41.0	0.	26.25	18.75	57.00	25.00	25.00	25.25	23.00	31.50	1	0	0
3	180	9.2	41.0	0.	26.00	18.00	57.00	24.50	24.50	25.00	23.00	30.25	0	0	0
4	180	9.0	41.0	0.	25.50	17.75	57.00	24.25	24.25	24.75	22.75	30.00	1	0	0
5	180	9.0	42.0	0.	25.00	17.50	56.75	46.00	23.50	51.50	22.00	28.75	1	0	0
6	180	9.5	42.0	15.7	24.25	17.75	56.00	49.25	23.00	55.00	21.25	28.25	1	0	0
7	180	9.5	42.0	44.2	23.50	18.50	55.25	45.50	22.25	50.00	21.00	27.25	1	0	0
8	180	10.0	44.0	90.0	23.25	18.75	54.75	47.50	22.50	53.25	21.00	25.00	1	0	0
9	180	10.0	44.0	120.2	23.25	18.50	54.00	44.00	22.50	46.00	20.75	22.50	2	0	0
10	180	10.5	50.0	166.5	23.00	18.25	53.50	39.00	22.75	43.50	20.75	19.00	2	0	0
11	180	10.0	50.0	184.3	24.00	18.50	53.25	37.75	23.00	41.75	40.00	30.00	1	0	0
12	180	11.5	52.0	210.8	25.00	18.75	53.00	33.25	24.25	36.25	53.25	42.00	1	0	0
13	180	12.0	50.0	206.1	25.25	19.00	53.50	34.50	25.25	37.75	54.00	65.25	1	0	0
14	180	11.5	50.0	189.2	27.75	19.00	54.75	29.75	26.50	31.25	54.50	63.50	1	0	0
15	180	11.0	50.0	161.5	28.50	19.25	55.75	28.25	27.00	29.00	56.25	69.25	1	0	0
16	180	11.0	50.0	124.7	29.00	19.25	56.75	28.00	27.50	28.75	57.00	66.25	1	0	0
17	180	8.5	50.0	73.9	29.50	19.75	57.00	28.25	27.75	28.25	57.00	60.00	1	0	0
18	180	7.0	49.0	32.4	29.75	19.25	57.00	28.25	28.00	28.25	55.25	51.50	1	0	0
19	180	7.5	44.0	.4	29.25	19.25	57.00	28.00	28.00	28.25	38.25	37.50	0	0	0
20	180	6.5	42.0	0.	29.00	19.25	57.00	27.50	27.25	27.75	33.25	42.00	5	0	0
21	180	7.0	42.0	0.	28.25	19.25	56.75	27.00	27.00	27.25	28.75	46.50	4	0	0
22	180	5.5	41.0	0.	27.75	19.25	56.50	26.25	26.25	26.50	24.75	45.00	4	0	0
23	180	6.2	41.0	0.	27.00	19.00	56.25	25.75	25.75	26.00	22.75	42.75	3	0	0
TOT.				1619.9									36	0	2
AVG.	177	9.2	45.0	67.5	26.45	18.80	55.84	32.45	25.21	34.30	34.08	41.37	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	160	4.0	41.0	0.	26.50	18.75	56.00	25.25	25.00	25.75	22.00	39.75	1	0	0
1	180	5.0	41.0	0.	26.00	19.00	56.00	25.00	25.00	25.25	22.00	36.75	1	0	0
2	180	5.0	41.0	0.	25.50	18.25	55.75	24.50	24.25	25.00	22.00	34.00	1	0	0
3	180	3.5	41.0	0.	25.00	18.25	55.50	37.00	23.75	41.00	22.00	31.50	1	0	0
4	180	3.4	40.0	0.	24.75	18.25	55.00	41.00	23.75	45.50	22.00	30.00	1	0	0
5	150	2.8	40.0	0.	24.50	18.25	55.00	35.50	23.75	39.75	22.00	29.25	1	0	0
6	150	5.0	40.0	14.9	24.00	18.50	54.00	46.00	23.00	51.50	21.75	28.25	1	0	0
7	150	4.0	40.0	40.9	23.75	18.50	53.75	40.00	23.00	44.75	21.25	28.00	1	0	0
8	140	3.0	42.0	82.8	23.50	19.00	53.25	44.50	22.75	51.25	21.25	28.25	1	0	0
9	140	3.5	46.0	110.3	23.25	18.50	53.00	38.00	23.00	43.00	21.00	18.00	1	0	0
10	140	3.8	43.0	131.8	23.25	18.75	52.50	45.25	22.75	51.25	20.75	17.75	1	0	0
11	150	2.5	50.0	168.8	23.50	19.00	52.25	35.75	23.00	39.50	21.00	19.25	1	0	0
12	90	2.0	48.0	175.1	24.00	18.50	52.00	40.00	23.50	42.00	51.50	53.00	1	0	0
13	60	3.4	50.0	210.0	24.75	19.75	52.00	38.00	23.25	42.00	51.00	49.25	1	0	0
14	360	2.2	50.0	200.8	25.00	20.00	52.00	45.50	24.00	51.00	33.00	32.00	1	0	0
15	240	3.0	52.0	171.5	25.75	20.00	52.00	31.25	25.00	33.50	52.25	57.75	1	0	0
16	270	3.5	54.0	130.7	26.75	20.00	52.00	28.25	26.00	29.25	47.00	46.00	1	0	0
17	320	2.5	52.0	80.2	27.25	19.75	52.00	27.25	26.25	28.00	52.25	57.25	1	0	0
18	330	3.0	50.0	26.1	27.75	19.75	52.00	27.00	26.25	27.25	51.25	50.25	2	0	0
19	360	3.0	48.0	.4	27.25	19.75	52.00	27.00	26.25	27.00	36.75	36.25	1	0	0
20	270	.8	47.0	0.	27.00	19.75	52.00	26.50	26.25	26.50	31.75	40.75	2	0	0
21	210	1.2	43.0	0.	26.50	19.75	51.75	26.00	25.75	26.00	29.25	41.25	2	0	0
22	150	3.5	42.0	0.	26.25	19.75	51.75	25.50	25.25	25.50	26.75	41.00	1	0	0
23	130	4.0	42.0	0.	25.75	19.50	51.75	25.00	24.75	25.00	23.75	42.00	2	0	0
TOT.				1544.3									27	0	2
AVG.	195	3.4	45.1	64.3	25.31	19.14	53.14	33.54	24.40	36.10	31.02	37.31	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	3.0	42.0	0.	25.25	19.25	51.50	24.25	24.25	24.50	21.50	41.00	2	0	0
1	150	4.0	41.0	0.	25.00	19.00	51.50	23.75	23.75	24.00	20.75	40.00	1	0	0
2	150	4.5	41.0	0.	24.75	18.75	51.25	30.00	23.25	28.00	20.00	37.50	1	0	0
3	150	8.5	40.0	0.	23.75	18.75	51.25	43.75	22.75	49.00	20.00	35.75	1	0	0
4	140	1.0	38.0	0.	23.50	18.75	51.00	38.50	22.50	43.00	20.00	34.00	1	0	0
5	110	.8	38.0	0.	23.00	18.25	50.25	34.25	22.25	38.00	20.00	32.75	1	0	0
6	270	1.1	46.0	21.2	22.75	18.50	50.00	44.25	22.00	49.00	20.00	31.00	1	0	0
7	270	2.0	50.0	56.6	22.00	19.00	49.25	42.50	21.00	47.00	19.25	29.00	1	0	0
8	300	2.4	50.0	89.6	21.75	19.00	48.75	34.50	21.25	38.00	19.50	25.25	1	0	0
9	300	4.2	52.0	116.1	22.00	19.25	48.25	42.75	21.25	46.00	19.75	15.00	1	0	0
10	300	5.2	52.0	132.9	22.50	19.25	48.00	42.00	22.00	46.75	48.00	54.50	4	0	0
11	300	4.0	54.0	124.8	24.00	19.75	48.75	26.50	21.25	29.00	49.75	64.50	1	0	0
12	300	4.0	55.0	89.1	25.00	20.00	50.00	25.00	23.25	26.25	50.00	56.75	1	0	0
13	300	4.0	60.0	109.3	26.25	20.00	50.75	25.25	24.75	26.00	51.25	59.25	1	0	0
14	300	4.4	60.0	100.4	27.25	20.50	51.50	26.00	25.50	26.25	52.25	64.50	1	0	0
15	300	5.8	60.0	85.8	28.00	20.75	52.00	26.75	26.25	26.75	52.00	55.00	1	0	0
16	300	4.2	60.0	66.5	28.25	21.00	52.25	27.00	26.75	27.00	52.75	57.00	1	0	0
17	300	2.0	58.0	43.8	29.00	21.50	53.00	27.00	27.00	27.25	53.00	57.50	3	0	0
18	340	.8	54.0	15.7	29.00	22.00	53.00	27.75	27.25	27.50	52.00	49.00	1	0	0
19	30	1.1	54.0	.4	28.50	21.75	53.00	27.75	27.25	27.50	37.75	38.00	1	0	0
20	70	2.6	54.0	0.	28.25	21.75	53.00	27.25	27.00	27.25	32.00	37.00	2	0	0
21	70	.6	52.0	0.	28.00	21.75	52.75	26.75	26.75	26.75	29.50	37.00	2	0	0
22	340	.8	50.0	0.	27.25	21.75	52.75	26.25	26.00	26.50	26.75	47.25	2	0	0
23	360	.6	50.0	0.	27.00	21.50	52.50	26.00	25.75	26.00	22.00	47.25	2	0	0
TOT.				1052.2									34	0	2
AVG.	234	3.0	50.5	43.8	25.50	20.07	51.09	31.07	24.21	32.64	33.74	43.57	1	0	0

DATE
(05/07/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.8	48.0	0.	26.50	21.25	52.50	25.50	25.00	25.75	20.50	46.00	3	0	0
1	60	1.1	46.0	0.	26.25	21.00	52.25	25.25	25.00	25.25	20.25	45.25	1	0	0
2	70	1.5	44.0	0.	26.00	21.00	52.00	24.75	24.25	25.00	20.25	44.25	1	0	0
3	90	2.0	42.0	0.	26.00	20.75	52.00	24.25	24.25	24.50	20.00	44.00	1	0	0
4	120	1.2	42.0	0.	25.00	20.00	52.00	24.00	23.75	24.25	19.50	42.75	1	0	0
5	130	1.8	43.0	0.	25.00	19.75	51.75	23.75	23.50	24.00	19.00	42.25	1	0	0
6	140	3.0	48.0	28.5	24.00	19.50	51.75	45.75	22.75	51.00	18.75	40.75	1	0	0
7	180	2.2	53.0	74.0	22.50	20.00	50.75	41.50	22.00	47.75	18.25	39.00	1	0	0
8	270	1.5	60.0	113.5	23.00	20.50	50.00	40.50	21.75	44.50	18.75	33.25	2	0	0
9	30	2.2	60.0	144.4	23.25	20.00	50.00	28.25	22.75	30.25	20.25	17.25	2	0	0
10	30	3.5	60.0	172.1	24.25	20.25	49.75	26.00	23.25	27.00	47.75	54.00	1	0	0
11	30	3.5	62.0	190.1	25.50	20.50	50.00	25.50	24.50	26.00	50.75	58.25	2	0	0
12	300	4.0	68.0	205.6	27.00	21.00	50.00	26.00	25.50	26.00	51.75	64.00	4	0	0
13	300	7.2	66.0	192.7	28.00	21.25	52.00	27.00	26.25	26.75	53.25	71.00	1	0	0
14	310	7.0	68.0	166.0	29.00	21.50	53.75	27.25	27.00	27.25	55.00	72.75	1	0	0
15	360	4.0	68.0	128.7	30.00	22.00	55.25	28.00	27.75	28.00	56.50	71.75	1	0	0
16	90	7.2	58.0	99.9	30.50	22.00	56.75	28.75	28.25	28.50	57.25	68.00	1	0	0
17	90	7.2	52.0	66.0	31.00	22.25	57.25	29.00	28.75	29.00	56.75	56.75	1	0	0
18	90	5.8	52.0	30.0	31.00	22.75	57.00	29.00	28.75	29.00	44.00	43.25	1	0	0
19	180	4.2	50.0	1.0	30.00	22.25	57.00	28.25	28.00	28.50	35.00	46.75	1	0	0
20	180	5.8	51.0	0.	29.50	22.00	57.00	27.75	27.75	28.00	30.75	47.00	1	0	0
21	160	4.2	50.0	0.	29.00	22.00	56.75	27.00	27.00	27.25	27.25	46.75	1	0	0
22	150	4.8	50.0	0.	28.25	21.50	56.50	27.00	26.50	27.00	25.50	45.00	2	0	0
23	150	5.2	50.0	0.	28.00	21.25	56.50	26.25	26.00	26.50	24.00	43.00	2	0	0
TOT.				1612.5									34	0	1
AVG.	161	3.8	53.8	67.2	27.02	21.09	53.35	28.59	25.43	29.46	33.79	49.29	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.2	48.0	0.	27.50	21.25	56.25	26.00	25.75	26.25	23.50	40.50	1	0	0
1	150	5.0	50.0	0.	27.00	21.00	56.25	25.25	25.25	26.00	23.50	36.00	1	0	0
2	180	5.0	49.0	0.	26.75	21.00	56.00	25.50	25.25	25.50	23.50	35.00	1	0	0
3	180	5.0	49.0	0.	26.25	20.75	56.00	25.00	25.00	25.25	23.50	33.00	1	0	0
4	180	6.0	48.0	0.	26.25	20.00	56.00	25.00	24.75	25.25	23.75	31.75	1	0	0
5	180	6.1	48.0	0.	26.00	20.00	55.75	25.00	24.50	25.00	23.75	30.75	1	0	0
6	180	5.0	48.0	17.7	25.75	19.50	55.75	24.50	24.25	24.75	23.25	30.50	1	0	0
7	150	4.6	50.0	45.6	25.75	19.75	55.50	24.50	24.25	24.75	23.25	30.00	1	0	0
8	140	4.5	52.0	72.5	25.00	19.50	55.50	36.00	24.00	39.75	23.00	28.75	1	0	0
9	200	5.8	58.0	120.3	25.25	19.50	55.25	44.00	24.00	48.00	22.50	22.50	1	0	0
10	240	4.2	58.0	165.9	25.50	19.25	55.00	30.25	24.75	32.25	52.25	52.00	2	0	0
11	330	4.0	58.0	201.9	25.25	19.75	55.00	45.00	25.25	49.00	55.00	65.00	2	0	0
12	270	2.7	58.0	223.4	28.25	20.00	55.50	32.00	26.75	34.00	56.25	64.25	1	0	0
13	360	2.4	51.0	233.7	29.25	20.25	56.00	30.00	28.00	30.75	55.75	58.75	1	0	0
14	350	3.5	62.0	218.0	30.00	20.25	56.00	29.25	28.25	29.50	55.00	54.50	1	0	0
15	360	3.0	61.0	188.1	30.00	20.50	56.25	29.00	28.75	29.25	57.00	71.50	3	0	0
16	330	3.0	63.0	146.9	31.00	21.00	57.25	29.25	29.00	29.25	57.75	64.00	2	0	0
17	30	2.3	62.0	98.2	31.00	21.75	57.50	30.00	29.50	29.75	57.00	57.75	1	0	0
18	330	2.5	62.0	45.2	31.25	21.75	57.25	30.00	29.75	30.00	56.25	54.25	1	0	0
19	330	2.2	58.0	1.6	31.25	22.00	57.25	30.00	29.75	29.75	45.00	42.50	1	0	0
20	330	1.5	55.0	0.	31.00	21.75	57.00	29.75	29.25	29.25	36.50	42.00	1	0	0
21	330	1.4	52.0	0.	30.25	21.75	57.00	29.00	29.00	29.00	32.50	49.25	4	0	0
22	330	2.0	50.0	0.	29.75	22.00	57.00	28.25	28.00	28.50	29.75	50.00	2	0	0
23	330	.9	48.0	0.	29.00	22.00	57.00	27.75	27.50	28.00	25.00	49.25	1	0	0
TOT.				1779.0									31	0	0
AVG.	248	3.7	54.1	74.1	28.14	20.68	56.22	29.59	26.69	30.36	37.65	46.07	1	0	0

DATE
(05/09/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	1.5	48.0	0.	28.50	21.50	56.75	27.00	27.00	27.25	24.00	44.00	1	0	0
1	330	1.0	46.0	0.	28.00	21.25	56.75	26.75	26.50	27.00	24.00	41.25	0	0	0
2	360	1.5	48.0	0.	27.50	21.00	56.25	26.00	26.00	26.50	24.00	39.00	1	0	0
3	360	.4	44.0	0.	27.00	20.75	56.00	26.00	25.75	26.00	24.00	36.75	1	0	0
4	30	2.5	45.0	0.	26.75	20.00	56.00	25.50	25.25	26.00	23.50	35.00	1	0	0
5	30	2.5	46.0	0.	26.25	20.00	55.75	25.00	25.00	25.50	23.50	34.00	0	0	0
6	30	2.6	50.0	24.8	26.00	19.50	55.50	25.00	25.00	25.25	23.25	32.25	1	0	0
7	30	3.4	50.0	63.1	26.00	19.25	55.50	24.75	24.75	25.00	23.00	31.00	1	0	0
8	30	4.0	52.0	100.4	25.75	19.00	55.25	25.00	24.50	25.00	23.00	26.75	0	0	0
9				132.6	25.50	18.75	55.25	24.75	24.75	25.00	23.00	19.25	1	0	0
10	360	5.2	54.0	157.7	26.00	19.00	55.00	25.00	25.00	25.00	51.25	53.25	1	0	0
11	360	5.5	56.0	173.9	27.25	19.00	55.75	26.00	25.75	26.00	56.25	67.00	1	0	0
12	360	5.6	61.0	179.1	28.50	19.75	57.00	27.00	26.75	27.00	57.75	73.25	1	0	0
13	360	5.0	64.0	170.3	30.00	20.00	58.25	28.00	27.75	28.00	59.25	75.00	4	0	0
14	360	2.4	66.0	146.4	31.00	20.50	59.75	28.75	28.50	28.75	60.25	77.00	10	0	0
15	360	5.0	68.0	117.5	31.00	21.25	60.75	29.50	29.00	29.50	61.25	75.25	8	0	0
16	360	3.2	68.0	82.9	32.00	22.75	61.25	30.00	29.75	30.00	61.25	68.00	5	0	0
17	360	3.2	68.0	55.2	32.25	23.25	61.25	30.25	30.00	30.25	61.25	64.25	2	0	0
18	300	5.4	66.0	25.7	32.75	23.75	61.25	31.00	30.75	30.75	60.00	58.00	2	0	0
19	300	3.8	65.0	1.1	33.00	24.00	61.00	31.00	30.75	30.75	58.00	53.50	3	0	0
20	300	1.2	60.0	0.	32.50	24.25	61.25	31.00	30.75	31.00	43.25	43.00	2	0	0
21	330	.5	56.0	0.	32.25	24.00	61.00	30.75	30.00	30.50	35.25	55.00	2	0	0
22	200	2.0	56.0	0.	31.50	24.25	60.75	30.00	29.50	30.00	29.00	55.50	2	0	0
23	360	9.0	50.0	0.	31.00	24.00	60.50	29.00	29.00	29.50	25.00	54.50	3	0	0
TOT.				1430.7									54	0	0
AVG.	270	3.3	56.0	59.6	29.09	21.28	58.07	27.62	27.41	27.73	39.80	50.49	2	0	0

DATE
(05/10/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.9	51.0	0.	30.00	23.75	60.00	28.50	28.25	29.00	25.00	51.25	1	0	0
1	270	.8	49.0	0.	30.00	23.75	60.00	28.00	28.00	28.50	25.50	46.75	1	0	0
2	190	5.5	50.0	0.	29.25	23.00	59.75	28.00	27.75	28.00	26.00	43.00	1	0	0
3	180	8.0	48.0	0.	29.00	22.25	59.50	27.75	27.25	28.00	26.00	34.25	1	0	0
4	180	9.8	48.0	0.	28.50	21.75	59.25	27.25	27.00	27.75	26.00	36.00	1	0	0
5	180	7.2	48.0	0.	28.25	21.00	59.00	27.25	27.00	27.25	26.00	34.00	1	0	0
6	170	6.0	48.0	33.6	28.00	20.25	59.00	25.75	26.75	27.00	25.50	32.75	1	0	0
7	150	7.4	48.0	83.4	28.00	20.00	59.00	26.50	26.50	26.75	25.25	32.00	1	0	0
8	150	8.0	48.0	131.2	27.50	19.25	59.00	26.00	26.00	26.50	25.00	31.00	0	0	0
9	150	7.5	49.0	172.9	27.25	19.75	58.75	26.00	26.00	26.00	24.75	30.00	1	0	0
10	140	9.5	48.0	205.4	27.00	19.25	58.50	25.75	25.75	26.00	24.25	29.25	1	0	0
11	140	8.5	48.0	226.4	26.25	19.50	58.25	44.75	25.00	50.00	24.00	28.00	2	0	0
12	140	9.5	48.0	234.6	26.25	20.00	57.75	39.00	25.50	43.00	24.00	27.25	1	0	0
13	140	9.0	46.0	229.4	26.25	20.00	57.25	37.00	25.75	40.75	24.00	28.25	1	0	0
14	140	8.0	47.0	211.1	26.50	20.00	57.00	29.75	26.00	31.25	24.00	27.50	4	0	0
15	140	8.0	46.0	180.9	25.00	21.00	56.75	42.50	23.00	48.00	20.50	25.75	2	0	0
16	140	7.2	47.0	141.0	24.00	20.00	56.50	27.25	22.00	29.75	19.25	25.00	1	0	0
17	140	6.5	46.0	94.3	24.75	20.25	56.00	25.25	23.00	26.50	21.25	27.00	1	0	0
18	180	2.7	46.0	44.4	25.00	20.00	56.00	24.50	23.25	25.25	21.75	28.00	2	0	0
19	180	6.2	46.0	2.3	24.50	19.75	56.00	45.75	23.25	50.00	22.00	28.50	2	0	0
20	180	6.5	47.0	0.	24.75	20.00	55.50	38.50	24.00	42.50	22.00	29.25	2	0	0
21	180	8.0	46.0	0.	24.50	19.75	55.25	36.00	24.00	40.00	22.25	30.25	2	0	0
22	170	8.5	45.0	0.	24.75	19.75	55.00	34.25	24.25	38.00	22.50	30.50	2	0	0
23	150	8.2	43.0	0.	24.25	19.50	54.50	44.00	24.00	49.00	22.25	30.00	1	0	0
TOT.				1990.9									32	0	1
AVG.	186	7.2	47.3	83.0	26.65	20.56	57.65	31.53	25.39	33.95	23.71	32.10	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	9.0	42.0	0.	24.00	19.00	54.25	44.75	24.00	48.00	22.25	29.00	1	0	0
1	150	9.8	42.0	0.	24.00	19.25	53.75	39.50	24.00	44.00	22.00	29.25	1	0	0
2	150	8.3	42.0	0.	23.75	19.00	53.25	37.50	23.50	42.00	21.75	28.75	1	0	0
3	150	8.5	41.0	0.	23.75	19.00	53.00	45.00	23.00	52.00	21.25	28.25	1	0	0
4	150	7.0	41.0	0.	23.00	19.00	52.50	43.50	23.00	49.00	21.00	27.50	1	0	0
5	150	6.2	40.0	0.	23.00	19.00	52.25	37.00	22.75	41.75	21.00	27.50	1	0	0
6	160	6.5	70.0	2.8	22.25	19.00	51.75	45.75	22.25	50.75	20.50	27.25	1	0	0
7	160	5.0	42.0	6.4	22.25	19.25	51.00	40.50	22.00	45.00	20.00	26.00	1	0	0
8	180	6.0	44.0	9.0	22.00	19.50	50.50	43.00	22.00	49.25	19.75	21.00	1	0	0
9	210	7.0	46.0	10.3	22.00	19.50	50.00	39.25	22.00	48.25	19.75	17.25	1	0	0
10	210	5.6	49.0	12.2	22.00	19.75	49.50	44.00	22.00	48.50	19.75	17.75	1	0	0
11	210	4.5	53.0	13.4	22.25	20.00	49.00	39.75	22.00	43.75	20.00	18.75	4	0	0
12	360	3.8	52.0	13.9	22.75	19.50	49.00	28.25	23.00	30.25	49.25	54.75	4	0	0
13	360	3.0	52.0	17.4	24.50	20.00	49.00	26.25	24.00	27.25	47.50	52.00	3	0	0
14	360	2.6	52.0	17.8	25.50	20.00	49.00	26.00	25.00	26.25	46.75	50.00	3	0	0
15	360	4.4	52.0	15.7	25.50	20.00	49.00	25.75	25.00	26.00	32.25	30.75	4	0	0
16	360	4.5	57.0	12.4	26.00	20.00	49.00	25.25	25.00	25.50	49.50	59.25	5	0	0
17	360	3.3	57.0	8.4	26.25	20.00	50.00	25.75	25.25	25.50	50.00	55.00	2	0	0
18	360	2.2	55.0	4.0	27.00	21.00	50.00	26.00	26.00	26.00	45.00	44.75	1	0	0
19	330	1.8	54.0	.2	26.75	21.00	50.00	26.00	26.00	26.00	33.25	34.75	4	0	0
20	330	2.2	49.0	0.	26.25	20.75	50.00	25.50	25.50	25.75	29.75	35.75	1	0	0
21	330	2.1	47.0	0.	25.75	20.75	49.75	25.00	25.00	25.25	27.25	37.00	2	0	0
22	360	1.2	44.0	0.	25.25	20.25	49.25	25.00	24.50	25.00	25.75	36.50	2	0	0
23	50	3.5	43.0	0.	25.00	20.00	49.25	24.25	24.00	24.25	24.00	38.00	1	0	0
TOT.				143.9									48	0	2
AVG.	248	4.9	48.6	6.0	24.20	19.77	50.58	33.69	23.78	36.47	29.55	34.45	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(Kwh)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	50	2.5	43.0	0.	25.00	19.75	49.00	23.75	23.50	24.00	22.00	37.00	1	0	0
1	50	2.5	42.0	0.	24.00	19.25	49.00	25.00	23.00	42.00	21.00	36.50	1	0	0
2	50	1.5	42.0	0.	23.25	19.50	49.00	41.25	22.75	45.00	20.00	35.00	1	0	0
3	30	.7	36.0	0.	22.50	19.00	48.50	38.00	22.25	40.00	20.00	33.75	1	0	0
4	120	1.1	38.0	0.	22.00	19.00	48.25	41.00	22.25	43.00	19.75	33.25	1	0	0
5	120	1.1	37.0	0.	22.75	18.75	48.00	24.25	22.25	30.75	19.75	32.75	1	0	0
6	360	.4	40.0	20.6	21.75	18.50	47.50	42.50	21.75	46.75	19.50	31.00	1	0	0
7	270	1.7	43.0	49.3	21.50	19.00	47.00	42.00	21.00	45.50	18.75	29.25	1	0	0
8	270	1.8	49.0	76.8	21.00	19.00	46.25	38.50	20.50	43.00	18.75	24.00	1	0	0
9	130	1.8	52.0	100.8	21.25	19.25	46.00	41.25	21.00	44.00	19.00	16.50	1	0	0
10	270	2.5	56.0	119.5	21.75	19.50	45.50	35.25	21.25	38.50	44.00	48.00	1	0	0
11	270	3.3	58.0	131.6	23.00	19.25	46.00	27.50	22.75	29.25	47.00	59.25	2	0	0
12	210	3.4	61.0	136.3	25.00	19.75	47.25	28.25	24.00	27.00	48.50	64.25	2	0	0
13	210	4.0	62.0	130.6	25.75	20.00	49.00	24.00	23.50	25.00	50.25	69.25	1	0	0
14	210	4.0	62.0	110.8	26.25	20.25	50.75	23.00	22.50	23.75	52.00	69.00	1	0	0
15	210	7.5	63.0	80.8	27.25	20.75	52.25	25.00	24.50	25.00	53.00	66.00	1	0	0
16	240	7.0	65.0	54.6	28.25	21.00	53.25	26.00	25.75	26.00	54.00	63.00	1	0	0
17	240	5.2	63.0	36.7	29.00	21.25	54.00	27.00	26.75	27.00	53.75	56.25	3	0	0
18	210	6.2	62.0	17.7	29.25	21.25	53.75	27.50	27.00	27.25	52.75	51.25	2	0	0
19	210	7.5	60.0	1.2	29.00	21.75	53.75	29.00	27.50	27.50	41.75	40.00	4	0	0
20	210	7.0	55.0	0.	28.75	21.75	53.50	28.00	27.25	27.50	34.25	38.50	2	0	0
21	130	7.0	52.0	0.	28.00	21.75	53.25	27.00	27.00	27.00	30.25	39.25	2	0	0
22	150	6.5	51.0	0.	27.75	22.00	53.25	26.75	26.25	26.75	27.50	48.00	2	0	0
23	180	6.5	50.0	0.	27.25	22.00	53.00	26.00	26.00	26.25	27.50	47.00	2	0	0
TOT.				1067.3									36	0	2
AVG.	189	4.1	51.7	44.5	25.05	20.14	49.87	30.70	23.84	32.82	33.75	44.58	1	0	0

DATE
(05/13/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.0	48.0	0.	27.00	21.50	53.00	25.50	25.50	26.00	23.00	39.75	1	0	0
1	180	4.3	48.0	0.	26.50	21.50	53.00	25.25	25.00	25.75	23.25	36.50	1	0	0
2	180	5.5	47.0	0.	26.00	20.75	52.75	25.00	24.75	25.00	23.25	34.00	1	0	0
3	180	4.6	46.0	0.	25.75	20.75	52.50	24.75	24.50	25.00	23.25	33.00	0	0	0
4	180	5.5	47.0	0.	25.25	20.00	52.50	24.25	24.00	24.75	23.00	32.00	1	0	0
5	180	4.6	46.0	.2	25.00	20.00	52.25	24.00	23.75	24.25	22.75	31.25	1	0	0
6	180	3.8	46.0	34.2	25.00	19.50	52.25	24.00	23.75	24.00	22.50	30.00	1	0	0
7	180	4.9	77.0	90.5	24.00	19.00	52.00	23.75	23.75	24.00	22.25	29.25	1	0	0
8	180	4.0	48.0	124.9	24.25	19.25	52.25	41.50	23.00	46.00	22.00	26.75	1	0	0
9	150	5.8	52.0	163.6	24.25	18.75	52.00	28.75	23.50	30.75	22.00	20.50	1	0	0
10	180	7.0	53.0	193.7	24.00	19.00	51.75	32.00	23.50	34.75	22.00	19.00	1	0	0
11	210	5.5	58.0	213.2	24.75	19.00	51.50	27.25	24.25	28.75	23.00	21.00	2	0	0
12	210	6.6	60.0	220.7	25.00	19.00	51.50	26.00	24.25	26.75	52.00	53.00	3	0	0
13	210	7.0	58.0	215.8	26.25	19.50	51.75	26.25	25.50	26.50	51.50	52.75	2	0	0
14	210	7.2	58.0	198.8	27.00	20.00	51.50	26.25	26.00	26.50	48.00	48.50	1	0	0
15	210	8.8	58.0	170.8	27.00	20.25	51.25	25.75	26.00	26.50	40.00	47.00	2	0	0
16	210	8.5	56.0	133.7	27.25	20.50	51.25	26.75	26.25	26.25	42.50	41.00	2	0	0
17	210	8.5	56.0	113.2	27.00	20.75	51.25	26.00	26.00	26.25	31.25	31.00	3	0	0
18	180	8.0	54.0	55.0	26.75	21.00	51.00	26.00	26.00	26.00	29.25	29.50	1	0	0
19	180	7.0	51.0	4.4	26.25	21.75	51.00	25.75	25.50	26.00	27.25	32.00	1	0	0
20	150	6.0	50.0	0.	26.00	21.25	51.00	25.25	25.25	25.75	26.25	34.00	1	0	0
21	180	6.0	50.0	0.	26.00	21.00	51.00	25.25	25.00	25.50	25.75	42.00	1	0	0
22	180	6.0	49.0	0.	25.75	20.75	50.75	25.00	24.50	25.00	23.25	44.00	1	0	0
23	180	6.8	48.0	0.	25.50	20.25	50.50	24.75	24.25	25.00	21.25	44.00	2	0	0
TOT.				1922.7									31	0	0
AVG.	187	6.2	52.7	80.1	25.73	20.21	51.73	25.50	24.74	27.12	28.77	35.41	1	0	0

DATE
(05/14/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.3	46.0	0.	25.25	20.00	50.75	24.50	24.25	24.50	20.00	44.00	3	0	0
1	180	6.0	45.0	0.	24.75	19.75	50.25	24.00	24.00	24.00	19.50	43.25	2	0	0
2	170	6.0	44.0	0.	25.00	19.50	50.00	24.00	23.75	24.00	19.00	43.00	1	0	0
3	160	7.8	43.0	0.	23.75	19.25	50.00	23.25	23.25	23.75	19.00	42.75	1	0	0
4	150	5.0	43.0	0.	24.25	19.00	50.00	23.50	23.00	23.50	18.75	42.25	1	0	0
5	150	5.0	42.0	.1	23.75	18.50	50.00	23.25	23.00	23.25	18.50	42.25	1	0	0
6	150	6.0	42.0	9.8	23.25	18.75	49.75	43.00	22.25	47.50	18.00	41.00	1	0	0
7	170	6.0	43.0	36.6	23.25	18.75	49.25	37.50	22.25	42.00	18.00	40.75	1	0	0
8	180	8.0	48.0	62.8	22.50	18.75	49.00	33.50	22.25	37.00	18.50	38.50	1	0	0
9	180	7.2	50.0	84.2	23.00	19.00	48.75	43.00	22.50	47.75	20.00	28.50	2	0	0
10	180	7.2	52.0	99.6	23.00	19.25	48.00	33.50	22.25	36.75	40.75	40.00	2	0	0
11	190	6.5	52.0	102.4	24.25	19.25	48.25	27.75	23.75	29.50	49.00	59.25	1	0	0
12	220	5.2	52.0	77.8	25.00	19.75	48.75	37.00	24.25	40.50	48.25	50.00	4	0	0
13	210	9.0	54.0	76.1	26.00	20.00	48.50	29.75	25.00	31.00	48.25	51.50	1	0	0
14	190	8.5	56.0	81.2	26.50	20.00	49.00	28.00	26.00	28.75	49.75	53.75	1	0	0
15	180	9.8	57.0	69.8	27.25	20.00	50.00	27.25	26.50	27.75	51.00	54.25	1	0	0
16	180	10.2	57.0	60.4	28.00	20.25	51.00	27.25	26.50	27.50	51.75	59.25	2	0	0
17	160	8.8	56.0	40.9	28.00	20.75	51.25	27.50	27.00	27.50	51.00	52.00	3	0	0
18	150	8.8	52.0	21.4	27.75	21.00	51.25	27.50	27.00	27.50	50.00	48.25	1	0	0
19	150	8.0	49.0	1.9	28.00	21.00	51.00	27.25	27.00	27.25	36.00	35.50	1	0	0
20	150	7.0	48.0	0.	27.00	20.75	51.25	25.75	26.50	27.00	31.50	37.25	1	0	0
21	150	6.3	77.0	0.	26.75	20.25	51.00	26.00	26.00	26.25	28.75	39.25	2	0	0
22	150	5.0	44.0	0.	26.00	20.00	51.00	25.50	25.25	25.75	25.75	41.00	1	0	0
23	150	6.0	44.0	0.	26.25	20.00	50.75	25.25	24.75	25.25	23.25	40.25	2	0	0
TOT.				825.0									37	0	1
AVG.	170	7.1	49.8	34.4	25.35	19.73	49.95	28.99	24.51	30.23	32.26	44.95	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.2	44.0	0.	26.00	19.50	50.50	24.75	24.50	25.00	21.75	39.50	2	0	0
1	160	5.0	43.0	0.	25.00	19.25	50.50	24.50	24.00	25.50	21.25	38.00	1	0	0
2	150	5.5	42.0	0.	24.75	19.00	50.50	24.00	23.50	25.00	21.00	36.25	1	0	0
3	150	4.2	42.0	0.	24.00	18.75	50.25	23.75	23.50	25.00	21.00	35.25	1	0	0
4	150	4.4	42.0	0.	23.75	18.25	50.00	35.50	23.00	39.50	20.75	33.50	1	0	0
5	160	4.0	42.0	.4	23.50	18.50	50.00	35.75	22.75	40.00	21.00	32.75	1	0	0
6	160	4.7	42.0	29.4	23.00	19.00	49.50	44.00	22.25	48.75	20.50	31.25	1	0	0
7	180	5.0	44.0	62.9	22.50	19.00	48.75	42.00	22.00	46.75	20.00	28.00	1	0	0
8	180	5.8	50.0	96.7	22.50	19.25	48.50	41.50	22.00	44.00	20.00	22.50	1	0	0
9	160	4.5	50.0	126.0	22.25	19.25	48.00	39.25	22.00	43.25	20.25	16.75	2	0	0
10	240	3.4	44.0	148.9	23.00	19.50	47.75	36.00	22.25	39.25	39.00	35.00	1	0	0
11	60	3.8	50.0	174.7	23.50	19.75	47.50	35.25	23.25	38.50	38.00	38.00	1	0	0
12	270	3.0	57.0	188.5	24.00	19.25	47.25	41.00	23.75	39.00	37.00	35.00	1	0	0
13	270	4.5	56.0	176.8	24.75	19.75	47.25	30.00	24.00	32.00	48.25	61.50	1	0	0
14	290	4.8	58.0	152.7	26.25	19.75	49.00	27.75	25.25	28.50	50.25	69.50	1	0	0
15	300	6.8	58.0	119.1	27.25	20.00	51.00	27.25	26.25	27.50	51.75	66.25	1	0	0
16	300	8.0	57.0	93.6	28.00	20.00	52.00	27.25	26.50	27.25	52.50	63.50	1	0	0
17	300	6.5	57.0	63.6	28.25	20.50	52.25	27.50	27.00	27.25	52.50	55.25	3	0	0
18	300	6.0	57.0	31.5	28.75	20.75	52.25	27.75	27.25	27.50	51.25	49.00	5	0	0
19	300	6.8	55.0	3.7	28.25	20.75	52.00	27.75	27.25	27.50	37.75	37.00	3	0	0
20	300	4.0	52.0	0.	28.00	20.25	52.00	27.25	27.25	27.25	32.50	36.00	4	0	0
21	300	1.2	48.0	0.	27.50	20.00	52.00	27.00	26.75	27.00	30.00	39.00	6	0	0
22	30	1.5	48.0	0.	26.75	20.00	52.00	26.25	26.25	26.25	28.00	43.50	4	0	0
23	150	3.0	47.0	0.	27.00	20.00	51.75	25.75	25.50	26.00	24.00	42.75	3	0	0
TOT.				1468.5									45	0	2
AVG.	209	4.7	49.4	61.2	25.35	19.58	50.10	31.20	24.50	32.65	32.51	41.04	2	0	0

DATE
(05/16/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(MWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	44.0	0.	26.00	20.00	51.75	25.25	25.00	25.25	21.50	42.25	2	0	0
1	150	8.0	44.0	0.	25.25	19.50	51.50	24.25	24.25	25.00	20.25	41.00	1	0	0
2	150	7.0	44.0	0.	25.00	19.25	51.25	24.00	24.00	25.25	20.00	40.00	1	0	0
3	150	4.5	44.0	0.	24.00	19.00	51.25	24.00	23.75	24.00	20.00	38.25	0	0	0
4	150	5.8	44.0	0.	24.25	18.75	51.00	23.75	23.25	24.00	20.25	37.00	1	0	0
5	150	5.7	44.0	.7	23.75	18.75	51.00	44.50	22.75	50.00	20.00	35.00	1	0	0
6	160	4.5	43.0	30.2	22.75	18.75	50.50	44.75	22.25	49.75	20.00	34.00	2	0	0
7	150	4.5	44.0	68.0	23.00	19.25	50.00	41.00	22.00	46.00	20.00	32.00	2	0	0
8	160	5.0	45.0	104.1	22.75	19.50	49.75	37.00	22.00	46.00	20.25	30.00	1	0	0
9	150	4.0	45.0	135.4	22.50	19.50	49.25	43.50	22.00	48.00	20.50	22.75	1	0	0
10	140	4.6	46.0	159.9	22.50	19.50	48.75	35.25	22.25	39.00	20.50	18.75	3	0	0
11	140	5.0	47.0	175.7	22.25	19.50	48.50	33.25	22.75	40.00	20.75	19.00	3	0	0
12	140	3.4	47.0	181.7	23.00	19.75	48.00	42.00	22.50	46.25	21.00	20.75	1	0	0
13	140	4.5	48.0	177.7	22.50	19.75	48.00	35.50	22.75	37.25	21.25	23.00	1	0	0
14	140	5.2	50.0	163.8	23.00	19.75	47.25	40.00	22.25	43.75	21.00	21.00	1	0	0
15	150	5.2	51.0	141.1	23.00	19.75	47.00	32.50	22.50	35.75	21.00	20.00	4	0	0
16	150	6.0	50.0	111.0	23.00	19.75	46.75	31.50	22.50	34.00	21.75	18.75	1	0	0
17	150	5.0	50.0	75.6	23.50	20.00	46.75	26.75	23.00	28.00	23.00	21.75	1	0	0
18	150	5.0	50.0	37.9	23.50	19.75	46.25	24.75	22.75	25.50	22.75	23.00	1	0	0
19	150	4.0	50.0	4.2	23.00	19.75	46.25	24.00	23.25	26.00	22.25	24.25	2	0	0
20	150	3.5	49.0	0.	23.25	20.00	46.00	24.75	23.00	32.25	22.00	26.00	2	0	0
21	150	3.8	48.0	0.	23.25	20.00	46.00	26.00	23.00	27.25	22.25	30.00	2	0	0
22	150	4.4	48.0	0.	23.25	20.00	45.75	24.00	23.00	25.00	22.00	36.75	4	0	0
23	150	3.5	48.0	0.	23.50	20.00	45.50	23.50	23.00	23.75	19.50	39.25	1	0	0
TOT.				1567.0									39	0	2
AVG.	149	4.9	46.8	65.3	23.41	19.56	48.50	31.70	22.91	34.48	20.99	28.94	2	0	0

DATE
(05/17/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.1	48.0	0.	22.75	19.25	45.75	23.00	22.25	23.00	18.75	38.25	1	0	0
1	150	5.0	48.0	0.	23.00	19.25	45.50	22.75	22.25	23.00	18.75	37.50	1	0	0
2	150	4.8	48.0	0.	22.25	19.00	45.25	22.25	22.00	23.00	19.00	36.25	1	0	0
3	150	5.0	48.0	0.	23.00	18.75	45.00	22.25	22.00	22.50	19.00	35.50	1	0	0
4	150	5.0	48.0	0.	21.25	18.50	45.00	22.00	22.00	30.00	19.00	35.00	1	0	0
5	150	5.0	48.0	.3	22.00	18.50	45.00	28.75	21.50	31.00	19.25	35.00	1	0	0
6	160	4.0	77.0	8.2	21.75	18.50	44.75	40.50	21.50	44.25	19.00	33.50	1	0	0
7	160	5.0	46.0	18.2	20.00	19.00	44.50	33.50	21.25	37.00	19.00	32.25	1	0	0
8	160	6.0	48.0	27.7	21.50	19.25	44.00	37.50	21.00	41.00	19.00	27.75	1	0	0
9	180	6.5	49.0	35.9	21.25	19.25	44.00	39.00	21.00	43.00	19.75	18.25	1	0	0
10	180	6.8	51.0	42.4	21.25	19.25	43.25	35.00	21.00	38.00	19.50	17.75	2	0	0
11	180	6.4	56.0	46.5	22.00	19.25	43.00	30.25	21.50	32.75	20.00	18.50	3	0	0
12	170	6.0	57.0	48.1	21.75	19.25	43.00	36.50	21.75	39.75	21.00	20.75	2	0	0
13	190	7.0	56.0	47.1	22.25	19.50	42.75	27.00	22.00	28.75	21.25	21.75	3	0	0
14	180	6.5	58.0	43.4	22.75	19.50	42.75	24.50	22.50	25.75	21.50	22.75	2	0	0
15	180	7.0	58.0	37.4	22.50	19.50	42.50	23.75	22.50	24.50	30.50	26.25	2	0	0
16	180	7.0	56.0	29.5	23.25	19.75	42.75	23.75	22.75	24.00	27.00	25.50	5	0	0
17	180	6.2	56.0	25.3	23.25	20.00	42.25	23.00	22.50	23.50	24.75	25.00	5	0	0
18	170	7.6	52.0	12.8	23.25	20.00	42.25	23.50	22.75	23.50	23.25	24.75	1	0	0
19	180	7.2	52.0	1.2	23.25	20.00	42.25	23.25	22.75	23.25	27.75	24.00	1	0	0
20	180	7.0	50.0	0.	23.00	20.00	42.25	23.00	22.75	23.25	24.50	29.50	1	0	0
21	180	5.0	48.0	0.	23.00	20.00	42.25	34.25	22.50	36.75	23.00	31.00	4	0	0
22	180	6.0	48.0	0.	22.25	19.75	42.00	26.00	22.25	28.00	22.50	32.75	5	0	0
23	180	5.0	47.0	0.	22.75	19.75	42.00	30.00	22.25	32.50	21.50	32.25	2	0	0
TOT.				424.0									47	0	2
AVG.	169	5.9	52.2	17.7	22.30	19.36	43.50	28.14	22.02	30.08	21.60	28.41	2	0	0

DATE
(05/18/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.8	46.0	0.	23.00	19.50	42.00	25.25	22.25	26.75	21.00	32.50	2	0	0
1	140	3.2	44.0	0.	22.00	19.25	41.75	23.50	22.00	24.50	20.50	32.00	1	0	0
2	140	3.4	43.0	0.	22.00	19.00	41.75	22.50	22.00	23.25	20.00	32.00	1	0	0
3	120	2.5	43.0	0.	20.25	18.75	41.75	36.00	21.75	40.00	19.50	31.25	1	0	0
4	130	3.0	43.0	0.	22.00	18.75	41.25	35.00	21.25	40.00	19.50	31.00	1	0	0
5	250	4.4	45.0	.4	21.00	18.50	41.00	32.00	21.00	35.00	19.00	30.25	1	0	0
6	120	2.5	45.0	9.0	21.00	18.50	40.75	36.75	20.75	40.00	19.00	29.75	2	0	0
7	150	3.0	44.0	24.8	21.00	19.00	40.25	33.25	20.50	36.00	18.50	28.25	1	0	0
8	160	3.0	49.0	43.6	20.50	19.25	40.00	35.00	20.25	37.50	18.75	26.25	1	0	0
9	190	2.0	52.0	56.4	20.25	19.25	39.75	32.75	20.25	35.25	18.75	21.50	1	0	0
10	240	1.8	52.0	66.5	21.00	19.25	39.25	28.00	20.75	30.00	19.00	19.50	1	0	0
11	270	2.5	50.0	73.0	20.50	19.25	39.25	30.50	21.00	34.00	19.75	19.25	4	0	0
12	300	3.2	50.0	68.2	22.00	20.00	39.00	27.00	21.25	29.00	32.75	35.50	2	0	0
13	350	3.0	58.0	73.8	21.50	19.75	39.00	24.25	21.75	25.25	33.50	49.00	1	0	0
14	360	3.0	58.0	75.1	23.00	20.00	40.00	23.75	22.50	24.25	38.50	51.25	1	0	0
15	360	2.8	60.0	64.7	23.75	20.25	40.50	23.75	23.00	24.00	39.25	49.50	2	0	0
16	360	3.0	60.0	51.1	24.00	21.00	40.75	23.75	23.25	24.00	40.50	50.00	1	0	0
17	360	1.6	59.0	31.8	24.75	21.25	41.50	24.50	24.00	24.00	37.00	41.50	2	0	0
18	150	2.2	59.0	14.0	24.25	21.50	41.25	23.50	23.50	23.75	29.00	31.25	4	0	0
19	220	2.0	58.0	1.8	23.25	22.00	41.25	24.00	23.75	23.75	26.25	28.00	1	0	0
20	150	2.0	56.0	0.	24.00	21.75	41.25	24.00	23.50	23.75	25.00	27.75	2	0	0
21	150	2.0	52.0	0.	23.75	21.75	41.25	23.50	23.00	23.50	24.50	29.25	2	0	0
22	130	1.8	52.0	0.	23.75	21.75	41.00	23.25	23.00	23.50	23.75	29.25	2	0	0
23	160	2.2	52.0	0.	23.50	21.50	41.00	23.25	22.75	23.25	23.00	28.50	1	0	0
TOT.				651.2									38	0	2
AVG.	213	2.7	51.2	27.1	22.33	20.06	40.64	27.46	22.04	28.93	25.26	33.01	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.2	51.0	0.	23.00	21.25	41.00	22.25	22.00	23.00	22.50	28.00	1	0	0
1	150	3.2	50.0	0.	23.25	21.25	41.00	23.00	22.75	22.75	22.25	28.00	1	0	0
2	150	4.0	50.0	0.	22.75	21.00	41.00	22.50	22.25	22.50	22.00	27.25	1	0	0
3	150	2.5	49.0	0.	23.00	20.75	41.00	22.50	22.00	22.25	21.75	27.00	1	0	0
4	150	3.2	49.0	0.	22.50	20.00	40.75	22.25	22.00	22.25	21.50	26.50	1	0	0
5	130	2.6	48.0	1.0	22.50	20.00	40.75	22.25	21.75	22.00	21.25	26.25	1	0	0
6	150	4.0	58.0	22.7	22.50	19.75	40.50	22.00	21.75	22.00	21.25	26.00	1	0	0
7	150	5.2	50.0	57.7	22.00	19.50	40.50	22.00	21.50	22.00	21.00	25.00	1	0	0
8	130	5.0	52.0	93.2	22.25	19.50	40.75	22.00	21.75	22.00	21.00	22.00	1	0	0
9	140	6.0	57.0	122.4	21.75	19.00	40.50	22.00	21.50	22.00	20.75	18.00	1	0	0
10	140	7.0	60.0	145.1	22.25	19.25	40.50	22.00	21.75	22.00	40.00	51.25	1	0	0
11	210	5.2	61.0	159.2	23.00	19.50	41.50	22.75	22.50	22.75	42.75	55.75	2	0	0
12	210	4.0	63.0	163.3	23.75	20.00	43.00	23.50	23.25	23.25	44.50	61.25	2	0	0
13	210	4.0	65.0	147.1	25.75	20.75	44.50	24.50	24.50	24.50	46.25	65.75	2	0	0
14	180	5.0	66.0	115.4	27.00	21.00	46.25	25.50	25.00	25.25	48.00	67.00	5	0	0
15	240	4.0	70.0	86.0	27.25	21.75	48.00	26.00	26.00	26.00	49.50	63.00	4	0	0
16	240	4.0	68.0	54.1	28.25	21.75	49.50	26.75	26.50	26.75	50.50	62.25	3	0	0
17	270	3.5	66.0	37.2	28.75	22.00	50.00	27.00	27.00	27.00	49.25	49.00	8	0	0
18	260	3.5	64.0	19.2	28.75	22.25	50.00	27.25	27.00	27.00	37.25	37.00	6	0	0
19	290	1.5	62.0	2.7	28.00	22.25	49.75	27.25	27.00	27.00	31.75	32.75	3	0	0
20	330	1.6	60.0	0.	28.00	22.25	49.25	27.00	26.25	26.75	30.00	35.75	7	0	0
21	330	1.0	58.0	0.	27.00	22.00	49.25	26.75	26.75	26.25	28.25	37.00	6	0	0
22	310	1.2	56.0	0.	27.00	22.00	49.00	26.75	26.00	26.00	27.75	37.00	7	0	0
23	330	1.2	54.0	0.	26.75	22.00	49.00	26.25	26.00	26.00	27.00	38.50	4	0	0
TOT.				1226.3									69	0	0
AVG.	214	3.5	57.8	51.1	24.87	20.86	44.47	24.25	23.95	24.14	32.00	39.47	3	0	0

DATE
(05/20/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	.9	52.0	0.	26.75	22.00	48.75	26.00	25.50	26.00	25.50	39.00	1	0	0
1	360	.6	51.0	0.	26.25	21.75	48.75	25.50	25.25	25.75	24.25	38.75	1	0	0
2	360	1.0	50.0	0.	26.25	21.75	48.50	25.25	25.00	25.25	23.00	38.50	1	0	0
3	150	4.0	50.0	0.	25.75	21.00	48.25	25.00	24.75	25.00	22.50	37.75	1	0	0
4	150	2.5	50.0	0.	25.50	21.00	48.25	24.75	24.50	25.00	22.00	37.25	1	0	0
5	150	2.7	50.0	2.8	25.25	21.00	48.00	24.75	24.25	24.75	22.00	36.50	1	0	0
6	130	3.0	50.0	55.5	25.00	20.50	48.00	24.25	23.75	24.25	21.50	35.25	1	0	0
7	180	4.0	52.0	118.1	25.00	20.25	48.00	24.00	23.75	24.00	21.75	33.00	1	0	0
8	160	4.0	53.0	153.5	24.00	19.75	48.00	23.75	23.25	24.00	22.25	24.25	1	0	0
9	160	4.0	60.0	198.1	24.50	20.00	47.50	24.00	23.25	24.00	22.25	18.75	1	0	0
10	160	6.0	62.0	232.9	24.50	20.00	47.75	24.00	23.50	24.00	45.50	49.00	1	0	0
11	190	8.0	62.0	255.3	25.25	20.00	47.75	25.00	24.25	24.75	48.75	59.50	1	0	0
12	180	8.0	66.0	263.9	26.75	21.00	49.00	25.75	25.50	25.50	50.50	68.50	2	0	0
13	180	7.5	67.0	258.1	28.00	21.25	50.50	27.00	26.00	26.25	51.75	66.25	1	0	0
14	190	8.5	70.0	189.9	28.25	22.00	51.75	26.25	25.75	26.25	53.00	66.25	1	0	0
15	180	8.5	70.0	164.0	28.75	22.50	53.00	26.25	25.75	26.25	53.50	61.00	6	0	0
16	180	10.5	67.0	129.7	29.00	23.00	53.25	27.00	27.00	27.25	52.75	54.25	3	0	0
17	180	8.5	67.0	89.5	30.00	23.50	53.00	28.25	27.75	28.00	52.00	49.50	3	0	0
18	180	9.0	62.0	46.5	30.00	23.75	53.00	28.25	28.25	28.25	45.00	43.00	3	0	0
19	180	6.5	60.0	7.1	29.75	23.25	53.00	28.25	28.00	28.25	35.25	38.00	2	0	0
20	180	5.0	59.0	0.	29.25	23.00	52.75	28.00	28.00	28.00	31.50	37.25	3	0	0
21	180	5.0	58.0	0.	28.75	23.00	52.50	27.75	27.50	28.00	29.75	44.00	2	0	0
22	180	6.0	56.0	0.	28.25	23.00	52.50	27.25	27.00	27.50	26.75	45.25	3	0	0
23	180	5.8	54.0	0.	28.00	23.00	52.25	26.75	26.50	27.00	24.25	45.00	4	0	0
TOT.				2164.9									43	0	0
AVG.	195	5.4	58.2	90.2	27.03	21.72	50.17	25.96	25.58	25.97	34.47	44.41	2	0	0

DATE
(05/21/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.5	52.0	0.	27.75	23.00	52.25	26.25	26.00	26.75	23.00	44.00	1	0	0
1	180	8.8	53.0	0.	27.25	23.00	52.00	26.25	26.00	26.75	23.00	43.25	1	0	0
2	180	7.5	53.0	0.	27.25	22.00	52.00	26.25	25.75	26.25	22.50	42.25	1	0	0
3	180	7.5	53.0	0.	27.00	22.00	51.75	26.00	25.50	26.00	22.50	41.50	1	0	0
4	180	10.0	51.0	0.	26.75	21.25	52.00	25.75	25.00	25.75	22.25	40.25	1	0	0
5	180	11.5	49.0	3.2	26.25	21.00	51.50	24.75	25.00	25.50	22.00	40.25	1	0	0
6	180	11.0	50.0	47.1	26.25	20.00	51.25	25.00	24.75	25.00	21.50	40.50	1	0	0
7	180	8.5	50.0	97.4	26.00	19.50	51.25	24.25	24.25	25.00	21.25	38.25	0	0	0
8	180	10.0	52.0	142.3	25.75	19.75	51.00	24.50	24.25	24.75	21.75	31.00	1	0	0
9	180	8.8	53.0	175.8	25.25	19.00	51.25	24.25	24.25	24.75	22.25	19.25	2	0	0
10	180	11.0	57.0	193.5	25.25	19.50	51.00	24.25	24.00	24.75	23.00	19.75	1	0	0
11	180	9.6	58.0	212.0	26.00	19.75	51.25	24.75	24.75	25.00	52.00	61.00	4	0	0
12	180	10.0	59.0	219.1	26.25	20.00	52.00	26.00	25.00	25.75	53.00	66.00	5	0	0
13	180	9.8	60.0	194.3	28.00	20.50	52.75	26.75	26.25	26.75	52.75	56.25	5	0	0
14	180	8.5	62.0	179.4	29.00	21.00	53.00	27.25	27.00	27.25	53.25	63.25	4	0	0
15	180	7.0	62.0	155.0	29.25	21.00	53.50	28.00	27.25	27.75	54.50	66.25	3	0	0
16	230	5.2	62.0	122.8	30.00	21.25	54.25	28.50	28.00	28.25	54.00	54.25	1	0	0
17	240	6.0	62.0	85.0	30.25	21.75	54.00	28.75	28.50	28.75	53.00	51.75	2	0	0
18	300	5.5	56.0	49.1	30.00	22.25	54.00	29.00	28.50	28.75	44.50	42.50	7	0	0
19	310	2.0	58.0	8.9	29.25	22.25	54.00	28.75	28.25	28.50	34.00	35.25	2	0	0
20	360	1.7	52.0	0.	29.00	22.25	53.75	28.00	27.75	28.00	31.75	40.25	1	0	0
21	360	2.0	51.0	0.	28.25	22.50	53.50	27.50	27.25	27.75	29.25	41.50	6	0	0
22	360	2.6	50.0	0.	28.25	22.50	53.25	27.25	27.00	27.00	27.00	44.50	5	0	0
23	40	3.0	49.0	0.	27.50	22.50	53.25	26.75	26.50	27.00	24.75	43.00	2	0	0
TOT.				1884.9									57	0	0
AVG.	212	7.2	54.7	78.5	27.57	21.23	52.49	26.45	26.11	26.57	33.70	44.42	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	40	2.4	48.0	0.	27.25	22.00	53.00	26.25	26.25	26.25	23.50	42.00	1	0	0
1	40	2.4	48.0	0.	27.00	21.75	53.00	26.00	26.00	26.25	23.00	41.00	1	0	0
2	40	2.4	48.0	0.	26.75	21.00	52.75	25.50	25.75	26.00	22.50	39.75	1	0	0
3	350	2.0	48.0	0.	26.50	20.75	52.50	25.00	25.00	25.75	22.25	38.00	1	0	0
4	360	1.6	48.0	0.	26.00	20.25	52.25	25.00	25.00	25.25	22.25	37.25	0	0	0
5	360	1.2	45.0	5.1	26.00	20.00	52.25	25.00	24.75	25.00	22.25	36.25	1	0	0
6	360	1.7	48.0	31.4	25.50	19.75	52.00	24.25	24.25	24.75	22.25	35.25	1	0	0
7	360	2.0	50.0	97.1	25.50	19.25	52.00	24.25	24.25	24.75	22.25	32.00	0	0	0
8	360	3.7	51.0	161.7	25.25	19.00	52.00	24.00	24.25	24.50	22.50	24.75	1	0	0
9	360	4.0	52.0	210.8	25.25	19.00	52.00	24.00	24.00	24.25	22.75	19.50	1	0	0
10	360	3.5	58.0	247.8	25.25	19.00	52.00	24.00	24.00	24.75	50.50	52.75	2	0	0
11	360	4.5	60.0	271.5	25.00	19.75	52.25	25.25	25.25	25.25	53.00	63.00	2	0	0
12	360	4.5	60.0	281.3	28.00	20.00	52.25	26.50	26.00	26.00	54.25	66.00	1	0	0
13	360	3.0	60.0	262.2	28.75	20.50	54.25	27.25	26.75	27.00	55.25	65.00	1	0	0
14	360	4.0	62.0	199.1	29.75	21.00	55.25	28.00	27.25	28.00	56.25	67.00	1	0	0
15	360	4.2	62.0	120.2	30.25	21.25	56.75	28.75	28.00	28.50	57.75	70.00	1	0	0
16	330	3.4	62.0	97.6	31.00	21.50	58.00	29.00	28.50	29.00	58.25	67.25	1	0	0
17	60	2.5	62.0	70.8	31.25	22.00	58.25	29.25	29.00	29.25	58.00	60.00	1	0	0
18	300	2.5	60.0	41.8	31.25	22.25	58.25	29.75	29.25	29.75	56.25	54.00	5	0	0
19	330	2.5	60.0	13.5	31.25	22.50	58.00	30.00	29.75	29.75	44.25	42.50	2	0	0
20	320	2.5	58.0	0.	31.00	22.25	58.00	29.50	29.00	29.25	36.25	41.00	3	0	0
21	320	1.6	52.0	0.	30.25	22.25	57.75	29.00	29.00	29.00	32.75	52.50	2	0	0
22	320	2.0	51.0	0.	30.00	22.00	57.50	28.75	28.25	28.75	27.00	52.00	2	0	0
23	210	1.2	50.0	0.	29.25	22.00	57.25	28.25	28.00	28.25	28.25	51.75	1	0	0
TOT.				2111.9									33	0	0
AVG.	241	2.7	54.3	88.0	28.09	20.87	54.56	26.77	26.56	26.84	37.02	47.94	1	0	0

DATE
(05/23/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	2.2	48.0		29.25	21.75	57.00	27.50	27.00	28.00	23.25	50.25	1	0	0
1	180	3.3	47.0		28.00	21.50	57.00	27.25	27.00	27.25	22.75	49.25	0	0	0
2	180	4.0	48.0		28.25	21.00	56.75	26.75	26.25	27.00	22.25	48.00	1	0	0
3	180	5.0	46.0		27.25	21.00	56.50	26.25	26.25	26.75	22.00	47.00	0	0	0
4	160	4.8	47.0		27.25	20.00	56.25	26.00	25.75	26.25	21.00	46.75	1	0	0
5	140	3.0	46.0		27.00	20.00	56.00	25.25	25.25	26.00	20.75	46.25	1	0	0
6	140	3.5	44.0		26.75	19.75	56.00	25.50	25.25	25.75	20.50	45.00	1	0	0
7	140	4.0	44.0		26.50	19.50	56.00	24.75	25.00	25.25	20.00	46.00	1	0	0
8	140	4.0	44.0		26.25	19.25	56.00	25.00	24.75	25.00	20.00	44.00	1	0	0
9	140	3.5	45.0		26.00	19.00	55.75	24.50	24.50	25.00	21.25	31.50	1	0	0
10	180	5.8	44.0		25.25	19.00	55.50	34.25	24.25	38.25	22.25	24.75	2	0	0
11	180	5.2	44.0		25.25	19.00	55.25	41.75	24.50	46.00	22.50	25.25	1	0	0
12	180	6.7	44.0		25.25	18.75	55.00	41.00	24.50	45.00	22.75	23.75	4	0	0
13	180	6.8	45.0		25.00	19.00	54.75	46.00	24.75	50.50	22.75	22.25	5	0	0
14	210	5.2	48.0		26.00	18.75	54.25	30.50	25.00	33.00	23.00	23.75	3	0	0
15	270	2.2	48.0		25.25	19.00	54.25	45.25	25.00	50.00	22.75	21.25	5	0	0
16	350	1.2	47.0		25.75	19.00	53.75	30.75	25.00	33.00	23.50	22.75	5	0	0
17	60	3.0	44.0		25.75	19.00	53.50	27.50	25.00	28.75	24.00	28.25	3	0	0
18	180	1.2	46.0		25.75	19.25	53.25	26.00	25.00	27.00	24.00	36.00	1	0	0
19	190	6.5	45.0		25.00	19.50	53.00	25.25	24.75	26.00	22.00	44.00	4	0	0
20	190	6.8	46.0		25.00	19.25	53.00	25.00	24.00	25.50	21.00	43.00	2	0	0
21	150	5.5	44.0		25.00	19.50	53.00	24.75	24.50	25.00	20.75	43.25	1	0	0
22	150	6.0	44.0		24.50	19.25	52.75	24.50	24.00	25.00	19.75	44.50	4	0	0
23	150	6.0	43.0		25.00	19.00	52.50	24.00	24.00	24.50	19.00	44.50	1	0	0
TOT.													48	0	1
AVG.	175	4.4	45.5		26.09	19.58	54.87	29.39	25.05	30.82	21.82	37.55	2	0	0

DATE
(05/24/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	6.0	43.0		24.50	19.00	52.25	23.75	23.75	51.50	18.75	43.00	1	0	0
1	150	5.0	43.0		24.25	18.75	52.00	30.50	23.00	33.75	18.75	42.75	1	0	0
2	150	5.5	43.0		24.00	18.75	52.00	45.25	23.50	51.00	19.00	41.75	1	0	0
3	140	4.5	43.0		23.50	18.75	51.25	40.75	23.00	45.25	19.00	40.50	1	0	0
4	140	4.5	42.0		24.00	18.50	51.25	34.00	23.25	45.00	19.00	41.00	1	0	0
5	140	4.5	42.0		23.25	18.50	50.50	43.00	22.75	47.00	19.00	39.50	1	0	0
6	140	4.0	43.0		23.25	18.25	50.00	38.00	22.75	39.00	19.00	38.75	1	0	0
7	150	4.5	44.0		23.25	18.50	50.00	44.25	22.50	46.75	19.25	35.75	1	0	0
8	150	5.5	46.0		23.00	18.00	49.50	37.50	22.50	42.00	20.00	20.00	1	0	0
9	150	5.0	50.0		23.00	18.75	49.00	43.75	22.50	47.00	20.25	18.00	1	0	0
10	160	4.0	50.0		22.75	18.75	48.75	43.00	22.50	48.00	21.00	17.75	2	0	0
11	180	7.0	54.0		22.00	19.00	48.50	29.25	23.00	31.25	23.00	19.25	2	0	0
12	180	8.0	55.0		24.75	19.00	48.50	25.25	24.00	27.75	47.50	54.00	1	0	0
13	180	7.5	55.0		25.00	19.75	49.25	26.00	24.25	26.25	50.00	59.00	1	0	0
14	180	7.5	60.0		26.25	20.00	50.00	25.75	25.00	25.00	51.00	66.00	1	0	0
15	210	7.0	60.0		26.50	20.25	51.50	24.25	24.00	24.50	52.00	64.00	1	0	0
16	210	6.0	60.0		27.50	21.00	52.50	25.50	25.25	25.75	53.25	63.75	1	0	0
17	210	6.0	60.0		28.50	21.00	53.25	26.50	26.00	26.50	53.25	57.00	1	0	0
18	270	4.5	60.0		28.75	21.00	53.00	27.00	26.75	27.00	52.00	49.75	1	0	0
19	290	4.0	56.0		28.75	21.00	53.00	27.25	27.00	27.00	38.25	37.75	1	0	0
20	300	3.0	54.0		27.50	21.00	53.00	25.50	25.50	26.00	30.75	34.75	1	0	0
21	300	2.0	50.0		26.25	21.00	52.75	25.25	25.00	25.50	28.50	37.50	1	0	0
22	330	2.2	46.0		26.75	21.00	52.75	25.00	25.00	25.50	27.00	48.00	2	0	0
23	330	1.2	45.0		26.75	20.75	52.75	25.00	25.00	25.25	22.25	44.00	2	0	0
TOT.													28	0	0
AVG.	200	5.0	50.2		25.17	19.59	51.14	31.76	24.07	35.10	30.91	42.23	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.4	42.0		26.25	20.00	52.25	24.75	24.25	25.00	22.00	41.75	1	0	0
1	90	1.5	42.0		25.50	20.00	52.25	24.50	24.25	24.50	21.50	40.00	1	0	0
2	120	1.2	42.0		25.25	19.25	52.00	23.75	23.75	24.25	21.25	36.25	1	0	0
3	120	1.0	41.0		24.75	19.00	52.00	23.75	23.50	23.75	20.75	37.00	1	0	0
4	140	.6	40.0		24.25	18.00	52.00	23.00	23.00	23.50	20.50	36.00	1	0	0
5	100	1.0	40.0		23.75	18.25	52.00	42.75	22.50	47.00	20.00	35.00	1	0	0
6	120	1.5	44.0		23.50	18.25	52.00	43.00	22.25	48.75	20.00	34.00	1	0	0
7	270	1.2	49.0		23.25	17.75	51.25	33.25	22.25	37.00	20.00	32.75	1	0	0
8	360	2.0	52.0		23.00	18.25	51.00	45.00	22.25	49.25	20.25	26.00	1	0	0
9	300	1.2	54.0		22.75	17.75	50.75	29.50	23.00	31.75	21.00	15.75	2	0	0
10	300	3.0	60.0		23.25	18.25	50.50	26.50	23.50	27.50	50.00	54.00	1	0	0
11	180	3.0	64.0		25.50	19.00	51.00	26.00	25.00	26.25	51.25	59.00	4	0	0
12	180	4.4	64.0		26.75	19.00	52.00	26.50	25.25	26.25	53.00	68.50	4	0	0
13	220	4.2	66.0		28.00	19.75	53.00	27.00	26.25	27.00	52.75	54.75	4	0	0
14	210	6.3	55.0		28.50	20.25	53.25	27.25	27.00	27.25	54.75	69.25	3	0	0
15	210	7.0	45.0		29.25	21.00	54.75	28.00	27.25	28.00	54.50	57.50	5	0	0
16	210	7.0	45.0		29.75	21.75	54.25	28.25	28.00	28.00	53.00	51.50	3	0	0
17	200	5.5	62.0		30.00	22.00	54.00	28.75	28.25	28.25	52.25	51.25	1	0	0
18	200	9.8	64.0		30.00	22.75	54.00	29.00	28.50	28.25	46.00	43.50	1	0	0
19	200	9.2	62.0		29.00	23.00	53.75	28.75	28.00	28.25	35.50	38.00	1	0	0
20	180	5.0	50.0		29.00	22.25	53.75	28.00	27.75	28.00	31.75	43.50	2	0	0
21	120	3.0	50.0		28.25	22.00	53.50	27.75	27.25	27.75	29.25	45.00	3	0	0
22	110	3.0	49.0		28.00	22.00	53.50	27.00	26.75	27.00	25.50	45.00	3	0	0
23	90	4.0	50.0		27.00	22.00	53.25	26.50	26.25	27.00	23.50	44.00	1	0	0
TOT.													45	0	1
AVG.	191	3.6	51.3		26.44	20.06	52.58	29.10	25.25	29.98	34.18	44.22	2	0	0

DATE
(05/26/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	5.2	48.0		27.00	22.00	53.25	25.00	26.00	26.25	22.75	42.25	1	0	0
1	190	1.1	48.0		26.75	21.75	53.00	25.75	25.50	26.00	22.50	40.75	1	0	0
2	190	9.5	47.0		26.50	21.25	52.75	25.25	25.25	25.50	22.00	40.00	0	0	0
3	190	8.8	44.0		26.00	20.25	52.75	25.00	25.00	25.25	22.00	39.00	1	0	0
4	180	9.0	44.0		26.00	20.00	52.75	24.75	24.75	25.00	21.75	38.00	1	0	0
5	180	8.0	43.0		25.75	20.00	52.75	24.50	24.25	25.00	21.50	37.25	1	0	0
6	160	7.2	44.0		25.00	19.25	52.25	24.25	24.00	24.50	21.25	36.75	1	0	0
7	180	8.2	45.0		25.00	19.00	52.25	24.00	24.00	24.25	21.25	34.50	0	0	0
8	180	8.2	48.0		24.25	18.50	52.25	23.75	23.75	24.00	21.75	23.00	1	0	0
9	180	8.0	50.0		24.25	18.50	52.25	44.50	23.00	48.50	21.50	18.25	1	0	0
10	180	9.3	52.0		24.75	18.50	52.00	29.75	24.00	31.75	44.00	38.00	2	0	0
11	210	11.0	50.0		23.75	18.75	52.00	27.25	24.50	28.00	52.50	52.00	2	0	0
12	210	8.0	47.0		26.50	19.00	52.25	34.50	25.50	37.50	43.25	40.50	1	0	0
13	180	7.0	45.0		26.25	19.00	52.00	34.00	25.00	41.50	32.50	30.75	1	0	0
14	180	8.2	50.0		26.50	19.00	52.00	29.75	26.00	31.50	50.00	51.25	1	0	0
15	180	8.5	53.0		27.25	19.25	52.75	28.00	26.25	29.00	53.25	59.25	2	0	0
16	150	7.5	52.0		27.75	19.25	53.25	27.25	27.00	28.25	54.00	61.75	3	0	0
17	240	5.2	52.0		28.00	20.00	54.00	27.75	27.00	28.00	53.50	54.00	1	0	0
18	190	3.3	52.0		28.00	20.25	53.75	27.25	27.00	27.75	39.00	37.00	4	0	0
19	180	9.2	50.0		27.00	20.25	53.25	27.00	26.50	27.25	31.75	34.25	1	0	0
20	150	6.0	42.0		27.00	20.75	53.25	26.50	26.00	26.75	29.50	40.50	1	0	0
21	150	3.4	42.0		26.75	20.00	53.00	24.75	25.50	26.00	27.25	45.75	2	0	0
22	90	1.0	42.0		26.25	20.00	53.00	25.25	25.25	25.75	23.00	45.25	1	0	0
23	90	3.2	41.0		25.75	19.25	53.00	24.75	24.50	25.00	20.50	44.75	1	0	0
TOT.													30	0	0
AVG.	173	6.8	47.1		26.17	19.74	52.74	27.73	25.23	28.68	32.18	41.49	1	0	0

DATE
(05/27/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	2.8	40.0	0.	25.00	19.00	52.75	24.00	24.00	24.75	19.75	43.75	1	0	0
1	150	3.5	38.0	0.	24.50	18.75	52.75	46.00	23.75	51.50	19.25	43.00	1	0	0
2	150	5.0	39.0	0.	23.75	18.25	52.25	44.25	23.00	49.00	18.75	42.00	1	0	0
3	150	4.5	40.0	0.	24.00	18.25	52.00	42.00	23.00	44.00	18.75	42.00	1	0	0
4	150	3.8	40.0	0.	23.50	17.00	51.75	30.75	23.00	33.25	18.75	41.25	1	0	0
5	150	3.2	41.0	4.3	23.25	17.50	51.50	32.00	22.75	45.00	18.75	40.25	1	0	0
6	150	3.6	41.0	29.7	22.75	17.75	51.00	42.50	22.00	47.00	18.25	38.75	1	0	0
7	150	5.2	43.0	58.0	22.25	17.50	50.25	44.00	22.00	49.50	18.25	38.00	1	0	0
8	150	6.5	44.0	85.0	22.25	18.50	49.75	40.00	21.50	44.25	18.50	34.25	1	0	0
9	150	7.0	46.0	108.5	22.00	18.25	49.25	43.50	21.50	48.25	19.50	26.75	1	0	0
10	180	6.5	48.0	127.0	22.25	19.00	49.00	39.50	21.75	42.00	20.00	19.00	1	0	0
11	180	8.0	50.0	139.1	22.50	19.00	48.50	40.00	22.00	42.00	20.50	23.75	2	0	0
12	180	9.0	52.0	144.1	22.75	18.75	48.25	29.00	22.25	31.25	46.75	50.00	1	0	0
13	180	9.8	55.0	141.6	23.75	19.00	48.00	39.25	23.00	42.75	46.00	51.00	2	0	0
14	180	11.0	55.0	131.7	25.00	19.25	48.50	29.25	24.25	31.00	49.00	57.00	1	0	0
15	150	8.5	48.0	115.2	25.25	19.25	48.25	27.00	25.00	28.00	37.75	37.00	1	0	0
16	160	8.0	58.0	93.2	25.25	19.50	48.25	26.00	25.00	26.50	30.50	33.75	2	0	0
17	180	9.0	44.0	67.1	24.75	19.50	48.25	25.00	24.50	25.50	26.75	28.75	2	0	0
18	150	6.0	44.0	38.9	25.00	19.75	48.25	24.75	24.25	25.00	26.00	39.00	2	0	0
19	150	6.0	43.0	18.5	24.25	19.50	48.00	24.00	23.75	24.25	22.75	41.00	1	0	0
20	150	6.0	43.0	0.	24.00	19.00	48.00	23.50	23.00	24.00	21.25	40.00	2	0	0
21	130	4.4	42.0	0.	23.75	19.00	48.00	27.00	23.00	23.50	20.00	40.00	2	0	0
22	160	5.8	42.0	0.	23.00	19.00	47.75	38.00	22.25	42.00	19.25	39.25	2	0	0
23	150	5.2	42.0	0.	22.75	18.75	47.25	38.75	22.00	43.25	18.50	38.75	2	0	0
TOT.				1301.9									33	0	3
AVG.	156	6.1	44.9	54.2	23.65	18.71	49.48	34.17	23.02	36.98	24.73	38.68	1	0	0

DATE
(05/24/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0	140	4.0	42.0	0.	23.00	18.75	47.00	36.00	22.00	44.00	18.00	38.00	2	0	0
1	150	4.4	42.0	0.	22.00	18.50	46.75	37.00	21.75	40.50	18.00	37.25	1	0	0
2	150	5.0	42.0	0.	22.25	18.50	46.25	36.00	22.00	43.50	18.00	37.25	1	0	0
3	150	5.0	42.0	0.	21.75	18.25	46.00	35.75	21.75	39.50	18.00	36.25	1	0	0
4	150	3.2	42.0	0.	21.75	18.50	45.75	36.00	21.25	40.00	18.00	36.00	1	0	0
5	150	3.5	42.0	1.6	21.75	18.50	45.25	40.75	21.25	44.00	18.00	35.50	1	0	0
6	150	4.2	42.0	11.4	21.25	18.50	45.00	40.50	21.00	44.00	18.00	35.00	1	0	0
7	160	7.0	42.0	22.4	21.25	18.75	44.50	10.00	20.75	44.00	17.75	33.75	1	0	0
8	160	7.0	44.0	32.9	21.00	18.00	44.25	39.00	21.00	41.00	18.25	31.00	1	0	0
9	160	6.8	43.0	42.0	21.25	18.75	43.75	34.00	21.00	37.00	19.00	26.25	2	0	0
10	150	4.0	46.0	61.6	21.25	18.75	43.75	30.25	21.00	33.00	19.75	26.75	3	0	0
11	140	8.0	50.0	86.2	21.75	19.00	43.25	39.00	21.25	41.75	20.00	23.75	3	0	0
12	140	7.0	52.0	99.4	22.00	19.25	43.00	30.25	21.25	33.00	29.00	25.00	1	0	0
13	140	9.0	55.0	97.6	22.50	19.25	43.00	31.50	22.00	34.00	44.00	55.50	1	0	0
14	160	7.5	52.0	90.8	24.00	19.50	44.00	26.75	23.25	28.25	45.25	60.75	1	0	0
15	190	6.5	56.0	79.4	24.75	19.75	44.75	25.75	24.25	26.50	44.00	46.75	1	0	0
16	190	6.0	56.0	64.1	25.00	20.00	44.75	25.25	24.50	26.00	41.00	43.50	1	0	0
17	190	6.3	56.0	44.2	25.00	20.00	45.00	25.00	24.75	25.25	40.25	44.00	4	0	0
18	190	4.0	52.0	23.9	25.25	20.00	44.75	24.75	25.00	25.00	33.50	33.75	3	0	0
19	180	5.5	50.0	7.0	25.00	20.00	44.75	24.75	24.25	24.75	29.00	31.00	3	0	0
20	150	4.0	52.0	0.	24.75	20.00	44.75	24.25	24.00	24.50	26.75	31.25	5	0	0
21	150	4.2	52.0	0.	24.25	20.00	44.75	23.75	23.75	24.00	25.75	33.75	2	0	0
22	140	3.8	44.0	0.	24.00	20.00	44.75	23.50	23.50	24.00	24.50	33.75	2	0	0
23	150	4.0	43.0	0.	24.00	19.75	44.50	23.50	23.00	23.75	23.25	34.00	1	0	0
TOT.				764.5									43	0	2
AVG.	163	5.4	47.5	31.9	22.95	19.16	44.76	30.09	22.48	33.80	26.12	36.24	2	0	0

DATE
(05/29/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	4.0	44.0	0.	23.00	19.00	44.50	34.00	22.25	23.25	21.75	33.50	2	0	0
1	150	4.5	42.0	0.	23.00	19.00	44.25	22.75	22.50	23.00	21.00	33.00	2	0	0
2	150	4.5	42.0	0.	22.75	18.75	44.00	34.00	21.50	37.25	20.00	32.00	2	0	0
3	150	3.5	42.0	0.	22.75	18.75	44.00	35.50	21.75	33.50	20.00	31.50	2	0	0
4	150	3.0	42.0	0.	21.75	18.50	43.50	33.75	21.50	37.00	20.00	29.75	1	0	0
5	150	2.5	42.0	1.8	22.00	18.25	43.25	34.50	21.50	42.00	20.00	28.75	1	0	0
6	180	2.0	42.0	12.8	21.75	18.75	43.00	38.50	21.25	41.75	19.75	27.00	1	0	0
7	180	4.3	44.0	36.6	21.00	19.00	42.75	37.00	20.75	41.75	19.50	25.50	1	0	0
8	180	4.5	45.0	59.3	21.25	19.25	42.00	32.00	20.75	35.25	19.25	20.75	1	0	0
9	210	4.2	50.0	84.3	21.25	19.00	41.75	34.25	21.00	37.00	19.25	17.00	1	0	0
10	210	4.8	52.0	101.3	21.25	19.25	41.25	36.25	21.00	40.00	19.75	16.50	1	0	0
11	210	3.8	58.0	113.4	22.50	19.25	41.75	27.00	21.75	29.00	41.00	51.25	1	0	0
12	270	3.5	58.0	118.1	23.00	19.00	42.75	25.50	22.75	26.00	44.25	58.00	1	0	0
13	270	3.0	60.0	114.5	24.75	19.75	44.00	25.00	24.00	25.25	45.00	54.75	1	0	0
14	60	3.6	60.0	104.9	26.25	19.75	45.25	25.50	25.00	25.25	47.00	66.75	1	0	0
15	30	3.0	60.0	91.6	27.00	20.00	46.75	25.75	25.50	26.00	48.25	63.75	1	0	0
16	360	2.0	60.0	74.0	27.75	20.00	48.00	25.50	26.00	26.25	49.00	56.50	1	0	0
17	360	2.6	64.0	53.9	27.75	20.50	48.25	26.75	26.25	26.50	48.25	51.25	1	0	0
18	360	2.2	64.0	31.3	28.00	20.75	48.25	27.00	26.75	27.00	47.25	45.75	1	0	0
19	330	1.0	62.0	9.0	28.00	21.00	48.00	27.00	26.50	27.00	35.00	35.00	1	0	0
20	360	1.0	58.0	0.	25.75	21.00	48.00	27.00	26.25	26.75	31.00	34.25	1	0	0
21	60	1.0	52.0	0.	25.75	21.00	48.00	26.50	26.00	26.50	29.00	35.25	2	0	0
22	60	1.0	50.0	0.	27.00	21.25	48.00	26.00	25.50	26.00	27.25	43.25	3	0	0
23	360	1.0	48.0	0.	26.00	21.25	48.00	25.50	25.00	25.50	25.75	39.25	3	0	0
TOT.				1006.8									35	0	2
AVG.	208	2.9	51.7	41.9	24.22	19.67	44.97	29.44	23.46	30.61	30.76	38.76	1	0	0

DATE
(05/30/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	30	.8	48.0	0.	25.75	21.00	47.75	25.00	24.75	25.00	23.25	38.00	1	0	0
1	60	3.0	46.0	0.	24.75	21.00	48.00	24.00	23.50	24.75	22.25	37.00	1	0	0
2	80	2.0	46.0	0.	25.00	20.75	47.75	24.00	23.75	24.25	21.50	36.25	1	0	0
3	130	.7	42.0	0.	24.00	20.00	47.50	23.25	23.00	23.75	21.00	35.00	1	0	0
4	150	1.0	43.0	0.	24.25	20.00	47.25	23.00	23.00	23.50	20.75	34.50	1	0	0
5	120	.9	48.0	4.4	24.00	19.25	47.25	22.50	23.00	23.25	20.50	33.50	1	0	0
6	210	.5	47.0	32.5	22.50	18.75	47.00	22.50	22.25	23.00	20.50	32.00	1	0	0
7	330	1.6	50.0	64.1	23.25	19.00	47.00	35.00	22.25	38.75	20.75	28.25	1	0	0
8	330	1.8	52.0	94.1	23.00	18.25	46.75	31.25	22.25	34.50	21.00	19.25	1	0	0
9	270	2.4	56.0	120.3	23.25	19.00	46.75	39.75	22.00	43.00	21.00	17.00	4	0	0
10	210	5.0	52.0	140.8	23.75	19.25	46.50	28.00	23.25	30.00	36.00	34.00	2	0	0
11	270	2.2	60.0	154.3	24.00	20.00	46.25	26.00	23.50	27.00	32.00	27.25	3	0	0
12	240	3.0	60.0	159.7	25.00	20.75	46.00	25.50	24.25	26.00	35.50	36.00	1	0	0
13	180	6.2	58.0	156.9	24.00	21.00	46.00	25.00	24.00	25.00	28.75	29.25	2	0	0
14	210	3.8	58.0	145.8	24.75	21.00	46.00	25.00	24.50	25.00	26.50	27.00	1	0	0
15	210	3.0	58.0	127.3	25.00	21.00	45.75	25.00	24.25	25.00	26.00	27.25	1	0	0
16	180	2.3	56.0	102.7	24.25	20.00	45.50	24.75	24.25	24.75	25.00	27.00	1	0	0
17	120	2.2	57.0	73.7	25.00	21.25	45.50	24.75	24.75	24.50	24.25	26.75	1	0	0
18	150	2.5	56.0	42.2	25.00	21.00	45.25	24.25	23.75	24.50	24.00	28.00	1	0	0
19	150	1.2	56.0	11.9	25.00	20.75	45.25	24.25	23.75	24.25	23.75	27.75	1	0	0
20	120	1.2	54.0	0.	24.50	20.75	45.25	24.00	24.00	24.25	23.75	30.25	1	0	0
21	90	.2	52.0	0.	24.75	20.25	45.00	24.00	23.00	24.25	23.75	33.75	7	0	0
22	100	1.0	52.0	0.	24.25	20.50	45.00	23.50	23.75	24.00	23.00	35.75	4	0	0
23	120	2.2	52.0	0.	24.25	20.75	45.00	23.75	23.50	23.75	22.50	36.00	3	0	0
TOT.				1430.7									42	0	0
AVG.	169	2.1	52.5	59.6	24.30	20.22	46.30	25.75	23.51	26.50	24.47	30.70	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	1.3	52.0	0.	23.00	20.00	45.00	23.75	23.25	23.75	22.00	36.75	1	0	0
1	150	3.0	52.0	0.	24.25	20.25	44.75	23.75	23.50	24.00	21.50	36.25	1	0	0
2	140	3.0	52.0	0.	23.25	20.25	44.75	23.50	23.00	24.00	21.00	36.00	1	0	0
3	130	1.8	52.0	0.	24.25	20.00	44.75	23.50	23.25	23.75	21.00	36.00	0	0	0
4	140	.6	52.0	0.	21.25	19.25	44.25	23.25	23.00	23.75	21.00	35.50	1	0	0
5	100	0.	52.0	1.8	23.00	19.25	44.25	23.25	22.75	23.25	21.00	35.25	0	0	0
6	150	1.5	52.0	13.2	24.00	19.50	44.25	23.25	23.00	23.25	21.00	35.00	1	0	0
7	210	2.5	52.0	26.1	20.50	18.75	44.00	23.00	22.75	23.25	21.00	34.25	1	0	0
8	210	4.0	52.0	38.4	24.00	19.25	44.00	23.50	23.00	23.25	21.00	34.50	1	0	0
9	210	3.8	52.0	49.1	23.00	19.00	44.00	23.00	23.00	23.00	21.25	33.25	1	0	0
10	210	3.0	55.0	57.4	23.75	19.00	44.00	23.00	22.50	23.00	21.50	29.00	1	0	0
11	240	2.2	56.0	62.9	24.00	19.25	44.00	23.25	23.00	23.00	21.75	21.00	1	0	0
12	240	1.8	56.0	65.2	23.25	19.00	44.00	23.00	21.75	22.25	21.25	22.75	1	0	0
13	280	1.2	57.0	64.0	23.25	19.25	44.00	20.50	21.00	21.50	20.00	23.25	1	0	0
14	360	1.1	58.0	59.4	22.00	19.25	43.75	19.00	19.25	19.75	18.00	21.25	1	0	0
15	270	1.8	56.0	51.9	22.25	18.50	43.75	20.00	20.00	20.50	19.50	22.75	3	0	0
16	140	1.2	57.0	41.8	22.50	20.00	43.75	21.00	21.00	21.25	20.50	25.00	3	0	0
17	120	2.8	58.0	29.9	22.75	20.00	43.75	21.25	21.75	21.75	21.00	24.00	5	0	0
18	120	2.4	58.0	17.1	23.00	20.25	43.75	22.00	22.00	22.00	21.50	25.25	1	0	0
19	150	1.8	59.0	4.7	23.25	21.00	43.50	22.50	22.00	22.25	21.75	27.25	1	0	0
20	210	6.0	59.0	0.	22.25	20.75	43.25	21.50	22.00	22.50	22.00	29.50	1	0	0
21	180	5.0	55.0	0.	23.25	20.75	43.25	22.50	22.50	22.75	22.00	31.75	2	0	0
22	160	6.0	53.0	0.	23.25	20.25	43.25	22.25	22.25	22.25	21.75	33.00	1	0	0
23	160	6.0	53.0	0.	22.75	20.00	43.00	22.25	22.50	22.25	21.25	34.00	2	0	0
TOT.				582.9									33	0	0
AVG.	186	2.7	54.6	24.3	23.00	19.70	43.96	22.41	22.25	22.59	21.06	30.10	1	0	0

DATE
(06/01/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	1.2	50.0	0.	23.00	20.00	43.00	22.25	22.50	22.25	21.00	34.00	1	0	0
1	180	6.0	50.0	0.	22.00	19.75	43.00	22.25	22.25	22.00	20.75	34.00	1	0	0
2	150	2.8	50.0	0.	23.00	19.50	43.00	22.25	22.00	22.25	20.25	34.25	1	0	0
3	120	2.0	49.0	0.	21.00	19.00	42.75	22.00	22.00	22.00	20.00	34.00	1	0	0
4	150	2.5	49.0	0.	22.75	19.00	42.75	22.00	21.75	22.00	19.75	34.00	0	0	0
5	150	3.0	49.0	.5	22.00	18.50	42.75	22.00	22.00	22.00	19.75	34.00	1	0	0
6	180	3.5	50.0	4.1	22.25	18.75	42.50	37.00	22.00	41.00	19.50	33.00	1	0	0
7	180	6.8	50.0	10.4	22.50	19.00	42.75	33.00	21.50	36.00	19.50	33.25	1	0	0
8	180	6.0	52.0	17.9	22.25	18.50	42.25	32.00	21.75	35.25	19.75	32.00	1	0	0
9	180	7.0	52.0	25.3	22.25	18.75	42.00	29.50	21.25	31.75	20.00	28.25	2	0	0
10	180	8.0	54.0	31.7	22.25	18.75	42.00	22.25	21.75	24.00	19.00	18.25	1	0	0
11	180	7.0	59.0	34.7	21.25	19.00	42.25	19.25	20.25	20.00	39.00	51.50	3	0	0
12	190	9.5	60.0	35.9	22.50	19.50	43.75	19.75	19.00	20.00	44.50	59.50	1	0	0
13	190	10.5	60.0	37.7	24.50	19.25	44.50	21.75	19.50	21.75	46.00	59.00	1	0	0
14	210	11.0	61.0	35.4	26.00	19.50	46.00	23.25	21.75	23.25	47.50	64.00	1	0	0
15	210	10.5	62.0	31.0	26.75	20.25	47.50	24.25	23.00	24.25	48.75	63.25	1	0	0
16	210	12.0	61.0	24.8	27.00	20.25	49.00	25.25	24.00	25.00	49.75	59.75	3	0	0
17	210	11.0	61.0	17.3	28.00	21.00	49.75	25.00	24.75	26.00	50.00	53.00	3	0	0
18	210	9.0	54.0	9.1	27.75	21.25	49.75	26.50	26.00	26.25	48.00	46.00	4	0	0
19	210	8.5	52.0	2.0	27.00	21.00	49.50	26.50	26.00	26.25	34.50	35.00	1	0	0
20	200	9.5	52.0	0.	26.50	21.75	49.25	26.00	26.00	26.00	30.25	33.75	3	0	0
21	180	6.8	48.0	0.	25.75	21.00	49.00	25.50	25.00	26.00	28.25	36.25	2	0	0
22	170	9.0	48.0	0.	25.50	20.75	49.00	25.25	25.25	25.50	25.75	39.75	2	0	0
23	160	8.5	46.0	0.	25.00	20.75	49.00	25.00	24.50	25.00	23.50	38.00	1	0	0
TOT.				317.8									37	0	0
AVG.	182	7.2	53.3	13.2	24.11	19.78	45.29	25.03	22.74	25.66	30.62	41.16	2	0	0

DATE
(06/02/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	7.5	46.0	0.	24.50	20.00	49.00	24.25	23.25	24.75	22.25	35.75	2	0	0
1	150	5.0	44.0	0.	25.25	19.75	48.75	24.00	24.00	24.25	21.75	36.00	1	0	0
2	150	5.0	44.0	0.	24.25	19.50	48.50	23.75	23.25	23.75	21.00	35.00	1	0	0
3	150	4.0	42.0	0.	24.50	19.00	48.25	23.25	23.25	23.75	21.00	34.75	1	0	0
4	150	5.0	42.0	0.	23.75	19.00	48.25	23.00	22.75	23.25	20.50	34.00	0	0	0
5	150	4.2	42.0	6.3	23.50	18.25	48.00	22.50	22.25	23.00	20.25	33.25	1	0	0
6	180	2.0	44.0	58.7	23.00	18.50	48.00	43.00	22.00	47.00	20.00	32.00	1	0	0
7	180	3.8	48.0	107.0	22.50	19.00	47.25	35.75	21.75	39.50	20.00	27.25	1	0	0
8	180	6.0	50.0	124.3	22.50	19.00	47.00	41.00	21.75	43.00	20.00	19.00	1	0	0
9	180	4.0	52.0	127.1	23.00	19.00	46.75	24.25	22.25	30.50	20.50	16.50	1	0	0
10	210	3.0	58.0	149.0	22.75	18.75	46.25	31.75	22.25	34.00	23.00	18.50	1	0	0
11	270	3.0	60.0	163.3	24.00	19.00	46.50	26.75	23.25	28.00	47.00	52.25	1	0	0
12	270	3.0	60.0	168.9	25.50	19.25	47.00	25.00	24.00	26.25	45.00	61.25	1	0	0
13	270	4.5	60.0	165.6	25.00	19.75	48.25	25.00	24.25	25.25	49.75	66.75	1	0	0
14	270	3.5	60.0	153.4	26.00	20.00	49.00	24.25	23.75	24.50	50.00	59.75	1	0	0
15	300	3.5	60.0	133.3	27.00	20.25	50.00	25.25	24.75	25.50	50.00	54.50	1	0	0
16	300	3.0	60.0	106.6	27.50	20.75	50.00	26.25	25.75	26.00	50.00	51.50	2	0	0
17	300	2.8	60.0	75.3	26.75	21.00	50.00	27.00	26.50	26.75	50.00	52.25	1	0	0
18	330	2.2	60.0	41.5	28.75	21.25	50.00	27.00	27.00	27.00	49.25	48.25	1	0	0
19	330	1.8	59.0	9.4	28.00	21.25	50.00	27.00	27.00	27.00	33.75	32.50	3	0	0
20	330	2.0	57.0	0.	27.75	21.50	50.00	27.00	26.75	26.75	30.50	34.00	1	0	0
21	330	1.8	52.0	0.	27.50	21.50	50.00	26.50	26.25	26.25	29.00	40.50	2	0	0
22	330	.4	51.0	0.	27.00	21.25	49.75	26.00	26.00	26.00	27.25	38.00	2	0	0
23	330	1.0	50.0	0.	26.75	21.25	49.75	25.75	25.50	26.00	26.25	38.00	2	0	0
TOT.				1589.7									31	0	1
AVG.	242	3.4	52.5	66.2	25.29	19.41	48.54	27.51	24.15	28.25	32.12	39.69	1	0	0

DATE
(06/03/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	330	.8	50.0	0.	26.25	21.25	49.50	25.25	25.00	25.25	25.00	38.00	1	0	0
1	330	0.	49.0	0.	26.00	20.50	49.25	25.00	24.25	25.00	23.75	37.25	2	0	0
2	120	.4	48.0	0.	26.00	20.75	49.25	25.00	24.50	25.00	23.00	36.75	1	0	0
3	150	2.5	48.0	0.	25.50	20.00	49.25	24.50	24.25	24.75	22.50	35.75	1	0	0
4	150	5.0	48.0	0.	25.25	20.00	49.00	24.25	24.00	24.25	22.00	34.75	1	0	0
5	130	4.2	48.0	3.0	25.00	19.25	49.00	24.00	24.00	24.00	22.00	34.00	0	0	0
6	130	5.0	46.0	27.7	24.75	19.25	49.00	24.00	23.50	24.00	22.00	33.00	1	0	0
7	90	3.5	48.0	56.2	24.50	19.25	49.00	41.00	23.25	45.00	21.75	31.00	1	0	0
8	180	2.5	52.0	83.2	24.50	18.50	49.00	23.50	23.25	30.25	22.00	26.50	1	0	0
9	360	2.0	50.0	106.7	24.50	18.75	48.75	43.25	23.75	46.00	22.25	20.00	1	0	0
10	360	1.5	60.0	125.1	24.75	19.25	48.50	30.00	24.00	32.00	22.50	20.75	1	0	0
11	330	2.5	60.0	137.0	25.00	19.00	48.25	27.00	24.25	27.75	23.00	22.00	2	0	0
12	190	5.6	60.0	141.8	25.25	20.00	48.25	26.00	24.50	26.25	41.25	35.00	3	0	0
13	190	5.0	59.0	139.0	25.50	19.75	48.00	25.25	24.50	25.50	31.50	28.00	1	0	0
14	180	4.5	56.0	128.8	25.25	20.00	48.00	25.25	25.00	25.25	27.75	27.25	1	0	0
15	210	4.0	57.0	112.0	25.75	20.00	47.75	25.00	24.75	25.00	26.25	26.50	2	0	0
16	210	3.0	52.0	89.7	25.00	20.00	47.75	23.50	23.25	24.00	24.00	26.00	1	0	0
17	210	4.0	52.0	63.4	24.75	20.50	47.75	24.00	24.00	24.00	24.00	28.00	1	0	0
18	180	3.0	50.0	35.1	25.00	20.50	47.25	23.75	23.50	24.00	23.75	27.75	2	0	0
19	180	.8	50.0	8.2	24.75	20.00	47.25	24.00	23.50	24.00	23.75	34.50	1	0	0
20	180	1.2	50.0	0.	25.00	20.50	47.25	24.00	23.75	24.00	23.25	39.00	2	0	0
21	150	2.2	50.0	0.	24.75	20.00	47.25	23.75	23.00	24.00	22.25	39.25	1	0	0
22	150	2.6	50.0	0.	25.00	20.00	47.00	24.00	23.75	23.75	21.75	39.00	2	0	0
23	150	2.2	52.0	0.	25.00	20.00	47.00	23.75	23.25	23.75	21.50	38.75	1	0	0
TOT.				1256.9									29	0	0
AVG.	202	2.8	51.9	52.4	25.12	19.87	48.26	26.42	23.95	26.95	24.26	31.61	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.4	52.0	0.	24.50	20.00	47.00	23.75	23.50	23.50	21.00	38.50	1	0	0
1	150	1.2	52.0	0.	24.25	20.00	47.00	23.75	23.25	23.50	21.00	38.00	1	0	0
2	150	2.0	52.0	0.	24.00	20.00	46.75	23.75	23.25	23.25	21.00	38.00	1	0	0
3	140	2.2	52.0	0.	24.50	20.00	46.75	23.75	23.25	23.50	21.00	37.75	1	0	0
4	150	1.8	52.0	0.	24.50	19.75	46.75	23.75	23.25	23.50	21.00	37.25	1	0	0
5	140	2.4	52.0	1.1	24.00	19.75	46.50	23.75	23.25	23.00	21.00	37.25	1	0	0
6	140	2.5	52.0	10.0	24.50	19.50	46.50	23.75	23.25	23.25	21.00	37.00	1	0	0
7	140	2.0	54.0	20.2	24.50	19.50	46.25	23.50	23.25	23.25	21.00	36.25	1	0	0
8	120	2.3	54.0	29.9	24.50	19.25	46.25	23.75	23.25	23.25	21.25	35.00	2	0	0
9	150	2.0	60.0	38.3	24.25	19.50	46.25	23.00	23.00	23.25	21.25	34.00	2	0	0
10	150	3.4	62.0	44.9	24.25	20.00	46.25	23.75	23.25	23.25	22.00	28.00	4	0	0
11	200	5.5	60.0	49.2	24.75	20.25	46.25	23.75	23.25	23.50	22.25	22.00	3	0	0
12	180	6.2	60.0	50.9	24.25	20.50	46.00	24.00	23.25	23.50	22.25	22.75	1	0	0
13	180	7.5	61.0	49.9	24.75	20.75	46.00	24.00	23.75	24.00	22.25	21.75	5	0	0
14	240	7.5	62.0	58.0	25.00	21.25	45.75	24.25	23.75	24.00	39.50	42.25	4	0	0
15	240	6.0	64.0	50.5	25.25	21.25	45.75	24.75	24.25	24.25	39.25	41.00	2	0	0
16	240	5.0	65.0	40.4	26.00	21.50	45.75	25.00	24.75	25.00	45.00	49.00	1	0	0
17	160	3.0	67.0	28.6	26.25	22.00	45.75	25.00	25.00	25.00	37.25	38.50	1	0	0
18	140	3.0	67.0	15.9	25.75	22.25	45.25	25.25	25.25	25.25	30.00	30.00	2	0	0
19	140	3.5	63.0	4.4	26.00	22.25	45.50	25.25	25.00	25.25	28.00	28.25	2	0	0
20	140	3.0	62.0	0.	25.75	22.00	45.25	25.00	24.25	25.00	26.75	29.25	1	0	0
21	120	1.8	62.0	0.	25.75	22.50	45.25	25.25	25.00	25.00	26.00	31.25	2	0	0
22	120	1.0	60.0	0.	25.50	22.25	45.00	24.75	24.25	25.00	25.25	31.75	1	0	0
23	150	.7	56.0	0.	25.25	22.25	45.00	24.25	24.50	24.75	25.00	32.00	1	0	0
TOT.				492.2									44	0	0
AVG.	160	3.2	58.5	20.5	24.92	20.76	46.03	24.20	23.83	24.00	25.89	34.03	2	0	0

DATE
(06/05/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP.	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	300	.4	56.0	0.	25.00	22.00	44.75	24.75	24.00	24.75	24.75	34.25	2	0	0
1	330	.4	54.0	0.	24.50	21.50	45.00	24.00	24.00	24.25	24.00	34.50	0	0	0
2	330	1.7	52.0	0.	25.00	21.50	44.75	24.00	23.75	24.25	23.00	34.75	1	0	0
3	330	2.0	52.0	0.	23.00	21.00	44.75	23.75	23.25	24.00	22.25	35.00	0	0	0
4	330	.8	51.0	0.	24.50	21.00	44.50	23.00	23.50	23.75	21.75	34.75	1	0	0
5	330	1.2	52.0	1.5	24.50	20.50	44.75	23.50	23.50	23.75	21.50	35.00	1	0	0
6	330	1.8	52.0	13.0	23.00	20.00	44.75	23.75	23.25	23.50	21.00	34.75	1	0	0
7	330	1.5	55.0	26.2	24.50	20.00	44.75	23.25	23.00	23.25	21.00	34.00	1	0	0
8	330	2.5	60.0	39.0	24.00	19.75	44.75	23.25	23.00	23.25	21.00	33.00	1	0	0
9	330	3.2	62.0	50.0	24.00	20.00	44.50	23.25	23.00	23.25	21.75	26.75	1	0	0
10	330	3.0	66.0	58.6	24.50	19.75	44.50	23.50	23.50	23.50	43.50	47.00	1	0	0
11	330	4.0	68.0	64.3	25.00	20.25	45.25	23.75	24.00	24.25	46.50	56.50	1	0	0
12	330	5.0	70.0	66.5	27.25	21.00	46.75	24.75	25.25	25.00	48.00	63.75	1	0	0
13	330	6.0	72.0	65.2	28.00	21.25	48.25	25.50	26.00	26.25	50.00	67.25	1	0	0
14	330	6.0	72.0	60.5	29.00	22.00	50.25	26.25	26.75	27.00	51.50	69.00	1	0	0
15	330	6.5	72.0	52.6	30.00	22.50	51.75	27.00	27.75	27.75	53.00	68.00	1	0	0
16	330	7.4	74.0	42.2	30.00	23.50	53.00	28.00	28.00	28.00	54.00	64.00	2	0	0
17	330	4.5	75.0	29.9	30.75	24.00	53.75	28.25	28.75	28.50	54.00	59.25	3	0	0
18	330	6.0	76.0	16.7	31.25	24.75	53.50	29.00	29.00	29.00	53.00	52.25	2	0	0
19	330	6.0	75.0	4.1	31.00	24.75	53.25	29.25	29.25	29.00	44.25	42.75	6	0	0
20	330	3.0	74.0	0.	30.25	24.75	53.25	29.50	29.00	29.00	36.00	38.75	3	0	0
21	330	3.0	70.0	0.	30.00	24.50	53.25	29.25	28.75	28.75	32.75	40.25	2	0	0
22	330	1.0	66.0	0.	30.00	24.25	53.00	29.00	28.75	28.75	32.75	41.00	5	0	0
23	330	6.0	62.0	0.	30.00	24.25	53.00	28.75	28.50	28.50	30.00	43.75	2	0	0
TOT.				590.3									40	0	0
AVG.	329	3.3	64.1	24.6	27.04	22.03	48.33	25.76	25.73	25.89	35.47	45.51	2	0	0

DATE
(06/06/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	90	.4	62.0	0.	29.00	24.25	52.75	28.25	28.00	28.00	29.25	43.50	1	0	0
1	90	2.0	60.0	0.	29.75	24.00	52.75	28.00	28.00	28.00	27.50	43.75	1	0	0
2	40	.2	61.0	0.	29.50	23.75	52.50	27.75	27.50	27.75	26.50	43.00	1	0	0
3	90	1.0	60.0	0.	29.50	23.50	52.25	27.25	27.00	27.25	25.75	42.25	1	0	0
4	120	.8	58.0	0.	28.00	23.00	52.00	27.00	26.75	27.00	25.00	41.25	1	0	0
5	90	.9	57.0	6.3	28.00	22.50	52.00	26.75	26.50	27.00	24.75	40.75	1	0	0
6	330	2.0	61.0	54.1	27.75	22.25	52.00	26.50	26.25	26.75	24.25	39.25	1	0	0
7	330	3.0	62.0	106.4	27.25	21.75	51.75	26.50	26.25	26.25	24.50	37.75	1	0	0
8	330	2.2	68.0	144.7	27.00	22.00	51.50	26.25	26.00	26.00	25.00	31.25	1	0	0
9	300	2.0	72.0	157.6	27.00	21.50	51.50	26.25	26.00	26.00	25.00	22.75	1	0	0
10	300	4.0	72.0	159.5	27.25	22.00	51.25	26.75	26.25	26.25	50.75	55.25	1	0	0
11	310	5.0	68.0	174.7	28.75	22.75	52.00	27.25	26.75	27.00	52.50	58.75	1	0	0
12	350	4.5	74.0	180.8	29.75	23.00	52.75	28.00	27.75	27.50	54.00	66.00	2	0	0
13	340	4.0	74.0	141.4	30.75	23.75	54.50	28.75	28.25	28.25	55.75	74.00	1	0	0
14	30	3.5	74.0	131.2	31.25	24.25	56.00	29.25	29.00	29.00	57.00	70.75	1	0	0
15	350	2.3	77.0	143.3	32.00	25.00	57.00	30.00	29.75	29.75	58.00	66.50	1	0	0
16	350	2.3	78.0	146.8	32.75	26.00	58.00	30.25	30.25	30.00	58.75	67.00	1	0	0
17	300	4.0	78.0	116.1	33.00	26.00	58.50	30.75	30.50	30.25	58.75	62.25	2	0	0
18	270	3.5	78.0	68.6	33.25	27.00	58.50	31.00	30.75	30.75	58.00	57.25	1	0	0
19	340	2.6	78.0	17.1	33.25	26.65	58.50	31.25	31.00	31.00	55.75	52.50	1	0	0
20	30	2.5	74.0	0.	33.25	26.65	58.25	31.25	31.00	31.00	43.50	43.25	1	0	0
21	30	3.5	70.0	0.	32.50	26.50	58.00	31.00	30.75	30.75	37.25	43.50	1	0	0
22	330	2.4	68.0	0.	32.00	26.25	58.00	30.75	30.25	30.50	34.00	44.75	3	0	0
23	330	2.4	68.0	0.	31.75	26.25	58.00	30.25	30.00	30.00	32.25	44.75	1	0	0
TOT.				1748.6									27	0	0
AVG.	228	2.5	68.8	72.9	30.18	24.19	54.59	28.62	28.35	28.42	40.16	49.83	1	0	0

DATE
(06/07/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIV.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0	320	1.5	61.0	0.	31.00	26.25	58.00	30.00	29.75	30.00	31.00	44.50	1	0	0
1	60	3.0	60.0	0.	31.00	26.00	57.50	29.25	29.00	29.25	29.75	44.75	1	0	0
2	60	1.9	58.0	0.	30.25	25.75	57.50	29.00	29.00	29.00	29.00	43.25	1	0	0
3	60	1.5	56.0	0.	30.00	25.00	57.00	28.75	28.75	29.00	28.00	43.00	1	0	0
4	120	2.5	54.0	0.	29.75	25.00	57.00	28.75	28.50	28.50	27.25	42.00	1	0	0
5	150	2.6	52.0	4.9	29.50	24.25	57.00	28.25	28.00	28.25	27.00	41.25	1	0	0
6	150	3.8	54.0	24.0	29.00	23.75	57.00	28.00	27.75	28.00	26.50	40.25	1	0	0
7	160	4.5	54.0	48.0	29.00	23.00	56.75	28.00	27.50	28.00	26.50	37.00	1	0	0
8	180	4.2	55.0	70.9	28.75	22.50	56.75	27.75	27.25	27.75	26.75	31.00	1	0	0
9	180	4.8	55.0	90.8	28.75	22.25	56.50	27.75	27.00	27.75	26.50	27.25	1	0	0
10	190	4.7	58.0	133.5	27.75	22.00	56.50	27.25	27.00	27.25	26.25	26.00	3	0	0
11	210	4.0	61.0	169.3	27.25	22.00	56.50	25.25	25.25	26.00	25.00	25.00	1	0	0
12	200	4.5	63.0	193.2	28.25	22.25	56.50	26.50	26.25	26.50	51.25	53.00	1	0	0
13	180	6.0	64.0	216.4	29.25	22.75	56.75	27.75	27.50	27.50	57.25	72.00	1	0	0
14	150	5.5	64.0	205.4	30.50	23.25	57.75	28.75	28.00	28.25	59.00	70.50	1	0	0
15	180	5.0	69.0	179.0	31.75	24.00	59.00	29.25	29.00	29.00	59.75	71.75	4	0	0
16	180	3.5	70.0	142.6	32.00	24.00	60.00	30.00	29.50	29.50	60.25	69.25	5	0	0
17	180	4.0	72.0	97.5	32.50	24.75	60.25	30.25	30.00	30.00	60.00	62.75	2	0	0
18	210	4.0	71.0	38.6	32.75	24.75	60.00	31.00	30.75	30.50	58.75	56.50	4	0	0
19	180	3.2	70.0	13.4	33.00	24.75	60.00	31.25	31.00	30.75	51.25	48.00	5	0	0
20	330	2.5	64.0	0.	32.50	24.50	60.00	31.00	30.75	30.50	39.50	42.25	5	0	0
21	270	3.5	60.0	0.	32.00	24.75	59.75	30.50	30.25	30.25	35.00	44.00	5	0	0
22	180	2.1	58.0	0.	31.25	24.50	59.25	30.00	30.00	30.00	32.25	53.00	5	0	0
23	180	7.0	52.0	0.	31.00	24.25	59.25	29.75	29.50	29.50	28.00	53.00	3	0	0
TOT.				1627.5									55	0	0
AVG.	178	3.7	60.6	67.8	30.36	24.01	58.02	29.92	28.64	28.79	38.41	47.55	2	0	0

DATE
(06/08/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	170	3.8	50.0	0.	30.50	23.75	59.00	29.25	29.00	29.25	27.00	48.25	1	0	0
1	150	5.0	50.0	0.	30.00	23.50	59.00	28.75	28.75	29.00	26.25	46.25	1	0	0
2	150	5.0	50.0	0.	29.25	23.00	58.75	28.00	28.00	28.25	25.75	44.25	1	0	0
3	150	5.0	49.0	0.	29.00	22.75	58.25	27.50	27.50	25.00	25.25	42.00	1	0	0
4	140	3.2	48.0	0.	28.50	22.00	58.00	27.25	27.00	27.50	25.00	40.75	0	0	0
5	140	3.2	48.0	2.2	28.25	22.00	58.00	27.00	26.75	27.00	25.00	40.00	1	0	0
6	140	3.2	48.0	17.9	28.00	21.75	58.00	26.75	26.50	27.00	24.75	38.25	1	0	0
7	150	5.5	49.0	44.7	27.50	21.25	57.50	26.25	26.25	26.75	24.75	35.25	1	0	0
8	150	5.2	49.0	76.3	27.50	21.00	57.50	26.25	26.00	26.50	24.75	25.00	1	0	0
9	160	4.6	50.0	107.7	27.50	20.75	57.25	26.00	26.00	26.25	25.00	23.75	1	0	0
10	120	3.2	53.0	126.1	27.00	20.50	57.00	26.00	25.75	26.00	25.00	23.00	1	0	0
11	90	2.8	54.0	138.2	27.50	20.75	57.00	26.00	26.00	26.25	26.00	42.00	1	0	0
12	140	2.8	60.0	143.0	28.00	21.00	56.75	27.00	26.50	27.00	27.00	52.00	4	0	0
13	270	2.5	60.0	149.7	29.25	21.25	56.75	27.75	27.25	27.50	27.75	62.75	4	0	0
14	330	3.5	60.0	145.0	30.00	21.50	57.00	28.25	28.00	28.00	28.25	59.00	2	0	0
15	340	2.5	60.0	129.6	29.75	22.00	56.75	28.75	28.25	28.75	28.75	53.00	4	0	0
16	340	2.2	60.0	105.8	30.75	22.25	57.00	29.00	29.00	29.00	29.00	60.25	5	0	0
17	360	3.0	61.0	76.4	30.50	22.25	56.75	29.25	29.00	29.25	29.25	55.00	4	0	0
18	330	3.8	60.0	43.4	31.00	22.25	56.75	29.75	29.50	29.50	29.75	50.00	4	0	0
19	330	4.0	59.0	11.3	30.75	22.00	56.50	29.75	29.25	29.25	29.75	40.00	2	0	0
20	330	3.0	58.0	0.	30.00	21.75	56.25	29.25	29.00	29.00	29.25	41.00	1	0	0
21	330	3.0	52.0	0.	29.50	21.50	56.25	29.00	29.00	29.00	29.00	50.50	1	0	0
22	360	1.5	50.0	0.	29.50	21.25	56.00	28.50	28.25	28.50	28.50	51.00	1	0	0
23	60	2.1	48.0	0.	28.75	21.25	56.00	27.75	27.50	28.00	27.75	46.25	1	0	0
TOT.				1317.3									43	0	0
AVG.	220	3.5	53.6	54.9	29.09	21.80	57.25	27.87	27.67	27.81	27.02	44.56	2	0	0

DATE
(06/09/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	60	3.2	48.0	0.	28.25	21.25	55.75	27.00	27.00	27.25	23.75	44.25	1	0	0
1	50	1.2	46.0	0.	27.75	21.00	55.75	26.75	26.50	27.00	23.75	42.75	0	0	0
2	360	1.0	44.0	0.	27.50	20.00	55.50	26.50	26.25	26.50	23.00	41.25	1	0	0
3	60	.5	43.0	0.	27.00	20.00	55.50	26.00	26.00	26.25	22.75	40.25	1	0	0
4	60	1.0	42.0	0.	27.00	19.75	55.25	25.75	25.75	26.00	22.25	39.75	1	0	0
5	80	.4	42.0	2.5	26.25	19.25	55.25	25.25	25.00	25.75	22.00	38.50	1	0	0
6	80	.3	45.0	19.6	26.00	19.00	55.00	25.00	25.00	25.25	22.00	37.00	1	0	0
7	330	2.5	50.0	39.0	26.00	18.75	55.00	25.00	24.75	25.00	22.00	34.75	1	0	0
8	330	4.0	51.0	57.4	26.00	18.25	55.00	24.75	24.75	25.00	22.75	28.50	0	0	0
9	330	5.0	52.0	73.4	26.00	18.50	55.00	25.00	25.00	25.00	23.00	18.75	1	0	0
10	330	5.0	58.0	86.0	26.00	18.75	54.75	25.25	25.25	25.25	51.25	51.00	1	0	0
11	330	5.0	60.0	94.2	27.75	19.00	55.00	26.25	26.00	26.00	55.75	66.00	2	0	0
12	330	4.0	61.0	97.5	29.00	20.00	56.00	27.25	26.75	27.00	57.00	71.00	5	0	0
13	330	4.5	62.0	95.7	30.00	20.00	57.25	28.00	28.00	28.00	58.25	74.25	6	0	0
14	330	5.0	64.0	88.9	31.00	21.00	58.75	28.75	28.75	28.75	59.50	75.25	4	0	0
15	310	8.0	66.0	77.5	32.00	21.25	60.00	29.50	29.25	29.25	61.00	73.75	5	0	0
16	330	4.0	68.0	62.4	32.25	21.50	60.75	30.00	30.00	30.00	61.00	69.75	5	0	0
17	330	4.5	68.0	44.5	33.00	22.00	61.00	30.75	30.25	30.25	61.00	63.50	7	0	0
18	330	4.5	68.0	25.2	33.00	22.50	61.00	31.00	30.75	30.75	59.00	56.25	5	0	0
19	310	6.0	66.0	6.7	33.00	22.75	60.75	31.25	31.00	31.00	49.50	46.00	3	0	0
20	310	4.0	64.0	0.	32.25	22.75	60.50	31.00	30.75	30.75	39.50	44.50	3	0	0
21	340	1.5	58.0	0.	31.75	22.75	60.50	30.50	30.00	30.25	34.75	52.00	5	0	0
22	330	1.2	58.0	0.	31.25	22.50	60.00	30.00	30.00	30.00	31.00	52.00	3	0	0
23	120	.7	52.0	0.	30.50	22.75	60.00	29.25	29.25	29.25	28.00	51.25	2	0	0
TOT.				870.5									63	0	0
AVG.	254	3.3	55.7	36.3	29.19	20.64	57.47	27.74	27.56	27.73	38.41	50.51	3	0	0

DATE
(06/10/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (Kwh)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	.6	52.0	0.	30.00	23.00	59.75	28.50	28.50	28.75	25.50	49.25	1	0	0
1	90	.5	50.0	0.	29.25	22.25	59.25	28.00	28.00	28.25	24.50	47.25	1	0	0
2	110	.9	48.0	0.	28.75	22.00	59.25	27.50	27.50	28.00	24.00	45.00	1	0	0
3	80	1.1	48.0	0.	28.25	21.50	59.00	27.00	27.00	27.25	24.00	43.50	0	0	0
4	90	.6	46.0	0.	28.00	21.00	59.00	26.75	26.75	27.00	23.50	42.00	1	0	0
5	120	1.5	44.0	5.7	27.50	20.00	59.00	26.25	26.25	26.75	23.00	41.00	1	0	0
6	120	1.2	50.0	43.7	27.00	20.00	58.50	26.00	25.75	26.25	23.00	39.50	1	0	0
7	150	2.4	53.0	86.6	26.75	19.50	58.50	25.50	25.75	26.00	23.00	38.50	1	0	0
8	270	1.7	60.0	127.5	27.00	19.25	58.50	25.50	25.25	25.75	23.75	30.25	1	0	0
9	270	2.2	62.0	163.1	26.75	19.00	58.00	25.75	25.75	26.00	24.00	20.00	1	0	0
10	300	3.2	62.0	191.0	27.00	19.25	58.00	26.00	25.75	26.00	55.00	54.00	1	0	0
11	300	4.7	63.0	207.9	28.75	20.00	58.25	27.00	26.75	27.00	58.75	67.00	2	0	0
12	330	4.8	64.0	215.2	29.75	20.75	59.00	28.00	27.50	28.00	60.00	73.00	1	0	0
13	330	4.5	67.0	208.5	31.25	21.25	60.75	29.00	28.50	29.00	61.50	77.00	2	0	0
14	40	4.0	70.0	190.9	32.00	22.00	62.00	29.75	29.50	29.75	62.75	78.00	1	0	0
15	40	3.5	72.0	155.6	33.00	22.25	63.00	30.25	30.00	30.25	64.00	76.00	1	0	0
16	360	2.8	72.0	117.5	32.75	23.00	64.00	30.00	30.00	30.00	64.25	72.50	1	0	0
17	360	2.2	72.0	65.8	33.00	23.50	64.50	30.25	30.25	30.75	64.25	66.25	1	0	0
18	60	3.2	74.0	29.8	34.00	24.50	64.25	31.25	31.00	31.25	62.50	60.00	2	0	0
19	60	2.8	74.0	8.1	34.00	25.00	64.00	31.75	31.50	31.50	60.00	56.00	1	0	0
20	150	1.5	74.0	0.	34.25	25.00	64.00	32.00	31.75	31.75	54.50	50.50	1	0	0
21	220	3.0	67.0	0.	33.75	25.25	64.00	31.75	31.50	31.75	41.75	51.25	1	0	0
22	240	3.0	64.0	0.	33.00	25.25	63.75	31.25	31.00	31.25	35.75	56.25	2	0	0
23	180	4.5	60.0	0.	32.25	25.25	63.50	30.75	30.25	30.75	30.75	56.25	2	0	0
TOT.				1816.9									29	0	0
AVG.	193	2.5	61.2	75.7	30.33	22.07	60.91	28.57	28.41	28.71	42.25	53.68	1	0	0

DATE
(06/11/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.2	56.0	0.	31.75	25.00	63.25	30.00	30.00	30.00	28.00	55.25	1	0	0
1	180	7.8	52.0	0.	31.25	25.00	63.00	29.50	29.50	29.75	26.25	53.75	1	0	0
2	170	5.5	50.0	0.	31.00	24.50	63.00	29.00	29.00	29.25	26.00	52.00	1	0	0
3	170	5.0	50.0	0.	30.00	24.00	63.00	28.50	28.75	29.00	25.00	49.75	1	0	0
4	170	5.0	50.0	0.	30.00	24.00	62.75	28.00	28.00	28.50	25.00	47.00	1	0	0
5	150	4.5	48.0	5.2	29.50	23.00	62.75	28.00	27.75	28.00	25.00	44.75	1	0	0
6	150	4.8	48.0	31.1	29.00	22.75	62.50	27.50	27.50	28.00	25.00	42.25	1	0	0
7	150	5.3	50.0	61.5	29.00	22.00	62.25	27.00	27.00	27.50	25.00	36.75	1	0	0
8	150	5.5	52.0	113.4	28.75	22.00	62.00	27.00	26.75	27.25	25.25	24.00	3	0	0
9	180	6.4	55.0	145.0	28.50	21.75	62.00	27.00	26.50	27.00	25.50	22.00	1	0	0
10	180	7.0	54.0	169.7	28.25	21.75	62.00	27.00	26.75	27.00	27.00	23.75	1	0	0
11	180	6.5	55.0	215.3	28.50	21.75	61.75	27.00	26.75	27.00	28.00	25.50	1	0	0
12	180	5.8	60.0	222.9	29.00	22.25	61.50	27.25	27.00	27.25	55.00	59.00	2	0	0
13	150	4.8	63.0	216.8	30.00	22.00	61.25	28.00	28.00	28.00	60.25	64.00	1	0	0
14	180	7.0	62.0	175.6	31.00	22.25	61.50	29.00	28.75	29.00	62.00	68.25	3	0	0
15	180	6.4	64.0	153.3	32.00	23.00	62.00	30.00	29.50	29.75	62.00	68.25	2	0	0
16	180	7.5	66.0	123.6	32.50	23.25	62.00	30.25	30.00	30.00	62.25	65.75	3	0	0
17	180	6.2	68.0	88.5	33.00	24.00	62.00	31.00	30.75	30.75	61.75	62.50	1	0	0
18	180	5.5	67.0	50.5	33.25	24.25	62.00	31.25	31.00	31.00	59.50	57.00	2	0	0
19	150	4.3	67.0	19.9	33.25	24.75	62.00	31.25	31.00	31.00	57.50	53.25	1	0	0
20	180	4.5	67.0	0.	32.75	24.75	61.75	31.00	31.00	31.00	41.75	43.00	1	0	0
21	180	3.4	60.0	0.	32.00	24.00	61.50	30.75	30.25	30.75	36.00	48.25	1	0	0
22	180	5.5	58.0	0.	31.25	24.00	61.25	30.00	30.00	30.00	32.00	50.25	2	0	0
23	180	6.3	56.0	0.	31.00	23.75	61.25	30.00	29.75	30.00	29.00	50.50	2	0	0
TOT.				1794.3									33	0	0
AVG.	171	5.8	57.4	74.8	30.69	23.32	62.09	28.97	28.80	29.03	38.75	48.61	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.7	52.0	0.	30.25	23.25	61.00	29.25	29.00	29.25	27.00	49.00	1	0	0
1	180	5.5	52.0	0.	30.00	23.00	61.00	28.75	29.00	29.00	26.00	47.00	1	0	0
2	180	5.5	52.0	0.	29.75	22.75	60.75	28.25	28.00	28.50	25.75	44.75	1	0	0
3	170	5.0	50.0	0.	29.25	22.75	60.50	28.00	27.75	28.00	25.50	43.00	1	0	0
4	170	5.0	49.0	0.	29.00	22.75	60.25	27.25	27.25	27.75	25.00	42.00	1	0	0
5	170	4.0	48.0	3.7	28.75	21.75	60.25	27.00	27.00	27.50	25.00	41.00	1	0	0
6	180	3.8	50.0	26.5	28.25	21.25	60.00	27.00	26.50	27.00	24.75	39.00	1	0	0
7	180	3.2	52.0	53.4	28.00	21.00	60.00	26.50	26.50	27.00	25.00	33.75	1	0	0
8	180	3.5	56.0	78.8	28.00	20.75	60.00	26.25	26.25	26.75	25.00	25.50	1	0	0
9	210	3.0	60.0	100.8	27.75	20.25	59.75	26.75	26.25	26.75	25.25	23.00	3	0	0
10	210	3.0	63.0	118.0	28.00	20.75	59.75	27.00	27.00	27.00	56.00	55.25	3	0	0
11	270	3.0	62.0	128.6	29.25	21.75	59.50	27.75	27.25	27.75	59.00	65.25	3	0	0
12	300	2.8	64.0	132.1	30.00	22.00	59.50	28.75	28.25	28.75	60.00	65.50	1	0	0
13	360	2.5	68.0	130.7	31.00	22.75	60.00	29.25	29.00	29.50	60.25	69.25	1	0	0
14	360	3.5	70.0	122.1	32.00	23.00	61.00	30.00	30.00	30.00	62.00	75.75	1	0	0
15	360	3.0	70.0	107.4	33.00	23.25	62.25	31.00	30.50	31.00	63.00	75.50	1	0	0
16	30	3.5	70.0	86.6	34.00	24.00	63.00	31.50	31.25	31.75	63.50	71.00	1	0	0
17	30	3.0	70.0	62.1	34.25	24.00	63.50	32.00	31.75	32.00	63.25	65.25	1	0	0
18	360	3.2	71.0	35.4	34.50	24.25	63.25	32.25	32.00	32.25	61.75	59.00	1	0	0
19	330	4.6	70.0	10.0	34.75	25.00	63.25	32.50	32.25	32.50	59.00	55.00	1	0	0
20	330	4.8	69.0	0.	34.25	25.00	63.00	32.50	32.25	32.50	46.00	44.50	1	0	0
21	330	1.8	63.0	0.	33.50	25.00	63.00	32.00	32.00	32.00	39.00	52.00	4	0	0
22	330	1.5	60.0	0.	33.00	25.00	62.75	31.25	31.25	31.25	34.25	55.25	5	0	0
23	330	1.1	58.0	0.	32.25	25.00	62.50	31.00	31.00	31.00	29.75	55.00	2	0	0
TOT.				1196.2									37	0	0
AVG.	234	3.6	60.4	49.8	30.95	22.93	61.24	29.32	29.14	29.45	42.12	52.15	2	0	0

DATE
(06/13/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0	360	1.0	57.0	0.	31.75	24.75	62.25	30.25	30.25	30.50	27.50	53.00	1	0	0
1	360	.8	55.0	0.	31.50	24.25	62.00	30.00	30.00	30.00	26.75	51.75	1	0	0
2	360	.4	52.0	0.	31.00	24.00	62.00	29.75	29.75	30.00	26.00	50.00	0	0	0
3	360	.4	51.0	0.	30.75	23.00	62.00	29.50	29.25	29.75	26.00	47.75	1	0	0
4	90	.2	50.0	0.	30.25	22.50	61.75	29.00	29.00	29.25	26.00	46.00	1	0	0
5	90	.6	50.0	3.6	30.00	22.00	61.75	28.75	28.75	29.00	26.00	44.25	1	0	0
6	90	1.0	52.0	25.5	29.75	21.75	61.50	28.75	28.50	28.75	26.00	42.25	1	0	0
7	270	1.5	52.0	50.2	29.25	21.25	61.25	28.25	28.00	28.50	26.25	38.75	0	0	0
8	240	2.2	52.0	73.7	29.00	21.00	61.00	28.00	28.00	28.25	26.75	31.00	1	0	0
9	180	4.5	52.0	94.2	29.00	21.00	61.00	28.00	28.00	28.00	26.50	26.25	1	0	0
10	180	3.6	52.0	110.3	29.00	20.75	60.75	27.75	27.75	28.00	26.50	27.25	4	0	0
11	210	3.8	56.0	120.8	28.50	20.75	60.50	27.75	27.75	27.75	26.25	26.50	5	0	0
12	180	3.5	59.0	125.1	28.25	21.00	60.50	27.25	27.25	27.75	26.00	25.25	4	0	0
13	180	3.6	62.0	210.0	29.00	20.75	60.25	27.75	27.75	27.75	50.00	53.25	4	0	0
14	180	5.0	65.0	213.7	29.75	21.25	60.00	28.25	28.00	28.25	60.00	73.00	3	0	0
15	180	4.0	69.0	189.0	31.00	22.00	61.00	29.00	28.75	29.00	61.75	72.75	3	0	0
16	180	3.0	70.0	152.6	31.00	22.00	61.25	28.00	27.75	28.00	62.25	69.00	2	0	0
17	180	3.0	72.0	109.5	32.00	22.75	62.00	29.25	29.00	29.25	61.75	63.75	1	0	0
18	210	3.0	73.0	63.1	32.50	23.25	61.75	30.25	30.00	30.00	60.00	57.75	1	0	0
19	210	2.6	73.0	18.1	33.00	24.00	61.75	31.00	30.50	30.75	57.75	53.75	1	0	0
20	180	4.2	70.0	0.	33.00	24.00	61.75	31.00	30.75	31.00	45.25	45.25	1	0	0
21	180	3.0	65.0	0.	32.50	24.25	61.25	31.00	30.25	30.75	50.00	50.00	1	0	0
22	180	3.4	63.0	0.	32.00	24.50	61.25	30.25	30.00	30.00	51.75	51.75	2	0	0
23	180	1.8	59.0	0.	31.25	24.25	61.00	30.00	29.75	30.00	52.00	52.00	1	0	0
TOT.				1559.4									42	0	0
AVG.	204	2.5	59.6	65.0	30.62	22.54	61.31	29.11	28.95	29.18	39.79	48.09	2	0	0

DATE
(08/14/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	140	3.3	53.0	0.	31.00	24.00	61.00	29.50	29.00	30.00	27.25	54.00	1	0	0
1	140	5.5	52.0	0.	30.00	24.00	60.75	29.00	28.75	29.50	24.75	53.00	1	0	0
2	140	4.4	50.0	0.	30.00	23.75	60.75	28.50	28.50	29.00	24.25	52.00	1	0	0
3	140	5.0	50.0	0.	29.50	23.25	60.75	28.25	28.00	28.75	23.75	51.25	1	0	0
4	140	2.0	50.0	0.	29.00	22.50	60.25	28.00	27.75	28.25	23.00	50.75	0	0	0
5	140	6.0	49.0	2.6	28.75	22.25	60.25	27.75	27.25	28.00	23.00	50.00	1	0	0
6	140	4.5	49.0	18.3	28.75	22.00	60.00	27.25	27.00	27.75	22.75	49.75	1	0	0
7	140	4.5	50.0	35.9	28.25	21.50	60.00	27.00	27.00	27.25	22.75	48.75	1	0	0
8	140	4.7	50.0	52.6	28.25	21.25	60.00	27.00	26.75	27.00	22.75	49.00	1	0	0
9	140	5.0	51.0	67.2	28.00	21.00	59.75	27.00	26.50	27.00	23.00	47.00	1	0	0
10	140	5.2	52.0	78.6	27.75	21.00	59.50	26.75	26.50	27.00	24.00	44.00	1	0	0
11	140	5.0	56.0	86.1	28.00	21.00	59.25	25.75	26.50	27.00	25.00	35.00	2	0	0
12	140	5.0	54.0	89.2	27.25	21.00	59.25	27.00	26.50	27.00	25.00	26.25	1	0	0
13	140	5.0	58.0	140.3	27.75	21.00	59.00	27.00	26.75	27.00	25.25	26.75	1	0	0
14	140	4.7	60.0	149.0	28.00	21.00	59.00	27.00	26.75	27.00	54.50	40.00	1	0	0
15	140	5.5	62.0	133.2	26.75	21.00	58.75	25.50	25.50	26.00	52.00	50.75	1	0	0
16	140	4.4	62.0	108.2	27.75	21.25	58.75	24.75	24.75	25.25	56.25	62.00	1	0	0
17	140	5.0	63.0	78.3	29.00	21.25	58.50	27.00	26.25	27.00	54.25	54.50	1	0	0
18	140	5.2	63.0	45.3	30.00	21.50	58.50	28.00	27.50	27.50	56.50	54.00	1	0	0
19	150	4.2	63.0	13.0	30.00	21.75	58.25	28.50	28.00	28.00	43.25	41.25	3	0	0
20	150	4.0	62.0	0.	29.25	21.75	58.00	28.75	28.00	28.00	35.25	41.25	1	0	0
21	140	4.0	58.0	0.	29.00	22.00	58.00	28.25	28.00	28.00	32.00	45.00	2	0	0
22	140	6.0	55.0	0.	29.75	22.00	58.00	28.25	28.00	27.75	29.50	49.50	3	0	0
23	130	7.0	52.0	0.	29.00	22.00	57.75	28.00	27.50	27.75	28.50	49.00	2	0	0
TOT.				1097.8									30	0	0
AVG.	177	4.9	55.2	45.7	28.78	21.87	59.33	27.53	27.21	27.81	32.52	47.20	1	0	0

DATE
(06/15/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.5	51.0	0.	28.75	22.00	57.25	27.75	27.25	27.50	24.25	48.75	1	0	0
1	180	3.2	50.0	0.	28.25	21.75	57.25	27.25	27.00	27.25	24.00	46.25	1	0	0
2	180	5.5	50.0	0.	27.50	21.50	57.00	27.00	26.75	27.25	24.00	44.50	1	0	0
3	180	4.5	50.0	0.	27.50	21.00	57.00	26.75	26.25	27.00	24.00	42.25	1	0	0
4	180	4.0	50.0	0.	27.25	21.00	57.00	26.75	26.00	26.75	24.00	40.25	1	0	0
5	180	3.5	50.0	1.8	27.00	21.00	56.75	26.25	26.25	26.50	24.00	38.75	0	0	0
6	180	3.2	50.0	12.4	27.00	20.25	56.50	26.25	25.75	26.25	24.25	37.00	1	0	0
7	180	3.2	50.0	24.3	27.00	20.25	56.50	26.00	25.75	26.00	24.00	35.75	1	0	0
8	180	2.5	51.0	35.6	26.75	20.00	56.00	26.00	25.50	26.00	24.50	32.25	1	0	0
9	210	3.4	52.0	45.4	27.00	20.00	56.25	25.75	25.75	26.00	24.50	28.00	1	0	0
10	210	3.0	55.0	53.2	26.75	19.75	56.00	26.00	25.50	26.00	24.50	22.00	1	0	0
11	180	4.5	58.0	58.3	26.75	19.75	56.00	26.00	25.75	26.00	24.75	22.00	1	0	0
12	180	3.5	60.0	60.3	27.00	20.00	56.00	26.00	26.00	26.00	49.50	39.00	1	0	0
13	180	3.5	61.0	101.3	27.75	20.00	56.00	26.75	26.25	26.75	52.25	49.00	5	0	0
14	180	4.0	60.0	100.8	28.00	20.25	55.75	27.25	27.00	27.00	50.00	48.25	6	0	0
15	180	5.2	61.0	90.2	29.00	20.75	55.50	27.75	27.50	27.50	49.00	48.00	4	0	0
16	180	4.5	64.0	73.3	29.00	21.00	55.25	28.00	28.00	28.00	52.75	55.00	5	0	0
17	180	5.0	65.0	52.8	29.75	21.25	55.25	28.50	28.25	28.25	54.00	57.00	3	0	0
18	180	4.5	63.0	30.5	29.75	22.00	55.00	29.00	28.75	29.00	53.00	51.50	2	0	0
19	180	4.5	63.0	9.1	29.50	22.50	55.00	29.00	28.75	29.00	41.75	40.75	1	0	0
20	180	4.3	60.0	0.	29.25	23.00	54.75	29.00	28.75	29.00	35.00	41.00	1	0	0
21	180	3.6	62.0	0.	28.75	22.75	54.50	28.75	28.25	28.50	31.50	44.00	2	0	0
22	150	3.0	56.0	0.	29.00	22.75	54.25	28.00	27.75	28.00	30.00	45.00	4	0	0
23	120	2.0	52.0	0.	28.50	22.50	54.00	27.75	27.50	27.75	25.25	47.25	2	0	0
TOT.				749.3									47	0	0
AVG.	179	3.9	56.0	31.2	28.03	21.12	55.86	27.23	26.93	27.22	33.99	41.81	2	0	0

DATE
(06/16/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	120	2.0	52.0	0.	25.00	22.50	54.00	27.25	27.00	27.25	23.25	41.75	1	0	0
1	150	2.0	50.0	0.	27.75	22.25	54.00	27.00	27.00	27.00	22.25	41.00	1	0	0
2	170	.6	50.0	0.	27.75	22.00	53.75	26.75	26.50	26.75	22.00	41.00	1	0	0
3	170	1.0	48.0	0.	27.25	21.75	53.50	26.25	26.25	26.50	21.50	45.50	1	0	0
4	140	1.0	48.0	0.	27.00	21.25	53.50	26.25	26.00	26.00	21.00	45.25	1	0	0
5	140	.6	48.0	1.6	27.00	21.00	53.25	26.00	25.75	26.00	21.00	45.00	1	0	0
6	140	1.0	50.0	10.4	26.75	20.75	53.00	25.75	25.50	25.75	20.50	44.75	1	0	0
7	330	3.0	50.0	20.4	26.50	20.25	53.00	25.50	25.25	25.50	20.75	44.50	1	0	0
8	330	2.4	51.0	29.8	26.50	20.25	53.00	25.75	25.25	25.50	21.25	43.75	1	0	0
9	330	2.5	52.0	38.1	26.50	20.00	52.75	25.75	25.25	25.75	22.00	42.00	1	0	0
10	330	3.0	58.0	64.7	26.50	20.00	52.75	25.75	25.25	25.50	23.00	30.50	1	0	0
11	300	5.8	60.0	87.0	27.00	20.25	52.50	26.00	26.00	26.00	52.00	53.25	1	0	0
12	300	5.5	60.0	95.0	28.25	20.75	53.00	27.00	26.50	26.75	53.25	61.25	2	0	0
13	300	4.0	63.0	93.4	29.00	21.25	53.25	27.75	27.25	27.50	53.25	56.50	1	0	0
14	300	5.6	62.0	86.9	30.00	21.75	54.00	28.25	28.00	28.00	55.00	68.00	1	0	0
15	300	5.2	68.0	75.6	31.00	22.00	55.50	29.00	28.75	28.75	56.25	68.75	1	0	0
16	300	2.8	70.0	60.7	31.00	22.50	56.25	29.50	29.00	29.25	57.00	65.50	1	0	0
17	300	4.2	71.0	42.1	31.75	23.00	57.00	30.00	29.75	29.50	57.00	61.00	2	0	0
18	300	5.2	71.0	22.0	32.00	23.50	57.00	30.25	30.00	30.00	56.00	54.25	1	0	0
19	300	5.0	71.0	6.7	32.00	23.75	57.00	30.50	30.00	30.00	48.00	46.00	1	0	0
20	330	2.0	70.0	0.	31.75	24.00	56.75	30.25	30.00	30.00	38.00	41.00	1	0	0
21	330	8.0	65.0	0.	31.00	24.25	56.50	30.00	29.75	29.75	34.00	45.00	2	0	0
22	360	.8	60.0	0.	30.75	24.25	56.25	29.50	29.25	29.50	31.75	50.25	1	0	0
23	60	1.2	60.0	0.	30.25	24.50	56.25	29.00	29.00	29.00	28.25	50.00	2	0	0
TOT.				734.4									28	0	0
AVG.	255	3.1	58.7	30.6	28.76	21.99	54.49	27.71	27.43	27.56	35.76	49.41	1	0	0

DATE
(06/17/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INTER. HEATER	HEAT PUMP
0	60	1.2	59.0	0.	30.00	24.00	56.00	28.50	28.00	28.50	26.00	49.75	1	0	0
1	330	1.0	57.0	0.	29.25	24.00	56.00	28.00	28.00	28.00	25.25	48.25	1	0	0
2	360	1.8	56.0	0.	29.00	23.75	55.75	28.00	27.75	28.00	25.00	47.75	1	0	0
3	50	1.5	55.0	0.	29.00	23.00	55.75	28.00	27.75	28.00	24.50	46.75	1	0	0
4	360	.8	54.0	0.	28.75	22.75	55.50	27.75	27.50	27.75	24.25	45.75	1	0	0
5	50	2.0	52.0	4.9	28.75	22.25	55.50	27.25	27.00	27.50	24.00	44.50	1	0	0
6	330	1.0	56.0	32.4	28.00	22.00	55.25	27.25	27.00	27.25	24.25	42.25	1	0	0
7	330	1.7	60.0	62.6	28.00	21.25	55.00	27.00	27.00	27.00	24.50	41.25	1	0	0
8	330	2.5	62.0	90.9	28.00	21.00	55.00	27.00	26.75	27.00	25.25	32.50	1	0	0
9	330	2.6	56.0	114.3	28.00	21.00	55.00	27.00	27.00	27.00	25.50	23.00	1	0	0
10	330	2.6	70.0	133.7	28.25	21.25	55.00	27.25	27.00	27.00	52.00	55.00	2	0	0
11	330	5.3	72.0	146.5	29.25	21.75	55.25	28.00	27.75	27.75	56.00	65.25	2	0	0
12	310	6.3	72.0	151.7	30.50	22.50	56.50	28.75	28.25	28.25	57.00	70.50	2	0	0
13	310	5.5	74.0	149.1	31.25	23.25	57.50	29.50	29.25	29.25	58.50	72.75	2	0	0
14	310	4.7	78.0	135.3	32.75	24.25	59.00	29.75	29.25	29.75	60.00	74.50	1	0	0
15	330	3.0	80.0	118.4	33.00	25.00	60.25	30.25	30.25	30.25	61.00	73.25	2	0	0
16	330	2.3	80.0	92.0	34.00	25.75	61.75	31.25	31.00	31.00	62.00	70.00	1	0	0
17	330	2.2	81.0	66.5	34.25	26.25	61.75	31.75	31.50	31.50	61.75	64.50	1	0	0
18	300	4.5	81.0	36.4	35.00	27.00	62.00	32.25	32.00	32.00	61.00	59.75	1	0	0
19	270	3.8	80.0	12.8	34.75	27.25	61.50	32.50	32.00	32.00	58.75	55.75	1	0	0
20	330	3.8	80.0	0.	34.75	27.25	61.50	32.75	32.25	32.00	52.00	50.00	3	0	0
21	360	1.1	78.0	0.	34.25	27.25	61.25	32.25	32.00	32.00	41.25	50.75	2	0	0
22	30	1.1	72.0	0.	33.50	27.25	61.00	32.00	31.50	31.75	36.50	53.25	2	0	0
23	210	2.5	70.0	0.	33.00	27.00	61.00	31.25	31.00	31.25	33.25	53.00	2	0	0
TOT.				1347.5									31	0	0
AVG.	275	2.7	68.1	56.1	31.05	24.08	57.92	29.39	29.11	29.24	41.65	53.75	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.5	62.0	0.	32.25	26.75	60.75	31.00	30.75	31.00	30.50	52.75	1	0	0
1	180	1.0	58.0	0.	32.00	26.25	60.75	30.50	30.25	30.25	29.25	54.75	1	0	0
2	180	8.5	55.0	0.	31.75	25.75	60.25	30.00	30.00	30.00	27.25	53.75	1	0	0
3	180	7.0	53.0	0.	31.25	25.00	60.00	30.00	29.75	30.00	25.75	52.75	1	0	0
4	180	4.8	53.0	0.	31.00	24.25	60.00	29.75	29.25	29.75	25.25	52.00	1	0	0
5	180	5.0	52.0	6.2	30.50	24.00	60.00	29.50	29.00	29.25	25.25	51.00	1	0	0
6	180	5.5	52.0	39.8	30.00	23.25	59.75	29.00	29.00	29.00	25.25	50.00	1	0	0
7	180	6.5	54.0	77.2	30.00	23.00	59.75	29.00	28.75	29.00	25.25	49.50	1	0	0
8	180	6.4	56.0	112.8	30.00	22.25	59.75	29.00	28.50	28.75	25.25	47.50	1	0	0
9	180	7.0	56.0	143.9	29.50	22.00	59.25	28.50	28.00	28.25	25.75	45.00	4	0	0
10	180	7.0	58.0	168.3	29.25	22.00	59.25	28.25	28.00	28.25	26.25	36.50	5	0	0
11	180	6.5	60.0	184.3	29.25	22.00	59.00	28.00	28.00	28.25	27.00	30.50	1	0	0
12	180	5.0	63.0	190.9	29.00	22.25	59.00	28.00	28.00	28.00	56.50	43.00	1	0	0
13	180	6.0	63.0	187.7	29.75	22.25	58.75	28.75	28.25	28.50	50.00	51.00	2	0	0
14	180	6.0	64.0	174.8	31.00	22.75	58.50	29.25	29.00	29.00	58.25	63.00	2	0	0
15	180	5.0	68.0	153.1	31.75	23.50	59.00	30.00	29.75	30.00	59.50	67.00	2	0	0
16	180	4.8	69.0	124.1	32.00	23.50	60.00	30.25	30.00	30.00	60.25	68.00	1	0	0
17	180	3.5	71.0	89.8	32.25	23.50	60.25	31.00	30.75	30.00	60.00	63.00	1	0	0
18	180	3.5	71.0	52.6	30.00	23.50	60.00	31.25	31.00	30.50	58.50	56.25	1	0	0
19	180	3.5	70.0	28.1	33.00	24.00	60.00	31.25	31.00	30.75	56.25	52.25	3	0	0
20	180	3.2	70.0	0.	32.50	24.00	60.00	31.25	31.00	31.00	42.00	44.75	1	0	0
21	150	2.8	63.0	0.	32.00	24.00	59.75	31.00	30.75	30.75	35.50	49.75	2	0	0
22	150	3.0	61.0	0.	32.00	24.25	59.50	30.75	30.25	30.25	33.00	51.00	2	0	0
23	180	3.8	61.0	0.	31.00	24.25	59.25	30.00	30.00	30.00	31.75	51.00	2	0	0
TOT.				1733.6									36	0	0
AVG.	177	5.2	61.0	72.2	30.96	23.68	59.69	29.80	29.54	29.60	38.31	51.50	2	0	0

DATE
(06/19/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)							ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	8.0	56.0	0.	30.75	24.25	59.25	29.75	29.50	29.75	30.00	50.75	2	0	0
1	180	7.4	52.0	0.	30.75	24.00	59.00	29.25	29.25	29.50	27.00	50.75	1	0	0
2	180	6.0	62.0	0.	30.00	23.50	58.75	29.00	29.00	29.25	26.00	50.00	1	0	0
3	180	6.8	50.0	0.	30.00	22.50	58.75	29.00	29.00	29.00	25.25	49.75	1	0	0
4	180	6.2	50.0	0.	29.50	22.00	58.50	28.75	28.25	28.75	24.50	49.25	1	0	0
5	180	4.8	48.0	3.5	29.25	22.00	58.25	28.00	28.00	28.25	24.00	48.75	1	0	0
6	180	4.2	50.0	22.0	29.00	21.50	58.00	28.00	28.00	28.00	23.75	48.25	1	0	0
7	190	5.0	50.0	42.5	29.00	21.50	58.00	27.50	27.50	27.75	23.50	47.50	1	0	0
8	180	5.8	58.0	62.1	28.25	21.00	58.00	27.50	27.00	27.50	23.25	46.25	1	0	0
9	180	6.0	52.0	79.1	28.00	21.00	58.00	27.00	27.00	27.25	23.75	44.25	1	0	0
10	180	5.8	53.0	92.5	28.00	21.00	57.50	27.00	27.00	27.00	24.25	40.00	2	0	0
11	180	5.0	56.0	127.1	28.00	21.00	57.25	27.00	27.00	27.00	25.00	27.25	4	0	0
12	180	5.0	61.0	131.7	28.00	21.25	57.25	27.00	27.00	27.00	55.25	60.00	4	0	0
13	180	5.0	63.0	129.5	29.25	21.50	57.50	24.00	27.75	28.00	58.00	67.75	3	0	0
14	180	6.2	63.0	120.6	30.00	22.25	58.25	28.75	28.50	29.00	59.00	68.00	3	0	0
15	180	5.5	63.0	105.7	31.00	22.75	59.00	29.50	29.00	29.25	59.75	69.50	3	0	0
16	180	5.0	66.0	85.8	31.75	23.00	60.00	30.00	29.75	30.00	60.00	65.25	3	0	0
17	180	4.5	56.0	49.5	32.00	23.50	60.00	30.50	30.25	30.75	59.00	58.50	4	0	0
18	180	5.0	62.0	29.1	32.25	24.00	59.75	31.00	30.50	30.75	59.00	55.25	3	0	0
19	190	3.0	61.0	9.2	32.75	24.25	59.50	31.25	31.00	31.00	53.00	50.00	2	0	0
20	180	3.7	60.0	0.	32.00	24.00	59.25	31.00	30.75	30.75	40.00	44.50	3	0	0
21	180	5.5	58.0	0.	31.25	24.00	59.25	30.75	30.00	30.25	34.75	50.75	3	0	0
22	180	5.0	53.0	0.	31.00	23.25	59.00	30.25	30.00	30.00	32.00	51.00	3	0	0
23	190	5.5	53.0	0.	31.00	23.25	59.00	29.75	29.25	29.75	28.00	51.25	5	0	0
TOT.				1089.9									53	0	0
AVG.	181	5.4	56.5	45.4	30.11	22.59	58.62	28.98	28.76	28.98	37.37	51.85	2	0	0

DATE
(06/20/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	5.2	52.0	0.	30.00	23.00	58.75	29.00	29.00	29.00	26.00	49.00	1	0	0
1	180	5.8	52.0	0.	30.00	23.00	58.75	28.75	28.25	29.00	25.50	47.25	1	0	0
2	180	3.7	52.0	0.	29.50	22.75	58.25	28.25	28.00	28.50	25.50	45.00	1	0	0
3	190	4.0	52.0	0.	29.25	22.25	58.00	28.00	28.00	28.25	26.00	42.00	1	0	0
4	180	4.2	52.0	0.	29.00	22.00	58.00	28.00	27.75	28.00	26.00	39.25	1	0	0
5	180	3.8	51.0	4.6	28.75	22.00	58.00	27.75	27.25	28.00	26.25	36.50	0	0	0
6	180	3.1	52.0	28.1	28.50	21.75	57.75	27.25	27.25	27.75	26.00	34.25	1	0	0
7	190	4.5	51.0	54.3	28.25	21.00	57.75	27.25	27.00	27.50	26.25	32.50	1	0	0
8	180	3.7	52.0	79.2	28.00	21.00	57.25	27.00	27.00	27.25	26.00	28.75	0	0	0
9	180	4.5	54.0	101.0	28.00	21.00	57.25	27.00	26.75	27.00	26.00	24.75	1	0	0
10	180	5.2	55.0	118.1	28.00	21.00	57.25	27.00	27.00	27.00	26.00	24.25	1	0	0
11	190	4.0	56.0	129.3	28.00	21.00	57.00	27.00	27.00	27.00	26.00	25.25	1	0	0
12	180	4.5	60.0	134.0	28.00	21.00	57.00	27.25	27.00	27.25	51.00	45.00	1	0	0
13	180	5.5	62.0	131.8	29.00	21.25	57.00	27.75	27.25	27.75	49.75	48.50	1	0	0
14	180	6.0	63.0	122.8	29.50	21.50	56.75	28.25	28.00	28.25	53.50	51.00	1	0	0
15	190	7.0	64.0	107.7	30.00	21.75	56.50	29.00	28.75	28.75	55.00	55.50	1	0	0
16	180	7.5	63.0	87.4	30.75	22.00	57.00	29.25	29.00	29.00	55.75	56.75	1	0	0
17	180	7.3	63.0	63.4	30.50	22.50	56.75	30.00	29.75	29.75	55.25	53.75	2	0	0
18	180	6.5	62.0	37.4	31.00	22.75	56.50	30.25	30.00	30.00	53.00	51.00	2	0	0
19	190	7.0	62.0	12.1	31.75	23.00	56.25	30.25	30.00	30.00	43.00	42.00	3	0	0
20	180	7.0	61.0	0.	30.75	23.00	56.25	30.00	30.00	30.00	36.00	47.25	1	0	0
21	180	5.0	61.0	0.	30.50	23.00	56.00	29.75	29.75	29.75	32.25	47.75	1	0	0
22	180	4.5	60.0	0.	30.00	22.75	56.00	29.25	29.00	29.25	29.25	48.25	4	0	0
23	190	5.0	60.0	0.	29.75	23.00	55.75	29.00	29.00	29.00	27.00	48.00	2	0	0
TOT.				1211.2									29	0	0
AVG.	182	5.2	57.2	50.5	29.45	22.05	57.16	28.43	28.24	28.46	35.51	42.65	1	0	0

DATE
(06/21/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	180	6.0	58.0	0.	29.75	23.00	55.50	28.50	28.25	28.50	26.00	45.25	1	0	0
1	180	5.5	58.0	0.	29.00	23.00	55.50	28.25	28.00	28.25	25.75	45.25	1	0	0
2	180	6.5	57.0	0.	28.75	22.25	55.25	28.00	27.75	28.00	25.00	44.25	1	0	0
3	190	6.0	56.0	0.	28.50	22.00	55.00	28.00	27.25	28.00	25.00	43.00	0	0	0
4	180	5.5	54.0	0.	28.25	22.00	55.00	27.50	27.25	27.75	25.00	42.00	1	0	0
5	180	6.0	55.0	3.6	28.25	21.75	55.00	27.25	27.00	27.50	25.00	41.00	1	0	0
6	180	5.5	54.0	17.0	28.00	21.25	54.75	27.00	27.00	27.00	25.00	39.75	1	0	0
7	190	6.5	55.0	32.8	28.00	21.25	54.75	27.00	27.00	27.00	25.00	39.75	1	0	0
8	180	7.5	60.0	47.8	27.50	21.00	54.25	27.00	26.50	27.00	25.25	24.50	0	0	0
9	180	7.0	60.0	60.9	27.75	21.00	54.25	27.00	26.75	27.00	25.50	23.00	1	0	0
10	180	7.0	60.0	71.2	27.75	21.00	54.00	27.00	26.75	27.00	26.00	25.00	1	0	0
11	190	7.0	63.0	78.0	28.00	20.50	54.00	27.25	27.00	27.00	43.50	38.00	1	0	0
12	180	8.5	68.0	80.8	28.75	21.00	54.00	27.75	27.50	27.25	54.00	55.00	1	0	0
13	180	8.5	68.0	79.5	30.00	21.75	54.75	28.25	28.25	28.00	55.00	61.00	1	0	0
14	180	9.2	68.0	74.1	30.00	22.25	55.00	28.75	28.75	28.25	54.50	54.75	1	0	0
15	180	11.5	70.0	65.0	29.00	22.25	55.00	27.75	27.25	27.50	55.50	65.50	1	0	0
16	180	11.0	70.0	52.8	30.00	23.75	55.50	28.25	28.00	28.00	56.00	61.00	1	0	0
17	180	12.5	70.0	48.1	31.00	24.00	55.75	29.00	29.00	29.00	55.25	57.00	1	0	0
18	180	10.5	68.0	28.5									1	0	0
19	190	9.5	64.0	9.3									1	0	0
20	180	10.0	62.0	0.									2	0	0
21	180	9.2	62.0	0.									3	0	0
22	180	5.5	62.0	0.									3	0	0
23	180	3.0	60.0	0.									2	0	0
TOT.				749.4									29	0	0
AVG.	181	7.7	61.7	31.2	28.79	21.94	54.85	27.75	27.51	27.67	36.24	44.78	1	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INMER. HEATER	HEAT PUMP
0	180	6.0	58.0	0.									1	0	0
1	180	5.2	58.0	0.									1	0	0
2	180	3.2	57.0	0.									1	0	0
3	180	3.0	57.0	0.									1	0	0
4	180	4.0	57.0	0.									1	0	0
5	180	4.2	56.0	.5									1	0	0
6	180	3.0	57.0	17.9									1	0	0
7	220	3.2	57.0	40.6									1	0	0
8	270	1.8	56.0	62.4									1	0	0
9	360	2.0	53.0	81.6									1	0	0
10	360	2.0	55.0	96.8									1	0	0
11	360	2.5	56.0	134.2									1	0	0
12	360	2.6	62.0	139.9									1	0	0
13	360	3.0	62.0	110.1									1	0	0
14	300	3.8	66.0	102.7									1	0	0
15	300	4.0	65.0	112.8									2	0	0
16	300	5.0	68.0	116.3									4	0	0
17	300	4.5	68.0	95.0									4	0	0
18	300	3.0	68.0	55.8									3	0	0
19	300	5.0	67.0	14.6									4	0	0
20	330	3.0	62.0	0.									1	0	0
21	330	2.0	60.0	0.									1	0	0
22	30	2.0	56.0	0.									5	0	0
23	360	2.5	52.0	0.									2	0	0
TOT.				1181.2									40	0	0
AVG.	267	3.4	59.7	49.2									2	0	0

DATE
(06/23/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	2.0	52.0	0.									1	0	0
1	40	3.0	52.0	0.									1	0	0
2	330	1.0	49.0	0.									1	0	0
3	30	2.0	50.0	0.									1	0	0
4	360	1.4	48.0	0.									1	0	0
5	340	1.0	48.0	.6									1	0	0
6	360	1.3	50.0	23.9									1	0	0
7	330	1.5	55.0	53.7									1	0	0
8	330	2.0	58.0	77.2									1	0	0
9	300	2.0	62.0	100.9									1	0	0
10	360	2.4	62.0	108.5									5	0	0
11	360	2.2	70.0	120.0									3	0	0
12	210	3.8	70.0	108.0									1	0	0
13	210	4.5	70.0	106.5									1	0	0
14	210	4.5	70.0	115.1									1	0	0
15	210	4.8	70.0	100.8									1	0	0
16	210	5.0	72.0	81.4									3	0	0
17	210	4.6	72.0	58.3									1	0	0
18	200	3.5	72.0	33.1									1	0	0
19	200	3.0	42.0	9.6									1	0	0
20	180	2.7	72.0	0.									1	0	0
21	240	2.5	64.0	0.									1	0	0
22	270	2.0	60.0	0.									2	0	0
23	300	1.0	58.0	0.									3	0	0
TOT.				1097.6									34	0	0
AVG.	256	2.7	60.5	45.7									1	0	0

DATE
(06/24/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	1.1	57.0	0.									2	0	0
1	30	.8	53.0	0.									1	0	0
2	150	.5	52.0	0.									1	0	0
3	150	1.0	51.0	0.									1	0	0
4	120	1.6	50.0	0.									1	0	0
5	130	2.2	48.0	1.2									0	0	0
6	150	7.8	52.0	36.5									1	0	0
7	150	7.3	53.0	81.5									1	0	0
8	150	7.0	58.0	124.8									1	0	0
9	150	8.0	52.0	161.6									1	0	0
10	150	8.5	64.0	188.8									1	0	0
11	150	9.0	72.0	203.3									2	0	0
12	180	9.0	72.0	190.4									2	0	0
13	180	9.5	72.0	187.8									1	0	0
14	180	9.5	72.0	158.9									1	0	0
15	180	8.0	72.0	139.1									1	0	0
16	180	9.0	72.0	97.1									1	0	0
17	180	9.0	72.0	69.5									2	0	0
18	270	4.0	70.0	31.5									3	0	0
19	300	3.2	66.0	8.4									3	0	0
20	330	2.8	60.0	0.									1	0	0
21	330	1.3	60.0	0.									3	0	0
22	30	2.0	60.0	0.									2	0	0
23	360	2.5	60.0	0.									2	0	0
TOT.				1680.4									33	0	0
AVG.	189	5.2	61.2	70.0									1	0	0

DATE
(06/25/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	INNER. HEATER	HEAT PUMP
0	360	1.5	58.0	0.									6	0	0
1	30	1.7	56.0	0.									4	0	0
2	30	3.3	54.0	0.									1	0	0
3	30	1.5	52.0	0.									2	0	0
4	30	2.0	53.0	0.									1	0	0
5	30	4.0	52.0	.7									1	0	0
6	30	5.0	52.0	18.3									1	0	0
7	30	5.0	52.0	40.6									1	0	0
8	30	4.5	56.0	62.0									2	0	0
9	30	3.5	58.0	80.9									3	0	0
10	300	3.0	62.0	95.8									1	0	0
11	330	3.4	62.0	105.8									2	0	0
12	330	4.0	61.0	110.3									1	0	0
13	330	4.4	62.0	105.9									1	0	0
14	330	4.0	64.0	105.5									1	0	0
15	330	3.2	68.0	164.9									1	0	0
16	300	3.2	68.0	133.2									1	0	0
17	300	6.5	66.0	91.7									1	0	0
18	300	5.8	64.0	42.6									1	0	0
19	330	4.2	62.0	14.0									1	0	0
20	330	2.5	62.0	0.									1	0	0
21	330	3.0	62.0	0.									1	0	0
22	30	4.0	58.0	0.									2	0	0
23	330	3.2	58.0	0.									1	0	0
TOT.				1332.2									40	0	0
AVG.	201	3.6	59.2	55.5									2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	330	2.8	52.0	0.	31.00	24.50	58.25	29.75	29.50	30.00	28.50	49.50	2	0	0
1	30	2.8	53.0	0.	31.00	24.00	58.25	29.50	29.00	29.25	27.25	48.50	2	0	0
2	330	2.0	52.0	0.	30.50	24.25	58.00	29.00	29.00	29.00	26.25	47.50	1	0	0
3	30	1.5	50.0	0.	30.00	23.50	58.00	28.50	28.25	28.75	25.50	46.75	2	0	0
4	360	.4	50.0	0.	29.50	23.00	57.50	28.00	28.00	28.25	25.00	46.00	1	0	0
5	360	0.	48.0	1.7	29.25	22.75	57.50	28.00	27.75	28.00	25.00	45.00	1	0	0
6	270	.7	52.0	35.2	28.75	22.25	57.25	27.25	27.50	27.75	24.25	44.50	1	0	0
7	240	1.6	56.0	61.8	29.00	22.00	57.25	27.50	27.25	27.50	24.00	43.00	1	0	0
8	180	2.5	60.0	94.2	28.50	22.00	57.25	27.00	27.00	27.25	24.50	37.50	1	0	0
9	180	3.5	61.0	122.7	28.00	21.50	57.00	27.00	27.00	27.25	25.50	25.00	1	0	0
10	180	3.0	62.0	182.2	28.25	21.75	57.00	27.00	27.00	27.25	26.00	24.00	1	0	0
11	230	3.5	62.0	256.9	28.50	21.75	56.75	27.00	27.00	27.25	54.50	47.50	1	0	0
12	190	4.5	68.0	297.7	29.25	21.25	56.50	28.00	27.50	28.00	51.00	50.00	1	0	0
13	180	4.5	68.0	305.7	30.00	22.00	56.50	28.75	28.25	28.50	53.00	55.00	1	0	0
14	180	5.5	70.0	287.5	30.25	22.75	57.00	29.00	29.00	29.00	57.00	61.50	1	0	0
15	240	4.5	70.0	253.1	31.00	22.75	57.50	29.75	29.25	29.50	58.00	68.25	1	0	0
16	210	4.2	72.0	204.6	32.00	23.50	58.00	30.00	30.00	30.00	58.75	69.00	2	0	0
17	210	6.0	72.0	145.9	32.25	23.25	58.75	30.75	30.75	30.50	59.00	66.25	2	0	0
18	210	6.5	73.0	82.6	32.25	24.00	59.00	31.00	31.00	30.75	59.00	60.50	1	0	0
19	210	7.5	72.0	22.5	32.00	25.00	59.00	31.00	31.00	31.25	57.50	55.00	2	0	0
20	240	4.0	64.0	0.	33.00	24.75	58.75	31.25	31.00	31.25	50.00	47.00	1	0	0
21	270	2.5	62.0	0.	32.00	24.25	58.75	31.50	31.00	31.00	40.00	46.00	2	0	0
22	360	1.5	59.0	0.	32.00	24.00	58.50	31.00	31.75	31.50	34.50	50.00	2	0	0
23	60	3.0	58.0	0.	31.75	24.00	58.25	30.25	30.25	30.25	32.75	51.00	2	0	0
TOT.				2354.3									33	0	0
AVG.	220	3.3	61.1	98.1	30.42	23.11	57.77	29.07	28.96	29.12	39.45	49.34	1	0	0

DATE
(06/27/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	150	2.0	58.0	0.	31.00	23.75	58.00	30.00	29.75	29.75	28.50	50.00	1	0	0
1	180	4.2	56.0	0.	31.00	24.00	58.00	29.50	29.00	29.50	27.25	48.50	1	0	0
2	180	4.5	56.0	0.	30.25	23.50	58.00	29.50	29.00	29.25	26.50	47.00	1	0	0
3	150	3.0	55.0	0.	30.00	23.00	57.50	29.00	28.50	29.00	26.25	45.00	1	0	0
4	150	2.0	54.0	0.	29.75	22.75	57.50	28.50	28.00	28.75	26.00	43.75	1	0	0
5	130	2.5	54.0	0.	29.00	22.25	57.25	28.25	28.25	28.50	26.00	42.75	1	0	0
6	120	2.5	54.0	1.9	29.25	22.50	57.25	28.25	28.00	28.25	26.00	42.25	1	0	0
7	180	2.0	54.0	4.2	29.00	22.00	57.00	28.25	28.00	28.25	26.00	41.25	1	0	0
8	180	.8	53.0	6.4	29.00	21.50	57.00	28.00	28.00	28.00	26.00	40.00	1	0	0
9	330	1.8	55.0	10.4	29.00	21.25	57.00	28.00	28.00	28.00	26.50	37.00	0	0	0
10	330	3.0	58.0	14.3	28.50	20.75	57.00	28.00	28.00	28.00	27.00	25.25	1	0	0
11	270	3.5	62.0	17.4	28.75	21.00	56.50	28.00	27.75	28.00	26.75	23.00	1	0	0
12	310	3.0	62.0	19.3	29.00	21.00	56.25	28.25	28.00	28.25	55.00	61.00	3	0	0
13	270	4.2	62.0	19.0	29.75	21.00	56.50	29.00	28.50	28.75	55.75	55.00	2	0	0
14	330	5.0	68.0	18.5	30.75	21.50	56.50	28.50	28.25	28.25	56.25	54.00	1	0	0
15	300	3.5	68.0	16.6	30.25	21.75	57.00	30.00	29.75	30.00	57.25	60.50	1	0	0
16	270	4.2	70.0	13.7	31.75	22.25	58.00	30.50	30.25	30.00	58.75	68.50	2	0	0
17	270	5.0	70.0	9.9	32.25	22.75	58.25	31.00	30.75	30.75	58.50	63.00	2	0	0
18	270	3.8	70.0	5.7	32.25	23.25	58.75	31.50	31.00	31.00	58.50	60.00	4	0	0
19	240	7.0	70.0	1.6	32.75	23.00	58.75	31.50	31.25	31.00	57.00	54.00	3	0	0
20	330	.6	70.0	0.	33.00	23.50	58.50	31.75	31.50	31.25	45.00	43.25	1	0	0
21	360	.4	62.0	0.	31.25	23.00	58.25	31.50	31.00	31.00	38.00	48.75	3	0	0
22	360	.3	60.0	0.	31.75	23.25	58.00	31.00	30.50	31.00	34.00	52.00	2	0	0
23	360	1.1	60.0	0.	31.50	23.00	58.00	30.75	30.00	30.50	30.25	50.25	4	0	0
TOT.				158.9									38	0	0
AVG.	252	2.9	60.9	6.6	30.45	22.40	57.53	29.52	29.21	29.37	38.46	48.37	2	0	0

DATE
(06/28/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	360	0.	58.0	0.	31.00	23.50	57.75	30.00	29.75	30.00	28.25	49.00	1	0	0
1	120	.5	55.0	0.	30.75	22.75	57.50	29.50	29.00	29.75	27.00	48.00	1	0	0
2	130	.8	53.0	0.	30.25	22.75	57.50	29.00	29.75	29.25	26.25	47.00	1	0	0
3	150	2.2	52.0	0.	30.00	22.00	57.25	28.75	28.50	29.00	25.50	46.25	1	0	0
4	150	3.8	52.0	0.	29.25	21.50	57.00	28.25	28.00	28.50	25.25	44.00	1	0	0
5	150	2.0	50.0	.9	29.25	21.75	57.00	28.00	27.50	28.25	25.00	43.00	1	0	0
6	140	4.0	52.0	15.3	29.00	21.25	56.75	27.50	27.50	28.00	25.00	42.00	1	0	0
7	150	2.5	55.0	33.3	28.50	21.00	56.75	27.25	27.00	27.50	24.75	40.00	1	0	0
8	150	3.0	60.0	50.6	28.25	21.00	56.75	27.00	27.00	27.00	25.00	36.00	1	0	0
9	150	4.2	62.0	65.7	28.00	20.00	56.25	27.00	27.00	27.25	25.25	25.00	1	0	0
10	150	5.0	66.0	97.6	28.00	20.75	56.25	27.00	27.00	27.00	25.50	23.25	1	0	0
11	190	5.7	63.0	124.6	28.00	21.00	56.25	27.25	27.25	27.50	54.00	51.50	1	0	0
12	190	5.8	68.0	152.7	29.25	21.00	56.25	28.00	28.00	28.00	51.75	55.50	5	0	0
13	230	2.5	70.0	141.1	30.25	21.25	56.25	29.25	29.00	29.00	56.75	62.25	5	0	0
14	210	1.7	71.0	131.6	31.00	22.00	56.25	29.75	29.50	29.50	56.50	55.50	3	0	0
15	180	3.0	72.0	115.3	32.00	22.25	56.25	30.00	30.00	30.00	57.00	69.00	6	0	0
16	210	2.5	72.0	99.5	32.75	22.25	57.50	30.25	30.00	30.00	58.50	69.25	8	0	0
17	210	2.4	72.0	74.5	31.00	23.00	58.25	28.00	28.00	28.00	58.00	60.00	6	0	0
18	210	2.2	72.0	44.4	31.75	23.75	58.00	29.25	29.00	29.25	56.00	55.00	3	0	0
19	240	2.0	73.0	11.2	32.25	24.75	57.75	30.25	30.00	30.25	55.00	51.75	1	0	0
20	300	4.0	70.0	0.	32.25	27.00	57.75	30.50	30.00	30.25	41.00	42.75	3	0	0
21	330	2.0	67.0	0.	32.00	23.50	57.50	30.50	30.00	30.25	35.00	47.50	3	0	0
22	300	2.8	66.0	0.	31.25	23.00	57.25	30.00	29.50	30.00	32.00	50.00	2	0	0
23	300	2.4	64.0	0.	31.00	23.50	57.00	29.75	29.25	29.50	28.25	50.25	3	0	0
TOT.				1158.3									57	0	0
AVG.	204	2.8	63.1	48.3	30.29	22.35	57.04	28.83	28.65	28.87	38.44	48.49	2	0	0

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE (KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0	300	2.0	62.0	0.	30.25	23.00	56.75	29.00	28.75	29.00	26.00	49.00	1	0	0
1				0.	30.00	22.75	56.50	28.75	28.25	29.00	25.00	48.00	1	0	0
2	30	3.5	56.0	0.	29.75	22.50	56.50	28.00	28.00	28.25	25.00	46.25	1	0	0
3	30	3.0	54.0	0.	29.00	22.25	56.00	28.00	27.75	28.25	24.50	44.75	0	0	0
4	30	3.0	53.0	0.	29.00	21.75	56.00	27.75	27.50	28.00	24.50	43.75	1	0	0
5	30	4.5	52.0	1.1	28.75	22.00	57.75	27.50	27.25	27.75	24.25	42.75	0	0	0
6	30	3.0	52.0	19.9	28.50	21.00	55.50	27.50	27.25	27.75	24.25	42.00	1	0	0
7	30	3.2	52.0	55.0	28.00	21.00	55.25	27.00	27.00	27.25	24.00	40.50	1	0	0
8	30	3.5	53.0	89.0	28.00	21.00	55.25	27.00	27.00	27.00	24.25	40.00	0	0	0
9	30	2.5	52.0	120.6	28.00	21.25	55.00	27.00	27.00	27.00	25.25	25.00	1	0	0
10				142.6	28.25	21.50	55.00	27.00	27.00	27.00	25.50	22.25	1	0	0
11	360	2.0	64.0	150.8	28.25	21.00	55.00	27.25	27.25	27.25	54.50	58.75	1	0	0
12	360	1.5	64.0	133.4	29.25	20.75	55.25	28.25	28.00	28.25	56.25	66.50	1	0	0
13	330	3.0	65.0	90.6	30.25	21.50	55.25	29.00	28.75	28.75	57.25	69.00	2	0	0
14				84.5	31.50	21.50	57.25	29.50	29.00	29.25	58.50	73.00	1	0	0
15	300	3.5	69.0	74.0	32.25	21.75	58.75	30.25	29.75	30.00	59.75	73.00	1	0	0
16	300	3.0	69.0	86.9	33.00	22.00	60.00	30.75	30.00	30.75	60.25	70.00	1	0	0
17	300	3.0	69.0	73.5	33.50	22.25	60.50	21.25	31.00	31.00	61.00	67.00	1	0	0
18	300	3.5	69.0	46.1	33.75	22.50	61.00	31.75	31.25	31.25	60.25	60.25	2	0	0
19	300	3.0	69.0	12.9	34.00	23.25	60.50	32.00	31.75	31.75	58.25	54.50	2	0	0
20	300	2.5	69.0	0.	34.00	23.50	60.50	32.00	31.75	31.75	44.25	44.00	2	0	0
21	300	4.2	69.0	0.	33.25	24.00	60.25	31.75	31.25	31.75	37.25	54.75	1	0	0
22	300	3.0	69.0	0.	32.75	23.75	60.00	31.00	31.00	31.00	32.25	53.00	1	0	0
23				0.	32.00	23.25	60.00	31.00	30.25	31.00	29.75	52.00	1	0	0
TOT.				1190.9									27	0	0
AVG.	199	3.0	61.5	49.2	30.64	22.12	57.53	28.76	28.41	29.17	39.25	51.67	1	0	0

DATE
(06/30/77)

	CLIMATIC DATA				HOUSE TEMPERATURE DATA (C)								ENERGY USE(KWH)		
HOUR	WIND DIR.	WIND VEL.	TEMP	SOLAR RAD.	MECH. ROOM	LIV. ROOM	STOR. TANK	HEAT PUMP EXIT	HEAT PUMP ENTER	HOT WATER EXIT	SOLAR COLL. ENTER	SOLAR COLL. EXIT	TOTAL HOUSE	IMMER. HEATER	HEAT PUMP
0				0.	31.50	23.00	59.75	30.00	30.00	30.25	27.50	51.00	1	0	0
1	300	1.5	68.0	0.	31.00	22.75	59.25	29.75	29.25	30.00	26.75	50.00	1	0	0
2	300	3.0	70.0	0.	30.75	22.25	59.50	29.00	29.00	29.50	25.75	48.25	1	0	0
3	300	3.5	72.0	0.	30.00	22.00	59.25	28.75	28.75	29.00	25.00	47.00	1	0	0
4	300	5.0	74.0	0.	29.75	22.00	59.00	28.00	28.00	28.50	25.00	45.00	1	0	0
5	300	2.5	72.0	1.9	29.25	21.25	58.75	28.00	28.00	28.25	25.00	44.00	1	0	0
6	300	2.5	76.0	33.0	29.00	21.25	58.75	27.75	27.75	28.00	24.75	43.00	1	0	0
7	300	2.8	77.0	70.8	28.75	21.00	58.75	27.50	27.50	28.00	25.00	41.25	1	0	0
8	300	3.5	78.0	107.2	28.50	20.75	58.50	27.50	27.50	27.75	25.00	39.25	0	0	0
9	300	3.5	77.0	139.1	28.50	21.00	58.50	27.50	27.50	27.50	26.00	30.50	1	0	0
10	300	3.0	77.0	164.3	28.25	20.50	58.25	27.50	27.50	27.75	26.00	21.75	1	0	0
11	300	3.0	77.0	181.2	29.25	21.00	58.00	28.25	28.00	28.00	57.00	61.50	1	0	0
12	300	3.2	77.0	188.5	29.00	20.75	59.00	29.25	29.00	29.00	59.50	70.00	1	0	0
13	300	3.0	77.0	185.9	29.50	22.00	60.00	30.00	28.50	28.50	61.00	74.50	1	0	0
14	300	2.8	77.0	173.4	30.25	22.25	61.25	31.00	30.25	30.25	62.25	77.00	1	0	0
15	300	3.0	77.0	151.9	34.00	23.00	62.75	31.25	31.00	31.00	63.50	72.00	1	0	0
16	300	2.5	77.0	122.8	34.00	23.75	63.75	32.00	31.50	32.00	64.25	74.50	2	0	0
17	300	3.0	77.0	88.3	34.75	24.50	64.25	32.50	32.25	32.25	64.75	71.75	4	0	0
18	300	3.0	77.0	50.7	35.50	24.75	64.75	33.00	33.00	32.75	64.75	65.00	3	0	0
19	300	1.5	77.0	14.2	35.75	25.00	64.25	33.50	33.00	33.00	62.00	59.00	1	0	0
20	300	1.1	77.0	0.	36.00	25.75	64.25	33.75	33.25	33.25	59.75	55.25	3	0	0
21				0.	35.75	26.00	64.00	33.75	33.50	33.25	48.25	45.50	1	0	0
22	180	2.5	62.0	0.	35.00	26.25	63.75	33.25	33.00	33.25	40.50	59.00	3	0	0
23	360	2.0	77.0	0.	34.50	26.25	63.50	33.00	32.50	33.75	28.50	59.75	2	0	0
TOT.				1673.2									34	0	0
AVG.	297	2.8	75.0	69.7	31.60	22.87	60.91	30.24	29.98	30.20	42.41	54.41	1	0	0

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp. (°C)
09/01	103.	514.	21000.	48.	12000.	1.	0.	0.	0.	12.	0.	0.	22.	56.
09/02	166.	1384.	74000.	133.	32000.	0.	0.	0.	0.	0.	0.	0.	50.	56.
09/03	244.	1773.	153000.	23.	5000.	0.	0.	0.	0.	0.	0.	0.	30.	59.
09/04	196.	1237.	83000.	25.	4000.	0.	0.	0.	0.	33.	0.	0.	27.	60.
09/05	18.	1.	1000.	72.	18000.	0.	0.	0.	806.	19.	0.	0.	51.	55.
09/06	192.	1300.	82000.	11.	1000.	244.	24215.	0.	0.	0.	0.	0.	17.	55.
09/07	263.	1708.	173000.	93.	21000.	0.	0.	0.	0.	0.	0.	0.	43.	60.
09/08	270.	1760.	162000.	52.	12000.	0.	0.	0.	0.	10.	0.	0.	33.	63.
09/09	273.	1804.	160000.	95.	25000.	0.	0.	0.	0.	1.	0.	0.	40.	66.
09/10	243.	1653.	122000.	48.	14000.	0.	0.	0.	0.	0.	0.	0.	35.	66.
09/11	75.	76.	2000.	20.	6000.	0.	0.	0.	0.	38.	0.	0.	29.	61.
09/12	110.	824.	16000.	159.	42000.	0.	0.	0.	898.	12.	0.	0.	56.	56.
09/13	222.	1602.	142000.	142.	38000.	0.	0.	0.	0.	3.	0.	0.	60.	55.
09/14	26.	2.	1000.	66.	16000.	0.	0.	0.	0.	5.	0.	0.	49.	54.
09/15	52.	11.	0.	22.	3000.	0.	0.	0.	0.	0.	0.	0.	33.	51.
09/16	144.	1097.	73000.	80.	14000.	0.	0.	0.	0.	0.	0.	0.	43.	52.
09/17	38.	58.	3000.	48.	10000.	0.	0.	0.	0.	4.	0.	0.	32.	50.
09/18	142.	1323.	71000.	87.	17000.	0.	0.	0.	0.	0.	0.	0.	46.	49.
09/19	226.	1538.	164000.	66.	11000.	0.	0.	0.	0.	4.	0.	0.	46.	55.
09/20	258.	1805.	180000.	23.	4000.	0.	0.	0.	0.	2.	0.	0.	29.	61.
09/21	28.	1.	0.	73.	20000.	0.	0.	0.	0.	3.	0.	0.	43.	56.
09/22	36.	0.	0.	57.	16000.	0.	0.	0.	0.	0.	0.	0.	36.	52.
09/23	30.	0.	0.	64.	17000.	69.	8442.	0.	0.	0.	0.	0.	37.	49.
09/24	239.	1525.	172000.	34.	8000.	0.	0.	0.	0.	0.	0.	0.	38.	56.
09/25	190.	1340.	136000.	38.	8000.	0.	0.	0.	0.	0.	0.	0.	37.	58.
09/26	130.	934.	61000.	128.	36000.	0.	0.	0.	0.	0.	0.	0.	61.	56.
09/27	246.	1641.	163000.	28.	5000.	9.	0.	0.	0.	20.	0.	0.	36.	61.
09/28	162.	1241.	63000.	32.	9000.	0.	0.	0.	0.	1.	0.	0.	30.	60.
09/29	198.	1553.	101000.	170.	48000.	0.	0.	0.	0.	0.	0.	0.	67.	59.
09/30	157.	1290.	64000.	74.	20000.	0.	0.	0.	0.	0.	0.	0.	43.	58.
10/01	77.	410.	10000.	36.	9600.	0.	0.	0.	895.	1.	0.	0.	34.	54.
10/02	41.	1.	0.	3.	1000.	1015.	104014.	0.	0.	52.	0.	0.	26.	47.
10/03	82.	56.	9000.	169.	28000.	706.	42414.	0.	0.	0.	0.	0.	78.	43.
10/04	252.	1269.	204000.	58.	7000.	596.	41908.	0.	0.	0.	0.	0.	48.	48.
10/05	98.	301.	29000.	37.	5000.	410.	34850.	0.	0.	0.	8.	0.	31.	45.
10/06	38.	1113.	162000.	65.	10000.	595.	42211.	0.	0.	6.	0.	0.	41.	49.
10/07	249.	1574.	195000.	98.	21000.	0.	2141.	0.	0.	0.	0.	0.	52.	51.
10/08	249.	1495.	148000.	89.	18000.	0.	0.	0.	0.	47.	0.	0.	54.	59.
10/09	130.	1017.	43000.	25.	6000.	0.	0.	0.	0.	2.	0.	0.	34.	57.
10/10	65.	314.	6000.	20.	4000.	0.	0.	0.	0.	19.	0.	0.	23.	54.
10/11	109.	1019.	31000.	59.	13000.	0.	0.	0.	0.	8.	0.	0.	35.	52.
10/12	146.	912.	87000.	92.	17000.	146.	12845.	0.	0.	0.	0.	0.	48.	51.
10/13	97.	409.	40000.	51.	13000.	1281.	130104.	1.	0.	0.	0.	0.	50.	46.
10/14	82.	232.	15000.	191.	31000.	258.	20046.	0.	0.	0.	0.	0.	89.	42.
10/15	193.	1142.	98000.	29.	4000.	1518.	98716.	0.	0.	0.	0.	0.	34.	40.
10/16	179.	1142.	56000.	65.	7000.	1236.	68041.	0.	0.	0.	8.	0.	57.	38.
10/17	256.	589.	65000.	94.	11000.	873.	44365.	0.	0.	8.	0.	0.	47.	37.
10/18	259.	1320.	171000.	64.	9000.	958.	49736.	129.	14274.	1.	8.	0.	57.	41.
10/19	190.	1359.	159000.	73.	11000.	1267.	80789.	0.	0.	0.	0.	0.	42.	43.
10/20	117.	993.	115000.	77.	12000.	888.	63170.	0.	0.	0.	0.	0.	37.	44.

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp. (°C)
10/21	85.	921.	30000.	118.	15000.	1248.	72866.	329.	35253.	0.	8.	0.	80.	33.
10/22	44.	147.	7000.	41.	4000.	0.	0.	1002.	113692.	0.	24.	0.	55.	28.
10/23	35.	1.	0.	163.	12000.	0.	0.	507.	53975.	0.	8.	0.	90.	24.
10/24	26.	0.	0.	43.	3000.	0.	0.	870.	72278.	12.	16.	0.	50.	22.
10/25	24.	0.	0.	119.	6000.	0.	0.	101.	7619.	53.	8.	0.	89.	19.
10/26	42.	3.	0.	54.	2000.	0.	0.	374.	29691.	0.	8.	1.	77.	18.
10/27	202.	1037.	68000.	47.	2000.	0.	0.	801.	62542.	4.	8.	7.	57.	20.
10/28	12.	13.	0.	66.	4000.	0.	0.	660.	49787.	16.	16.	0.	65.	19.
10/29	108.	1099.	76000.	100.	4000.	0.	0.	613.	44763.	0.	8.	7.	90.	19.
10/30	39.	48.	2000.	33.	2000.	0.	0.	1429.	128568.	0.	24.	2.	53.	15.
10/31	30.	13.	1000.	23.	1000.	0.	0.	1088.	69602.	62.	24.	16.	70.	14.
11/01	187.	964.	180000.	84.	4000.	0.	0.	203.	11371.	2.	0.	0.	56.	20.
11/02	9.	0.	0.	23.	1000.	0.	0.	405.	35239.	0.	8.	0.	27.	19.
11/03	24.	13.	0.	68.	4000.	0.	0.	966.	69712.	0.	16.	0.	64.	16.
11/04	195.	1201.	190000.	71.	4000.	0.	0.	318.	27221.	0.	8.	0.	50.	22.
11/05	111.	979.	80000.	124.	10000.	0.	0.	736.	68523.	0.	16.	0.	87.	22.
11/06	64.	886.	38000.	20.	2000.	0.	0.	780.	67621.	1.	16.	0.	48.	19.
11/07	51.	584.	31000.	34.	2000.	0.	0.	1160.	95246.	22.	24.	0.	56.	21.
11/08	16.	49.	1000.	192.	8000.	0.	0.	370.	28079.	1.	8.	0.	92.	16.
11/09	32.	558.	19000.	170.	7000.	0.	0.	579.	46181.	0.	8.	20.	92.	14.
11/10	6.	22.	1000.	38.	1000.	0.	0.	541.	36793.	0.	8.	5.	75.	16.
11/11	59.	675.	32000.	99.	3000.	0.	0.	198.	45247.	0.	8.	6.	76.	17.
11/12	77.	775.	56000.	42.	2000.	0.	0.	904.	42602.	0.	16.	0.	62.	16.
11/13	151.	904.	122000.	113.	6000.	0.	0.	875.	73723.	0.	16.	0.	83.	18.
11/14	168.	814.	145000.	77.	3000.	0.	0.	1141.	97659.	5.	16.	0.	69.	13.
11/15	60.	284.	24000.	32.	2000.	0.	0.	426.	36038.	50.	16.	0.	43.	15.
11/16	4.	71.	7000.	48.	5000.	0.	0.	780.	63191.	19.	16.	12.	74.	18.
11/17	13.	15.	1000.	36.	1000.	0.	0.	376.	28881.	44.	0.	8.	47.	17.
11/18	7.	0.	0.	74.	4000.	0.	0.	1368.	109763.	35.	32.	8.	86.	14.
11/19	49.	20.	0.	153.	4000.	0.	0.	1813.	136114.	6.	32.	31.	135.	13.
11/20	9.	13.	0.	61.	2000.	0.	0.	1818.	128384.	0.	32.	46.	127.	14.
11/21	136.	1397.	139000.	57.	1000.	0.	0.	766.	63539.	16.	8.	7.	68.	17.
11/22	10.	17.	0.	4.	0.	0.	0.	1491.	116387.	0.	32.	0.	65.	13.
11/23	74.	951.	64000.	189.	4000.	0.	0.	1255.	92123.	0.	24.	21.	122.	14.
11/24	22.	33.	0.	16.	0.	0.	0.	1682.	129568.	0.	32.	53.	215.	15.
11/25	8.	1.	0.	95.	3000.	0.	0.	1365.	98759.	53.	24.	20.	25.	16.
11/26	115.	593.	67000.	66.	3000.	0.	0.	1122.	101907.	0.	16.	40.	115.	19.
11/27	203.	1258.	156000.	63.	3000.	0.	0.	1697.	162658.	0.	32.	0.	82.	15.
11/28	183.	1039.	159000.	31.	3000.	0.	0.	1537.	143404.	0.	32.	14.	90.	17.
11/29	132.	901.	95000.	175.	10000.	0.	0.	1867.	170480.	0.	32.	47.	161.	19.
11/30	146.	836.	126000.	160.	13000.	0.	0.	1142.	105619.	0.	24.	19.	113.	21.
12/01	85.	509.	67000.	62.	5000.	0.	0.	1605.	158250.	0.	56.	29.	164.	20.
12/02	14.	5.	0.	158.	8000.	0.	0.	1997.	163631.	0.	8.	29.	141.	16.
12/03	12.	0.	0.	104.	5000.	0.	0.	1939.	158762.	0.	40.	43.	49.	15.
12/04	17.	120.	2000.	50.	2000.	0.	0.	1347.	110712.	0.	24.	47.	224.	17.
12/05	11.	27.	0.	20.	1000.	0.	0.	2144.	172385.	0.	40.	30.	111.	19.
12/06	92.	652.	84000.	30.	1000.	0.	0.	1626.	131679.	0.	32.	36.	180.	16.
12/07	5.	3.	0.	184.	10000.	0.	0.	1426.	116187.	51.	24.	38.	146.	16.
12/08	36.	294.	26000.	46.	3000.	0.	0.	1112.	100002.	119.	24.	38.	99.	19.
12/09	29.	236.	18000.	42.	2000.	0.	0.	2090.	169440.	51.	32.	38.	119.	16.
12/10	78.	844.	73000.	85.	6000.	0.	0.	1579.	133817.	18.	32.	36.	123.	17.

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp. (°C)
12/11	15.	0.	0.	103.	8000.	0.	0.	1743.	144266.	80.	32.	35.	130.	16.
12/12	79.	738.	83000.	57.	2000.	0.	0.	1235.	108191.	3.	24.	34.	109.	18.
12/13	78.	703.	75000.	25.	3000.	0.	0.	1354.	119398.	27.	32.	27.	94.	20.
12/14	29.	176.	10000.	23.	1000.	0.	0.	1130.	100122.	9.	16.	25.	80.	17.
12/15	39.	426.	26000.	149.	10000.	0.	0.	689.	78097.	2.	16.	25.	111.	19.
12/16	38.	457.	25000.	38.	5000.	0.	0.	790.	50223.	23.	8.	26.	70.	20.
12/17	83.	964.	74000.	34.	3000.	0.	0.	866.	77328.	20.	16.	27.	85.	21.
12/18	19.	0.	0.	81.	6000.	0.	0.	1262.	112978.	42.	24.	5.	80.	18.
12/19	42.	377.	22000.	126.	7000.	0.	0.	1620.	137488.	1.	32.	26.	121.	16.
12/20	188.	1027.	194000.	12.	1000.	0.	0.	1635.	154290.	7.	32.	19.	75.	19.
12/21	41.	55.	9000.	28.	1000.	0.	0.	1871.	158799.	15.	40.	27.	10.	16.
12/22	19.	111.	2000.	210.	12000.	0.	0.	1388.	119378.	0.	24.	35.	243.	16.
12/23	30.	69.	10000.	154.	9000.	0.	0.	1455.	116488.	0.	24.	42.	163.	17.
12/24	37.	82.	15000.	67.	3000.	0.	0.	2044.	173372.	1.	0.	43.	123.	15.
12/25	12.	0.	0.	101.	5000.	0.	0.	2606.	204171.	0.	88.	46.	140.	13.
12/26	8.	0.	0.	25.	2000.	0.	0.	1616.	125646.	33.	24.	44.	108.	15.
12/27	24.	28.	3000.	31.	2000.	0.	0.	1442.	110743.	55.	32.	29.	94.	14.
12/28	60.	498.	50000.	50.	3000.	0.	0.	1005.	77447.	6.	8.	0.	75.	12.
12/29	70.	125.	30000.	125.	5000.	0.	0.	861.	63986.	1.	24.	0.	106.	11.
12/30	174.	976.	212000.	24.	1000.	0.	0.	1.	0.	1.	0.	0.	75.	19.
12/31	200.	1207.	220000.	23.	2000.	0.	0.	1029.	103733.	0.	24.	0.	69.	23.
01/01	17.	70.	8000.	184.	14000.	0.	0.	1856.	169545.	1.	40.	0.	111.	14.
01/02	101.	796.	136000.	22.	1000.	0.	0.	2114.	183689.	12.	32.	0.	72.	12.
01/03	48.	71.	30000.	125.	6000.	0.	0.	647.	48333.	0.	16.	0.	162.	10.
01/04	7.	60.	0.	177.	9000.	0.	0.	0.	0.	0.	8.	20.	203.	15.
01/05	13.	0.	0.	89.	5000.	0.	0.	1526.	133284.	0.	24.	36.	172.	14.
01/06	213.	1120.	256000.	40.	3000.	0.	0.	2171.	198318.	0.	40.	21.	106.	17.
01/07	203.	1158.	223000.	59.	6000.	0.	0.	2370.	233615.	0.	48.	23.	117.	18.
01/08	173.	963.	187000.	32.	4000.	0.	0.	2232.	211594.	0.	40.	22.	102.	19.
01/09	204.	1149.	234000.	84.	9000.	0.	0.	2327.	229530.	0.	48.	21.	30.	19.
01/10	91.	493.	80000.	18.	1000.	0.	0.	2454.	220124.	0.	40.	13.	187.	15.
01/11	138.	696.	159000.	51.	5000.	0.	0.	1660.	143616.	0.	32.	42.	116.	18.
01/12	16.	0.	0.	84.	7000.	0.	0.	1708.	126838.	19.	32.	33.	121.	16.
01/13	12.	0.	0.	43.	5000.	0.	0.	1554.	150970.	7.	32.	33.	104.	15.
01/14	23.	123.	7000.	42.	3000.	0.	0.	1336.	107140.	1.	24.	35.	101.	15.
01/15	19.	0.	0.	40.	4000.	0.	0.	1359.	9682.	14.	24.	46.	100.	16.
01/16	10.	0.	0.	1.	0.	0.	0.	1276.	198487.	8.	24.	26.	91.	16.
01/17	6.	0.	0.	56.	5000.	0.	0.	1246.	99196.	14.	24.	36.	100.	17.
01/18	11.	0.	0.	143.	8000.	0.	0.	791.	61906.	13.	16.	39.	119.	19.
01/19	131.	881.	161000.	111.	19000.	0.	0.	471.	41906.	13.	8.	13.	103.	19.
01/20	45.	545.	25000.	55.	7000.	0.	0.	1075.	100446.	0.	16.	12.	93.	20.
01/21	86.	802.	80000.	26.	2000.	0.	0.	1361.	126670.	1.	32.	10.	75.	19.
01/22	154.	975.	164000.	153.	18000.	0.	0.	1063.	98560.	4.	16.	11.	112.	22.
01/23	15.	91.	20000.	54.	6000.	0.	0.	1625.	144152.	0.	40.	0.	182.	15.
01/24	23.	504.	9000.	26.	2000.	0.	0.	2730.	212483.	0.	48.	43.	30.	12.
01/25	59.	163.	21000.	41.	1000.	0.	0.	2953.	208511.	8.	48.	52.	144.	12.
01/26	164.	1337.	206000.	120.	11000.	0.	0.	1638.	158035.	1.	32.	46.	47.	18.
01/27	164.	1082.	196000.	40.	4000.	0.	0.	1683.	162201.	0.	32.	26.	106.	21.
01/28	40.	191.	13000.	74.	7000.	0.	0.	2042.	186071.	0.	32.	48.	242.	19.
01/29	20.	0.	0.	37.	3000.	0.	0.	2023.	177139.	0.	40.	43.	130.	17.
01/30	60.	442.	50000.	40.	3000.	0.	0.	1772.	151275.	0.	32.	43.	129.	18.

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp (°C)
01/31	63.	635.	53000.	135.	13000.	0.	0.	1852.	160850.	10.	32.	42.	77.	18.
02/01	14.	0.	0.	69.	6000.	0.	0.	1258.	104935.	2.	24.	35.	93.	17.
02/02	29.	289.	19000.	54.	5000.	0.	0.	943.	77145.	1.	24.	35.	202.	19.
02/03	209.	1317.	242000.	50.	15000.	0.	0.	622.	55480.	0.	8.	4.	66.	26.
02/04	192.	1408.	204000.	75.	0.	0.	0.	393.	43611.	0.	8.	0.	64.	31.
02/05	121.	1031.	112000.	29.	3000.	0.	0.	655.	71981.	0.	16.	0.	52.	30.
02/06	155.	1384.	115000.	60.	10000.	0.	0.	864.	87736.	4.	16.	0.	71.	29.
02/07	91.	1189.	89000.	70.	10000.	0.	0.	536.	54095.	0.	8.	0.	53.	28.
02/08	182.	1342.	189000.	29.	4000.	0.	0.	371.	38059.	8.	8.	0.	43.	32.
02/09	130.	1370.	114000.	153.	29000.	0.	0.	258.	26214.	26.	8.	0.	93.	33.
02/10	86.	615.	68000.	131.	21000.	0.	0.	309.	30809.	14.	8.	0.	76.	32.
02/11	51.	436.	16000.	43.	6000.	0.	0.	1093.	109670.	11.	24.	0.	62.	29.
02/12	39.	422.	9000.	10.	1000.	0.	0.	419.	67003.	0.	8.	0.	41.	24.
02/13	29.	136.	5000.	66.	8000.	0.	0.	980.	68054.	12.	16.	0.	58.	19.
02/14	246.	1400.	288000.	98.	11000.	0.	0.	776.	67404.	0.	16.	0.	74.	26.
02/15	223.	1396.	244000.	89.	12000.	0.	0.	500.	55276.	0.	8.	0.	65.	32.
02/16	122.	1028.	101000.	78.	13000.	0.	0.	686.	68142.	9.	16.	0.	69.	31.
02/17	148.	930.	144000.	86.	12000.	0.	0.	557.	55139.	0.	8.	0.	51.	33.
02/18	35.	201.	1000.	39.	3000.	0.	0.	698.	69001.	73.	16.	0.	58.	27.
02/19	262.	1482.	289000.	19.	3000.	658.	37972.	208.	21600.	5.	8.	0.	35.	35.
02/20	201.	1369.	205000.	74.	11000.	374.	23873.	0.	0.	6.	0.	0.	49.	41.
02/21	21.	1.	0.	83.	20000.	1255.	91134.	0.	0.	27.	0.	0.	52.	35.
02/22	42.	232.	2000.	212.	23000.	984.	33485.	1103.	117264.	34.	32.	0.	119.	26.
02/23	71.	257.	15000.	61.	7000.	1.	0.	1196.	113712.	58.	24.	0.	60.	20.
02/24	260.	1307.	301000.	176.	24000.	0.	0.	797.	82801.	12.	16.	0.	99.	27.
02/25	263.	1287.	260000.	72.	12000.	0.	0.	927.	99942.	15.	16.	0.	71.	31.
02/26	27.	0.	0.	80.	11000.	0.	0.	1577.	166916.	62.	40.	0.	77.	21.
02/27	56.	69.	8000.	12.	1000.	0.	0.	321.	112384.	9.	16.	14.	69.	19.
02/28	38.	25.	3000.	159.	15000.	0.	0.	672.	38298.	13.	8.	15.	100.	19.
03/01	50.	56.	7000.	82.	6000.	0.	0.	1940.	92950.	17.	24.	15.	86.	16.
03/02	40.	11.	0.	63.	5000.	0.	0.	1548.	125444.	0.	24.	29.	104.	14.
03/03	16.	0.	0.	63.	7000.	0.	0.	1997.	159745.	3.	40.	46.	125.	14.
03/04	60.	93.	27000.	48.	0.	0.	0.	1482.	120776.	0.	24.	40.	111.	15.
03/05	43.	0.	0.	55.	3000.	0.	0.	1841.	147950.	0.	32.	30.	121.	13.
03/06	146.	491.	131000.	167.	13000.	0.	0.	848.	68227.	10.	16.	34.	128.	20.
03/07	40.	141.	7000.	27.	0.	0.	0.	945.	80002.	66.	16.	26.	79.	19.
03/08	69.	652.	63000.	19.	4000.	0.	0.	1553.	196393.	152.	32.	14.	74.	17.
03/09	33.	85.	10000.	24.	2000.	0.	0.	1978.	105843.	127.	40.	26.	93.	14.
03/10	54.	85.	11000.	189.	8000.	0.	0.	2485.	189646.	122.	40.	32.	167.	12.
03/11	321.	1460.	345000.	62.	6000.	0.	0.	737.	59001.	3.	16.	29.	87.	27.
03/12	115.	716.	92000.	88.	6000.	0.	0.	955.	96394.	34.	16.	0.	80.	25.
03/13	63.	740.	30000.	49.	11000.	0.	0.	1683.	141518.	0.	32.	0.	71.	17.
03/14	181.	125.	176000.	45.	3000.	0.	0.	1244.	135956.	0.	24.	0.	64.	18.
03/15	32.	0.	0.	125.	8000.	0.	0.	2019.	168565.	2.	40.	27.	127.	14.
03/16	62.	29.	0.	152.	7000.	0.	0.	1643.	138184.	1.	32.	33.	149.	14.
03/17	19.	1056.	241000.	70.	6000.	0.	0.	1081.	83389.	1.	16.	13.	82.	20.
03/18	131.	842.	149000.	52.	5000.	0.	0.	1123.	115608.	5.	8.	0.	62.	20.
03/19	109.	732.	104000.	119.	12000.	0.	0.	912.	73913.	12.	8.	0.	81.	20.
03/20	140.	1061.	152000.	14.	0.	0.	0.	1228.	117503.	0.	48.	0.	56.	20.
03/21	47.	29.	0.	21.	3000.	0.	0.	1431.	122065.	80.	24.	14.	71.	16.
03/22	68.	218.	43000.	68.	6000.	0.	0.	1007.	87141.	66.	24.	14.	66.	16.

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp. (°C)
03/23	157.	1238.	195000.	67.	5000.	0.	0.	558.	44322.	21.	8.	0.	71.	21.
03/24	147.	1387.	138000.	24.	2000.	0.	0.	744.	67584.	65.	16.	0.	49.	22.
03/25	256.	1419.	304000.	63.	6000.	0.	0.	511.	48932.	41.	8.	0.	56.	32.
03/26	116.	1139.	76000.	12.	1000.	0.	0.	816.	80875.	67.	16.	0.	50.	20.
03/27	29.	5.	1000.	29.	4000.	0.	0.	1440.	147112.	159.	32.	0.	58.	21.
03/28	175.	1046.	184000.	86.	8000.	0.	0.	885.	84108.	36.	16.	0.	83.	23.
03/29	177.	1336.	186000.	76.	10000.	0.	0.	940.	93614.	0.	24.	0.	63.	25.
03/30	137.	1325.	121000.	28.	2000.	0.	0.	866.	87126.	1.	16.	0.	51.	25.
03/31	276.	1589.	300000.	86.	13000.	0.	0.	382.	34199.	0.	8.	0.	98.	35.
04/01	39.	9.	0.	62.	9000.	0.	0.	583.	60319.	5.	8.	0.	34.	29.
04/02	132.	1302.	101000.	29.	4000.	0.	0.	616.	63780.	4.	16.	0.	60.	30.
04/03	207.	1409.	195000.	57.	7000.	0.	0.	494.	49603.	2.	8.	0.	55.	34.
04/04	241.	631.	251000.	25.	5000.	240.	0.	43.	7137.	3.	0.	0.	34.	41.
04/05	270.	2603.	256000.	94.	19000.	374.	45766.	0.	0.	5.	0.	0.	53.	47.
04/06	277.	1212.	240000.	122.	44000.	128.	0.	0.	0.	4.	0.	0.	57.	52.
04/07	277.	1465.	210000.	52.	1000.	0.	0.	0.	0.	0.	0.	0.	39.	58.
04/08	266.	1367.	176000.	70.	14000.	2.	0.	0.	0.	49.	0.	0.	43.	61.
04/09	114.	384.	23000.	53.	21000.	776.	115871.	0.	0.	95.	8.	0.	44.	54.
04/10	167.	754.	71000.	11.	0.	1214.	129667.	0.	0.	58.	0.	0.	31.	50.
04/11	62.	18.	0.	24.	5000.	1458.	119164.	0.	0.	26.	0.	0.	40.	43.
04/12	231.	1163.	164000.	166.	35000.	647.	52906.	0.	0.	0.	8.	0.	71.	44.
04/13	181.	994.	93000.	45.	9000.	451.	36900.	0.	0.	36.	0.	0.	48.	45.
04/14	81.	120.	17000.	75.	13000.	873.	59683.	0.	0.	35.	0.	0.	46.	41.
04/15	163.	331.	48000.	66.	10000.	587.	29388.	0.	0.	8.	0.	0.	45.	39.
04/16	88.	126.	20000.	23.	3000.	815.	54009.	0.	0.	11.	8.	0.	37.	37.
04/17	190.	1075.	126000.	4.	1000.	2025.	147360.	0.	0.	20.	0.	0.	36.	36.
04/18	237.	1121.	219000.	88.	15000.	371.	4039.	0.	0.	30.	8.	0.	55.	43.
04/19	196.	933.	43000.	37.	6000.	858.	69700.	0.	0.	3.	0.	0.	40.	45.
04/20	150.	915.	176000.	29.	5000.	688.	59011.	0.	0.	0.	0.	0.	31.	44.
04/21	229.	1366.	179000.	6.	1000.	392.	52385.	0.	0.	6.	0.	0.	37.	49.
04/22	80.	446.	0.	46.	3000.	91.	0.	0.	0.	5.	0.	0.	35.	45.
04/23	271.	1583.	234000.	21.	10000.	298.	10780.	0.	0.	0.	0.	0.	34.	52.
04/24	164.	1365.	90000.	40.	10000.	0.	0.	0.	0.	0.	0.	0.	33.	60.
04/25	255.	1568.	193000.	84.	19000.	0.	0.	0.	0.	0.	0.	0.	46.	58.
04/26	126.	1151.	36000.	97.	11000.	0.	2201.	0.	0.	71.	0.	0.	61.	55.
04/27	185.	1299.	80000.	26.	21000.	83.	6604.	0.	0.	11.	0.	0.	34.	55.
04/28	263.	1420.	189000.	45.	10000.	0.	0.	0.	0.	13.	0.	0.	34.	59.
04/29	230.	1590.	128000.	47.	15000.	0.	0.	0.	0.	13.	0.	0.	44.	60.
04/30	248.	1412.	155000.	27.	5000.	89.	11612.	0.	0.	2.	0.	0.	33.	63.
05/01	244.	1368.	164000.	6.	0.	51.	0.	1.	0.	9.	0.	0.	24.	65.
05/02	49.	0.	0.	35.	8000.	27.	4584.	0.	0.	12.	0.	0.	17.	61.
05/03	47.	1.	0.	78.	22000.	353.	74847.	0.	0.	36.	0.	0.	62.	56.
05/04	214.	1101.	0.	17.	0.	428.	31031.	0.	0.	82.	0.	0.	54.	56.
05/05	204.	1127.	227000.	25.	9000.	669.	100567.	0.	0.	57.	0.	0.	36.	54.
05/06	139.	770.	46000.	12.	5000.	900.	118191.	0.	0.	0.	0.	0.	29.	49.
05/07	213.	1371.	127000.	32.	2000.	693.	34011.	0.	0.	1.	0.	0.	38.	50.
05/08	235.	1248.	190000.	30.	6000.	1.	0.	0.	0.	15.	0.	0.	29.	56.
05/09	189.	1400.	0.	50.	13000.	130.	13572.	0.	0.	0.	0.	0.	31.	59.
05/10	263.	1522.	280000.	109.	0.	0.	0.	0.	0.	9.	0.	0.	53.	59.
05/11	19.	0.	0.	20.	35000.	1037.	122027.	0.	0.	55.	0.	0.	33.	51.
05/12	141.	670.	43000.	55.	10000.	841.	83211.	0.	0.	4.	0.	0.	48.	47.

Date	Solar Ins.	Collector Gal.	Collector BTU	Water Heater Gal.	Water Heater BTU	Direct Heat Gal.	Direct Heat BTU	Heat Pump Gal.	Heat Pump BTU	Wind KWHR	Heat Pump KWHR	Tank Heater KWHR	Total KWHR	Tank Temp. (°C)
05/13	254.	1378.	196000.	28.	4000.	380.	40963.	0.	0.	18.	8.	0.	34.	52.
05/14	109.	446.	18000.	39.	8000.	205.	19131.	0.	0.	36.	0.	0.	35.	50.
05/15	194.	1303.	92000.	31.	5000.	625.	63317.	0.	0.	37.	0.	0.	36.	49.
05/16	207.	1031.	129000.	25.	4000.	506.	53142.	0.	0.	12.	0.	0.	44.	50.
05/17	56.	1.	1000.	34.	7000.	820.	71750.	0.	0.	0.	0.	0.	38.	45.
05/18	86.	3.	0.	40.	5000.	854.	59229.	0.	0.	18.	0.	0.	38.	46.
05/19	162.	354.	57000.	43.	6000.	401.	25666.	0.	0.	0.	0.	0.	36.	49.
05/20	286.	1248.	217000.	110.	20000.	0.	0.	0.	0.	3.	0.	0.	68.	48.
05/21	249.	1331.	139000.	22.	7000.	0.	0.	0.	0.	51.	0.	0.	44.	51.
05/22	279.	1229.	97000.	113.	31000.	2.	0.	0.	0.	33.	0.	0.	57.	52.
05/23		1456.	157000.	44.	4000.	1.	0.	0.	0.	0.	0.	0.	32.	51.
05/24		0.	0.	69.	15000.	622.	65896.	0.	0.	9.	8.	0.	49.	50.
05/25		1117.	113000.	1.	0.	366.	34495.	0.	0.	12.	0.	0.	36.	52.
05/26		1353.	101000.	60.	14000.	121.	12936.	0.	0.	33.	0.	0.	34.	52.
05/27	172.	824.	72000.	37.	5000.	538.	55661.	0.	0.	36.	0.	0.	32.	51.
05/28	101.	262.	22000.	24.	3000.	1316.	125050.	0.	0.	20.	0.	0.	35.	45.
05/29	133.	533.	57000.	44.	8000.	1088.	82188.	0.	0.	18.	8.	0.	49.	42.
05/30	189.	1261.	168000.	21.	4000.	97.	12482.	0.	0.	0.	0.	0.	28.	47.
05/31	77.	37.	0.	56.	11000.	1.	2035.	0.	0.	1.	0.	0.	40.	44.
06/01	42.	1.	1000.	27.	4000.	165.	4039.	0.	0.	3.	0.	0.	32.	43.
06/02	219.	1241.	177000.	58.	11000.	317.	27240.	0.	0.	57.	0.	0.	40.	48.
06/03	166.	1265.	90000.	12.	1000.	133.	8442.	0.	0.	1.	0.	0.	30.	49.
06/04	65.	5.	0.	19.	2000.	87.	8261.	0.	0.	1.	0.	0.	21.	46.
06/05	78.	130.	7000.	80.	13000.	0.	0.	0.	0.	9.	0.	0.	52.	45.
06/06	231.	1438.	210000.	82.	19000.	0.	0.	0.	0.	3.	0.	0.	38.	52.
06/07	215.	1612.	177000.	23.	4000.	0.	0.	0.	0.	2.	0.	0.	28.	57.
06/08	174.	1186.	96000.	103.	25000.	0.	0.	0.	0.	3.	0.	0.	55.	58.
06/09	115.	1194.	21000.	24.	5000.	0.	0.	0.	0.	1.	0.	0.	42.	55.
06/10	240.	1440.	175000.	122.	29000.	0.	0.	0.	0.	5.	0.	0.	64.	58.
06/11	237.	2037.	159000.	16.	2000.	0.	0.	0.	0.	6.	0.	0.	30.	62.
06/12	159.	813.	44000.	42.	11000.	0.	0.	0.	0.	13.	0.	0.	32.	60.
06/13	206.	1549.	117000.	41.	9000.	0.	0.	0.	0.	1.	0.	0.	36.	61.
06/14	145.	1028.	62000.	49.	11000.	0.	0.	0.	0.	0.	0.	0.	53.	60.
06/15	99.	556.	10000.	37.	7000.	0.	0.	0.	0.	4.	0.	0.	19.	56.
06/16	97.	752.	16000.	84.	19000.	0.	0.	0.	0.	0.	0.	0.	47.	53.
06/17	179.	1327.	99000.	10.	0.	0.	0.	0.	0.	1.	0.	0.	28.	65.
06/18	229.	1583.	161000.	32.	7000.	0.	0.	0.	0.	15.	0.	0.	32.	60.
06/19	144.	1042.	52000.	40.	8000.	0.	0.	0.	0.	16.	0.	0.	37.	58.
06/20	160.	1141.	70000.	41.	5000.	0.	0.	0.	0.	6.	0.	0.	51.	58.
06/21	99.	917.	6000.	28.	7000.	0.	0.	0.	0.	17.	0.	0.	29.	55.
06/22	156.	1133.	55000.	27.	6000.	0.	0.	0.	0.	51.	0.	0.	29.	53.
06/23	145.	997.	66000.	29.	3000.	0.	0.	0.	0.	1.	0.	0.	40.	54.
06/24	222.	1451.	143000.	39.	9000.	0.	0.	0.	0.	2.	0.	0.	37.	58.
06/25	176.	1289.	49000.	28.	5000.	0.	0.	0.	0.	33.	0.	0.	40.	58.
06/26	311.	2331.	137000.	21.	4000.	0.	0.	0.	0.	4.	0.	0.	47.	58.
06/27	21.	345.	2000.	5.	1000.	0.	0.	0.	0.	6.	0.	0.	15.	57.
06/28	153.	1252.	65000.	36.	7000.	0.	0.	0.	0.	0.	0.	0.	38.	57.
06/29	156.	1330.	64000.	111.	23000.	0.	0.	0.	0.	23.	0.	0.	56.	56.
06/30	221.	1400.	137000.	27.	95000.	0.	0.	0.	0.	7.	0.	0.	27.	59.

SOLAR BASELINE DATA: 1976-1977

Appendix B, Volume II of the Final Report for
Analysis and Simulation of Performance Data
for a Residential Solar Heating and Heat Pump System
in Seattle, Washington

Prepared by

Robert Taussig John Isakson
James Lockett Michael Storie
Benjamin Levy

MATHEMATICAL SCIENCES NORTHWEST, INC.
P.O. Box 1887
Bellevue, Washington 98009

For

The Division of Solar Applications
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ABSTRACT

The Pacific Cascades is a distinct climatological region for solar energy applications. In order to investigate the effect of the regional differences in solar energy availability on residential solar heating systems, a study was conducted to analyze the performance of a solar heated house in this region and to validate a solar heating and heat pump computer simulation program for this region. The house, called the Seattle City Light Project Weathervane house, uses solar energy from roof-top flat plate collectors to boost the performance of a water-to-air heat pump. If the temperature of the water storage tank drops too low, then auxiliary heating is provided by an off-peak immersion heater.

Performance data for the ten month heating season was collected from Seattle City Light, and put into the form of a comprehensive baseline data document during this study. The University of Wisconsin TRNSYS solar heating computer simulation program was used to model the performance of the house. The computer results were compared to the actual performance data in order to help validate TRNSYS with regional solar heating data. The computer results were also used to help in understanding the behavior of the Seattle City Light Project Weathervane house heating system.

Actual solar heating system performance demonstrates that approximately 40% of the total house heating requirements were provided by the solar heating system. The impact on utility peak load requirements was reduced by the off-peak auxiliary heating requirements. Significant heating was supplied by hot water taken directly from the storage tank when the water storage tank temperature was high. The computer program modeled the heating system behavior qualitatively hour-by-hour and for periods of a week or greater.

The Solar Baseline Data are presented in this report. Details of the computer simulation are presented in a separate report (Volume I) of this study.

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SECTION I

THE SOLAR BASELINE DATA DOCUMENT

A full heating season (September 1976 to June 1977) of solar heating system performance data for the Project Weathervane solar house has been collected, corrected for instrument errors, obvious reading inaccuracies and data gaps have been noted, and the more frequent measurements summed to obtain hourly data. In addition, daily averages and totals have also been computed where appropriate. The resulting data was stored on a magnetic tape to facilitate retrieval. Listings were also obtained in order to identify missing data and data errors and to help to determine the appropriate units for each item. Range checks were made in order to pick out obvious errors in the corrected data set, and the number of hours per day and days per month were also checked. As a result of this data reduction exercise, a relatively error-free solar baseline data set was obtained.

The corrected and augmented solar data set has been printed, hour by hour, for each day in the heating season. The printing format is largely self-explanatory. This Solar Baseline Data Document is Appendix B to the final report but supplied here as a separate volume. The baseline document has an abbreviated description of the Project Weathervane solar heating system (Section II) and a short discussion of the data reduction techniques (Section III). The purpose of this document is to present a self-contained record of solar heating system performance for the Pacific Cascade region with as little interpretation as is necessary to make it comprehensible. Other analysts of solar system operation can therefore make their own comparisons using this data.

SECTION II

THE SEATTLE CITY LIGHT PROJECT WEATHERVANE HOUSE

Project Weathervane is a house owned by the City of Seattle, retrofitted with a solar heating and hot water system and with a windmill to supply auxiliary power. The windmill power is accounted for in exactly the same way as power bought from the utility. Hence, the solar heating system can be studied by itself in conjunction with the house load and the ambient weather conditions.

The heating system consists of flat plate solar collectors mounted south-facing on the roof. Solar energy is stored in an insulated water tank in the basement. A heat pump can take energy from the tank and use it to supply heat to the hot air ducts in the house, or, if the tank temperature is high enough, the water from the tank can be used to heat the house air directly without using the heat pump. When the tank temperature drops too low, an immersion heater in the tank is used to boost the temperature back up. Hot water for the house is preheated through a separate circuit running through the energy storage tank. Figure 1 shows a schematic of the house heating system; double lines represent pipes connecting the collector, storage tanks, heat pump and other elements of the heating system.

A family occupying the house helped to take some of the instrument readings. The bulk of the data was recorded automatically on a ten-channel strip chart data logger and on separate weather station instruments located at the base of the windmill. A list of the separate pieces of data collected on a daily or hourly basis is given in Table 1. An addendum to the raw data is listed in Table 2 giving recommended corrections to missing or apparently incorrect meteorological data. Specific information characterizing the solar heating system is given in Table 3. A more detailed description has been published in the recent paper by A. Yamagiwa of the Seattle City Light Department of Engineering.[1]

Flow tests were carried out by the City Light staff to determine the optimum flow rates for heat transfer between the various elements of the heating system. The trade-off yielding an optimum flow rate consisted of an increase in required pumping power accompanied by diminishing returns on the rate of energy transfer from the collector. It is worth noting that daily pyroheliometer readings were taken which gave the total solar radiation for each day. Hourly readings were not taken, so that an hourly solar radiation intensity was constructed from cloud cover readings recorded at the Sea-Tac Airport weather station. Three-hourly cloud cover coefficients (i.e., values of 1 to 10) were interpolated to hourly values and used in the theoretical expression for solar radiation intensity.[2] The intensity was then normalized to give the total daily solar radiation recorded on the house site.

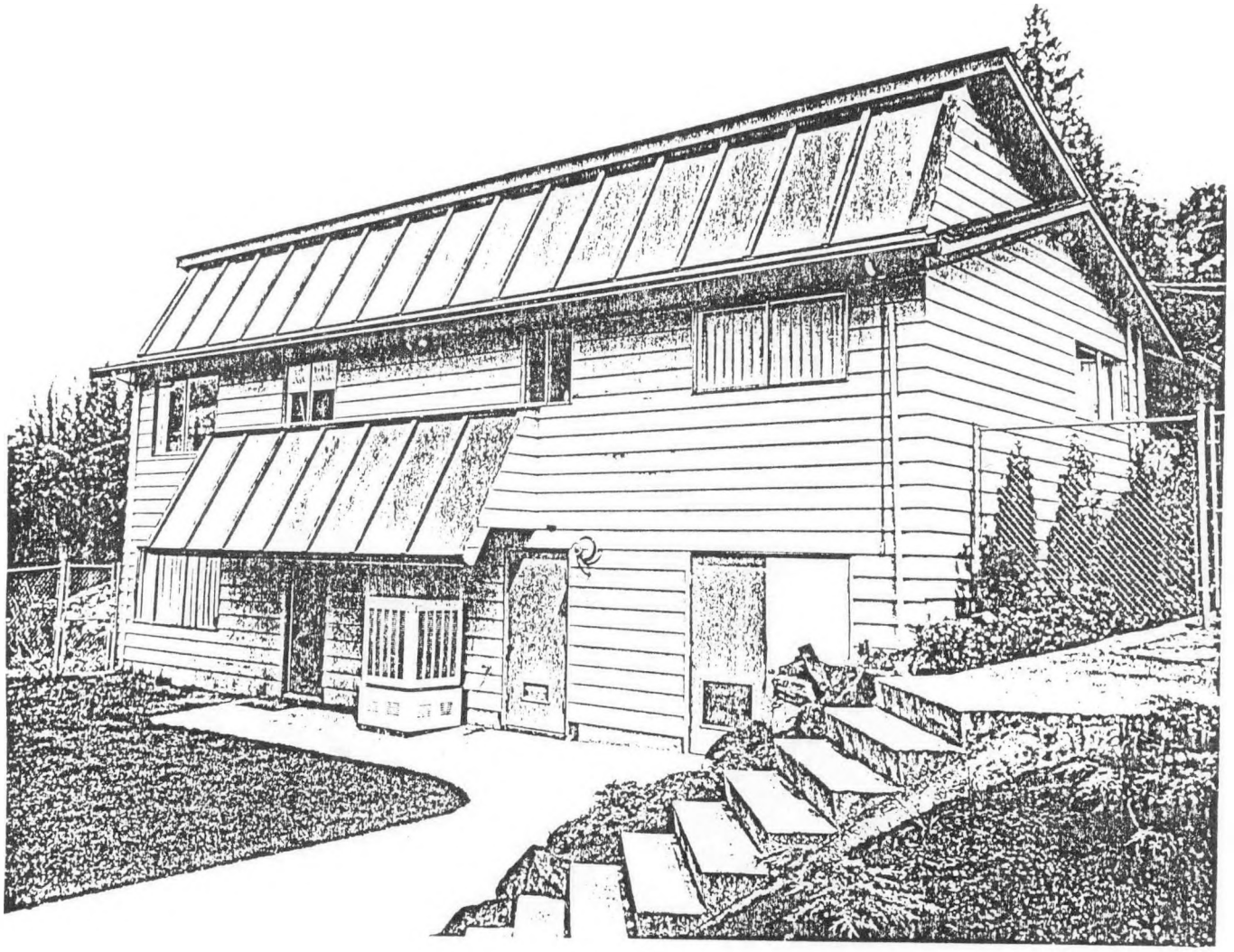


Figure 1. The Seattle City Light Project Weathervane House Showing the Roof-Top Solar Collectors

TABLE 1

LIST OF DATA COLLECTED

	Units	Daily Data Meter No. (See Figure 1)	Duplication of Daily and Hourly Data
Solar Insolation	Watts/m^2	W1	
Collector	Gal.	BF1	
	Btu	BF1	
Water Heater	Gal.	BF2	
	Btu	BF2	
Direct Heat	Gal.	BF3	
	Btu	BF3	
Heat Pump	Gal.	BF4	
	Btu	BF4	
Wind	KWHR	---	
Heat Pump	KWHR	K1	
Tank Heater	KWHR	K2	
Total	KWHR	K3	
Tank Temp.	°C	T1	
		Hourly Data	
Wind Direction	Degrees from North	W2	
Wind Velocity	MPH	W3	
Temperature	°F	W4	
Solar Radiation	Btu/hr/ft^2	W1	
Mech. Room	°C	T2	
Living Room	°C	T3	
Storage Tank	°C	T1	
Heat Pump Exit	°C	T4	
Heat Pump Enter	°C	T5	
Hot Water Exit	°C	T6	
Solar Collector Enter	°C	T7	
Solar Collector Exit	°C	T8	
Total House	KWHR	K3	
Immer. Heater	KWHR	K2	
Heat Pump	KWHR	K1	

Key: MO - Month
DY - Day
HR - Hour
OT - Old Temperature (°F)
OS - Old Solar (Btu/ft² hr.)
NT - New Temperature (°F)
NS - New Solar (Btu/ft² hr.)

TABLE 2

ADDENDUM TO METEOROLOGICAL DATA

HOURLY TEMPERATURE DATA

MO	DY	HR	OT	NT	PAGE
9	9	21	54	64	9
		22	52	62	
		23	50	60	
10	15	10		49	45
		11		50	
		12		50	
		13		51	
		14		52	
		15		54	
		16		56	
		17		54	
10	17	7	54	42	47
10	31	17	58	55	61
		19	60	50	
		20	60	50	
		21	60	50	
		22	59	49	
		23	58	48	
11	12	17	40	44	73
1	24	5	60	30	146
		9	60	30	
3	27	15		42	208
4	2	6	78	38	214
4	7	3	59	49	219
		4	58	48	
		15	80	60	
4	18	0		41	230
		1		41	
		2		41	
		3		41	
		12	42	49	
4	21	6	42	52	233
4	22	10	52	62	234
		11	57	67	
		18		73	
		19		70	
		20		68	
		21		67	
		22		65	
		23		61	
4	25	10	52	62	237
4	28	14	58	68	240
5	2	5	60	50	244
5	3	11	60	50	245
		16	48	51	
5	8	13	51	61	250
5	9	9		53	251
5	11	6	70	40	253
		16	57	52	
		17	57	52	
		18	55	51	
		19	54	50	
5	13	7	77	47	255
5	14	21	77	47	256
5	15	10	44	50	257
5	17	6	77	47	259
5	19	6	58	48	261
5	25	14	55	65	267
		15	45	65	
		16	45	65	
		18	64	54	
		19	62	52	
5	27	15	48	51	269
		16	58	48	
6	3	9	50	56	276
6	17	9	56	66	290
6	19	2	62	52	292
		8	58	51	
		17	56	66	
6	23	19	42	72	296
6	24	9	52	62	297
6	29	1		60	302
		10		58	
		14		67	
		17	69	68	
		18	69	67	
		19	69	65	
		20	69	63	
		21	69	61	
		22	69	59	
		23		59	
6	30	0		58	303
6	30	1	68	58	303
		2	70	54	
		3	72	54	
		4	74	53	
		5	72	55	
		6	76	57	
		7	77	58	
		8	78	61	
		9	77	64	
		10	77	67	
		11	77	69	
		12	77	72	
		13	77	75	
		18	77	75	
		19	77	73	
		20	77	70	
		21	66		
		23	77	60	
7	1	0	—	60	—

line added

DAILY SOLAR DATA

MO	DY	OS	NS	PAGE
5	23		221.	309
5	24		176.	309
5	25		176.	309
5	26		176.	309

HOURLY SOLAR DATA

MO	DY	HR	OS	NS
5	23	0-4		0
		5		6.2
		6		38.7
		7		74.9
P		8		109.3
A		9		139.4
G		10		163.0
E		11		178.5
		12		185.0
2		13		181.9
6		14		169.4
5		15		148.5
		16		120.4
		17		81.3
		18		51.3
		19		16.3
		20-23		0
5	24	0-4		0
		5		2.9
		6		18.5
		7		36.0
P		8		65.9
A		9		97.3
G		10		125.5
E		11		146.7
		12		162.7
2		13		159.9
6		14		148.9
6		15		130.4
		16		105.7
		17		76.5
		18		44.8
		19		14.2
		20-23		0
5	25	0-4		0
		5		7.2
		6		43.1
		7		83.9
P		8		122.7
A		9		146.8
G		10		155.7
E		11		147.3
		12		121.6
2		13		119.5
6		14		111.3
7		15		97.4
		16		78.9
		17		57.0
		18		33.3
		19		10.2
		20-23		0
5	26	0-4		0
		5		5.3
		6		35.4
		7		69.7
P		8		102.0
A		9		129.2
G		10		148.9
E		11		152.5
		12		115.9
2		13		131.9
6		14		135.4
8		15		118.4
		16		95.9
		17		62.7
		18		25.1
		19		7.6
		20-23		0

NOTE TO TABLE 2

After the data base had been generated, it was discovered that many temperatures were recorded that were obviously incorrect. The first case of this was October 17, where the temperature stays at 42 °F for seven hours, jumps to 54 °F at 7 A.M., and then goes back down to 42 °F at 8 A.M. After this was discovered, a program was run to check the temperature data for continuity and flag all abnormal jumps. Most cases where the program flagged data were similar to October 17 in that the aberration only lasted one hour and could be corrected with a little common sense (the 54 was replaced with a 42). There were some days, however, where larger intervals of data were either missing or obviously incorrect. In filling in this data, common sense was still a primary ingredient, but use was made of the three-hourly temperature data published in the National Climatic Center of the Department of Commerce's "Observations at 3-Hour Intervals."[3] Adjustment was made for the fact that this data was usually 4°-6°F higher than the database temperatures, probably representing difference in location and inaccuracies in the instruments.

There was also a period of four days in May when the batteries ran down on the pyroheliometer, producing a gap in the hourly solar radiation data. After consulting with Mr. Yamagiwa and looking at the cloud cover data for those days, numbers were chosen as shown in Table 2.

TABLE 3

DESCRIPTION OF PHYSICAL CHARACTERISTICS
OF PROJECT WEATHERVANE USED BY TRNSYS PROGRAM

Collector

Area: 36.2 m^2 (396 ft^2)
Efficiency Factor: 0.40 (includes storage tank heat exchanger)
Fluid Capacitance: 3.85 kj/kg °C (glycol-water mixture)
Collector Plate Absorptance: 0.95
Collector Loss Coefficient: 0.95
Transmittance of the Cover: 0.82
Orientation: South-facing, Slope 60° from horizontal

Pump

Flow Rate: 3 gallons/minute (738 kg/hr)
Operation: The pump is controlled by a Heliotrope differential temperature thermostat that turns the pump on when the temperature in the collectors is 27 °C or above and turns the pump off if a minimum temperature differential of 5 °C through the collectors is not reached within fifteen minutes. If the maximum differential is not reached, the pump is restarted after fifteen minutes and this cycle is repeated until the minimum temperature differential is reached. Once the temperature differential reaches 5 °C, the differentical switch is reset to 1.7° to avoid short-cycling and the system continues to run.

House Load

Heat Loss: $U \cdot A = 450$ kj/C° · hr
Capacitance: $\Sigma M_i C_{pi} = 50{,}000$ kj/C° (summed over walls, ceilings, floors)

Thermostat

Direct Heating: $T_{Tank} > 35$ °C, $T_{room} < 20$ °C, $T_{AMB} < 21$ °C

Heat Pump: $T_{Tank} < 35$ °C, $T_{room} < 20$ °C, $T_{AMB} < 21$ °C

Auxiliary Tank Heating: $T_{Tank} < 13$ °C
Capacity: 18,514 kh/hr
See Notes A, B and C.

Heat Pump

Type: Frederick "Climatronic" 27,000 Btu/hr capacity
Water to air heat pump (Model Number 27)

Flow Rate: 2 gal/min (1,780 kg/hr)

C_{Air} ($m*C_p$ product): 118,800 kj/C°

Storage Tank

Volume: 1,500 gallons (5.68 m^3)
Height: 4 ft. (1.22 m)
Fluid: Water
Loss Coefficient: 1.125 kj/hr·m^2 °C

Hot Water Heater

Daily Hot Water Demand: 276.3 kg
Volume of Preheat Tank: 0.151 m^3
Loss Coefficient: 1.51 kj / hr · m^2 ·°C
Tank Height-to-Diameter Ratio: 2.0
Delivery Temperature: 65.6 °C
Mass Flowrate Between Tank and Preheat Tank: 454.2 kg/hr
Effectiveness of heat exchanger: 0.9
Pump Operation: When T_{Tank} exceeds $T_{PREHEAT}$ by 5 °C or more

NOTES ON CONTROLS FOR TABLE 3

A. Immersion Heater

In the Seattle City Light House, the operation of the immersion heater is restricted to 11:00 P.M. to 6:00 A.M. except on very cold days. This restriction was not included in the simulation because weekly totals are obviously unaffected by this restriction. The only obvious effect is that the tank temperature is constant at 13 °C during cold days, whereas actual records show the temperature going down during the day and up at night. The actual thermostat was very variable, with immersion heating often being allowed when the tank temperature was as high as 15 °C.

(See also Note C.)

B. Room Temperature

Page 3 of Mr. Yamagiwa's paper (see Ref.1) states that the daytime thermostat setting was 68° to 70°F (20.0° to 21.1 °C) with a night setback to 66 °F (18.9 °C). Specific hours for setback are not specified, however, and an examination of the record of actual room temperatures shows considerable variation, with some days when the room temperature hit 22°-23 °C. As a result the simulation assumed a constant thermostat at 20 °C (68 °F) which, it is hoped, is about equal to the average actual temperature inside throughout the heating season.

C. Immersion Heater Capacity

Page 7 of Mr. Yamagiwa's paper states "During periods of cold windy weather, when the solar system is unable to keep the water temperature in the storage tank above 55 °F (13 °C), heat is added to the tank by the electric immersion heater. Normally between 21 and 28 kilowatt hours (24 to 36 kwhr on very cold days) of heat is added to the tank per day on a timed cycle so that the electric immersion heater is only permitted to operate during nighttime off peak hours (11:00 P.M. through 6:00 A.M.)." Initially we took this to mean that the electrical demand of the heater when it is on is (36 kwhr/day/7 hours/day) = 36/7 kw = 5.14 kw = 18514 kj/hr. It later became apparent that the actual demand was 3 kw (= 10,800 kj/hr); this fact was realized too late to include it in the simulation. Since in the actual data the capacity of the auxiliary heater is never exceeded for as much as a day, however, the effect of this error should be small.

SECTION III

DATA REDUCTION PROCEDURES

The primary functions of the data base are to:

1. Provide specific sub-sets of data for input to a transient simulation computer program.

2. Furnish whole sets of time-dependent data to give a complete chronology of the physical parameters (temperatures, energy readings, etc.) associated with the demonstration house.

In order to understand how these functions were satisfactorily accomplished, a review of the problems encountered during the course of the project will be used to help explain the data reduction methodology.

The most important consideration is the fact that none of the data had been saved on a standard computer medium (i.e., magnetic tape, punched card, etc.). The data, at best, is recorded in published documents and much of it had to be read from multi-channel reader strip charts. Between these two extremes there were a number of manually recorded tabulations on the solar house performance.

Since there are so many dissimilar sources of data, it was decided to encode all numbers on a standard computing medium; namely, the 80-column punched card. This mode of storage offered two advantages:

1. Data can be recorded in a relatively cost-effective manner.

2. Card image data may be utilized by most computer installations over long periods of time, especially the life of the current project.

It is axiomatic that data which is to be eventually placed in a large volume data base is extremely vulnerable to errors when the data must pass through a number of manual operations. To illustrate this further, in the worst case, a vast quantity of data is contained in strip chart format. The first step in data reduction is to measure the required data from its associated channel grid and transfer this quantity to some form of source tabulation. Both of these operations have the potential for introducing errors in the original data quantity. From this source tabulation the key-punch operator must transfer the data element to punch card format. Here again exists another source of error; particularly when the key punch personnel are not sensitized to the meaning of each data

item and no clear standards for verification exist. Even the transfer of data from published source documents has some unique opportunities to degrade data. Besides the key punching transcription error, documents were found to contain missing data (instruments not working, readings not recorded, etc.) or to contain obvious data distortions (e.g. typographical errors). Finally, if data had survived all these preliminary sources of error, it still may be subjected to modification by calibration curves or other factors associated with the particular instrumentation scheme used to record the data initially.

Fortunately, computer programs can be designed to check data elements for "reasonability." In other words, one may never know if the datum is "true," but at least one will feel that it is "valid." In this respect, a major proportion of the computer effort was devoted to the development of a number of computer programs which seek to answer the following questions:

1. Is the particular data set being examined keypunched in a standard of consistent format?

2. Is there a one-to-one correspondence with regard to hours within a day, to days within a month, months within the year under study?

3. Where are the missing data within the set? The program must then "flag" these entries with a recognizable, yet characteristic, symbol for easy identification and future processing.

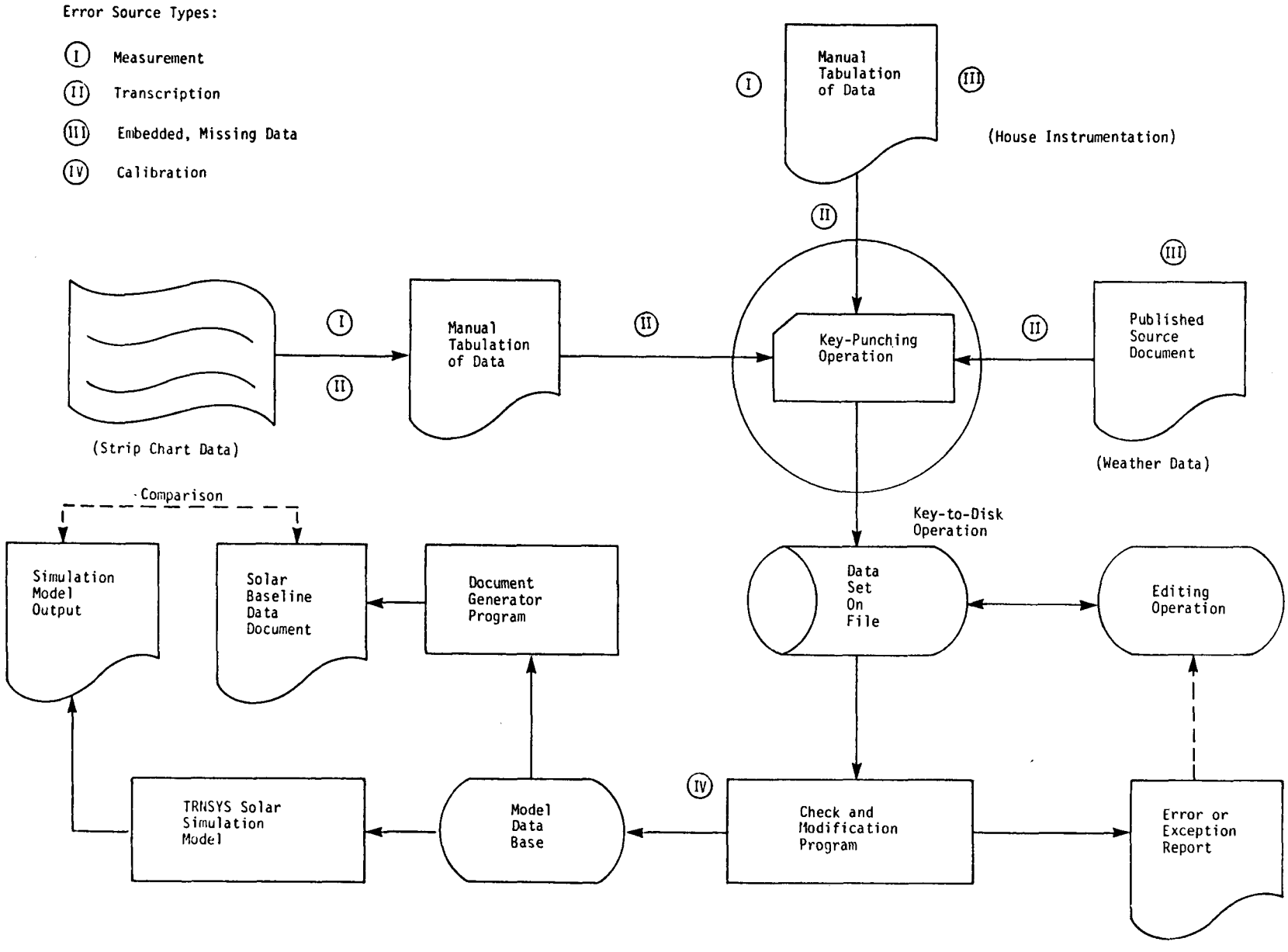
4. Which data elements are obviously not within a prescribed range for a given time interval? Are there any data elements which are seemingly discontinuous with respect to neighboring elements?

For any given data set, a number of computer runs might be necessary to completely purge the set of obvious errors. In the course of a computer run, if a data element is identified as questionable, the program automatically provides the location and other characteristics which lead to the identification of the offending element. With this information in hand, a manual search is then initiated back to the source documents (or to the strip chart, if necessary). If this search proves fruitless, the error invariably is associated with the keypunching operation. When the correct data element is determined, the error is removed by an editing operation and the process repeated until a "valid" data set is obtained.

When each data set has passed the test for validity, it remains a relatively straight-forward process to design programs which are able to access the total data base and provide the information necessary to carry out the functions of roles demanded by the project.

Figure 2

System Overview With Data Inputs, Error Sources and Final Products



A concise summary of the data reduction procedure involved in the solar house project is given in Figure 2 to reinforce the system concept of data flow, manual and computer processes and where the major sources of data distortion are likely to occur. The various sources of raw data are shown feeding into the circle titled "keypunching"; the major outputs driven by the data base are the TRNSYS solar simulation computer program and the generation of the solar baseline data document both shown on the left in Figure 2.

Several points are worth noting in the data tables which follow. The daily totals do not always represent the sum of the printed hourly values, because of truncation in printing the hourly values; the sums are correct. The units of the first four columns in the hourly values are degrees and miles per hour for wind direction and speed; temperature is the ambient temperature in degrees Fahrenheit; and the solar radiation is in Btu per hour per square foot. All of the other temperatures are in degrees centigrade.

SECTION IV

REFERENCES

1. A. Yamagiwa, "Experimental Evaluation of a Solar/Wind-Powered Space Heating and Hot Water Heating System in the Pacific Northwest," 12th Intersociety Energy Conversion Engineering Conference, 1977.

2. CAL-ERDA Program Manual, Loads Subroutine CCM Page III.56 ff, Version 1.2, Argonne National Laboratory, Argonne, Illinois, October 1977.

3. "Observations at 3-Hour Intervals" Monthly Summaries, Seattle-Tacoma Airport Weather Station, National Climatic Center, U.S. Department of Commerce, Federal Building, Asheville, North Carolina, 1976-1977.

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