

Program Evaluation: Weatherization Residential Assistance Partnership (WRAP) Program

Volume II Appendices A, B, and C

*Prepared for
Northeast Utilities
WRAP Task Force*

*Prepared by
ICF Resources Incorporated*

December 1991

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this evaluation report is dedicated
to the memory of

Charles R. "Tom" Dunklee

The complete program evaluation comprises five documents:

Principal evaluation document:

Program Evaluation: Weatherization Residential Assistance Partnership (WRAP) Program, ICF Resources Incorporated, December 1991.

Volume I: Final Report

Volume II: Appendices A, B, and C

Volume III: Appendices D, E, F, and G

Companion documents:

WRAP Program Evaluation, Steven Ferrey & Associates, 1990.

Process Evaluation, Weatherization Residential Assistance Partnership (WRAP Program), Technical Development Corporation, October 1990.

Key conclusions and documentation from both companion documents have been incorporated into the principal report.

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Appendix A: Program Activity

Appendix A contains the program summary pages of the WRAP Unit's monthly program financial goals/status reports. Program summaries from May 1989 through November 1991 are included.



WRAP TRACK
 PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: May 1989
 YTD: January 1989 - May 1989
 Date Prepared: 06/02/89

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/	\$/	Mon	YTD	Mon	YTD		Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year						PTD	PTD	YTD	YTD	Over(Under)	Over(Under)
Program Summary														
E1		3000	450000	87	598	11623	73954	124	2402	297053	3000	382791	0	0% (67209)15%
E2		350	210000	21	94	10377	34205	364	256	93154	350	142847	0	0% (67153)32%
E3		888	199800	114	534	19350	88397	166	560	92701	1094	190218	206	123% (9582) 5%
E4		487	243500	6	6	3705	3705	618	153	94478	159	92548	(328)	67% (150952)62%
E5		97	67950	6	24	7686	22829	951	73	69438	97	91553	0	0% 23603135%
				1171250				223090	676867		899957		(271293)	

Carry Over Funds
 Available Committed Balance
 320250 97253 222997

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: June 1989
YTD: January 1989 - June 1989
Date Prepared: 07/03/89

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		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Non	YTD	Non	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary

[illegible]

Carry Over Funds

Available	Committed	Balance
320250	142455	177795

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: July 1989
YTD: January 1989 - July 1989
Date Prepared: 08/02/89

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		CAP Goals				Completed		Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary

Summary												
E1	1584	237600	125	840	14279	101991	121	744	90335	1584	192326	0 0% (45274)19%
E2	270	162000	15	139	5944	52960	381	131	49912	270	102872	0 0% (59128)36%
E3	1998	449550	115	889	16053	145047	163	356	58084	1245	203131	(753) 38% (246419)55%
E4	487	243500	17	31	10472	16324	527	345	181670	376	197994	(111) 23% (45506)19%
E5	97	67950	11	45	13583	45411	1009	135	136233	180	181644	83 186% (113694)267%
		1160600			361733			516234			877967	(282633)

Carry Over Funds

Available	Committed	Balance
320250	146486	173764

wider

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: August 1989
 YTD: January 1989 - August 1989
 Date Prepared: 09/05/89

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/	\$/	Mon	YTD	Mon	YTD		Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year						PTD	PTD	YTD	YTD	Over(Under)	Over(Under)
Program Summary														
E1		1584	237600	198	1038	17543	119530	115	546	62874	1584	182404	0	0% (55196)23%
E2		270	162000	22	161	8279	61241	380	109	41461	270	102702	0	0% (59298)37%
E3		1998	449550	102	989	14718	159380	161	260	41900	1249	201280	(749)	37% (248270)55%
E4		487	243500	33	64	16007	32333	505	393	198545	457	230878	(30)	6% (12622) 5%
E5		97	67950	21	66	26927	72339	1096	158	173175	224	245514	127	231% 177564361%
		1160600				444823				517955	962778		(197822)	

Carry Over Funds
 Available Committed Balance
 320250 258731 61499

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: September 1989
YTD: January 1989 - September 1989
Date Prepared: 10/02/89

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/	\$/	Mon	YTD	Mon	YTD		Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year						PTD	PTD	YTD	YTD	Over(Under)	Over(Under)
Program Summary														
E1		1584	237600	76	1114	8745	129270	115	470	54118	1584	182388	0	0% (55212)23%
E2		270	162000	14	175	5662	66902	382	95	36318	270	103220	0	0% (58780)36%
E3		1998	449550	45	1033	8008	167373	162	182	29489	1215	196862	(783)	39% (252688)56%
E4		487	243500	31	95	15199	47530	500	377	188619	472	236149	(15)	3% (7351) 3%
E5		97	67950	30	96	41990	114328	1191	158	188165	254	302493	157	262% 234543445%
			1160600				524403			496708		1021111		(139489)

Carry Over Funds
Available Committed Balance
320250 311412 8838

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: October 1989
 YTD: January 1989 - October 1989
 Date Prepared: 11/01/89

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/	\$/	Mon	YTD	Mon	YTD		Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year						PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary

E1	1584	237600	107	1221	11427	139695	114	363	41531	1584	181226	0	0%	(56374)24%
E2	270	162000	15	190	6912	73814	388	80	31080	270	104894	0	0%	(57106)35%
E3	1998	449550	63	1095	11789	178937	163	200	32683	1295	211620	(703)	35%	(237930)53%
E4	487	243500	64	160	35241	82999	519	384	199198	544	282197	57	112%	38697116%
E5	97	67950	38	134	36456	149299	1114	158	176039	292	325338	195	301%	257388479%
		-----				-----			-----		-----			-----
		1160600				10,825, 624744			480530		1105274			(55326)

Carry Over Funds

Available	Committed	Balance
320250	355948	-35698

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: November 1989
 YTD: January 1989 - November 1989
 Date Prepared: 12/01/89

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/	\$/	Mon	YTD	Mon	YTD		Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year						PTD	PTD	YTD	YTD	Over(Under)	Over(Under)
Program Summary														
E1		1584	237600	87	1308	9405	149103	114	276	31462	1584	180565	0	0%
E2		270	162000	12	203	5016	79353	391	67	26190	270	105543	0	0%
E3		1998	449550	36	1130	7632	186435	165	260	42897	1390	229332	(608)	30%
E4		487	243500	27	186	24123	107052	576	425	244608	611	351660	124	125%
E5		97	67950	28	164	49799	202517	1235	160	197578	324	400095	227	334%
			1160600				<i>95,975</i> 724460			542735		1267195		106595

Carry Over Funds

Available	Committed	Balance
320250	469816	-149566



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: December 1989
 YTD: January 1989 - December 1989
 Date Prepared: 01/05/90

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		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av 8	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary

E1	1584	237600	142	1450	16878	165981	114	134	15339	1584	181320	0	0	(56280)244
E2	270	162000	38	241	20521	99875	414	29	12018	270	111893	0	0	(50107)318
E3	1998	449550	508	1638	59619	246054	150	385	57833	2023	303887	25	1013	(145663)328
E4	487	243500	68	254	59164	166216	654	361	236236	613	402452	128	1263	1589521658
E5	97	67950	38	199	55355	256692	1290	170	219285	369	475977	272	3803	4080277003
		1160600			*211,537	934818			540711		1475529			314929

Carry Over Funds

Available	Committed	Balance
320250	663282	-343032

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: January 1990
YTD: January 1990 - January 1990
Date Prepared: 02/05/90

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Region/ CAP	Plan	CAP Goals		Completed		Av \$ /Unit	Pend/Available		Committed		Status	
		Units/ Year	\$/ Year	Units Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)

Program Summary

E1	1600	184000	40	40	4685	4685	117	1560	182715	1600	187400	0	0%	3400102%
E2	300	135000	8	8	3825	3825	478	292	139613	300	143438	0	0%	8438106%
E3	1811	435300	18	18	3969	3969	221	566	124803	584	128772	(1227)	68%	306528)70%
E3P	900	162000	0	0	0	0	0	0	0	0	0	(900)100%	(162000)100%	
E4	400	320010	35	35	33325	33325	952	446	424656	481	457981	81	120%	137971143%
E5	200	220000	38	38	46710	46710	1229	194	238467	232	285177	32	116%	65177130%
		1294310				92514			1110253		1202767		(253543)	

Carry Over Funds

Available	Committed	Balance
320250	301042	19208



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: February 1990
YTD: January 1990 - February 1990
Date Prepared: 03/01/90

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Region/ CAP	Plan	CAP Goals		Units		Completed		Av \$ /Unit	Pend/Available		Committed		Status		
		Units/ Year	\$/ Year	Mon	YTD	Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Program Summary															
E1		1600	184000	77	117	10412	15096	129	1483	191345	1600	206441	0	0%	22441112%
E2		300	135000	22	30	6170	9995	333	270	89955	300	99950	0	0%	(35050)26%
E3		1811	435300	111	129	22705	26673	207	549	113515	678	140188	(1133)	63%	(295112)68%
E3P		900	162000	0	0	0	0	0	0	0	0	0	(900)100%	(162000)100%	
E4		400	320010	64	99	83324	116663	1178	448	527930	547	644593	147	137%	324583201%
E5		200	220000	43	80	71677	115180	1440	192	276432	272	391612	72	136%	171612178%
		-----								-----				-----	
		1294310				<i>194,288</i>		283607		1199177		1482784		26474	

Carry Over Funds

Available	Committed	Balance
320250	586825	-266575



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: March 1990
 YTD: January 1990 - March 1990
 Date Prepared: 04/03/90

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Region/ CAP	Plan	CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status		
		Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Program Summary															
E1		1600	184000	96	214	13768	29015	136	1386	187920	1600	216935	0	0%	32935118%
E2		300	135000	23	53	6289	16286	307	247	75899	300	92185	0	0%	(42815)32%
E3		911	273300	61	190	13350	40022	211	633	133336	823	173358	(88)	10%	(99942)37%
E3P		900	162000	0	0	0	0	0	0	0	0	0	(900)	100%	(162000)100%
E4		400	320010	79	178	81035	197696	1111	539	598641	717	796337	317	179%	476327249%
E5		200	220000	40	119	58536	172276	1448	208	301121	327	473397	127	164%	253397215%
		-----		-----				-----		-----		-----		-----	
		1294310		172978 455295				1296917		1752212		457902			

Carry Over Funds
 Available Committed Balance
 320250 761298 -441048

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: April 1990
 YTD: January 1990 - April 1990
 Date Prepared: 05/01/90

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Region/ CAP	Plan	CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status		
		Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Program Summary															
E1		1600	184000	67	281	8096	37108	132	1319	174183	1600	211291	0	0%	27291115%
E2		300	135000	29	82	9152	25435	310	218	67620	300	93055	0	0%	(41945)31%
E3		1811	435300	80	270	15971	56024	207	648	134458	918	190482	(893)	49%	(244818)56%
E3P		900	162000	0	0	0	0	0	0	0	0	0	(900)	00%	(162000)00%
E4		400	320010	54	232	69154	267329	1152	537	618774	769	886103	369	192%	566093277%
E5		200	220000	31	150	46342	223491	1490	249	370995	399	594486	199	200%	374486270%
		-----		-----				-----		-----		-----		-----	
		1294310		148,715. 609387						1366030		1975417		519107	

Carry Over Funds
 Available Committed Balance
 320250 xxxxxx -706222



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: May 1990
YTD: January 1990 - May 1990
Date Prepared: 06/01/90

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Region/ CAP	Plan	CAP Goals		Completed				Pend/Available		Committed		Status	
		Units/	\$/	Units	Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)

Program Summary													
E1		1600	184000	71	352	10289	47396	135	1248	168040	1600	215436	0 0% 31436117%
E2		300	135000	33	115	11639	37074	322	185	59641	300	96715	0 0% (38285128%
E3		1811	435300	80	350	18075	74698	212	689	145867	1039	219965	(772) 43% 215335149%
E3P		900	162000	0	0	0	0	0	7	0	7	0	(893)99% (162000)100%
E4		400	320010	36	266	42654	209141	1162	498	578768	764	887909	364 191% 567899
E5		200	220000	26	174	43982	262717	1510	232	350289	406	613006	206 203% 393006
				-----						-----		-----	
				1294310				9126639 730426		1302605		2033031	
												576721	

Carry Over Funds

Available	Committed	Balance
320250	*****	-699861

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: June 1990
 YTD: January 1990 - June 1990
 Date Prepared: 07/05/90

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		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/ CAP	Plan	Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD	Av \$ /Unit	Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over/Under)	Dollars Over/Under)

Program Summary														
E1		1600	184000	117	469	16834	64230	137	1131	154892	1600	219122	0	0%
E2		300	135000	66	181	27676	64750	358	119	42570	300	107320	0	0%
E3		1811	435300	556	904	70638	144359	160	470	75054	1374	219413	(437)	24%
E3P		900	162000	286	286	28987	28987	101	8	811	294	29798	(606)	167%
E4		400	320010	85	351	86903	396042	1128	423	477281	774	873323	374	194%
E5		200	220000	142	314	143255	404804	1289	215	277175	529	681979	329	265%
		-----				-----			-----		-----		-----	
		1294310		374,293		1074185			1027783		2130955		674645	

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
Month: July 1990
YTD: January 1990 - July 1990
Date Prepared: 08/01/90

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Region/ CAP Plan	CAP Goals		Completed				Pend/Available		Committed		Status			
	Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars	
	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)	

Program Summary														
E1	1600	184000	87	556	13050	77283	139	1044	145114	1600	222397	0	0%	38397121%
E2	300	135000	28	209	10156	74906	358	91	32615	300	107521	0	0%	(27479)20%
E3	1811	435300	134	1037	27983	171971	166	724	120065	1761	292036	(50)	3%	143264133%
E3P	900	162000	2	288	294	29281	102	81	8235	369	37516	(531)	159%	(124484)7
E4	400	320010	30	381	31080	427124	1121	395	442819	776	869943	376	194%	5499332
E5	200	220000	23	336	22433	425942	1268	202	256072	538	682014	338	269%	462014310%

		1294310				1177226			1004920		2211427			755117

Carry Over Funds

Available	Committed	Balance
320250	*****	-859517

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: August 1990
 YTD: January 1990 - August 1990
 Date Prepared: 09-04-90

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Region/ CAP	Plan	CAP Goals		Completed				Pend/Available		Committed		Status	
		Units/	\$/	Units		Dollars	Av \$	Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year	Mon	YTD	Mon	YTD	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)
Regional Summary													
E1		528	60720	23	251	3182	40784	162	277	45009	528	85793	0 0% 25073 141%
E2		114	51300	5	89	1109	32349	363	25	9087	114	41436	0 0% (9864) 19%
E3		264	79200	40	178	7561	36862	207	89	18431	267	55293	3 101% (23907) 30%
E3P		261	46980	0	0	0	0	0	52	0	52	0	(209) 80% (46980) 100%
E4		116	92810	10	146	16326	158532	1086	95	103154	241	261686	125 208% 168876 282%
E5		58	63800	11	121	19792	169576	1401	36	50452	157	220028	99 271% 156228 345%
			394810			47,970	438103			226133		664236	269426

Carry Over Funds

Available	Committed	Balance
92850	387413	-294563

WRAP TRACK
 PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: September 1990
 YTD: January 1990 - September 1990
 Date Prepared: 09-28-90

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Region/ CAP	Plan	CAP Goals		Completed				Pend/Available		Committed		Status	
		Units/	\$/	Units	Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
		Year	Year	Mon	YTD	Mon	YTD	PTD	PTD	YTD	YTD	Over/Under	Over/Under

Program Summary													
E1	1600	184000		45	674	5581	91558	136	926	125790	1600	217348	0 0% 33348118%
E2	300	135000		21	255	5554	88342	346	45	15590	300	103932	0 0% 31068123%
E3	911	273300		36	876	8462	170072	194	622	120759	1498	290831	587 164% 17531106%
E3P	900	162000		150	439	34467	64066	146	80	11675	519	75741	381 42% 86259153%
E4	400	320010		14	426	19496	483020	1134	347	393446	773	876466	373 193% 5564562%
E5	200	220000		19	378	33951	489826	1296	202	261759	580	751585	380 290% 531585342%

		1294310				1386884				929019		2315903	1021593

Carry Over Funds

Available	Committed	Balance
320250	1265212	-944962

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
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 YTD: January 1990 - October 1990
 Date Prepared: 11-01-90

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		CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status		
Region/ CAP	Plan	Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Program Summary															
E1		1600	184000	120	794	15398	106955	135	806	108571	1600	215526	0	0%	31526117%
E2		300	135000	40	295	14118	102464	347	5	1737	300	104201	0	0%	(30799)23%
E3		911	273300	97	973	20856	190927	196	543	106350	1516	297477	605	166%	24177109%
E3P		900	162000	15	454	3420	67486	149	78	11595	532	79081	(368)	41%	(82919)51%
E4		400	320010	95	520	112265	594953	1144	200	228828	720	823781	320	180%	503771257%
E5		200	220000	45	423	64475	554301	1310	168	220148	591	774449	391	296%	554449352%
		-----				-----				-----				-----	
		1294310				230,532		1617086				2294515		1000205	

Carry Over Funds

Available	Committed	Balance
320250	1298624	-978374



Date Prepared: 12-03-90

		CAP Goals			Completed			Pend/Available			Committed			Status	
Region/ CAP Plan		Units/\$ Year Year		Units Mon YTD	Dollars Mon YTD		\$ Av /Unit	Units PTD PTD	Dollars PTD PTD		Units/Dollars YTD YTD		Units Over(Under)	Dollars Over(Under)	

E1	1600	184000	99	893	14282	121239	136	707	95987	1600	217226	0	0%	33226110%
E2	300	135000	38	333	12512	114974	345	-33	-11394	300	103580	0	0%	(31420) 23%
E3	911	273300	58	1070	24540	215351	201	631	126997	1701	342348	790	187%	69048125%
E3P	900	162000	13	467	3558	71290	153	59	9007	526	80297	(374)	42%	(8170)
E4	400	320010	33	553	30108	625332	1131	147	166227	700	791559	300	175%	47154%
E5	200	220000	34	457	40664	595059	1302	142	184898	599	779957	399	300%	559957355%
		1294310			126,934	1743245			571722			2314967		

Available	Committed	Balance
320250	1281350	-961100

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: December 1990
 YTD: January 1990 - December 1990
 Date Prepared: 01-02-91

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		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary														
E1		1600	184000	114	1006	15604	136680	136	594	80704	1600	217384	0	0%
E2		300	135000	50	383	17913	132885	347	-83	-28798	300	104087	0	0%
E3		911	273300	98	1166	30885	245747	211	683	143950	1849	389697	938	203%
E3P		900	162000	0	467	0	71290	153	59	9007	526	80297	(374)	42%
E4		400	320010	26	579	26800	652210	1126	107	120529	686	772739	286	172%
E5		200	220000	46	505	75474	673039	1333	113	150601	618	823640	418	309%
				-----					-----		-----		-----	
				1294310					475993		2387844		1093534	

Carry Over Funds
 Available Committed Balance
 320250 1358996 *****

**WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT**

Month: January 1991
YTD: January 1991 - January 1991
Date Prepared: 02-01-91

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Page 4		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary														
E1		1600	184000	60	60	8468	8468	141	1540	217345	1600	225813	0	0%
E2		300	135000	10	10	2645	2645	265	290	76705	300	79350	0	0%
E3		911	273300	76	76	19673	19673	259	801	207343	877	227016	(34)	4%
E3P		900	162000	53	53	5573	5573	105	115	12092	168	17665	(732)	81%
E4		400	320010	12	12	16561	16561	1380	149	205632	161	222193	(239)	60%
E5		200	220000	31	31	50871	50871	1641	100	164100	131	214971	(69)	35%
		-----				-----			-----		-----		-----	
		1294310				103791			883218		987009		(307301)	

Carry Over Funds

Available Committed Balance
320250 207057 113193

320250



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: February 1991
 YTD: January 1991 - February 1991
 Date Prepared: 03-04-91

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		CAP Goals		Completed				Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)

Program Summary														
E1		1600	184000	80	140	9542	18613	129	1460	187850	1600	205863	0	0% 21863112%
E2		300	135000	26	36	7951	10596	294	264	77704	300	88300	0	0% 4670035%
E3		911	273300	143	219	33240	52913	242	851	205612	1070	258525	159	117% 14775 5%
E3P		900	162000	58	112	10168	15741	141	340	47785	452	63526	(448)	50% 9847461%
E4		400	320010	13	25	14235	30796	1232	153	188472	178	219268	(222)	56% 10074231%
E5		200	220000	25	56	36647	67516	1563	83	129711	139	217227	(61)	31% 2773 1%

		1294310				111,783		215575			1052708		(241602)	

Carry Over Funds

Available Committed Balance
 320250 250711 69539

320250

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: March 1991
 YTD: January 1991 - March 1991
 Date Prepared: 04-01-91

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		CAP Goals		Completed				Pend/Available		Committed		Status			
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars	
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)	

Program Summary															
E1		1600	184000	118	257	17674	35658	139	1343	186337	1600	221995	0	0%	379951218
E2		300	135000	51	88	15045	25671	292	212	61844	300	87515	0	0%	474851358
E3		911	273300	92	311	19575	72489	233	986	229820	1297	302309	386	142%	290091118
E3P		900	162000	52	164	6651	22392	137	515	70316	679	92708	(221)	25%	692921438
E4		400	320010	16	41	13117	43914	1071	156	167087	197	211001	(203)	51%	1090091348
E5		200	220000	11	67	13254	100771	1504	84	126340	151	227111	(49)	25%	71111038

		1294310				85,316		300895			841745		1142640		(151670)

Carry Over Funds

Available	Committed	Balance
320250	329466	-9216

Month: April 1991

YTD: January 1991 - April 1991

Date Prepared: 05-01-91

CAP Goals		Completed				Pend/Available		Committed		Status	
Region/	Units/ \$/	Units	Dollars	Av \$	Units	Dollars	Units	Dollars	Units	Dollars	
CAP Plan	Year Year	Mon YTD	Mon YTD	/Unit	PTD PTD	PTD PTD	YTD YTD	YTD YTD	Over(Under)	Over(Under)	

Carry Over Funds		
Available	Committed	Balance
320250	374284	-54034

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT

Month: May 1991
YTD: January 1991 - May 1991
Date Prepared: 06-01-91

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		CAP Goals		Completed					Pend/Available		Committed		Status		
Region/		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars	
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)	

Program Summary															
E1		1600	184000	125	500	18559	68499	137	1100	150698	1600	219197	0	0%	
E2		300	135000	53	203	19278	69026	340	97	32983	300	102009	0	0%	
E3		911	273300	139	570	32910	134044	235	777	182723	1347	316767	436	148%	
E3P		900	162000	86	260	13697	38901	150	757	113262	1017	152163	117	113%	
E4		400	320010	26	94	27884	95031	1011	105	106152	199	201183	(201)	50%	
E5		200	220000	26	122	47734	196812	1613	75	120991	197	317803	(3)	2%	
				-----						-----				-----	
		1294310		160,062				602313			706808		1309121		14811

Carry Over Funds

Available	Committed	Balance
0	431667	-431667



WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: June 1991
 YTD: January 1991 - June 1991
 Date Prepared: 07-01-91

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Region/ CAP Plan	CAP Goals		Completed				Pend/Available		Committed		Status	
	Units/	\$/	Units		Dollars		Av \$		Units Dollars		Units Dollars	
	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under) Over(Under)
Program Summary												
E1	1600	184000	61	560	9210	77562	139	1040	144044	1600	221606	0 0% 37606120%
E2	300	135000	20	224	6709	76492	341	76	25953	300	102445	0 0% (32555)24%
E3	911	273300	33	603	9221	143267	238	693	164650	1296	307917	385 142% 34617113%
E3P	900	162000	160	420	25607	64508	154	948	145604	1368	210112	468 152% 48112130%
E4	400	320010	7	101	4084	97620	967	101	97620	202	195240	(198) 50% (124770)39%
E5	200	220000	3	125	671	195886	1567	83	130068	208	325954	8 104% 105954148%
			-----		-----		-----		-----		-----	
			1294310		655335		707939		1363274		68964	

Carry Over Funds

able	Committed	Balance
0	454873	-454873

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: July 1991
 YTD: January 1991 - July 1991
 Date Prepared: 08-01-91

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Page 4		CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status		
Region/ CAP	Plan	Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Program Summary															
E1		1600	184000	97	657	12068	89757	137	943	128829	1600	218586	0	0%	345861190
E2		300	135000	35	259	9749	86238	333	41	13652	300	99890	0	0%	35110)260
E3		911	273300	111	714	23763	167030	234	634	148315	1348	315345	437	148%	420451150
E3P		900	162000	124	544	19335	83957	154	1255	193688	1799	277645	899	200%	1156451710
E4		400	320010	9	110	7305	104926	954	91	86802	201	191728	(199)	50%	128282)400
E5		200	220000	11	136	6144	202030	1486	80	118841	216	320671	16	108%	10087111450

		1294310		733938				690127		1424065		129755			

Carry Over Funds

A	able	Committed	Balance
0	571742	-571742	

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: August 1991
 YTD: January 1991 - August 1991
 Date Prepared: 09-03-91

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Region/ CAP Plan	CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status	
	Units/ Year	\$/ Year	Units Mon	YTD	Dollars Mon	YTD		Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)

Program Summary

E1	1600	184000	94	751	11058	100817	134	849	113973	1600	214790	0	0%	30790117%
E2	300	135000	43	302	9805	96045	318	-2	-636	300	95409	0	0%	(39591)29%
E3	911	273300	101	815	22491	189521	233	533	123944	1348	313465	437	148%	40165115%
E3P	900	162000	0	544	0	83957	154	1333	205726	1877	289683	977	209%	127683179%
E4	400	320010	37	147	9859	113563	773	48	37082	195	150645	(205)	51%	(169365)53%
E5	200	220000	21	157	7343	209372	1334	71	94684	228	304056	28	114%	84056138%
			-----				-----				-----			
			1294310				793275		574773		1368048		73738	

Carry Over Funds

lable	Committed	Balance
0	594339	-594339



PROGRAM FINANCIAL GOALS/STATUS REPORT

Month: September 1991

YTD: January 1991 - September 1991

Date Prepared: 10-01-91

Region/ CAP Plan		CAP Goals		Completed				Pend/Available		Committed		Status	
		Units/ Year	\$/ Year	Units Mon YTD	Dollars Mon YTD	Av \$ /Unit	Units PTD	Dollars PTD	Units YTD	Dollars YTD	Units Over(Under)	Dollars Over(Under)	

Regional Summary														
E1	1600	184000	79	826	9116	109546	133	774	102650	1600	212196	0	0%	28196115%
E2	300	135000	28	332	4172	100864	304	-32	-9722	300	91142	0	0%	43858)32%
E3	911	273300	105	920	25561	215516	234	418	97919	1338	313435	427	147%	40135115%
E3P	900	162000	202	746	25414	116628	156	1157	180883	1903	297511	1003	211%	135511184%
E4	400	320010	20	167	7717	121280	726	29	21061	196	142341	(204)	51%	177669)56%
E5	200	220000	20	177	4705	214078	1209	43	52008	220	266086	20	110%	46086121%

1294310			877912			444798			1322710			28400		

A	ble	Committed	Balance
0		527486	-527486

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: October 1991
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Region/ CAP Plan		CAP Goals		Completed				Pend/Available		Committed		Status			
		Units/	\$/	Units		Dollars		Av \$	Units	Dollars	Units	Dollars	Units	Dollars	
CAP	Plan	Year	Year	Mon	YTD	Mon	YTD	/Unit	PTD	PTD	YTD	YTD	Over(Under)	Over(Under)	

Program Summary															
E1		1600	184000	102	928	12130	121677	131	672	88111	1600	209788	0	0%	25788114%
E2		300	135000	42	374	10826	111689	299	-74	-22099	300	89590	0	0%	(45410)34%
E3		911	273300	97	1014	21316	236031	233	229	53305	1243	289336	332	136%	16036106%
E3P		900	162000	173	920	20656	137464	149	1116	166750	2036	304214	1136	226%	142214188%
E4		400	320010	4	171	1524	122804	718	26	18672	197	141476	(203)	51%	(178534)56%
E5		200	220000	1	180	446	214646	1192	65	77511	245	292157	45	123%	72157133%
		-----		-----		-----		-----		-----		-----		-----	
		1294310				944311				382250		1326561		32251	

Carry Over Funds

Available	Committed	Balance
0	544257	-544257

WRAP TRACK
PROGRAM FINANCIAL GOALS/STATUS REPORT
 Month: November 1991
 YTD: January 1991 - November 1991
 Date Prepared: 12-02-91

Page 4

Region/ CAP Plan		CAP Goals		Completed				Av \$ /Unit	Pend/Available		Committed		Status	
		Units/ Year	\$/ Year	Units Mon YTD	Dollars Mon YTD	Units Mon YTD	Dollars Mon YTD		Units PTD PTD	Dollars PTD PTD	Units YTD YTD	Dollars YTD YTD	Units Over(Under) Over(Under)	Dollars Over(Under) Over(Under)

Program Summary														
E1	1600	184000	114	1042	14824	136500	131	558	73097	1600	209597	0	0%	255971140
E2	300	135000	35	409	10063	121753	298	-109	-32448	300	89305	0	0%	(45695)340
E3	911	273300	15	1029	3547	239578	233	190	44237	1219	283815	308	134%	105151040
E3P	900	162000	40	960	3736	141200	147	790	116196	1750	257396	850	194%	953961590
E4	400	320010	5	175	1253	123698	707	20	14137	195	137835	(205)	51%	(182175)570
E5	200	220000	6	187	1336	216341	1157	73	84454	260	300795	60	130%	807951370

		1294310			979070				299673	1278743		(15567)		

Carry Over Funds

able	Committed	Balance
0	500256	-500256



Appendix B: Measures and Installations

Appendix B provides information on WRAP measures, and summarizes the measure installations that took place during 1988, 1989, and 1990.

Table of Contents:

B1.	Index of Measures	B-3
-----	-------------------------	-----

Section 1 indexes the measure codes used throughout this report with their WRAP numbers and descriptions. Also included is a description of the units used to describe quantity of installations.

B2.	1988 Installations	B-7
-----	--------------------------	-----

Section 2 presents tables, by participant group and by measure, of the number of times each measure was installed, the savings per measure installed, and the total savings from that measure. Only installations performed in 1988 are included.

B3.	1989 Installations	B-21
-----	--------------------------	------

B3.a.	Tables of Installations	B-21
-------	-------------------------------	------

Section 3.a. summarizes number of recipients of each measure, number of measures installed, and average quantity installed per participant.

B3.b.	Statistical Analysis of 1989 Installations	B-55
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Section 3.b. analyzes the frequency of each measure's installation among urban and rural participants of each plan. The purpose of this analysis is to determine whether there were any significant differences in the choice of measures to be installed between urban and rural households. Any difference in measure selection could reasonably be interpreted to indicate a difference in needs.

B4.	1990 Installations	B-63
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Section 4 is similar to section 3.a., but details only 1990 installation.





Appendix B: Measures and Installations

Section 1: Index of Measures



Index of Measures			
Measure Code (WRAPTRACK Database)	Audit Reference Code	Description	Quantity Unit
1	1	Set Water Heater Thermostat	Each
4	3	Install Electric Outlet Gasket	Each
5	4	Install Low-Flow Showerhead	Each
6	5	Wrap Water Heater	Each
7	6	Install Low-Flow Faucet Aerator	Each
8	7	Install Door Sweep	Each
9	8	Caulk Window(s)	Each
10	9	Caulk Exterior Doors	Each
11	10	Weatherstrip Window(s)	Each
12	11	Weatherstrip Door(s)	Each
13	12	Insulate Attic Hatchway	Each
14	13	Interior Caulk	Linear Foot
15	14	Basement Window Covering	Each
16	15	Insulate Heating Duct	Linear Foot
17	16	Insulate Vertical Attic Door	Each
18	17a	Install Pipe Insulation - Tube	Linear Foot
19	18	Sill Plate Caulk	Linear Foot
20	19	Insulate Pull-down Stair	Each
21	20	Replace Filter for Gas/Oil Warm Air System	Each
22	21	Hole in Wall (Minor Carpentry)	Each
23	22	Calibrate/Replace Thermostat	Each
24	23	Vent Damper (Gas)	Each
25	24	Pilotless Ignition System (Gas)	Each
26	25a	Increase Ceiling Insulation Levels	Square Foot
27	26	Replace Broken Window/Door Glass	Each
28	27a	Window Treatment	Each



Index of Measures			
Measure Code (WRAPTRACK Database)	Audit Reference Code	Description	Quantity Unit
29	28b	Heating System Repairs	Each
30	29	Burner Replacement	Each
31	30	Furnace Replacement	Each
32	31	Increase Sidewall Insulation	Square Foot
33	2a	Fluorescent (Compact 18 Watt)	Each
34	2b	Fluorescent (Twin 13 Watt)	Each
35	2c	Fluorescent (Quad 22 Watt)	Each
36	2d	Fixture (35 Watt)	Each
37	2e	Fixture (32 Watt)	Each
38	2f	Circline Fixture (40 Watt)	Each
39	2g	Fixture (54 Watt)	Each
40	27b	Window Replacement	Each
41	28a	Clean, Tune, and Test	Each
42	32	Minor Plumbing	Each
43	33	Miscellaneous	Each
44	17b	Install Pipe Insulation - Spiral	Linear Foot
45	27c	Window Lock	Each
46	25b	Gas Co. Ceiling Insulation	Square Foot
47	2h	Fixture (30 Tube)	Each
48	2i	Fixture (40 Watt)	Each
49	2j	Fixture (50 Watt)	Each



Appendix B: Measures and Installations

Section 2: 1988 Installations

Table of Contents:

Space Heating Measures

Plan E1

Urban Participants

Electric Space Heat B-9

Gas Space Heat B-9

Oil Space Heat B-11

Rural Participants

Electric Space Heat B-10

Gas Space Heat B-10

Oil Space Heat B-12

Plan E2

Urban Participants

Oil Space Heat B-11

Plan E3

Urban Participants

Electric Space Heat B-13

Gas Space Heat B-13

Oil Space Heat B-15

Rural Participants

Electric Space Heat B-14

Gas Space Heat B-14

Oil Space Heat B-16



Plan E4	
Urban Participants	
Oil Space Heat	B-15
Plan E5	
Rural Participants	
Oil Space Heat	B-16

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SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN PLAN E1 ELECTRIC SPACE HEAT				GAS SPACE HEAT			
		PER MEASURE		PER MEASURE		TOTAL	
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS
4	46	27.60	1,270	4	16	0.91	15
8	11	132.38	1,456	8	29	4.39	127
9	14	93.40	1,308	9	87	3.10	270
10	6	132.31	794	10	10	4.38	44
11	0	70.04	0	11	4	2.32	9
12	3	119.08	357	12	19	3.95	75
13	2	34.50	69	13	1	1.14	1
14	0	2.70	0	14	0	0.08	0
15	0	50.40	0	15	0	2.28	0
16	0	4.80	0	16	83	0.36	30
17	0	89.18	0	17	3	2.95	9
19	0	1.80	0	19	0	0.06	0
20	2	34.50	69	20	0	1.14	0
27	0	48.36	0	27	0	1.61	0
			<u>5,322</u>				<u>580</u>



SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

RURAL

PLAN E1

ELECTRIC SPACE HEAT

GAS SPACE HEAT

PER			PER		
MEASURE			MEASURE		
QUANTITY	SAVINGS	TOTAL	QUANTITY	SAVINGS	TOTAL
MEASURE	SAVINGS	SAVINGS	MEASURE	SAVINGS	SAVINGS
4	19	27.60	4	0.91	5
8	2	132.38	8	4.39	158
9	10	93.40	9	3.10	626
10	0	132.31	10	4.38	57
11	0	70.04	11	2.32	0
12	2	119.08	12	3.95	0
13	1	34.50	13	1.14	0
14	0	2.70	14	0.08	0
15	0	50.40	15	2.28	0
16	0	4.80	16	0.36	0
17	0	89.18	17	2.95	0
19	0	1.80	19	0.06	0
20	0	34.50	20	1.14	0
27	0	48.36	27	1.61	0
		<u>1,996</u>			<u>847</u>

SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN		PLAN E1		PLAN E2	
		OIL SPACE HEAT		OIL SPACE HEAT	
MEASURE	QUANTITY	PER		MEASURE	TOTAL
		MEASURE	SAVINGS		SAVINGS
4	130	0.68	88	8	3
8	46	3.25	150	12	3
9	91	2.30	209	29	235
10	23	3.25	75		241
11	43	1.73	74		
12	10	2.93	29		
13	6	0.85	5		
14	0	0.07	0		
15	0	1.80	0		
16	29	0.36	10		
17	6	2.20	13		
19	0	0.05	0		
20	0	0.85	0		
27	0	1.19	0		
				654	

SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

RURAL
 PLAN E1
 OIL SPACE HEAT

MEASURE	QUANTITY	PER		TOTAL
		MEASURE	SAVINGS	
SAVINGS				
4	66	0.68	45	
8	63	3.25	205	
9	176	2.30	405	
10	20	3.25	65	
11	0	1.73	0	
12	9	2.93	26	
13	1	0.85	1	
14	0	0.07	0	
15	5	1.80	9	
16	15	0.36	5	
17	4	2.20	9	
19	82	0.05	4	
20	0	0.85	0	
27	0	1.19	0	
				<u>774</u>

SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN

PLAN E3

ELECTRIC SPACE HEAT

GAS SPACE HEAT

MEASURE	QUANTITY	PER		MEASURE	TOTAL	PER		MEASURE	TOTAL
		SAVINGS	MEASURE			SAVINGS	MEASURE		
4	85	27.60	2,346	4	52	0.91	47		
8	21	132.38	2,780	8	60	4.39	263		
9	110	93.40	10,274	9	169	3.10	524		
10	28	132.31	3,705	10	41	4.38	180		
11	0	70.04	0	11	32	2.32	74		
12	16	119.08	1,905	12	32	3.95	126		
13	2	34.50	69	13	1	1.14	1		
14	0	2.70	0	14	0	0.08	0		
15	0	50.40	0	15	9	2.28	21		
16	0	4.80	0	16	135	0.36	49		
17	0	89.18	0	17	3	2.95	9		
19	0	1.80	0	19	0	0.06	0		
20	0	34.50	0	20	0	1.14	0		
27	0	48.36	0	27	0	1.61	0		
			<u>21,079</u>				<u>1,294</u>		



SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

RURAL

PLAN E3

ELECTRIC SPACE HEAT

PER

MEASURE TOTAL

SAVINGS

MEASURE

QUANTITY

SAVINGS

MEASURE

QUANTITY

SAVINGS

MEASURE

QUANTITY

SAVINGS

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MEASURE

QUANTITY

SAVINGS

MEASURE

QUANTITY

GAS SPACE HEAT

PER

MEASURE TOTAL

SAVINGS

MEASURE

QUANTITY

SAVINGS

MEASURE

QUANTITY

SAVINGS

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SUMMARY TABLES
HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN		PLAN E3		PLAN E4	
OIL SPACE HEAT		OIL SPACE HEAT		OIL SPACE HEAT	
PER		PER		PER	
MEASURE TOTAL		MEASURE TOTAL		MEASURE TOTAL	
MEASURE	QUANTITY	SAVINGS	MEASURE	QUANTITY	SAVINGS
4	257	0.68	175	4	6
8	216	3.25	702	9	4
9	923	2.30	2,123	12	2
10	194	3.25	631		
11	313	1.73	541		
12	166	2.93	486		
13	5	0.85	4		
14	0	0.07	0		
15	47	1.80	85		
16	328	0.36	118		
17	19	2.20	42		
19	282	0.05	14		
20	2	0.85	2		
27	12	1.19	14		
			<u>4,937</u>		<u>19</u>

SUMMARY TABLES

RURAL

PLAN E3

OIL SPACE HEAT

PLAN ES

OIL SPACE HEAT

MEASURE	PER		MEASURE TOTAL		PER		MEASURE TOTAL	
	QUANTITY	SAVINGS	SAVINGS	QUANTITY	SAVINGS	QUANTITY	SAVINGS	
4	349	0.68	237	31	148.21	1	148	
8	372	3.25	1,209				148	
9	1716	2.30	3,947					
10	420	3.25	1,365					
11	197	1.73	341					
12	362	2.93	1,061					
13	15	0.85	13					
14	0	0.07	0					
15	60	1.80	108					
16	440	0.36	158					
17	25	2.20	55					
19	568	0.05	28					
20	1	0.85	1					
27	7	1.19	8					
							8,531	

SUMMARY TABLES
WATER HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN				GAS WATER HEAT			
PLAN E1				PER			
ELECTRIC WATER HEAT				MEASURE TOTAL			
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS
1	0	367.85	0	1	0	12.76	0
5	2	454.33	909	5	7	18.82	132
6	3	301.73	905	6	3	16.13	48
7	5	113.58	568	7	9	4.70	42
18	153	2.15	329	18	912	0.07	64
			<u>2,711</u>				<u>286</u>

RURAL				GAS WATER HEAT			
PLAN E1				PER			
ELECTRIC WATER HEAT				MEASURE TOTAL			
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS
1	0	367.85	0	1	0	12.76	0
5	3	454.33	1,363	5	2	18.82	38
6	1	301.73	302	6	0	16.13	0
7	4	113.58	454	7	9	4.70	42
18	78	2.15	168	18	131	0.07	9
			<u>2,287</u>				<u>89</u>

SUMMARY TABLES
WATER HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN		PLAN E2			
PLAN E1		OIL WATER HEAT			
		PER		PER	
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	TOTAL SAVINGS
1	0	9.47	0	1	9.47
5	1	13.98	14	5	13.98
6	0	11.98	0	6	11.98
7	11	3.49	38	7	3.49
18	765	0.05	38	18	0.05
			<u>91</u>	<u>7</u>	

RURAL		PLAN E1			
		OIL WATER HEAT			
		PER		PER	
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	TOTAL SAVINGS
1	0	9.47	0		
5	3	13.98	42		
6	2	11.98	24		
7	12	3.49	42		
18	282	0.05	14		
			<u>122</u>		

SUMMARY TABLES

WATER HEATING MEASURES INSTALLED

SAVINGS PER PLAN PER FUEL TYPE

URBAN

PLAN E3

ELECTRIC WATER HEAT				GAS WATER HEAT			
		PER	MEASURE			PER	MEASURE
MEASURE	QUANTITY	SAVINGS	TOTAL	MEASURE	QUANTITY	SAVINGS	TOTAL
1	3	367.85	1,104	1	1	12.76	13
5	26	454.33	11,813	5	18	18.82	339
6	9	301.73	2,716	6	12	16.13	194
7	57	113.58	6,474	7	49	4.70	230
18	757	2.15	1,628	18	376	0.07	26
			<u>23,733</u>				<u>802</u>

RURAL

PLAN E3

ELECTRIC WATER HEAT				GAS WATER HEAT			
		PER	MEASURE			PER	MEASURE
MEASURE	QUANTITY	SAVINGS	TOTAL	MEASURE	QUANTITY	SAVINGS	TOTAL
1	1	367.85	368	1	4	12.76	51
5	6	454.33	2,726	5	32	18.82	602
6	8	301.73	2,414	6	31	16.13	500
7	37	113.58	4,202	7	155	4.70	729
18	869	2.15	1,868	18	2,225	0.07	142
			<u>11,578</u>				<u>2,024</u>

SUMMARY TABLES
WATER HEATING MEASURES INSTALLED
SAVINGS PER PLAN PER FUEL TYPE

URBAN		OIL WATER HEAT		PROPANE WATER HEAT	
PLAN E3		PER		PER	
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS	MEASURE	TOTAL SAVINGS
1	9	9.47	85	1	60.75
5	58	13.98	811	5	89.61
6	17	11.98	204	6	76.80
7	148	3.49	517	7	22.38
18	5637	0.05	282	18	0.33
			<u>1,898</u>	42	<u>14</u>
					<u>135</u>

RURAL		OIL WATER HEAT	
PLAN E3		PER	
MEASURE	QUANTITY	SAVINGS	TOTAL SAVINGS
1	6	9.47	57
5	142	13.98	1,985
6	17	11.98	204
7	374	3.49	1,305
18	4112	0.05	206
			<u>3,757</u>

Appendix B: Measures and Installations

Section 3: 1989 Installations Part a: Tables of Installations

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1989 Installations Under Plan E1

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	2.00	2.00	1.00	-	-	-	2.00	2.00	1.00
2	250.00	1737.00	6.95	69.00	441.00	6.39	181.00	1296.00	7.16
3	380.00	386.00	1.02	194.00	195.00	1.01	186.00	191.00	1.03
4	293.00	300.00	1.02	163.00	170.00	1.04	130.00	130.00	1.00
5	500.00	773.00	1.55	279.00	413.00	1.48	221.00	360.00	1.63
6	1001.00	2212.00	2.21	566.00	1244.00	2.20	435.00	968.00	2.23
7	806.00	8105.00	10.06	469.00	4779.00	10.19	337.00	3326.00	9.87
8	718.00	1525.00	2.12	464.00	987.00	2.13	254.00	538.00	2.12
9	70.00	412.00	5.89	27.00	144.00	5.33	43.00	268.00	6.23
10	655.00	1482.00	2.26	411.00	949.00	2.31	244.00	533.00	2.18
11	20.00	20.00	1.00	6.00	6.00	1.00	14.00	14.00	1.00
12	15.00	1060.00	70.67	14.00	964.00	68.86	1.00	96.00	96.00
13	12.00	41.00	3.42	12.00	41.00	3.42	-	-	-
14	26.00	764.00	29.38	17.00	580.00	34.12	9.00	184.00	20.44
15	33.00	38.00	1.15	6.00	7.00	1.17	27.00	31.00	1.15
16	469.00	23730.00	50.60	187.00	8450.00	45.19	282.00	15280.00	54.18
17	6.00	505.00	84.17	-	-	-	6.00	505.00	84.17
18	10.00	10.00	1.00	5.00	5.00	1.00	5.00	5.00	1.00
19	64.00	131.00	2.05	11.00	22.00	2.00	53.00	109.00	2.06
20	3.00	3.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
21	10.00	12.00	1.20	7.00	7.00	1.00	3.00	5.00	1.67

1989 Installations Under Plan E1

Measure Code	ALL						Owner			Renter		
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N
	SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN	
1	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	250.00	1737.00	6.95	115.00	1089.00	9.47	135.00	648.00	4.80	230.00	1.00	1.00
5	380.00	386.00	1.02	149.00	155.00	1.04	176.00	177.00	1.01	412.00	1.43	2.11
6	293.00	300.00	1.02	117.00	123.00	1.05	289.00	1146.00	9.61	870.00	2.02	5.49
7	500.00	773.00	1.55	210.00	359.00	1.71	543.00	4163.00	9.61	269.00	5.49	2.21
8	1001.00	2212.00	2.21	457.00	1064.00	2.33	433.00	870.00	2.02	770.00	2.21	1.00
9	806.00	8105.00	10.06	373.00	3942.00	10.57	430.00	269.00	5.49	5.00	1.00	82.62
10	718.00	1525.00	2.12	288.00	655.00	2.27	49.00	770.00	2.21	5.00	1.00	2.83
11	70.00	412.00	5.89	21.00	143.00	6.81	348.00	379.00	31.58	21.00	1.17	42.87
12	655.00	1482.00	2.26	307.00	712.00	2.32	200.00	8573.00	42.87	448.00	89.60	1.00
13	20.00	20.00	1.00	15.00	15.00	1.00	5.00	5.00	1.00	5.00	1.00	1.00
14	15.00	1060.00	70.67	7.00	399.00	57.00	8.00	661.00	82.62	17.00	2.83	1.00
15	12.00	41.00	3.42	6.00	24.00	4.00	6.00	17.00	2.83	379.00	31.58	1.17
16	26.00	764.00	29.38	14.00	385.00	27.50	12.00	379.00	31.58	21.00	1.17	42.87
17	33.00	38.00	1.15	15.00	17.00	1.13	18.00	21.00	1.17	8573.00	42.87	89.60
18	469.00	23730.00	50.60	269.00	15157.00	56.35	200.00	8573.00	42.87	448.00	89.60	1.00
19	6.00	505.00	84.17	1.00	57.00	57.00	5.00	448.00	89.60	1.00	1.00	1.00
20	10.00	10.00	1.00	10.00	10.00	1.00	55.00	112.00	2.04	3.00	1.00	1.22
33	64.00	131.00	2.05	9.00	19.00	2.11	3.00	3.00	1.00	11.00	1.22	1.00
34	3.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
35	10.00	12.00	1.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

1989 Installations Under Plan E1

Primary Space Heating Fuel

Measure Code	BLANK			ELEC			GAS			OIL	
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		SUM	MEAN
		SUM	MEAN		SUM	MEAN		SUM	MEAN		
1											2.00
4	8.00	42.00	5.25	76.00	483.00	6.36	58.00	307.00	5.29	307.00	105.00
5	14.00	14.00	1.00	95.00	96.00	1.01	129.00	130.00	1.01	130.00	140.00
6	16.00	19.00	1.19	30.00	30.00	1.00	144.00	148.00	1.03	148.00	100.00
7	24.00	41.00	1.71	80.00	140.00	1.75	169.00	235.00	1.39	235.00	222.00
8	45.00	95.00	2.11	90.00	174.00	1.93	403.00	860.00	2.13	860.00	457.00
9	33.00	321.00	9.73	67.00	587.00	8.76	325.00	3177.00	9.78	3177.00	377.00
10	27.00	63.00	2.33	105.00	208.00	1.98	284.00	574.00	2.02	574.00	300.00
11	4.00	22.00	5.50	8.00	33.00	4.12	26.00	135.00	5.19	135.00	29.00
12	25.00	55.00	2.20	47.00	144.00	3.06	275.00	580.00	2.11	580.00	307.00
13	1.00	1.00	1.00	4.00	4.00	1.00	3.00	3.00	1.00	3.00	11.00
14	3.00	97.00	32.33	1.00	50.00	50.00	8.00	674.00	84.25	674.00	3.00
15	1.00	3.00	3.00				7.00	23.00	3.29	23.00	4.00
16							10.00	387.00	38.70	387.00	16.00
17				1.00	2.00	2.00	9.00	11.00	1.22	11.00	23.00
18	23.00	983.00	42.74	37.00	1128.00	30.49	155.00	6708.00	43.28	6708.00	248.00
19	1.00	94.00	94.00				3.00	276.00	92.00	276.00	2.00
20							1.00	1.00	1.00	1.00	9.00
33	1.00	3.00	3.00	47.00	100.00	2.13	8.00	13.00	1.62	13.00	8.00
34							2.00	2.00	1.00	2.00	
35							8.00	8.00	1.00	8.00	1.00

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1989 Installations Under Plan E1

Primary Space Heating Fuel										
Measure Code	OIL			OTHER			PROP			
	Quantity Installed		N	Quantity Installed		N	Quantity Installed			
	SUM	MEAN		SUM	MEAN		SUM	MEAN		
1	2.00	1.00	.	.	.	.	.	.	.	.
4	874.00	8.32	2.00	20.00	10.00	1.00	11.00	11.00	1.00	11.00
5	144.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
6	100.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
7	350.00	1.58	4.00	6.00	1.50	1.00	1.00	1.00	1.00	1.00
8	1069.00	2.34	6.00	14.00	2.33	.	.	.	.	.
9	3986.00	10.57	4.00	34.00	8.50	.	.	.	.	.
10	675.00	2.25	2.00	5.00	2.50	.	.	.	.	.
11	206.00	7.10	3.00	16.00	5.33	.	.	.	.	.
12	702.00	2.29	1.00	1.00	1.00	.	.	.	.	.
13	11.00	1.00	1.00	1.00	1.00	.	.	.	.	.
14	239.00	79.67	.	.	.	.	.	.	.	.
15	15.00	3.75	.	.	.	.	.	.	.	.
16	377.00	23.56	.	.	.	.	.	.	.	.
17	25.00	1.09	.	.	.	.	.	.	.	.
18	14755.00	59.50	5.00	66.00	13.20	1.00	90.00	90.00	1.00	90.00
19	135.00	67.50	.	.	.	.	.	.	.	.
20	9.00	1.00	.	.	.	.	.	.	.	.
33	15.00	1.87	.	.	.	.	.	.	.	.
34	.	.	1.00	1.00	1.00	.	.	.	.	.
35	1.00	1.00	1.00	3.00	3.00	.	.	.	.	.

1989 Installations Under Plan E2

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
4	49.00	364.00	7.43	24.00	175.00	7.29	25.00	189.00	7.56
5	38.00	38.00	1.00	29.00	29.00	1.00	9.00	9.00	1.00
6	26.00	26.00	1.00	12.00	12.00	1.00	14.00	14.00	1.00
7	72.00	111.00	1.54	39.00	57.00	1.46	33.00	54.00	1.64
8	136.00	305.00	2.24	69.00	154.00	2.23	67.00	151.00	2.25
9	117.00	1211.00	10.35	61.00	649.00	10.64	56.00	562.00	10.04
10	88.00	181.00	2.06	48.00	95.00	1.98	40.00	86.00	2.15
11	11.00	74.00	6.73	1.00	12.00	12.00	10.00	62.00	6.20
12	59.00	124.00	2.10	27.00	48.00	1.78	32.00	76.00	2.37
13	3.00	4.00	1.33	2.00	2.00	1.00	1.00	2.00	2.00
14	1.00	17.00	17.00	1.00	17.00	17.00	-	-	-
16	12.00	289.00	24.08	5.00	83.00	16.60	7.00	206.00	29.43
17	7.00	8.00	1.14	4.00	5.00	1.25	3.00	3.00	1.00
18	109.00	6949.00	63.75	44.00	2985.00	67.84	65.00	3964.00	60.98
20	6.00	6.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00
29	88.00	88.00	1.00	37.00	37.00	1.00	51.00	51.00	1.00
30	56.00	434.00	7.75	26.00	35.00	1.35	30.00	399.00	13.30
31	42.00	42.00	1.00	16.00	16.00	1.00	26.00	26.00	1.00
32	69.00	26698.00	386.93	36.00	14186.00	394.06	33.00	12512.00	379.15
33	10.00	22.00	2.20	6.00	13.00	2.17	4.00	9.00	2.25
34	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
35	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
41	7.00	7.00	1.00	5.00	5.00	1.00	2.00	2.00	1.00

1989 Installations Under Plan E2

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed		N	SUM	MEAN	N	SUM	MEAN	N	Quantity Installed	
		SUM	MEAN								SUM	MEAN
4	49.00	364.00	7.43	39.00	310.00	7.95	10.00	54.00	5.40			
5	38.00	38.00	1.00	31.00	31.00	1.00	7.00	7.00	1.00			
6	26.00	26.00	1.00	16.00	16.00	1.00	10.00	10.00	1.00			
7	72.00	111.00	1.54	55.00	88.00	1.60	17.00	23.00	1.35			
8	136.00	305.00	2.24	104.00	229.00	2.20	32.00	76.00	2.37			
9	117.00	1211.00	10.35	86.00	894.00	10.40	31.00	317.00	10.23			
10	88.00	181.00	2.06	62.00	133.00	2.15	26.00	48.00	1.85			
11	11.00	74.00	6.73	9.00	67.00	7.44	2.00	7.00	3.50			
12	59.00	124.00	2.10	44.00	94.00	2.14	15.00	30.00	2.00			
13	3.00	4.00	1.33	3.00	4.00	1.33	-	-	-			
14	1.00	17.00	17.00	1.00	17.00	17.00	-	-	-			
16	12.00	289.00	24.08	12.00	289.00	24.08	-	-	-			
17	7.00	8.00	1.14	6.00	7.00	1.17	1.00	1.00	1.00			
18	109.00	6949.00	63.75	89.00	5983.00	67.22	20.00	966.00	48.30			
20	6.00	6.00	1.00	6.00	6.00	1.00	-	-	-			
29	88.00	88.00	1.00	65.00	65.00	1.00	23.00	23.00	1.00			
30	56.00	434.00	7.75	44.00	422.00	9.59	12.00	12.00	1.00			
31	42.00	42.00	1.00	39.00	39.00	1.00	3.00	3.00	1.00			
32	69.00	26698.00	386.93	44.00	13972.00	317.55	25.00	12726.00	509.04			
33	10.00	22.00	2.20	8.00	18.00	2.25	2.00	4.00	2.00			
34	1.00	1.00	1.00	-	-	-	1.00	1.00	1.00			
35	2.00	2.00	1.00	-	-	-	2.00	2.00	1.00			
41	7.00	7.00	1.00	4.00	4.00	1.00	3.00	3.00	1.00			

1989 Installations Under Plan E2

Primary Space Heating Fuel												
Measure Code	BLANK			ELEC			GAS			OIL		
	Quantity Installed			Quantity Installed			Quantity Installed			Quantity Installed		
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN
4	-	-	-	-	-	-	5.00	31.00	6.20	-	-	-
5	2.00	2.00	1.00	1.00	1.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00
6	1.00	1.00	1.00	1.00	1.00	1.00	4.00	4.00	1.00	4.00	4.00	1.00
7	4.00	5.00	1.25	-	-	-	9.00	16.00	1.78	9.00	16.00	1.78
8	5.00	9.00	1.80	2.00	6.00	3.00	13.00	29.00	2.23	13.00	29.00	2.23
9	3.00	25.00	8.33	2.00	18.00	9.00	13.00	113.00	8.69	13.00	113.00	8.69
10	2.00	4.00	2.00	1.00	3.00	3.00	13.00	26.00	2.00	13.00	26.00	2.00
11	-	-	-	-	-	-	2.00	8.00	4.00	2.00	8.00	4.00
12	2.00	8.00	4.00	-	-	-	1.00	2.00	2.00	1.00	2.00	2.00
13	-	-	-	1.00	1.00	1.00	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
16	2.00	73.00	36.50	-	-	-	1.00	20.00	20.00	1.00	20.00	20.00
17	-	-	-	-	-	-	-	-	-	-	-	-
18	6.00	447.00	74.50	1.00	35.00	35.00	7.00	244.00	34.86	7.00	244.00	34.86
20	-	-	-	-	-	-	1.00	1.00	1.00	1.00	1.00	1.00
29	10.00	10.00	1.00	-	-	-	3.00	3.00	1.00	3.00	3.00	1.00
30	3.00	12.00	4.00	1.00	1.00	1.00	-	-	-	-	-	-
31	4.00	4.00	1.00	-	-	-	1.00	1.00	1.00	1.00	1.00	1.00
32	3.00	802.00	267.33	1.00	254.00	254.00	19.00	5819.00	306.26	19.00	5819.00	306.26
33	1.00	1.00	1.00	-	-	-	2.00	3.00	1.50	2.00	3.00	1.50
34	-	-	-	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-	-	-	-
41	1.00	1.00	1.00	-	-	-	-	-	-	-	-	-

(CONTINUED)

1989 Installations Under Plan E2

	Primary Space Heating Fuel						
	OIL			OTHER			
	Quantity Installed		N	Quantity Installed			
	SUM	MEAN		SUM	MEAN		
Measure Code							
4	328.00	7.63	1.00	5.00	5.00	5.00	
5	32.00	1.00	-	-	-	-	
6	18.00	1.00	2.00	2.00	1.00	1.00	
7	90.00	1.53	-	-	-	-	
8	260.00	2.26	1.00	1.00	1.00	1.00	
9	1040.00	10.72	2.00	15.00	7.50	7.50	
10	144.00	2.06	2.00	4.00	2.00	2.00	
11	66.00	7.33	-	-	-	-	
12	113.00	2.05	1.00	1.00	1.00	1.00	
13	3.00	1.50	-	-	-	-	
14	17.00	17.00	-	-	-	-	
16	196.00	21.78	-	-	-	-	
17	8.00	1.14	-	-	-	-	
18	6185.00	66.51	2.00	38.00	19.00	19.00	
20	5.00	1.00	-	-	-	-	
29	74.00	1.00	1.00	1.00	1.00	1.00	
30	421.00	8.10	-	-	-	-	
31	36.00	1.00	1.00	1.00	1.00	1.00	
32	19123.00	424.96	1.00	700.00	700.00	700.00	
33	15.00	2.50	1.00	3.00	3.00	3.00	
34	1.00	1.00	-	-	-	-	
35	2.00	1.00	-	-	-	-	
41	6.00	1.00	-	-	-	-	

1989 Installations Under Plan E3

Measure Code	Urban/Rural Location									
	ALL					RURAL				
	N	Quantity Installed		R	Quantity Installed		N	Quantity Installed		URBAN
		SUM	MEAN		SUM	MEAN		SUM	MEAN	
1	10.00	10.00	1.00	3.00	3.00	1.00	7.00	7.00	1.00	1.00
4	251.00	1635.00	6.51	108.00	636.00	5.89	143.00	999.00	6.99	6.99
5	451.00	421.00	0.93	222.00	206.00	0.93	229.00	215.00	0.94	0.94
6	326.00	273.00	0.84	158.00	135.00	0.85	168.00	138.00	0.82	0.82
7	747.00	1084.00	1.45	417.00	579.00	1.39	330.00	505.00	1.53	1.53
8	761.00	1280.00	1.68	442.00	732.00	1.66	319.00	548.00	1.72	1.72
9	807.00	6099.00	7.56	435.00	3467.00	7.97	372.00	2632.00	7.08	7.08
10	830.00	1453.00	1.75	436.00	793.00	1.82	394.00	660.00	1.68	1.68
11	207.00	1312.00	6.34	101.00	558.00	5.52	106.00	754.00	7.11	7.11
12	830.00	1414.00	1.70	479.00	795.00	1.66	351.00	619.00	1.76	1.76
13	15.00	15.00	1.00	5.00	5.00	1.00	10.00	10.00	1.00	1.00
14	44.00	2612.00	59.36	30.00	1797.00	59.90	14.00	815.00	58.21	58.21
15	41.00	86.00	2.10	17.00	40.00	2.35	24.00	46.00	1.92	1.92
16	38.00	1732.00	45.58	14.00	469.00	33.50	24.00	1263.00	52.63	52.63
17	28.00	23.00	0.82	8.00	5.00	0.63	20.00	18.00	0.90	0.90
18	441.00	20118.00	45.62	184.00	7527.00	40.91	257.00	12591.00	48.99	48.99
19	24.00	938.00	39.08	10.00	362.00	36.20	14.00	576.00	41.14	41.14
20	16.00	15.00	0.94	8.00	6.00	0.75	8.00	9.00	1.12	1.12
22	2.00	1.00	0.50	-	-	-	2.00	1.00	0.50	0.50
23	22.00	19.00	0.86	12.00	10.00	0.83	10.00	9.00	0.90	0.90
26	1.00	0.00	0.00	1.00	0.00	0.00	-	-	-	-
27	112.00	263.00	2.35	61.00	154.00	2.52	51.00	109.00	2.14	2.14
33	103.00	203.00	1.97	36.00	73.00	2.03	67.00	130.00	1.94	1.94
34	14.00	21.00	1.50	4.00	7.00	1.75	10.00	14.00	1.40	1.40
35	13.00	13.00	1.00	1.00	1.00	1.00	12.00	12.00	1.00	1.00

(CONTINUED)



ICF Resources Incorporated

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1989 Installations Under Plan E3

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
36	293.00	586.00	2.00	-	-	-	293.00	586.00	2.00
37	300.00	315.00	1.05	-	-	-	300.00	315.00	1.05
38	140.00	140.00	1.00	-	-	-	140.00	140.00	1.00
39	134.00	134.00	1.00	-	-	-	134.00	134.00	1.00
43	1.00	2.00	2.00	-	-	-	1.00	2.00	2.00

1989 Installations Under Plan E3

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed			N	Quantity Installed			N	Quantity Installed		
		SUM	MEAN			SUM	MEAN			SUM	MEAN	
1	10.00	10.00	1.00		5.00	5.00			5.00	5.00	1.00	
4	251.00	1635.00	6.51		103.00	665.00	6.40		148.00	770.00	5.20	
5	451.00	421.00	0.93		205.00	195.00	0.95		246.00	226.00	0.92	
6	326.00	273.00	0.84		176.00	142.00	0.81		150.00	131.00	0.87	
7	747.00	1084.00	1.45		307.00	466.00	1.52		440.00	618.00	1.40	
8	761.00	1280.00	1.68		341.00	575.00	1.69		420.00	705.00	1.68	
9	807.00	6099.00	7.56		349.00	2999.00	8.59		458.00	3100.00	6.77	
10	830.00	1453.00	1.75		327.00	635.00	1.94		503.00	818.00	1.63	
11	237.00	1312.00	6.34		98.00	636.00	6.49		109.00	676.00	6.20	
12	830.00	1414.00	1.70		353.00	601.00	1.69		475.00	813.00	1.71	
13	15.00	15.00	1.00		11.00	11.00	1.00		4.00	4.00	1.00	
14	44.00	2612.00	59.36		12.00	740.00	61.67		32.00	1872.00	58.50	
15	41.00	86.00	2.10		28.00	52.00	1.86		13.00	34.00	2.62	
16	38.00	1732.00	45.58		32.00	1409.00	44.03		6.00	323.00	53.83	
17	28.00	23.00	0.82		23.00	18.00	0.78		5.00	5.00	1.00	
18	441.00	20118.00	45.62		261.00	12240.00	46.90		180.00	7878.00	43.77	
19	24.00	938.00	39.08		13.00	442.00	34.00		11.00	496.00	45.09	
20	16.00	15.00	0.94		12.00	11.00	0.92		4.00	4.00	1.00	
22	2.00	1.00	0.50		2.00	1.00	0.50		-	-	-	
23	22.00	19.00	0.86		16.00	14.00	0.88		6.00	5.00	0.83	
26	1.00	0.00	0.00		1.00	0.00	0.00		-	-	-	
27	112.00	263.00	2.35		53.00	131.00	2.47		59.00	132.00	2.24	
33	103.00	203.00	1.97		26.00	52.00	2.00		77.00	151.00	1.96	
34	14.00	21.00	1.50		1.00	2.00	2.00		13.00	19.00	1.46	
35	13.00	13.00	1.00		4.00	4.00	1.00		9.00	9.00	1.00	

(CONTINUED)

1989 Installations Under Plan E3

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
36	293.00	586.00	2.00	.	.	.	.	.	.	293.00	586.00	2.00
37	300.00	315.00	1.05	.	.	.	.	.	.	300.00	315.00	1.05
38	140.00	140.00	1.00	.	.	.	.	.	.	140.00	140.00	1.00
39	134.00	134.00	1.00	.	.	.	.	.	.	134.00	134.00	1.00
43	1.00	2.00	2.00	1.00	2.00	2.00	.	2.00	2.00	.	.	.

1989 Installations Under Plan E3

Primary Space Heating Fuel												
Measure Code	BLANK				ELEC				GAS			
	Quantity Installed		N	MEAN	Quantity Installed		N	MEAN	Quantity Installed		N	MEAN
	SUM	MEAN			SUM	MEAN			SUM	MEAN		
1	5.00	33.00	6.60	2.00	2.00	1.00	4.00	1.00	4.00	1.00	4.00	4.00
4	11.00	10.00	0.91	95.00	86.00	0.91	146.00	0.91	137.00	0.94	198.00	94.00
5	22.00	6.00	0.27	55.00	50.00	0.91	131.00	0.91	119.00	0.91	115.00	115.00
6	24.00	25.00	1.04	130.00	205.00	1.58	277.00	1.39	386.00	1.39	311.00	311.00
7	47.00	24.00	0.51	98.00	161.00	1.64	288.00	1.78	514.00	1.78	323.00	323.00
8	28.00	150.00	5.36	119.00	840.00	7.06	312.00	7.63	2382.00	7.63	343.00	343.00
9	21.00	40.00	1.90	147.00	286.00	1.95	287.00	1.79	514.00	1.79	370.00	370.00
10	6.00	28.00	4.67	21.00	113.00	5.38	82.00	5.63	462.00	5.63	97.00	97.00
11	52.00	36.00	0.69	119.00	205.00	1.72	294.00	1.80	530.00	1.80	359.00	359.00
12				5.00	4.00	0.80	3.00	1.00	3.00	1.00	7.00	7.00
13				16.00	481.00	34.36	18.00	57.94	1043.00	57.94	11.00	11.00
14	2.00	4.00	2.00	12.00	22.00	1.83	6.00	2.67	16.00	2.67	21.00	21.00
15	3.00	0.00	0.00	2.00	187.00	93.50	16.00	40.44	647.00	40.44	17.00	17.00
16				6.00	5.00	0.83	5.00	1.00	5.00	1.00	17.00	17.00
17	18.00	779.00	43.28	65.00	1623.00	24.97	120.00	27.08	3250.00	27.08	234.00	234.00
18				6.00	262.00	43.67	4.00	18.50	74.00	18.50	14.00	14.00
19	2.00	1.00	0.50	3.00	3.00	1.00	3.00	1.33	4.00	1.33	8.00	8.00
20											2.00	2.00
21							3.00	0.67	2.00	0.67	18.00	18.00
22											1.00	1.00
23												
24	4.00	4.00	1.00	11.00	20.00	1.82	44.00	2.09	92.00	2.09	52.00	52.00
25	2.00	6.00	3.00	34.00	58.00	1.71	33.00	2.12	70.00	2.12	33.00	33.00
26				4.00	6.00	1.50	8.00	1.50	12.00	1.50	2.00	2.00
27				4.00	4.00	1.00	4.00	1.00	4.00	1.00	5.00	5.00
28												
29												
30												
31												
32												
33												
34												
35												

(CONTINUED)

1989 Installations Under Plan E3

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	Quantity Installed			Quantity Installed			Quantity Installed				
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	N
36											
37	1.00	16.00	16.00				293.00	586.00	2.00		
38							299.00	299.00	1.00		
39							140.00	140.00	1.00		
43	1.00	2.00	2.00				134.00	134.00	1.00		

(CONTINUED)

1989 Installations Under Plan E3

Primary Space Heating Fuel											
Measure Code	OIL			OTHER				PROP			
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
	SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
	1	4.00	1.00	-	-	-	-	-	-	-	-
4	749.00	7.97	1.00	15.00	15.00	2.00	6.00	3.00	-	-	-
5	187.00	0.94	1.00	1.00	1.00	-	-	-	-	-	-
6	95.00	0.83	1.00	1.00	1.00	2.00	2.00	1.00	-	-	-
7	463.00	1.49	1.00	1.00	1.00	4.00	4.00	1.00	-	-	-
8	570.00	1.76	1.00	1.00	1.00	4.00	10.00	2.50	-	-	-
9	2665.00	7.77	1.00	11.00	11.00	4.00	51.00	12.75	-	-	-
10	600.00	1.62	1.00	2.00	2.00	4.00	11.00	2.75	-	-	-
11	697.00	7.19	-	-	-	1.00	12.00	12.00	-	-	-
12	629.00	1.75	1.00	1.00	1.00	5.00	13.00	2.60	-	-	-
13	8.00	1.14	-	-	-	-	-	-	-	-	-
14	1013.00	92.09	-	-	-	1.00	75.00	75.00	-	-	-
15	44.00	2.10	-	-	-	-	-	-	-	-	-
16	898.00	52.82	-	-	-	-	-	-	-	-	-
17	13.00	0.76	-	-	-	-	-	-	-	-	-
18	14370.00	61.41	-	-	-	4.00	96.00	24.00	-	-	-
19	602.00	43.00	-	-	-	-	-	-	-	-	-
20	7.00	0.88	-	-	-	-	-	-	-	-	-
22	1.00	0.50	-	-	-	-	-	-	-	-	-
23	16.00	0.89	1.00	1.00	1.00	-	-	-	-	-	-
26	0.00	0.00	-	-	-	-	-	-	-	-	-
27	139.00	2.67	-	-	-	1.00	8.00	8.00	-	-	-
33	68.00	2.06	-	-	-	1.00	1.00	1.00	-	-	-
34	3.00	1.50	-	-	-	-	-	-	-	-	-
35	5.00	1.00	-	-	-	-	-	-	-	-	-

(CONTINUED)

1989 Installations Under Plan E3

	Primary Space Heating Fuel									
	OIL			OTHER			PROP			
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed
	SUM	MEAN		SUM	MEAN		SUM	MEAN		MEAN
Measure Code										
36										
37										
38										
39										
43										

1989 Installations Under Plan E4

Measure Code	ALL				RURAL				URBAN			
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	6.00	6.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00
4	48.00	364.00	7.58	17.00	126.00	7.41	31.00	238.00	7.68	31.00	238.00	7.68
5	82.00	87.00	1.06	41.00	42.00	1.02	41.00	45.00	1.10	41.00	45.00	1.10
6	73.00	72.00	0.99	28.00	27.00	0.96	45.00	45.00	1.00	45.00	45.00	1.00
7	102.00	159.00	1.56	52.00	80.00	1.54	50.00	79.00	1.58	50.00	79.00	1.58
8	179.00	397.00	2.22	80.00	175.00	2.19	99.00	222.00	2.24	99.00	222.00	2.24
9	161.00	1046.00	11.47	82.00	927.00	11.30	79.00	919.00	11.63	79.00	919.00	11.63
10	139.00	271.00	1.95	69.00	140.00	2.03	70.00	131.00	1.87	70.00	131.00	1.87
11	30.00	272.00	9.07	12.00	88.00	7.33	18.00	184.00	10.22	18.00	184.00	10.22
12	191.00	448.00	2.35	88.00	207.00	2.35	103.00	241.00	2.34	103.00	241.00	2.34
13	10.00	10.00	1.00	3.00	3.00	1.00	7.00	7.00	1.00	7.00	7.00	1.00
14	3.00	160.00	53.33	2.00	136.00	68.00	1.00	26.00	24.00	1.00	26.00	24.00
15	5.00	18.00	3.60	4.00	17.00	4.25	1.00	1.00	1.00	1.00	1.00	1.00
16	13.00	1000.00	76.92	1.00	24.00	24.00	12.00	976.00	81.33	12.00	976.00	81.33
17	11.00	15.00	1.36	2.00	5.00	2.50	9.00	10.00	1.11	9.00	10.00	1.11
18	109.00	5586.00	51.25	39.00	1772.00	45.44	70.00	3016.00	54.49	70.00	3016.00	54.49
19	1.00	15.00	15.00	-	-	-	1.00	15.00	15.00	1.00	15.00	15.00
20	14.00	14.00	1.00	5.00	5.00	1.00	9.00	9.00	1.00	9.00	9.00	1.00
21	3.00	3.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
22	11.00	15.00	1.36	7.00	7.00	1.00	4.00	8.00	2.00	4.00	8.00	2.00
23	4.00	4.00	1.00	1.00	1.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00
26	52.00	31904.00	613.54	24.00	12555.00	523.12	28.00	19349.00	691.04	28.00	19349.00	691.04
27	67.00	193.00	2.88	29.00	71.00	2.45	38.00	122.00	3.21	38.00	122.00	3.21
28	91.00	395.00	4.34	49.00	235.00	4.80	42.00	160.00	3.81	42.00	160.00	3.81
29	6.00	6.00	1.00	1.00	1.00	1.00	5.00	5.00	1.00	5.00	5.00	1.00

(CONTINUED)

1989 Installations Under Plan E4

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
30	6.00	5.00	0.83	4.00	3.00	0.75	2.00	2.00	1.00
31	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
32	3.00	1600.00	533.33	2.00	600.00	300.00	1.00	1000.00	1000.00
33	15.00	30.00	2.00	5.00	11.00	2.20	10.00	19.00	1.90
34	2.00	2.00	1.00	-	-	-	2.00	2.00	1.00
35	7.00	8.00	1.14	-	-	-	7.00	8.00	1.14
40	46.00	268.00	5.83	21.00	130.00	6.19	25.00	138.00	5.52
41	14.00	14.00	1.00	5.00	5.00	1.00	9.00	9.00	1.00
43	1.00	1.00	1.00	-	-	-	1.00	1.00	1.00

1989 Installations Under Plan E4

Measure Code	ALL			Owner			Renter		
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N
	SUM	MEAN		SUM	MEAN		SUM	MEAN	
1	6.00	1.00	2.00	2.00	1.00	4.00	4.00	1.00	1.00
4	48.00	7.58	23.00	218.00	9.48	25.00	146.00	5.84	5.84
5	82.00	1.06	38.00	40.00	1.05	44.00	47.00	1.07	1.07
6	73.00	0.99	30.00	29.00	0.97	43.00	43.00	1.00	1.00
7	102.00	1.56	31.00	59.00	1.90	71.00	100.00	1.41	1.41
8	179.00	2.22	66.00	151.00	2.29	113.00	246.00	2.18	2.18
9	161.00	11.47	61.00	804.00	13.18	100.00	1042.00	10.42	10.42
10	139.00	1.95	52.00	109.00	2.10	87.00	162.00	1.86	1.86
11	30.00	9.07	7.00	79.00	11.29	23.00	193.00	8.39	8.39
12	191.00	2.35	72.00	175.00	2.43	119.00	273.00	2.29	2.29
13	10.00	1.00	6.00	6.00	1.00	4.00	4.00	1.00	1.00
14	3.00	53.33	-	-	-	3.00	160.00	53.33	53.33
15	5.00	3.60	4.00	15.00	3.75	1.00	3.00	3.00	3.00
16	13.00	76.92	5.00	335.00	67.00	8.00	665.00	83.12	83.12
17	11.00	1.36	5.00	6.00	1.20	6.00	9.00	1.50	1.50
18	109.00	51.25	42.00	2326.00	55.38	67.00	3260.00	48.66	48.66
19	1.00	15.00	-	-	-	1.00	15.00	15.00	15.00
20	14.00	1.00	10.00	10.00	1.00	4.00	4.00	1.00	1.00
21	3.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00
22	11.00	1.36	2.00	2.00	1.00	9.00	13.00	1.44	1.44
23	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00
26	52.00	613.54	35.00	22212.00	634.63	17.00	9692.00	570.12	570.12
27	67.00	2.88	27.00	58.00	2.15	40.00	135.00	3.37	3.37
28	91.00	4.34	27.00	94.00	3.48	64.00	301.00	4.70	4.70
29	6.00	1.00	4.00	4.00	1.00	2.00	2.00	1.00	1.00

(CONTINUED)

1989 Installations Under Plan E4

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
30	6.00	5.00	0.83	3.00	3.00	1.00	3.00	2.00	0.67
31	1.00	1.00	1.00	.	.	.	1.00	1.00	1.00
32	3.00	1600.00	533.33	2.00	1000.00	500.00	1.00	600.00	600.00
33	15.00	30.00	2.00	7.00	15.00	2.14	8.00	15.00	1.87
34	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
35	7.00	8.00	1.14	4.00	4.00	1.00	3.00	4.00	1.33
40	46.00	268.00	5.83	15.00	66.00	4.40	31.00	202.00	6.52
41	14.00	14.00	1.00	10.00	10.00	1.00	4.00	4.00	1.00
43	1.00	1.00	1.00	.	.	.	1.00	1.00	1.00

1989 Installations Under Plan E4

Primary Space Heating Fuel												
Measure Code	BLANK			ELEC			GAS			OIL		
	Quantity Installed			Quantity Installed			Quantity Installed			Quantity Installed		
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN
1	1.00											
2												
3												
4												
5	1.00	1.00	1.00									
6	1.00	1.00	1.00									
7	1.00	4.00	4.00									
8	1.00	1.00	1.00									
9	1.00	1.00	1.00									
10	1.00	1.00	1.00									
11												
12	1.00	1.00	1.00									
13												
14												
15												
16												
17												
18	1.00	21.00	21.00									
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												

(CONTINUED)

1989 Installations Under Plan E4

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
	SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
30	.	.	.	.	.	.	.	.	.	.	.
31	.	.	.	.	.	.	.	.	.	.	.
32	.	.	.	.	.	.	1000.00	500.00	2.00	500.00	1.00
33	.	.	.	2.00	1.00	2.00	17.00	2.43	7.00	2.43	6.00
34	.	.	.	.	.	.	1.00	1.00	1.00	1.00	1.00
35	.	.	.	2.00	1.50	2.00	4.00	1.00	4.00	1.00	1.00
40	.	.	.	2.00	2.50	2.00	169.00	6.50	26.00	6.50	18.00
41	.	.	.	.	.	.	.	.	.	.	14.00
43	.	.	.	.	.	.	1.00	1.00	1.00	1.00	.

(CONTINUED)

1989 Installations Under Plan E4

Measure Code	Primary Space Heating Fuel					
	OIL			PROP		
	Quantity Installed			Quantity Installed		
	SUM	MEAN	#	SUM	MEAN	#
1	2.00	1.00	•	•	•	•
4	160.00	8.89	•	•	•	•
5	24.00	1.04	•	•	•	•
6	16.00	1.00	•	•	•	•
7	51.00	1.89	•	•	•	•
8	104.00	2.04	•	•	•	•
9	615.00	13.37	1.00	12.00	12.00	12.00
10	72.00	2.12	1.00	3.00	3.00	3.00
11	97.00	10.78	•	•	•	•
12	115.00	2.17	•	•	•	•
13	3.00	1.00	•	•	•	•
14	•	•	•	•	•	•
15	13.00	3.25	•	•	•	•
16	292.00	73.00	•	•	•	•
17	6.00	1.50	•	•	•	•
18	2256.00	70.50	•	•	•	•
19	15.00	15.00	•	•	•	•
20	6.00	1.00	•	•	•	•
21	2.00	1.00	•	•	•	•
22	2.00	0.67	•	•	•	•
23	1.00	1.00	•	•	•	•
26	16941.00	705.87	•	•	•	•
27	57.00	2.37	•	•	•	•
28	87.00	3.48	•	•	•	•
29	6.00	1.00	•	•	•	•

(CONTINUED)

1989 Installations Under Plan E4

Primary Space Heating Fuel						
OIL			PROP			
Quantity Installed			N	Quantity Installed		
SUM	MEAN	SUM		MEAN		
Measure Code						
30		5.00	0.83	.	.	.
31		1.00	1.00	.	.	.
32		600.00	600.00	.	.	.
33		11.00	1.83	.	.	.
34		1.00	1.00	.	.	.
35		1.00	1.00	.	.	.
40		94.00	5.22	.	.	.
41		14.00	1.00	.	.	.
43		.	.	.	.	.

1989 Installations Under Plan E5

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	7.00	7.00	1.00	2.00	2.00	1.00	5.00	5.00	1.00
4	30.00	273.00	9.10	9.00	75.00	8.33	21.00	198.00	9.43
5	42.00	49.00	1.17	17.00	23.00	1.35	25.00	26.00	1.04
6	37.00	32.00	0.86	18.00	13.00	0.72	19.00	19.00	1.00
7	57.00	85.00	1.49	25.00	36.00	1.44	32.00	49.00	1.53
8	109.00	227.00	2.08	58.00	125.00	2.16	51.00	102.00	2.00
9	115.00	1276.00	11.10	70.00	756.00	10.80	45.00	520.00	11.56
10	86.00	179.00	2.08	49.00	104.00	2.12	37.00	75.00	2.03
11	31.00	273.00	8.81	10.00	99.00	9.90	21.00	174.00	8.29
12	116.00	251.00	2.20	63.00	143.00	2.27	51.00	108.00	2.12
13	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
14	3.00	345.00	115.00	1.00	64.00	64.00	2.00	281.00	140.50
15	8.00	21.00	2.62	3.00	6.00	2.00	5.00	15.00	3.00
16	13.00	767.00	59.00	4.00	252.00	63.00	9.00	515.00	57.22
17	11.00	14.00	1.27	3.00	5.00	1.67	8.00	9.00	1.12
18	67.00	4499.00	67.15	34.00	2090.00	61.47	33.00	2409.00	73.00
20	4.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
21	1.00	1.00	1.00	-	-	-	1.00	1.00	1.00
22	14.00	193.00	13.79	7.00	6.00	0.86	7.00	187.00	26.71
23	4.00	4.00	1.00	1.00	1.00	1.00	3.00	3.00	1.00
26	37.00	22960.00	620.54	18.00	11603.00	644.61	19.00	11357.00	597.74
27	45.00	155.00	3.44	27.00	97.00	3.59	18.00	58.00	3.22
28	88.00	462.00	5.25	53.00	274.00	5.17	35.00	188.00	5.37
29	34.00	31.00	0.91	15.00	14.00	0.93	19.00	17.00	0.89
30	6.00	6.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00

(CONTINUED)



ICF Resources Incorporated

1989 Installations Under Plan E5

Measure Code	ALL				RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N
		SUM	MEAN		SUM	MEAN		SUM	MEAN	
31	30.00	31.00	1.03	15.00	15.00	1.00	15.00	16.00	1.07	15.00
32	7.00	2261.00	323.00	3.00	1444.00	481.33	4.00	817.00	204.25	4.00
33	7.00	15.00	2.14	-	-	-	7.00	15.00	2.14	7.00
35	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-	-
40	31.00	212.00	6.84	20.00	156.00	7.80	11.00	56.00	5.09	11.00
41	12.00	12.00	1.00	4.00	4.00	1.00	8.00	8.00	1.00	8.00
43	1.00	1.00	1.00	-	-	-	1.00	1.00	1.00	1.00

1989 Installations Under Plan E5

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	7.00	7.00	1.00	3.00	3.00	1.00	4.00	4.00	1.00
4	30.00	273.00	9.10	15.00	156.00	10.40	15.00	117.00	7.80
5	42.00	69.00	1.17	22.00	29.00	1.32	20.00	20.00	1.00
6	37.00	32.00	0.86	15.00	15.00	1.00	22.00	17.00	0.77
7	57.00	85.00	1.49	30.00	46.00	1.53	27.00	39.00	1.44
8	109.00	227.00	2.08	56.00	125.00	2.23	53.00	102.00	1.92
9	115.00	1276.00	11.10	56.00	761.00	13.59	59.00	515.00	8.73
10	86.00	179.00	2.08	47.00	107.00	2.28	39.00	72.00	1.85
11	31.00	273.00	8.81	15.00	135.00	9.00	16.00	138.00	3.63
12	114.00	251.00	2.20	61.00	136.00	2.23	53.00	115.00	2.17
13	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
14	3.00	345.00	115.00	-	-	-	3.00	345.00	115.00
15	8.00	21.00	2.62	5.00	10.00	2.00	3.00	11.00	3.67
16	13.00	767.00	59.00	7.00	401.00	57.29	6.00	366.00	61.00
17	11.00	14.00	1.27	5.00	5.00	1.00	6.00	9.00	1.50
18	67.00	4499.00	67.15	38.00	3005.00	79.08	29.00	1494.00	51.52
20	4.00	4.00	1.00	3.00	3.00	1.00	1.00	1.00	1.00
21	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
22	14.00	193.00	13.79	5.00	41.00	8.20	9.00	152.00	16.89
23	4.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
26	37.00	22960.00	620.54	26.00	15757.00	606.54	13.00	7203.00	554.08
27	45.00	155.00	3.44	27.00	114.00	4.22	18.00	41.00	2.28
28	88.00	462.00	5.25	42.00	238.00	5.67	46.00	224.00	4.87
29	34.00	31.00	0.91	20.00	19.00	0.95	14.00	12.00	0.86
30	6.00	6.00	1.00	5.00	5.00	1.00	1.00	1.00	1.00

(CONTINUED)

1989 Installations Under Plan E5

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
31	30.00	31.00	1.03	22.00	22.00	1.00	8.00	9.00	1.12
32	7.00	2261.00	323.00	1.00	240.00	240.00	6.00	2021.00	336.83
33	7.00	15.00	2.14	5.00	10.00	2.00	2.00	5.00	2.50
35	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-
40	31.00	212.00	6.84	17.00	105.00	6.18	14.00	107.00	7.64
41	12.00	12.00	1.00	11.00	11.00	1.00	1.00	1.00	1.00
43	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-

1989 Installations Under Plan E5

Primary Space Heating Fuel												
Measure Code	BLANK				ELEC				GAS			
	Quantity Installed		N	N	Quantity Installed		N	N	Quantity Installed		N	N
	SUM	MEAN			SUM	MEAN			SUM	MEAN		
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	3.00	3.00
4	1.00	15.00	15.00	5.00	63.00	12.60	7.00	40.00	5.71	17.00	17.00	17.00
5	2.00	3.00	1.50	6.00	8.00	1.33	17.00	16.00	0.94	15.00	15.00	15.00
6	1.00	1.00	1.00	5.00	5.00	1.00	17.00	13.00	0.76	13.00	13.00	13.00
7	-	-	-	5.00	8.00	1.60	18.00	24.00	1.33	31.00	31.00	31.00
8	2.00	3.00	1.50	10.00	19.00	1.90	45.00	81.00	1.80	48.00	48.00	48.00
9	2.00	19.00	9.50	15.00	174.00	11.60	51.00	461.00	9.04	41.00	41.00	41.00
10	2.00	2.00	1.00	11.00	21.00	1.91	28.00	38.00	1.36	39.00	39.00	39.00
11	1.00	4.00	4.00	3.00	31.00	10.33	11.00	73.00	6.64	16.00	16.00	16.00
12	2.00	3.00	1.50	13.00	26.00	2.00	48.00	90.00	1.87	48.00	48.00	48.00
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	1.00	45.00	45.00	1.00	64.00	64.00	1.00	1.00	1.00
15	-	-	-	2.00	7.00	3.50	5.00	11.00	2.20	1.00	1.00	1.00
16	-	-	-	2.00	110.00	55.00	5.00	299.00	59.80	6.00	6.00	6.00
17	1.00	1.00	1.00	-	-	-	2.00	2.00	1.00	7.00	7.00	7.00
18	2.00	88.00	44.00	7.00	348.00	49.71	25.00	1234.00	49.36	32.00	32.00	32.00
20	1.00	1.00	1.00	1.00	1.00	1.00	-	-	-	2.00	2.00	2.00
21	-	-	-	-	-	-	1.00	1.00	1.00	-	-	-
22	-	-	-	-	-	-	8.00	44.00	5.50	6.00	6.00	6.00
23	-	-	-	-	-	-	-	-	-	4.00	4.00	4.00
26	2.00	1816.00	908.00	3.00	2535.00	845.00	16.00	7810.00	488.12	16.00	16.00	16.00
27	1.00	1.00	1.00	4.00	14.00	3.50	18.00	42.00	2.33	21.00	21.00	21.00
28	1.00	11.00	11.00	9.00	55.00	6.11	40.00	203.00	5.08	37.00	37.00	37.00
29	-	-	-	1.00	1.00	1.00	8.00	8.00	1.00	25.00	25.00	25.00
30	-	-	-	-	-	-	1.00	1.00	1.00	4.00	4.00	4.00

(CONTINUED)

1989 Installations Under Plan E5

Primary Space Heating Fuel.												
BLANK				ELEC				GAS			OIL	
N		Quantity Installed		N	Quantity Installed		N	Quantity Installed		N		
		SUM	MEAN		SUM	MEAN		SUM	MEAN			
Measure Code												
31		.	.	.	.	.	.	1.00	1.00			26.00
32		.	.	.	.	.	.	1.00	816.00			4.00
33		.	.	1.00	4.00	4.00	4.00	4.00	8.00			1.00
35		.	.	.	.	.	.	.	.			1.00
40		1.00	6.00	2.00	15.00	7.50	19.00	136.00	7.26			6.00
41		.	.	.	.	.	.	.	.			11.00
43		.	.	1.00	1.00	1.00	.	.	.			.

(CONTINUED)

1989 Installations Under Plan E5

Measure Code	Primary Space Heating Fuel									
	OIL				OTHER				PROP	
	Quantity Installed		N	MEAN	Quantity Installed		N	MEAN	Quantity Installed	
	SUM				SUM				SUM	MEAN
1	3.00			1.00						
4	155.00			9.12						
5	20.00		1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00
6	12.00		1.00	0.92	1.00	1.00		1.00		
7	48.00			1.55						
8	116.00		2.00	2.42	3.00	3.00	2.00	1.50	5.00	1.67
9	562.00		3.00	13.71	36.00	36.00	3.00	12.00	24.00	8.00
10	107.00		3.00	2.74	5.00	5.00	3.00	1.67	6.00	2.00
11	165.00			10.31						
12	125.00		1.00	2.60	2.30	2.30	2.00	2.00	5.00	2.50
13	1.00			1.00						
14	236.00			236.00						
15	3.00			3.00						
16	358.00			59.67						
17	8.00			1.14						
18	2777.00		1.00	86.78	52.00	52.00	1.00	52.00	3.00	3.00
20	2.00			1.00						
21										
22	149.00			24.83						
23	4.00			1.00						
26	10799.00			674.94						
27	92.00		1.00	4.38	6.00	6.00	1.00	6.00		
28	190.00		1.00	5.14	3.00	3.00	1.00	3.00		
29	22.00			0.88						
30	4.00		1.00	1.00	1.00	1.00	1.00	1.00		

(CONTINUED)

1989 Installations Under Plan E5

		Primary Space Heating Fuel									
		OIL			OTHER				PROP		
		Quantity Installed		N	Quantity Installed		N	Quantity Installed	Quantity Installed		MEAN
		SUM	MEAN		SUM	MEAN			SUM	MEAN	
Measure Code											
31		26.00	1.00	3.00	4.00	1.33					
32		241.00	60.25				2.00	1204.00	602.00		
33		1.00	1.00	1.00	2.00	2.00					
35		1.00	1.00								
40		34.00	5.67	2.00	14.00	7.00	1.00	5.00	5.00		
41		11.00	1.00	1.00	1.00	1.00					
43											

**Appendix B:
Measures and Installations**

**Section 3:
1989 Installations
Part b:
Statistical Analysis of
1989 Installations**



The purpose of the analysis contained in this section is to determine whether there is a systematic difference in the installment pattern (e.g., square foot covered, number of windows insulated) between the urban customers and rural customers. This analysis only applies to the quantity installed for the average recipient; it does not analyze the number of participants who received each measure.

ICF's analysis employed a t-test by which the differences between two group means (i.e., urban and rural) were compared for their statistical significance. The t-test allowed for the determination of differences in the installation patterns between the urban and rural customers, and an indication of whether these differences were due to a systematic difference in the two groups or due to random error.

The hypothesis being tested under this t-test is that the urban and rural customers' installation patterns are not statistically significantly different. In other words, the hypothesis tests that there is no difference in the group means of installation patterns between urban and rural population. Any apparent difference in group means from the samples (i.e., participants) is tested for statistical validity.

The formula for the t-test is as follows:

$$t = \frac{X_U - X_R}{S_{XU-XR}}$$

where:

X_U = mean number of installation per participant (urban)

X_R = mean number of installation per participant (rural)

S_{XU-XR} = estimated standard deviation of the difference between means

The formula for the standard deviation of the difference between means is as follows:

$$S_{XU-XR} = \sqrt{\frac{S_U^2}{U} + \frac{S_R^2}{R}}$$

where:

S_U = standard deviation within the urban participants

S_R = standard deviation within the rural participants

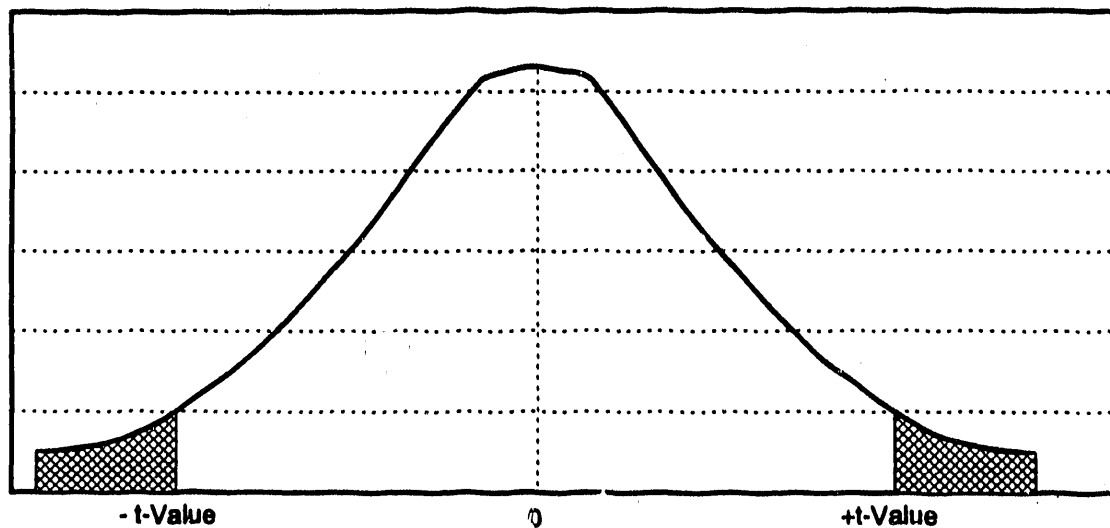
U = number of urban participants

R = number of rural participants



The t-score calculated using the above formula is compared to the critical t-score. If the absolute value of the calculated t-score is greater than the critical t-score, the difference in mean installations between the urban and rural groups should not be attributed to random error and should be considered a statistically significant difference. In other words, if the t-score calculated falls in the shaded area in figure B3-1 below, the difference in means is regarded as statistically significant.¹ The critical t-score is determined by the confidence level and the degree of freedom². Table B3-2 is a t-distribution table. It shows the critical t-value at each confidence level for varying degrees of freedom.

FIGURE B3-1



¹ For a normal distribution, the critical t-score at 95% confidence is ± 1.96 . In other words, if the calculated t-score is greater than $+1.96$ or less than -1.96 , the difference in mean installations between the urban and rural participants should be considered statistically significant.

² The degrees of freedom is defined as $U + R - 2$.



TABLE B3-2
T-Distribution Table

df	Level of significance for one-tailed test					
	.10	.05	.025	.01	.005	.0005
	Level of significance for two-tailed test					
	.20	.10	.05	.02	.01	.001
1	3.078	6.314	12.706	31.821	63.657	636.619
2	1.886	2.920	4.303	6.965	9.925	31.598
3	1.638	2.353	3.182	4.541	5.841	12.941
4	1.533	2.132	2.776	3.747	4.604	8.610
5	1.476	2.015	2.571	3.365	4.032	6.859
6	1.440	1.943	2.447	3.143	3.707	5.959
7	1.415	1.895	2.365	2.998	3.499	5.405
8	1.397	1.860	2.306	2.896	3.355	5.041
9	1.383	1.833	2.262	2.821	3.250	4.781
10	1.372	1.812	2.228	2.764	3.169	4.587
11	1.363	1.796	2.201	2.718	3.106	4.437
12	1.356	1.782	2.179	2.681	3.055	4.318
13	1.350	1.771	2.160	2.650	3.012	4.221
14	1.345	1.761	2.145	2.624	2.977	4.140
15	1.341	1.753	2.131	2.602	2.947	4.073
16	1.337	1.746	2.120	2.583	2.921	4.015
17	1.333	1.740	2.110	2.567	2.896	3.965
18	1.330	1.734	2.101	2.552	2.878	3.922
19	1.328	1.729	2.093	2.539	2.861	3.883
20	1.325	1.725	2.086	2.528	2.845	3.850
21	1.323	1.721	2.080	2.518	2.831	3.819
22	1.321	1.717	2.074	2.508	2.819	3.792
23	1.319	1.714	2.069	2.500	2.807	3.767
24	1.318	1.711	2.064	2.492	2.797	3.745
25	1.316	1.708	2.060	2.485	2.787	3.725
26	1.315	1.706	2.056	2.479	2.779	3.707
27	1.314	1.703	2.052	2.473	2.771	3.690
28	1.313	1.701	2.049	2.467	2.763	3.674
29	1.311	1.699	2.045	2.462	2.756	3.659
30	1.310	1.697	2.042	2.457	2.750	3.646
40	1.303	1.684	2.021	2.423	2.704	3.551
60	1.296	1.671	2.000	2.390	2.660	3.460
120	1.289	1.658	1.980	2.358	2.617	3.373
∞	1.282	1.645	1.960	2.326	2.576	3.291



Two types of data analysis were conducted -- (1) a t-test per measure for all customers and (2) a t-test per measure across different fuel customers.

t-test Per Measure for All Customers

Before conducting a t-test, the installation data were filtered in several ways to make the comparisons more meaningful.

First, participation data were analyzed to identify the measures that were predominantly accepted by one of the two geographic groups. The analysis showed that lighting measures (measures 33 through 39) were installed almost exclusively for urban participants. Thus, these measures were not considered in the t-test. Second, the measures with total participants less than 20 were not considered for the t-test, since it is difficult to detect differences accurately with a small sample size. Third, because the total number of participants differs between the two groups as well as across different plans, the installation data were first converted to installation per participant. Finally, the t-statistics were computed for the variable "Number of Installations Per Participant". Following is a discussion of the results of these analyses for each program plan and fuel type.

Plan E1

Under plan E1, only the low-flow faucet aerator (measure 7) has exhibited statistically different installation patterns. That is, under the plan E1, there were significantly more low-flow faucet aerators installed for the average urban aerator recipient than for the average rural recipient. This finding may be the result of two phenomena. First, under the plan E1, the urban customers may have greater relative water heating needs than rural participants. Urban customers tend to live in smaller homes that occupy less space (e.g., apartments) than rural customers. Therefore, the urban customers may spend a higher share of their energy use on water heating than the rural participants. This point can be supported by the finding that the average urban recipient of water heating measures receives a consistently higher quantity of the measures than the average rural recipient. This is true for four of the five water heating measures offered under plan E1³. Second, among the water heating measures offered under E1, the low-flow faucet aerator is one of the least-expensive. Given a fixed amount budget (i.e., \$150 per household), the low-cost item such as the low-flow faucet aerator is often a choice of high priority.

Plan E2

Only four measures were offered under the plan E2, and none of them showed any statistically significant difference in the average number of installations between the urban and rural recipients.

Plan F3

The number of installations by urban participants was statistically significantly higher for two measures, low-flow faucet aerator (measure 7) and window weatherstripping (measure 11). For the faucet

³ Although only the low-flow faucet aerator (measure 7) proved to be statistically significant, the urban participants exhibited higher average installations in three other water heating measures including set water heater thermostat (measure 1), low-flow shower head (measure 5) and pipe insulation (measure 18).



aerator, we believe the same reasons for this finding are true as those found under plan E1. That is, the urban customers' needs for water heating measures (as opposed to space heating measures) and for low-cost measures are the primary reasons for this result.

For weatherstripping of windows, the urban recipients received more window weatherstripping than the rural customers under the low-budget plans such as E1 and E3. On the contrary, it is worth noting that the rural customers were allocated more window weatherstripping than the urban customers under the high-budget plans such as E4 and E5. This result can be explained by the fact that the rural households typically have more windows (since they tend to have larger living spaces). Accordingly, the rural customers were not provided with this measure unless there were significant subsidies such as found in plans E4 and E5.

Plan E4

No measure under the plan E4 exhibited statistically significant differences in the installation patterns between urban and rural customers.

Plan E5

The rural customer's installation of door sweeps proved to be statistically significantly higher than that of the urban customers as indicated by the t-statistics. It is unclear why this may be true. It may be explained by the fact that a greater percentage of the rural households live in single-family homes (with more doors) than the urban households.

t-test Per Measure Across Different Fuels

Before conducting a t-test, the installation data were filtered in the same manner as those explained above. This process precluded analysis on certain measures due to lack of adequate sample size. For instance, a complete analysis on electric customers was nearly impossible because most measures had less than 20 electric customers participating.

Plan E1

In plan E1, the only measure which demonstrated a statistically significant difference in installation pattern was piping insulation. A much higher quantity of insulation was installed for urban gas water heating recipients than for rural gas water heating recipients.

Plan E2

Under the plan E2, none of the four heating measures exhibited any statistically significant differences in installation patterns between urban and rural customers, regardless of the fuel types.

Plan E3

For plan E3, there were a number of water heating measures that had statistically significant installation differences. The low-flow faucet aerator (measure 7) was installed in urban homes with a much greater frequency than in rural homes for recipients with electric or oil water heating. Urban and rural gas water heating participants were evenly provided with this measure. Piping insulation (measure 18) was not evenly provided among urban and rural participants. It was provided to urban gas water



heating participants with a greater frequency than to rural households.

Also in plan E3, window caulking (measure 11) was provided unevenly to urban and rural electric space heating customers. Urban recipients received more of this measure. Among recipients with oil heat, more exterior door caulk (measure 10) was installed for urban recipients than for rural recipients.

Plan E4

In plan E4, only piping and ceiling insulation (measures 18 and 26, respectively) had inconsistent installation patterns between urban and rural participants. Both measures were installed more heavily in the homes of urban recipients. Piping insulation was installed more intensively for urban gas water heating recipients and ceiling insulation was installed more intensively for urban gas space heating customers.

Plan E5

None of the measures offered under the plan E5 exhibited any statistically significant differences in installation patterns between urban and rural customers, regardless of the fuel types.





Appendix B: Measures and Installations

Section 4: 1990 Installations

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1990 Installations Under Plan E1

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	5.00	5.00	1.00	1.00	1.00	1.00	4.00	4.00	1.00
4	103.00	844.00	8.19	27.00	224.00	8.30	76.00	620.00	8.16
5	187.00	191.00	1.02	90.00	91.00	1.01	97.00	100.00	1.03
6	126.00	127.00	1.01	69.00	69.00	1.00	57.00	58.00	1.02
7	314.00	506.00	1.61	163.00	247.00	1.52	151.00	259.00	1.72
8	531.00	1121.00	2.11	282.00	576.00	2.04	249.00	545.00	2.19
9	444.00	4883.00	10.52	256.00	2791.00	10.90	208.00	2092.00	10.06
10	330.00	660.00	2.00	204.00	401.00	1.97	126.00	259.00	2.06
11	52.00	318.00	6.12	22.00	148.00	6.73	30.00	170.00	5.67
12	292.00	580.00	1.99	173.00	338.00	1.95	119.00	242.00	2.03
13	12.00	12.00	1.00	2.00	2.00	1.00	10.00	10.00	1.00
14	2.00	149.00	74.50	1.00	122.00	122.00	1.00	27.00	27.00
15	2.00	9.00	4.50	1.00	2.00	2.00	1.00	7.00	7.00
16	36.00	1311.00	36.42	12.00	540.00	45.00	24.00	771.00	32.13
17	11.00	15.00	1.36	6.00	9.00	1.50	5.00	6.00	1.20
18	274.00	16544.00	60.38	109.00	6577.00	60.34	165.00	9967.00	60.41
19	3.00	71.00	23.67	-	-	-	3.00	71.00	23.67
20	6.00	6.00	1.00	2.00	2.00	1.00	4.00	4.00	1.00
33	156.00	348.00	2.23	98.00	237.00	2.42	58.00	111.00	1.91
34	10.00	12.00	1.20	4.00	5.00	1.25	6.00	7.00	1.17
35	20.00	23.00	1.15	8.00	9.00	1.12	12.00	14.00	1.17
36	25.00	44.00	1.76	-	-	-	25.00	44.00	1.76
39	25.00	50.00	2.00	-	-	-	25.00	50.00	2.00
44	14.00	360.00	25.71	8.00	156.00	19.50	6.00	204.00	34.00

1990 Installations Under Plan E1

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	5.00	5.00	1.00	2.00	2.00	1.00	3.00	3.00	1.00
4	103.00	844.00	8.19	68.00	608.00	8.94	35.00	236.00	6.74
5	187.00	191.00	1.02	83.00	86.00	1.04	104.00	105.00	1.01
6	126.00	127.00	1.01	44.00	45.00	1.02	82.00	82.00	1.00
7	314.00	506.00	1.61	142.00	241.00	1.70	172.00	265.00	1.54
8	531.00	1121.00	2.11	245.00	547.00	2.23	286.00	574.00	2.01
9	464.00	4883.00	10.52	191.00	2191.00	11.47	273.00	2692.00	9.86
10	330.00	660.00	2.00	160.00	353.00	2.21	170.00	307.00	1.81
11	52.00	318.00	6.12	18.00	130.00	7.22	34.00	188.00	5.53
12	292.00	580.00	1.99	131.00	266.00	2.03	161.00	314.00	1.95
13	12.00	12.00	1.00	7.00	7.00	1.00	5.00	5.00	1.00
14	2.00	149.00	74.50	2.00	149.00	74.50	-	-	-
15	2.00	9.00	4.50	1.00	7.00	7.00	1.00	2.00	2.00
16	36.00	1311.00	36.42	25.00	802.00	32.08	11.00	509.00	46.27
17	11.00	15.00	1.36	6.00	10.00	1.67	5.00	5.00	1.00
18	274.00	16544.00	60.38	134.00	8945.00	66.75	140.00	7599.00	54.28
19	3.00	71.00	23.67	2.00	29.00	14.50	1.00	42.00	42.00
20	6.00	6.00	1.00	6.00	6.00	1.00	-	-	-
33	156.00	348.00	2.23	73.00	158.00	2.16	83.00	190.00	2.29
34	10.00	12.00	1.20	3.00	3.00	1.00	7.00	9.00	1.29
35	20.00	23.00	1.15	8.00	10.00	1.25	12.00	13.00	1.08
36	25.00	44.00	1.76	-	-	-	25.00	44.00	1.76
39	25.00	50.00	2.00	-	-	-	25.00	50.00	2.00
44	14.00	360.00	25.71	5.00	91.00	18.20	9.00	269.00	29.89

1990 Installations Under Plan E1

Primary Space Heating Fuel												
Measure Code	BLANK			ELEC			GAS			OIL		
	Quantity Installed			Quantity Installed			Quantity Installed			Quantity Installed		
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN
1												
4	5.00	44.00	8.80	10.00	94.00	9.40	2.00	2.00	1.00	1.00	2.00	3.00
5	13.00	13.00	1.00	16.00	16.00	1.00	18.00	86.00	4.78	63.00	86.00	63.00
6	11.00	11.00	1.00	7.00	7.00	1.00	81.00	82.00	1.01	74.00	82.00	74.00
7	27.00	43.00	1.59	29.00	52.00	1.79	71.00	71.00	1.00	33.00	71.00	33.00
8	53.00	114.00	2.15	41.00	77.00	1.88	126.00	188.00	1.49	120.00	188.00	120.00
9	43.00	463.00	10.77	33.00	298.00	9.03	211.00	426.00	2.01	213.00	426.00	213.00
10	35.00	72.00	2.06	22.00	45.00	2.05	201.00	1950.00	9.70	180.00	1950.00	180.00
11	1.00	2.00	2.00				126.00	230.00	1.83	141.00	230.00	141.00
12	39.00	79.00	2.03	15.00	25.00	1.67	22.00	115.00	5.23	27.00	115.00	27.00
13				2.00	2.00	1.00	137.00	275.00	2.01	98.00	275.00	98.00
14				1.00	27.00	27.00	2.00	2.00	1.00	7.00	2.00	7.00
15												
16	1.00	6.00	6.00									
17	2.00	3.00	1.50	1.00	1.00	1.00	10.00	454.00	45.40	24.00	454.00	24.00
18	24.00	1668.00	69.50	20.00	691.00	34.55	5.00	5.00	1.00	3.00	5.00	3.00
19				2.00	53.00	26.50	81.00	4451.00	54.95	144.00	4451.00	144.00
20												
33	8.00	23.00	2.87	19.00	36.00	1.89	2.00	2.00	1.00	3.00	2.00	3.00
34							56.00	124.00	2.21	69.00	124.00	69.00
35				5.00	7.00	1.40	6.00	7.00	1.17	4.00	7.00	4.00
36							8.00	8.00	1.00	7.00	8.00	7.00
39												
44	3.00	79.00	26.33	1.00	32.00	32.00	4.00	63.00	15.75	6.00	63.00	6.00

(CONTINUED)

1990 Installations Under Plan E1

		Primary Space Heating Fuel									
		OIL				OTHER				PROP	
		Quantity Installed		N	Quantity Installed		N	Quantity Installed		Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN	SUM	MEAN
Measure Code											
1		3.00	1.00								
4		549.00	8.71	5.00	57.00	11.40	2.00	14.00	7.00		
5		77.00	1.04	3.00	3.00	1.00					
6		34.00	1.03	2.00	2.00	1.00	2.00	2.00	1.00		
7		205.00	1.71	6.00	9.00	1.50	6.00	9.00	1.50		
8		478.00	2.24	7.00	11.00	1.57	6.00	17.00	2.83		
9		2110.00	11.72	3.00	20.00	6.67	4.00	42.00	10.50		
10		303.00	2.15	3.00	5.00	1.67	3.00	5.00	1.67		
11		191.00	7.07	1.00	8.00	8.00	1.00	2.00	2.00		
12		196.00	2.00	2.00	3.00	1.50	1.00	2.00	2.00		
13		7.00	1.00				1.00	1.00	1.00		
14				1.00	122.00	122.00					
15		9.00	4.50								
16		813.00	33.88				1.00	38.00	38.00		
17		6.00	2.00								
18		9614.00	66.76	1.00	51.00	51.00	4.00	69.00	17.25		
19		18.00	18.00								
20		3.00	1.00								
33		158.00	2.29	2.00	4.00	2.00	2.00	3.00	1.50		
34		5.00	1.25								
35		8.00	1.14								
36		44.00	1.76								
39		50.00	2.00								
44		186.00	31.00								

1990 Installations Under Plan E2

Measure Code	ALL				RURAL				URBAN			
	N	Quantity Installed		N	SUM	MEAN	N	SUM	MEAN	N	Quantity Installed	
		SUM	MEAN								SUM	MEAN
1	3.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00
4	55.00	474.00	8.62	17.00	136.00	8.00	38.00	358.00	8.89	49.00	50.00	1.02
5	78.00	80.00	1.03	29.00	30.00	1.03	19.00	19.00	1.00	76.00	126.00	1.66
6	45.00	45.00	1.00	26.00	26.00	1.00	64.00	64.00	1.56	122.00	290.00	2.38
7	117.00	190.00	1.62	41.00	64.00	1.56	74.00	166.00	2.24	104.00	1221.00	11.74
8	196.00	456.00	2.33	69.00	760.00	11.01	47.00	102.00	2.17	81.00	201.00	2.48
9	173.00	1981.00	11.45	69.00	760.00	11.01	9.00	57.00	6.33	13.00	89.00	6.85
10	128.00	303.00	2.37	47.00	102.00	2.17	43.00	84.00	1.95	54.00	96.00	1.78
11	22.00	146.00	6.64	9.00	57.00	6.33	1.00	1.00	1.00	5.00	5.00	1.00
12	97.00	180.00	1.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
13	6.00	6.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	22.00	643.00	29.23	5.00	132.00	26.40	17.00	511.00	30.06	17.00	17.00	1.70
17	14.00	25.00	1.79	4.00	8.00	2.00	109.00	6981.00	64.05	1.00	95.00	95.00
18	171.00	10752.00	62.88	62.00	3771.00	60.82	2.00	2.00	1.00	7.00	7.00	1.00
19	1.00	95.00	95.00	1.00	1.00	1.00	39.00	38.00	0.97	44.00	43.00	0.98
20	9.00	9.00	1.00	2.00	2.00	1.00	24.00	23.00	0.96	68.00	67.00	0.99
29	83.00	81.00	0.98	8.00	8.00	1.00	8.00	8.00	1.00	19.00	19.00	1.00
30	92.00	90.00	0.98	8.00	8.00	1.00	44.00	42748.00	971.55	78.00	76525.00	981.09
31	27.00	27.00	1.00	8.00	8.00	1.00	44.00	94.00	2.14	63.00	112.00	1.78
32	122.00	119273.00	977.65	44.00	42748.00	971.55	3.00	3.00	1.00	2.00	2.00	1.00
33	107.00	206.00	1.93	44.00	94.00	2.14	4.00	4.00	1.00	6.00	9.00	1.50
34	5.00	5.00	1.00	3.00	3.00	1.00	4.00	4.00	1.00	23.00	35.00	1.52
35	10.00	13.00	1.30	4.00	4.00	1.00	1.52	1.52	1.00	23.00	35.00	1.52
36	23.00	35.00	1.52	1.52	1.52	1.00	1.52	1.52	1.00	23.00	35.00	1.52

(CONTINUED)

1990 Installations Under Plan E2

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
39	23.00	46.00	2.00				23.00	46.00	2.00
41	150.00	149.00	0.99	64.00	63.00	0.98	86.00	86.00	1.00
44	4.00	248.00	62.00	1.00	40.00	40.00	3.00	208.00	69.33

1990 Installations Under Plan E2

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	3.00	3.00	1.00	3.00	3.00	1.00						
4	55.00	474.00	8.62	39.00	384.00	9.85	16.00	90.00	5.62			
5	78.00	80.00	1.03	55.00	57.00	1.04	23.00	23.00	1.00			
6	45.00	45.00	1.00	29.00	29.00	1.00	16.00	16.00	1.00			
7	117.00	190.00	1.62	83.00	138.00	1.66	34.00	52.00	1.53			
8	197.00	456.00	2.33	128.00	303.00	2.37	68.00	153.00	2.25			
9	173.00	1981.00	11.45	117.00	1375.00	11.75	56.00	606.00	10.82			
10	128.00	303.00	2.37	89.00	204.00	2.29	39.00	99.00	2.54			
11	22.00	146.00	6.64	10.00	75.00	7.50	12.00	71.00	5.92			
12	97.00	180.00	1.86	69.00	129.00	1.87	28.00	51.00	1.82			
13	6.00	6.00	1.00	3.00	3.00	1.00	3.00	3.00	1.00			
15	1.00	1.00	1.00	1.00	1.00	1.00						
16	22.00	643.00	29.23	15.00	443.00	29.53	7.00	200.00	28.57			
17	14.00	25.00	1.79	7.00	16.00	2.29	7.00	9.00	1.29			
18	171.00	10752.00	62.88	121.00	7328.00	60.56	50.00	3424.00	68.48			
19	1.00	95.00	95.00	1.00	95.00	95.00						
20	9.00	9.00	1.00	7.00	7.00	1.00	2.00	2.00	1.00			
29	83.00	81.00	0.98	55.00	53.00	0.96	28.00	28.00	1.00			
30	92.00	90.00	0.98	47.00	46.00	0.98	45.00	44.00	0.98			
31	27.00	27.00	1.00	22.00	22.00	1.00	5.00	5.00	1.00			
32	122.00	119273.00	977.65	80.00	82922.00	1036.53	42.00	36351.00	865.50			
33	107.00	206.00	1.93	72.00	142.00	1.97	35.00	64.00	1.83			
34	5.00	5.00	1.00	4.00	4.00	1.00	1.00	1.00	1.00			
35	10.00	13.00	1.30	6.00	8.00	1.33	4.00	5.00	1.25			
36	23.00	35.00	1.52				23.00	35.00	1.52			

(CONTINUED)



ICF Resources Incorporated

BN02427.3AppB4

1990 Installations Under Plan E2

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
39	23.00	46.00	2.00	.	.	.	23.00	46.00	2.00
41	150.00	149.00	0.99	100.00	99.00	0.99	50.00	50.00	1.00
44	4.00	248.00	62.00	3.00	136.00	45.33	1.00	112.00	112.00

1990 Installations Under Plan E2

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	N
		SUM	MEAN		SUM	MEAN		SUM	MEAN		
1											3.00
4											50.00
5	3.00	3.00	1.00				4.00	51.00	12.75		68.00
6	6.00	6.00	1.00				7.00	7.00	1.00		37.00
7	10.00	13.00	1.30	1.00	2.00	2.00	4.00	7.00	1.75		99.00
8	12.00	26.00	2.17	2.00	6.00	3.00	12.00	24.00	2.00		167.00
9	8.00	96.00	12.00	1.00	14.00	14.00	20.00	219.00	10.95		142.00
10	7.00	13.00	1.86	1.00	2.00	2.00	17.00	37.00	2.18		101.00
11							1.00	3.00	3.00		20.00
12	11.00	21.00	1.91				4.00	7.00	1.75		82.00
13							1.00	1.00	1.00		5.00
15											1.00
16								149.00	49.67		19.00
17							1.00	3.00	3.00		13.00
18	10.00	430.00	43.00				16.00	877.00	54.81		145.00
19											1.00
20											9.00
29	6.00	6.00	1.00				3.00	3.00	1.00		73.00
30	6.00	6.00	1.00				1.00	1.00	1.00		85.00
31	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		24.00
32	5.00	4850.00	970.00	3.00	3578.00	1192.67	29.00	27496.00	948.14		83.00
33	2.00	3.00	1.50	1.00	3.00	3.00	23.00	39.00	1.70		79.00
34											5.00
35	1.00	1.00	1.00	1.00	3.00	3.00	1.00	1.00	1.00		7.00
36											23.00

(CONTINUED)

BN02427.3NApB4

1990 Installations Under Plan E2

Primary Space Heating Fuel										
Measure Code	BLANK			ELEC			GAS			OIL
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		
		SUM	MEAN		SUM	MEAN		SUM	MEAN	
	39									23.00
	41	9.00	9.00	1.00				9.00	9.00	1.00
44										4.00

(CONTINUED)

1990 Installations Under Plan E2

Measure Code	Primary Space Heating Fuel					
	OIL			PROP		
	Quantity Installed			Quantity Installed		
	SUM	MEAN	N	SUM	MEAN	N
1	3.00	1.00	-	-	-	-
4	421.00	8.42	1.00	2.00	2.00	2.00
5	70.00	1.03	-	-	-	-
6	37.00	1.00	-	-	-	-
7	164.00	1.66	3.00	4.00	1.33	1.67
8	395.00	2.37	3.00	5.00	10.00	2.00
9	1632.00	11.49	2.00	20.00	2.00	2.00
10	247.00	2.45	2.00	6.00	6.00	6.00
11	137.00	6.85	1.00	-	-	-
12	152.00	1.85	-	-	-	-
13	5.00	1.00	-	-	-	-
15	1.00	1.00	-	-	-	-
16	494.00	26.00	-	-	-	-
17	22.00	1.69	-	-	-	-
18	9445.00	65.14	-	-	-	-
19	95.00	95.00	-	-	-	-
20	9.00	1.00	-	-	-	-
29	71.00	0.97	1.00	1.00	1.00	1.00
30	83.00	0.98	-	-	-	-
31	24.00	1.00	-	-	-	-
32	80693.00	972.20	2.00	2656.00	1328.00	2.00
33	157.00	1.99	2.00	4.00	2.00	2.00
34	5.00	1.00	-	-	-	-
35	8.00	1.14	-	-	-	-
36	35.00	1.52	-	-	-	-

(CONTINUED)

1990 Installations Under Plan E2

	Primary Space Heating Fuel					
	OIL			PROP		
	Quantity Installed		N	Quantity Installed		MEAN
	SUM	MEAN		SUM	MEAN	
Measure Code						
39	46.00	2.00	-	-	-	-
41	129.00	0.99	2.00	2.00	1.00	1.00
44	248.00	62.00	-	-	-	-

1990 Installations Under Plan E3

Measure Code	ALL				RURAL				URBAN			
	N	Quantity Installed		MEAN	N	Quantity Installed		MEAN	N	Quantity Installed		MEAN
		SUM				SUM				SUM		
1	8.00	7.00		0.88	3.00	2.00		0.67	5.00	5.00		1.00
4	282.00	1861.00		6.60	105.00	791.00		7.53	177.00	1070.00		6.05
5	638.00	615.00		0.96	316.20	314.00		0.99	322.00	301.00		0.93
6	249.00	227.00		0.91	96.00	92.00		0.94	151.00	135.00		0.89
7	831.00	1267.00		1.52	400.00	590.00		1.47	431.00	677.00		1.57
8	675.00	1289.00		1.91	312.00	625.00		2.00	363.00	664.00		1.83
9	867.66	7036.00		8.12	423.00	3447.00		8.15	444.00	3589.00		8.08
10	770.00	1486.00		1.93	340.00	669.00		1.97	430.00	817.00		1.90
11	187.00	1409.00		7.53	74.00	514.00		6.95	113.00	895.00		7.92
12	751.00	1353.00		1.80	313.00	599.00		1.91	438.00	754.00		1.72
13	35.00	33.00		0.94	11.00	9.00		0.82	24.00	24.00		1.00
14	79.00	4819.00		61.00	28.00	1643.00		58.68	51.00	3176.00		62.27
15	31.00	86.00		2.77	8.00	21.00		2.62	23.00	65.00		2.83
16	53.00	2010.00		37.92	12.00	491.00		40.92	41.00	1519.00		37.05
17	19.00	16.00		0.84	3.00	2.00		0.67	16.00	14.00		0.88
18	352.00	18873.00		53.62	131.00	7292.00		55.66	221.00	11581.00		52.40
19	49.00	2647.00		54.02	12.00	388.00		32.33	37.00	2259.00		61.05
20	30.00	29.00		0.97	12.00	12.00		1.00	18.00	17.00		0.94
22	16.00	106.00		6.62	8.00	49.00		6.12	8.00	57.00		7.12
23	9.00	9.00		1.00	2.00	2.00		1.00	7.00	7.00		1.00
27	180.00	430.00		2.39	78.00	202.00		2.59	102.00	228.00		2.24
33	444.00	900.00		1.94	185.00	381.00		2.06	279.00	519.00		1.86
34	60.00	86.00		1.43	21.00	31.00		1.48	39.00	55.00		1.41
35	172.00	267.00		1.55	37.00	60.00		1.62	135.00	207.00		1.53
37	44.00	125.00		2.84	44.00	125.00		2.84				

(CONTINUED)



ICF Resources Incorporated

1990 Installations Under Plan E3

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
38	167.00	167.00	1.00	137.00	137.00	1.00	33.00	30.00	1.00
39	37.00	82.00	2.22	5.00	18.00	3.60	32.00	64.00	2.00
42	5.00	3.00	0.60	4.00	3.00	0.75	1.00	0.00	0.00
43	24.00	157.00	6.54	8.00	78.00	9.75	16.00	79.00	4.94
44	46.00	2182.00	47.43	18.00	739.00	41.06	28.00	1443.00	51.54
48	25.00	26.00	1.04	25.00	26.00	1.04	.	.	.

1990 Installations Under Plan E3

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	8.00	7.00	0.88	6.00	5.00	0.83	2.00	2.00	1.00
4	282.00	1861.00	6.60	147.00	1170.00	7.96	135.00	691.00	5.12
5	638.00	615.00	0.96	217.00	204.00	0.94	421.00	411.00	0.98
6	249.00	227.00	0.91	107.00	94.00	0.88	142.00	133.00	0.94
7	831.00	1267.00	1.52	305.00	492.00	1.61	526.00	775.00	1.47
8	675.00	1289.00	1.91	312.00	630.00	2.02	363.00	659.00	1.82
9	867.00	7036.00	8.12	313.00	3070.00	9.81	554.00	3966.00	7.16
10	770.00	1486.00	1.93	339.00	675.00	1.99	431.00	811.00	1.88
11	187.00	1409.00	7.53	81.00	713.00	8.80	106.00	696.00	6.57
12	751.00	1353.00	1.80	322.00	590.00	1.83	429.00	763.00	1.78
13	35.00	33.00	0.94	21.00	19.00	0.90	14.00	14.00	1.00
14	79.00	4819.00	61.00	37.00	2569.00	69.43	42.00	2250.00	53.57
15	31.00	86.00	2.77	24.00	72.00	3.00	7.00	14.00	2.00
16	53.00	2010.00	37.92	36.00	1512.00	42.00	17.00	498.00	29.29
17	19.00	16.00	0.84	14.00	11.00	0.79	5.00	5.00	1.00
18	352.00	18873.00	53.62	199.00	11374.00	57.16	153.00	7499.00	49.01
19	49.00	2647.00	54.02	31.00	1553.00	50.10	18.00	1094.00	60.78
20	30.00	29.00	0.97	25.00	24.00	0.96	5.00	5.00	1.00
22	16.00	106.00	6.62	11.00	100.00	9.09	5.00	6.00	1.20
23	9.00	9.00	1.00	6.00	6.00	1.00	3.00	3.00	1.00
27	180.00	430.00	2.39	97.00	212.00	2.19	83.00	218.00	2.63
33	464.00	900.00	1.94	209.00	395.00	1.89	255.00	505.00	1.98
34	60.00	86.00	1.43	28.00	33.00	1.18	32.00	53.00	1.66
35	172.00	267.00	1.55	81.00	134.00	1.65	91.00	133.00	1.46
37	44.00	125.00	2.84	-	-	-	44.00	125.00	2.84

(CONTINUED)

1990 Installations Under Plan E3

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
38	167.00	167.00	1.00	1.00	1.00	1.00	166.00	166.00	1.00
39	37.00	82.00	2.22	.	.	.	37.00	82.00	2.22
42	5.00	3.00	0.60	4.00	3.00	0.75	1.00	0.00	0.00
43	24.00	157.00	6.54	15.00	117.00	7.80	9.00	40.00	4.44
44	46.00	2182.00	47.43	25.00	1006.00	40.24	21.00	1176.00	56.00
48	25.00	26.00	1.04	.	.	.	25.00	26.00	1.04

1990 Installations Under Plan E3

Primary Space Heating Fuel												
Measure Code	BLANK			ELEC			GAS			OIL		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	-	-	-	2.00	2.00	1.00	-	-	-	-	-	4.00
4	8.00	32.00	4.00	76.00	514.00	6.76	54.00	287.90	5.31	131.00	131.00	131.00
5	16.00	16.00	1.00	151.00	150.00	0.99	133.00	127.00	0.95	322.00	322.00	322.00
6	6.00	6.00	1.00	35.00	32.00	0.91	99.00	89.00	0.90	100.00	100.00	100.00
7	25.00	35.00	1.40	177.00	310.00	1.75	184.00	275.00	1.49	423.00	423.00	423.00
8	20.00	38.00	1.90	87.00	142.00	1.63	192.00	344.00	1.79	364.00	364.00	364.00
9	25.00	241.00	9.64	172.00	1041.00	6.05	174.00	1371.00	7.88	466.00	466.00	466.00
10	29.00	57.00	1.97	165.00	301.00	1.82	188.00	345.00	1.84	359.00	359.00	359.00
11	7.00	52.00	7.43	12.00	43.00	5.25	44.00	330.00	7.50	118.00	118.00	118.00
12	23.00	43.00	1.87	161.00	239.00	1.48	200.00	356.00	1.78	356.00	356.00	356.00
13	1.00	1.00	1.00	10.00	10.00	1.00	6.00	5.00	0.83	17.00	17.00	17.00
14	-	-	-	20.00	923.00	46.15	20.00	1173.00	58.65	33.00	33.00	33.00
15	1.00	4.00	4.00	3.00	10.00	3.33	5.00	8.00	1.60	21.00	21.00	21.00
16	1.00	35.00	35.00	1.00	36.00	36.00	14.00	270.00	19.29	37.00	37.00	37.00
17	1.00	1.00	1.00	4.00	4.00	1.00	2.00	1.00	0.50	12.00	12.00	12.00
18	10.00	391.00	39.10	42.00	1356.00	32.29	76.00	3092.00	40.68	217.00	217.00	217.00
19	-	-	-	6.00	292.00	48.67	9.00	530.00	58.89	31.00	31.00	31.00
20	1.00	1.00	1.00	7.00	7.00	1.00	3.00	3.00	1.00	17.00	17.00	17.00
22	-	-	-	2.00	2.00	1.00	2.00	3.00	1.50	6.00	6.00	6.00
23	-	-	-	1.00	1.00	1.00	1.00	1.00	1.00	6.00	6.00	6.00
27	6.00	22.00	3.67	16.00	35.00	2.19	46.00	140.00	3.04	105.00	105.00	105.00
33	20.00	30.00	1.50	131.00	250.00	1.91	81.00	176.00	2.17	210.00	210.00	210.00
34	7.00	9.00	1.29	19.00	31.00	1.63	11.00	18.00	1.64	19.00	19.00	19.00
35	11.00	12.00	1.09	85.00	130.00	1.53	15.00	24.00	1.60	50.00	50.00	50.00
37	6.00	15.00	2.50	1.00	1.00	1.00	12.00	46.00	3.83	25.00	25.00	25.00

(CONTINUED)

1990 Installations Under Plan E3

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	OIL
		SUM	MEAN		SUM	MEAN		SUM	MEAN		
38	4.00	4.00	1.00	30.00	30.00	1.00					133.00
39	3.00	12.00	4.00	33.00	67.00	2.03					1.00
42	-	-	-	-	-	-			1.00	0.00	4.00
43	-	-	-	2.00	17.00	8.50			4.00	32.00	17.00
44	1.00	39.00	39.00		-	-			6.00	415.00	39.00
48	3.00	4.00	1.33	1.00	1.00	1.00			6.00	6.00	15.00

(CONTINUED)

1990 Installations Under Plan E3

Primary Space Heating Fuel										
Measure Code	OIL			OTHER			PROP			
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	MEAN
	SUM	MEAN		SUM	MEAN		SUM	MEAN		
1	3.00	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
4	911.00	6.95	10.00	94.00	9.40	3.00	23.00	7.67	1.00	1.00
5	306.00	0.95	12.00	12.00	1.00	4.00	4.00	1.00	1.00	1.00
6	91.00	0.91	7.00	7.00	1.00	2.00	2.00	1.00	1.00	1.00
7	612.00	1.45	15.00	23.00	1.53	7.00	12.00	1.71	1.00	1.00
8	747.00	2.05	7.00	9.00	1.29	5.00	9.00	1.80	1.00	1.00
9	4075.00	8.74	17.00	192.00	11.29	13.00	116.00	8.92	1.00	1.00
10	721.00	2.01	17.00	38.00	2.24	12.00	24.00	2.00	1.00	1.00
11	924.00	7.83	1.00	13.00	13.00	5.00	27.00	5.40	1.00	1.00
12	698.00	1.96	6.00	10.00	1.67	5.00	7.00	1.40	1.00	1.00
13	16.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	2222.00	67.33	5.00	493.00	98.60	1.00	8.00	8.00	1.00	1.00
15	60.00	2.86	1.00	4.00	4.00	1.00	1.00	1.00	1.00	1.00
16	1669.00	45.11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	10.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18	13881.00	63.97	4.00	39.00	9.75	3.00	114.00	38.00	1.00	1.00
19	1648.00	53.16	2.00	155.00	77.50	1.00	22.00	22.00	1.00	1.00
20	16.00	0.94	1.00	1.00	1.00	1.00	2.00	1.00	1.00	1.00
22	56.00	9.33	4.00	44.00	11.00	2.00	1.00	0.50	1.00	1.00
23	6.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
27	224.00	2.13	5.00	6.00	1.20	2.00	3.00	1.50	1.00	1.00
33	407.00	1.94	14.00	23.00	1.64	8.00	14.00	1.75	1.00	1.00
34	24.00	1.26	3.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00
35	81.00	1.62	8.00	15.00	1.87	3.00	5.00	1.67	1.00	1.00
37	63.00	2.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

(CONTINUED)

1990 Installations Under Plan E3

		Primary Space Heating Fuel									
		OIL			OTHER			PROP			
		Quantity Installed			Quantity Installed			Quantity Installed			
		SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	
Measure Code											
38		133.00	1.00								
39		3.00	3.00								
42		3.00	0.75								
43		108.00	6.35								
44		1728.00	44.31								
48		15.00	1.00								

1990 Installations Under Plan E3P

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
4	62.00	118.00	1.90	.	.	.	62.00	118.00	1.90
5	98.00	98.00	1.00	21.00	21.00	1.00	77.00	77.00	1.00
6	1.00	1.00	1.00	1.00	1.00	1.00	.	.	.
7	94.00	163.00	1.73	14.00	19.00	1.36	80.00	144.00	1.80
8	30.00	42.00	1.40	30.00	42.00	1.40	.	.	.
9	28.00	116.00	4.14	28.00	116.00	4.14	.	.	.
10	30.00	50.00	1.67	30.00	50.00	1.67	.	.	.
11	27.00	132.00	4.89	27.00	132.00	4.89	.	.	.
12	30.00	38.00	1.27	30.00	38.00	1.27	.	.	.
27	1.00	8.00	8.00	1.00	8.00	8.00	.	.	.
33	177.00	385.00	2.18	140.00	346.00	2.47	37.00	39.00	1.05
34	14.00	14.00	1.00	2.00	2.00	1.00	12.00	12.00	1.00
35	131.00	256.00	1.95	43.00	49.00	1.14	88.00	207.00	2.35
36	190.00	241.00	1.27	102.00	153.00	1.50	88.00	88.00	1.00
37	146.00	250.00	1.71	97.00	155.00	1.60	49.00	95.00	1.94
38	445.00	583.00	1.31	159.00	283.00	1.78	286.00	300.00	1.05
39	166.00	188.00	1.13	72.00	94.00	1.31	94.00	94.00	1.00
48	15.00	17.00	1.13	15.00	17.00	1.13	.	.	.

1990 Installations Under Plan E3P

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
4	62.00	118.00	1.90	-	-	-	62.00	118.00	1.90
5	98.00	98.00	1.00	1.00	1.00	1.00	97.00	97.00	1.00
6	1.00	1.00	1.00	-	-	-	1.00	1.00	1.00
7	94.00	163.00	1.73	-	-	-	94.00	163.00	1.73
8	30.00	42.00	1.40	1.00	1.00	1.00	29.00	41.00	1.41
9	28.00	116.00	4.14	1.00	3.00	3.00	27.00	113.00	4.19
10	30.00	50.00	1.67	1.00	1.00	1.00	29.00	49.00	1.69
11	27.00	132.00	4.89	1.00	4.00	4.00	26.00	128.00	4.92
12	30.00	38.00	1.27	1.00	1.00	1.00	29.00	37.00	1.28
27	1.00	8.00	8.00	-	-	-	1.00	8.00	8.00
33	177.00	385.00	2.18	-	-	-	177.00	385.00	2.18
34	14.00	14.00	1.00	-	-	-	14.00	14.00	1.00
35	131.00	256.00	1.95	-	-	-	131.00	256.00	1.95
36	190.00	241.00	1.27	-	-	-	190.00	241.00	1.27
37	146.00	250.00	1.71	1.00	1.00	1.00	145.00	249.00	1.72
38	445.00	583.00	1.31	1.00	1.00	1.00	444.00	582.00	1.31
39	166.00	188.00	1.13	-	-	-	166.00	188.00	1.13
48	15.00	17.00	1.13	-	-	-	15.00	17.00	1.13

1990 Installations Under Plan E3P

Primary Space Heating Fuel												
	BLANK						GAS				OIL	
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		Quantity Installed		
		SUM	MEAN		SUM	MEAN		SUM	MEAN			
Measure Code												
4	62.00	118.00	1.90	.	.	.	.	.	.	.	.	
5	83.00	83.00	1.00	.	.	.	15.00	15.00	1.00	1.00	1.00	
6	.	.	.	1.00	1.00	1.00	.	.	.	.	.	
7	81.00	145.00	1.79	.	.	.	13.00	18.00	1.38	1.38	1.38	
8	6.00	7.00	1.17	2.00	3.00	1.50	22.00	32.00	1.45	1.45	1.45	
9	5.00	15.00	3.00	2.00	11.00	5.50	21.00	90.00	4.29	4.29	4.29	
10	6.00	9.00	1.50	2.00	4.00	2.00	22.00	37.00	1.68	1.68	1.68	
11	6.00	26.00	4.33	.	.	.	21.00	106.00	5.05	5.05	5.05	
12	6.00	7.00	1.17	2.00	4.00	2.00	22.00	27.00	1.23	1.23	1.23	
27	.	.	.	.	.	.	1.00	8.00	8.00	8.00	8.00	
33	37.00	39.00	1.05	.	.	.	140.00	346.00	2.47	2.47	2.47	
34	12.00	12.00	1.00	.	.	.	2.00	2.00	1.00	1.00	1.00	
35	88.00	207.00	2.35	.	.	.	43.00	49.00	1.14	1.14	1.14	
36	88.00	88.00	1.00	.	.	.	102.00	153.00	1.50	1.50	1.50	
37	23.00	45.00	1.96	.	.	.	123.00	205.00	1.67	1.67	1.67	
38	170.00	171.00	1.01	.	.	.	275.00	412.00	1.50	1.50	1.50	
39	90.00	90.00	1.00	.	.	.	76.00	98.00	1.29	1.29	1.29	
48	1.00	1.00	1.00	.	.	.	14.00	16.00	1.14	1.14	1.14	

1990 Installations Under Plan E4

Measure Code	ALL				RURAL				URBAN			
	Quantity Installed		N	R	Quantity Installed		N	R	Quantity Installed		N	R
	SUM	MEAN			SUM	MEAN			SUM	MEAN		
1	10.00	1.00	10.00	7.00	7.00	1.00	3.00	3.00	3.00	1.00	1.00	1.00
4	121.00	6.18	121.00	38.00	213.00	5.61	83.00	83.00	535.00	6.45	6.45	6.45
5	178.00	0.97	178.00	71.00	64.00	0.90	107.00	107.00	109.00	1.02	1.02	1.02
6	143.00	0.92	143.00	57.00	50.00	0.88	86.00	86.00	82.00	0.95	0.95	0.95
7	240.00	1.50	240.00	89.00	117.00	1.31	151.00	151.00	243.00	1.61	1.61	1.61
8	391.00	2.10	391.00	183.00	369.00	2.02	208.00	208.00	451.00	2.17	2.17	2.17
9	309.00	10.30	309.00	151.00	1592.00	10.54	158.00	158.00	1590.00	10.06	10.06	10.06
10	251.00	1.84	251.00	125.00	223.00	1.78	126.00	126.00	240.00	1.90	1.90	1.90
11	95.00	8.86	95.00	44.00	388.00	8.82	51.00	51.00	454.00	8.90	8.90	8.90
12	389.00	2.11	389.00	184.00	371.00	2.02	205.00	205.00	448.00	2.19	2.19	2.19
13	27.00	1.07	27.00	4.00	4.00	1.00	23.00	23.00	25.00	1.09	1.09	1.09
14	12.00	49.33	12.00	2.00	121.00	60.50	10.00	10.00	471.00	47.10	47.10	47.10
15	11.00	2.09	11.00	1.00	4.00	4.00	10.00	10.00	19.00	1.90	1.90	1.90
16	47.00	63.51	47.00	10.00	658.00	65.80	37.00	37.00	2327.00	62.89	62.89	62.89
17	33.00	1.06	33.00	4.00	5.00	1.25	29.00	29.00	30.00	1.03	1.03	1.03
18	210.00	59.81	210.00	62.00	3378.00	54.48	148.00	148.00	9183.00	62.05	62.05	62.05
19	13.00	78.06	13.00	5.00	318.00	63.60	8.00	8.00	697.00	87.12	87.12	87.12
20	8.00	0.75	8.00	4.00	2.00	0.50	4.00	4.00	4.00	1.00	1.00	1.00
22	29.00	2.00	29.00	7.00	17.00	2.43	22.00	22.00	41.00	1.86	1.86	1.86
23	6.00	1.00	6.00	2.00	2.00	1.00	4.00	4.00	4.00	1.00	1.00	1.00
26	171.00	589.36	171.00	54.00	35099.00	649.98	117.00	117.00	65682.00	561.38	561.38	561.38
27	109.00	2.74	109.00	39.00	118.00	3.03	70.00	70.00	181.00	2.59	2.59	2.59
28	150.00	5.25	150.00	77.00	426.00	5.53	73.00	73.00	361.00	4.95	4.95	4.95
29	30.00	0.83	30.00	17.00	13.00	0.76	13.00	13.00	12.00	0.92	0.92	0.92
30	19.00	0.84	19.00	12.00	10.00	0.83	7.00	7.00	6.00	0.86	0.86	0.86

(CONTINUED)

1990 Installations Under Plan E4

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
31	35.00	35.00	1.00	9.00	9.00	1.00	26.00	26.00	1.00
32	37.00	20833.00	563.05	6.00	3735.00	622.50	31.00	17098.00	551.55
33	214.00	303.00	1.42	113.00	123.00	1.09	101.00	180.00	1.78
34	24.00	25.00	1.04	2.00	2.00	1.00	22.00	23.00	1.05
35	37.00	46.00	1.24	4.00	5.00	1.25	33.00	41.00	1.24
36	70.00	83.00	1.19	56.00	58.00	1.04	14.00	25.00	1.79
37	4.00	11.00	2.75	3.00	9.00	3.00	1.00	2.00	2.00
38	57.00	61.00	1.07	56.00	59.00	1.05	1.00	2.00	2.00
39	16.00	25.00	1.56	2.00	4.00	2.00	14.00	21.00	1.50
40	258.00	1868.00	7.24	169.00	1343.00	7.95	89.00	525.00	5.90
41	95.00	81.00	0.85	53.00	45.00	0.85	42.00	36.00	0.86
43	28.00	59.00	2.11	7.00	17.00	2.43	21.00	42.00	2.00
44	14.00	644.00	46.00	2.00	46.00	23.00	12.00	598.00	49.83
45	68.00	419.00	6.16	46.00	256.00	5.57	22.00	163.00	7.41

1990 Installations Under Plan E4

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed		N	SUM	MEAN	N	SUM	MEAN	N	Quantity Installed	
		SUM	MEAN								SUM	MEAN
1	10.00	10.00	1.00	4.00	4.00	1.00	4.00	4.00	1.00	6.00	6.00	1.00
4	121.00	748.00	6.18	40.00	295.00	7.37	81.00	453.00	5.59	116.00	116.00	0.97
5	178.00	173.00	0.97	58.00	47.00	0.94	93.00	85.00	0.91	240.00	240.00	1.46
6	143.00	132.00	0.92	76.00	108.00	2.22	283.00	580.00	2.05	233.00	233.00	10.10
7	240.00	340.00	1.50	68.00	143.00	2.10	183.00	320.00	1.75	67.00	558.00	8.33
8	391.00	820.00	2.10	28.00	284.00	10.14	288.00	594.00	2.06	19.00	19.00	1.00
9	309.00	3182.00	10.30	76.00	828.00	10.89	233.00	2334.00	10.10	8.00	444.00	55.50
10	251.00	463.00	1.84	68.00	143.00	2.10	183.00	320.00	1.75	67.00	558.00	8.33
11	95.00	842.00	8.86	28.00	284.00	10.14	288.00	594.00	2.06	19.00	19.00	1.00
12	389.00	819.00	2.11	101.00	225.00	2.23	288.00	594.00	2.06	19.00	19.00	1.00
13	27.00	29.00	1.07	8.00	10.00	1.25	19.00	19.00	1.00	8.00	8.00	1.00
14	12.00	592.00	49.33	4.00	148.00	37.00	8.00	444.00	55.50	8.00	444.00	55.50
15	11.00	23.00	2.09	1.00	4.00	4.00	10.00	19.00	1.90	10.00	19.00	1.90
16	47.00	2985.00	63.51	17.00	908.00	53.41	30.00	2077.00	69.23	30.00	2077.00	69.23
17	33.00	35.00	1.06	7.00	9.00	1.29	26.00	26.00	1.00	26.00	26.00	1.00
18	210.00	12561.00	59.81	63.00	3165.00	50.24	147.00	9396.00	63.92	147.00	9396.00	63.92
19	13.00	1015.00	78.06	4.00	270.00	67.50	9.00	745.00	82.78	9.00	745.00	82.78
20	8.00	6.00	0.75	6.00	4.00	0.67	2.00	2.00	1.00	2.00	2.00	1.00
21	29.00	58.00	2.00	9.00	23.00	2.56	20.00	35.00	1.75	20.00	35.00	1.75
23	6.00	6.00	1.00	4.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
26	171.00	100781.00	589.35	63.00	40855.00	648.49	108.00	59926.00	554.87	108.00	59926.00	554.87
27	109.00	299.00	2.74	43.00	127.00	2.95	66.00	172.00	2.61	66.00	172.00	2.61
28	150.00	787.00	5.25	39.00	204.00	5.23	111.00	583.00	5.25	111.00	583.00	5.25
29	30.00	25.00	0.83	15.00	12.00	0.80	15.00	13.00	0.87	15.00	13.00	0.87
30	19.00	16.00	0.84	11.00	8.00	0.73	8.00	8.00	1.00	8.00	8.00	1.00

(CONTINUED)



ICF Resources Incorporated

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1990 Installations Under Plan E4

Measure Code	ALL				Owner				Renter			
	N	Quantity Installed		N	SUM	Quantity Installed		N	SUM	Quantity Installed		MEAN
		SUM	MEAN			SUM	MEAN			SUM	MEAN	
31	35.00	35.00	1.00	27.00	27.00	27.00	1.00	8.00	8.00	8.00	1.00	1.00
32	37.00	20833.00	563.05	13.00	9953.00	9953.00	765.62	24.00	10880.00	10880.00	453.33	453.33
33	214.00	303.00	1.42	53.00	98.00	98.00	1.85	161.00	205.00	205.00	1.27	1.27
34	24.00	25.00	1.04	8.00	8.00	8.00	1.00	16.00	17.00	17.00	1.06	1.06
35	37.00	46.00	1.24	10.00	10.00	10.00	1.00	27.00	36.00	36.00	1.33	1.33
36	76.00	83.00	1.19	.	.	.	.	70.00	83.00	83.00	1.19	1.19
37	4.00	11.00	2.75	.	.	.	.	4.00	11.00	11.00	2.75	2.75
38	57.00	61.00	1.07	.	.	.	.	57.00	61.00	61.00	1.07	1.07
39	16.00	25.00	1.56	.	.	.	.	16.00	25.00	25.00	1.56	1.56
40	258.00	1868.00	7.24	54.00	380.00	380.00	7.04	204.00	1488.00	1488.00	7.29	7.29
41	95.00	81.00	0.85	49.00	42.00	42.00	0.86	46.00	39.00	39.00	0.85	0.85
43	28.00	59.00	2.11	9.00	18.00	18.00	2.00	19.00	41.00	41.00	2.16	2.16
44	14.00	644.00	46.00	4.00	272.00	272.00	68.00	10.00	372.00	372.00	37.20	37.20
45	68.00	419.00	6.16	13.00	60.00	60.00	4.62	55.00	359.00	359.00	6.53	6.53

1990 Installations Under Plan E4

Primary Space Heating Fuel												
Measure Code	BLANK				ELEC				GAS			
	N	Quantity Installed		N	Quantity Installed	N	Quantity Installed		N	Quantity Installed		OIL
		SUR	MEAN				SUR	MEAN		SUR	MEAN	
1												
4	12.00	70.00	5.83	6.00	60.00	10.00	5.00	1.00	5.00	5.00	1.00	3.00
5	15.00	15.00	1.00	8.00	9.00	1.12	45.00	4.56	205.00	73.00	0.96	54.00
6	3.00	3.00	1.00	6.00	6.00	1.00	76.00	0.96	76.00	76.00	0.93	71.00
7	16.00	32.00	2.00	7.00	14.00	2.00	82.00	1.40	153.00	153.00	1.40	49.00
8	18.00	35.00	1.94	10.00	16.00	1.60	109.00	2.09	403.00	403.00	2.09	103.00
9	17.00	157.00	9.24	11.00	84.00	7.64	193.00	9.84	1457.00	1457.00	9.84	163.00
10	14.00	22.00	2.00	8.00	18.00	2.25	148.00	1.82	219.00	219.00	1.82	124.00
11	1.00	8.00	8.00	3.00	25.00	8.33	120.00	7.32	322.00	322.00	7.32	102.00
12	18.00	37.00	2.06	10.00	18.00	1.80	44.00	2.12	415.00	415.00	2.12	46.00
13	4.00	4.00	1.00	2.00	2.00	1.00	196.00	1.22	11.00	11.00	1.22	159.00
14							9.00	74.00	444.00	444.00	74.00	11.00
15	9.00	16.00	1.73				6.00					4.00
16												2.00
17	13.00	13.00	1.00				16.00	55.25	884.00	884.00	55.25	31.00
18	14.00	353.00	25.21	5.00	136.00	27.20	5.00	1.40	5.00	5.00	1.40	14.00
19							88.00	57.44	5055.00	5055.00	57.44	100.00
20	1.00	1.00	1.00	1.00	1.00	1.00	5.00	122.20	611.00	611.00	122.20	8.00
22	5.00	8.00	1.60									6.00
23				1.00	1.00	1.00	11.00	0.91	10.00	10.00	0.91	10.00
26	13.00	1300.00	100.00	4.00	758.75	758.75	1.00	1.00	1.00	1.00	1.00	4.00
27	1.00	9.00	9.00	2.00	1.00	0.50	68.00	2.35	42009.00	42009.00	617.78	82.00
28	3.00	12.00	4.00	5.00	18.00	3.60	52.00	5.68	122.00	122.00	2.35	54.00
29							73.00	1.00	415.00	415.00	5.68	65.00
30							3.00	1.00	3.00	3.00	1.00	25.00
												19.00

(CONTINUED)

1990 Installations Under Plan E4

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	N
		SUM	MEAN		SUM	MEAN		SUM	MEAN		
31	.	.	.	1.00	1.00	1.00	4.00	4.00	1.00	29.00	
32	7.00	175.00	25.00	.	.	.	14.00	9927.00	709.07	16.00	
33	14.00	17.00	1.21	4.00	10.00	2.50	120.00	139.00	1.16	70.00	
34	6.00	7.00	1.17	1.00	1.00	1.00	5.00	5.00	1.00	11.00	
35	11.00	20.00	1.82	.	.	.	10.00	10.00	1.00	15.00	
36	13.00	23.00	1.77	.	.	.	54.00	54.00	1.00	3.00	
37	.	.	.	.	.	.	1.00	5.00	5.00	3.00	
38	.	.	.	.	.	.	56.00	59.00	1.05	1.00	
39	13.00	13.00	1.00	.	.	.	1.00	8.00	8.00	2.00	
40	4.00	33.00	8.25	3.00	35.00	11.67	164.00	1229.00	7.49	85.00	
41	2.00	2.00	1.00	.	.	.	5.00	4.00	0.80	86.00	
43	.	.	.	1.00	1.00	1.00	10.00	31.00	3.10	17.00	
44	1.00	6.00	6.00	.	.	.	2.00	75.00	37.50	11.00	
45	.	.	.	1.00	1.00	1.00	40.00	270.00	6.75	26.00	

(CONTINUED)

1990 Installations Under Plan E4

Primary Space Heating Fuel											
	OIL				OTHER				PROP		
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
	SUM	MEAN		SUM	MEAN		SUM	MEAN		SUM	MEAN
	Pressure Code										
1	3.00	1.00	1.00		1.00		1.00		1.00		1.00
4	377.00	6.98	2.00		2.00		25.00		12.50		5.50
5	69.00	0.97	5.00		5.00		4.00		0.80		1.00
6	45.00	0.92	2.00		2.00		1.00		0.50		1.00
7	151.00	1.47	3.00		3.00		6.00		2.00		2.00
8	356.00	2.18	3.00		3.00		6.00		2.00		1.00
9	1421.00	11.46	5.00		5.00		23.00		4.60		10.00
10	188.00	1.84	5.00		5.00		5.00		1.00		2.50
11	482.00	10.48	-		-		-		-		5.00
12	340.00	2.14	3.00		3.00		5.00		1.67		1.33
13	11.00	1.00	1.00		1.00		1.00		1.00		-
14	27.00	6.75	2.00		2.00		121.00		60.50		-
15	7.00	3.50	-		-		-		-		-
16	2101.00	67.77	-		-		-		-		-
17	16.00	1.14	1.00		1.00		1.00		1.00		-
18	6937.00	69.37	3.00		3.00		80.00		26.67		-
19	404.00	50.50	-		-		-		-		-
20	4.00	0.67	-		-		-		-		-
22	37.00	3.70	-		-		-		-		1.00
23	4.00	1.00	-		-		-		-		-
26	51704.00	630.54	2.00		2.00		412.00		206.00		1160.50
27	167.00	3.09	-		-		-		-		-
28	323.00	4.97	1.00		1.00		1.00		1.00		6.00
29	21.00	0.84	2.00		2.00		1.00		0.50		-
30	16.00	0.84	-		-		-		-		-

(CONTINUED)

1990 Installations Under Plan E4

Primary Space Heating Fuel										
	OIL			OTHER			PROP			
	Quantity Installed		N	Quantity Installed		N	Quantity Installed			
	SUM	MEAN		SUM	MEAN		SUM	MEAN		
	Measure Code									
31	29.00	1.00	.	.	.	1.00	1.00	1.00	1.00	
32	10731.00	670.69	.	.	.	.	.	.	.	
33	131.00	1.87	4.00	5.00	1.25	2.00	1.00	1.00	0.50	
34	11.00	1.00	.	.	.	1.00	1.00	1.00	1.00	
35	15.00	1.00	.	.	.	1.00	1.00	1.00	1.00	
36	6.00	2.00	.	.	.	.	.	.	.	
37	6.00	2.00	.	.	.	.	.	.	.	
38	2.00	2.00	.	.	.	.	.	.	.	
39	4.00	2.00	.	.	.	.	.	.	.	
40	546.00	6.42	1.00	10.00	10.00	1.00	15.00	15.00	15.00	
41	73.00	0.85	2.00	2.00	1.00	.	.	.	.	
43	27.00	1.59	.	.	.	.	.	.	.	
44	563.00	51.18	.	.	.	.	.	.	.	
45	139.00	5.35	.	.	.	1.00	9.00	9.00	9.00	

1990 Installations Under Plan E5

Measure Code	ALL				RURAL				URBAN			
	N	Quantity Installed		N	SUM	MEAN	N	SUM	MEAN	N	Quantity Installed	
		SUM	MEAN								SUM	MEAN
1	9.00	9.00	1.00	7.00	7.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
4	86.00	633.00	7.36	10.00	99.00	9.90	76.00	534.00	7.03	76.00	534.00	7.03
5	133.00	133.00	1.00	47.00	43.00	0.91	86.00	90.00	1.05	86.00	90.00	1.05
6	83.00	72.00	0.87	50.00	43.00	0.86	33.00	29.00	0.88	33.00	29.00	0.88
7	208.00	337.00	1.62	88.00	123.00	1.40	120.00	216.00	1.78	120.00	216.00	1.78
8	268.00	568.00	2.12	118.00	239.00	2.03	150.00	329.00	2.19	150.00	329.00	2.19
9	268.00	2959.00	11.04	130.00	1415.00	10.88	138.00	1544.00	11.19	138.00	1544.00	11.19
10	219.00	442.00	2.02	90.00	179.00	1.99	129.00	263.00	2.04	129.00	263.00	2.04
11	57.00	610.00	10.70	25.00	230.00	9.20	32.00	300.00	11.88	32.00	300.00	11.88
12	272.00	582.00	2.14	125.00	248.00	1.98	147.00	334.00	2.27	147.00	334.00	2.27
13	54.00	54.00	1.00	6.00	6.00	1.00	48.00	48.00	1.00	48.00	48.00	1.00
14	3.00	231.00	77.00	2.00	95.00	47.50	1.00	136.00	136.00	1.00	136.00	136.00
15	64.00	136.00	2.12	2.00	5.00	2.50	62.00	131.00	2.11	62.00	131.00	2.11
16	30.00	1896.00	63.20	12.00	537.00	44.75	18.00	1359.00	75.50	18.00	1359.00	75.50
17	77.00	86.00	1.12	8.00	13.00	1.62	69.00	73.00	1.06	69.00	73.00	1.06
18	230.00	26860.00	116.78	59.00	3079.00	52.19	171.00	23781.00	139.07	171.00	23781.00	139.07
19	4.00	301.00	75.25	2.00	127.00	63.50	2.00	174.00	87.00	2.00	174.00	87.00
20	8.00	1111.00	138.87	2.00	2.00	1.00	6.00	1109.00	184.83	6.00	1109.00	184.83
22	38.00	88.00	2.32	8.00	49.00	6.12	30.00	39.00	1.30	30.00	39.00	1.30
23	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
25	2.00	1.00	0.50	-	-	-	2.00	1.00	0.50	2.00	1.00	0.50
26	216.00	115047.00	532.62	52.00	26322.00	506.19	164.00	88725.00	541.01	164.00	88725.00	541.01
27	81.00	183.00	2.26	42.00	99.00	2.36	39.00	84.00	2.15	39.00	84.00	2.15
28	76.00	473.00	6.22	40.00	254.00	6.35	36.00	219.00	6.08	36.00	219.00	6.08
29	51.00	251.00	4.92	28.00	31.00	1.11	23.00	220.00	9.57	23.00	220.00	9.57

(CONTINUED)

1990 Installations Under Plan E5

Measure Code	ALL			RURAL			URBAN		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
30	24.00	21.00	0.88	11.00	10.00	0.91	13.00	11.00	0.85
31	93.00	90.00	0.97	34.00	34.00	1.00	59.00	56.00	0.95
32	53.00	17165.00	323.87	14.00	9617.00	686.93	39.00	7548.00	193.54
33	164.00	214.00	1.30	51.00	79.00	1.55	113.00	135.00	1.19
34	49.00	92.00	1.88	9.00	9.00	1.00	40.00	83.00	2.08
35	77.00	121.00	1.57	12.00	15.00	1.25	65.00	106.00	1.63
36	106.00	210.00	1.98	6.00	14.00	2.33	100.00	196.00	1.96
37	17.00	48.00	2.82	15.00	44.00	2.93	2.00	4.00	2.00
38	8.00	9.00	1.12	7.00	7.00	1.00	1.00	2.00	2.00
39	102.00	155.00	1.52	6.00	14.00	2.33	96.00	141.00	1.47
40	131.00	884.00	6.75	79.00	553.00	7.00	52.00	331.00	6.37
41	90.00	84.00	0.93	45.00	41.00	0.91	45.00	43.00	0.96
42	2.00	2.00	1.00	.	.	.	2.00	2.00	1.00
43	18.00	27.00	1.50	8.00	9.00	1.12	10.00	18.00	1.80
44	2.00	220.00	110.00	2.00	220.00	110.00	.	.	.
45	35.00	238.00	6.80	28.00	178.00	6.36	7.00	60.00	8.57

1990 Installations Under Plan E5

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
1	9.00	9.00	1.00	6.00	6.00	1.00	3.00	3.00	1.00
4	86.00	633.00	7.36	27.00	280.00	10.37	59.00	353.00	5.98
5	133.00	133.00	1.00	59.00	62.00	1.05	74.00	71.00	0.96
6	83.00	72.00	0.87	45.00	37.00	0.82	38.00	35.00	0.92
7	208.00	337.00	1.62	95.00	155.00	1.63	113.00	182.00	1.61
8	268.00	568.00	2.12	127.00	301.00	2.37	141.00	267.00	1.89
9	268.00	2959.00	11.04	120.00	1619.00	13.49	148.00	1340.00	9.05
10	219.00	442.00	2.02	99.00	220.00	2.22	120.00	222.00	1.85
11	57.00	610.00	10.70	37.00	463.00	12.51	20.00	147.00	7.35
12	272.00	582.00	2.14	122.00	298.00	2.44	150.00	284.00	1.89
13	54.00	54.00	1.00	8.00	8.00	1.00	46.00	46.00	1.00
14	3.00	231.00	77.00	3.00	231.00	77.00	-	-	-
15	64.00	136.00	2.12	7.00	25.00	3.57	57.00	111.00	1.95
16	30.00	1896.00	63.20	24.00	1631.00	67.96	6.00	265.00	44.17
17	77.00	86.00	1.12	17.00	24.00	1.41	60.00	62.00	1.03
18	230.00	26860.00	116.78	96.00	9572.00	97.62	134.00	17488.00	130.51
19	4.00	301.00	75.25	3.00	231.00	77.00	1.00	70.00	70.00
20	8.00	1111.00	138.87	7.00	7.00	1.00	1.00	1104.00	1104.00
22	38.00	88.00	2.32	8.00	8.00	1.00	30.00	80.00	2.67
23	2.00	2.00	1.00	2.00	2.00	1.00	-	-	-
25	2.00	1.00	0.50	-	-	-	2.00	1.00	0.50
26	216.00	115047.00	532.62	93.00	64465.00	693.17	123.00	50582.00	411.24
27	81.00	183.00	2.26	56.00	142.00	2.54	25.00	41.00	1.64
28	76.00	473.00	6.22	50.00	300.00	6.00	26.00	173.00	6.65
29	51.00	251.00	4.92	36.00	237.00	6.58	15.00	14.00	0.93

(CONTINUED)

1990 Installations Under Plan E5

Measure Code	ALL			Owner			Renter		
	N	Quantity Installed		N	Quantity Installed		N	Quantity Installed	
		SUM	MEAN		SUM	MEAN		SUM	MEAN
30	24.00	21.00	0.88	10.00	7.00	0.70	14.00	14.00	1.00
31	93.00	90.00	0.97	75.00	71.00	0.95	18.00	19.00	1.06
32	53.00	17165.00	323.87	25.00	14844.00	593.76	28.00	2321.00	82.89
33	164.00	214.00	1.30	81.00	119.00	1.47	83.00	95.00	1.14
34	49.00	92.00	1.88	23.00	56.00	2.43	26.00	36.00	1.38
35	77.00	121.00	1.57	27.00	30.00	1.11	50.00	91.00	1.82
36	106.00	210.00	1.98	1.00	4.00	4.00	105.00	206.00	1.96
37	17.00	48.00	2.82	1.00	4.00	4.00	16.00	44.00	2.75
38	8.00	9.00	1.12	-	-	-	8.00	9.00	1.12
39	102.00	155.00	1.52	1.00	4.00	4.00	101.00	151.00	1.50
40	131.00	884.00	6.75	66.00	426.00	6.45	65.00	458.00	7.05
41	90.00	84.00	0.93	66.00	64.00	0.97	24.00	20.00	0.83
42	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
43	18.00	27.00	1.50	15.00	23.00	1.53	3.00	4.00	1.33
44	2.00	220.00	110.00	2.00	220.00	110.00	-	-	-
45	35.00	238.00	6.80	18.00	124.00	6.89	17.00	114.00	6.71

1990 Installations Under Plan E5

		Primary Space Heating Fuel										
		BLANK			ELEC			GAS			OIL	
Measure Code		N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	
1												
4		47.00	265.00	5.64	1.00	5.00	5.00	5.00	5.00	1.00	4.00	
5		45.00	45.00	1.00	2.00	2.00	1.00	42.00	44.00	1.05	40.00	
6		2.00	1.00	0.50				49.00	46.00	6.94	31.00	
7		59.00	110.00	1.86	2.00	4.00	2.00	58.00	84.00	1.45	83.00	
8		62.00	122.00	1.97	2.00	3.00	1.50	87.00	182.00	2.09	113.00	
9		60.00	535.00	8.92	2.00	16.00	8.00	101.00	1111.00	11.00	100.00	
10		58.00	116.00	2.00	1.00	1.00	1.00	74.00	137.00	1.85	82.00	
11								22.00	239.00	10.86	35.00	
12		63.00	124.00	1.97	2.00	3.00	1.50	89.00	187.00	2.10	115.00	
13		29.00	29.00	1.00				5.00	5.00	1.00	20.00	
14											3.00	
15		55.00	108.00	1.96				3.00	8.00	2.67	5.00	
16		2.00	20.00	10.00				7.00	315.00	45.00	21.00	
17		55.00	55.00	1.00				4.00	5.00	1.25	18.00	
18		56.00	1756.00	31.36				41.00	3283.00	80.07	133.00	
19								2.00	144.00	72.00	2.00	
20		1.00	1.00	1.00				2.00	2.00	1.00	5.00	
22		26.00	36.00	1.38				3.00	44.00	14.67	9.00	
23								1.00	1.00	1.00	1.00	
25											2.00	
26		56.00	6004.00	107.21				37.00	21949.00	593.22	122.00	
27		1.00	2.00	2.00				35.00	78.00	2.23	41.00	
28		2.00	12.00	6.00				34.00	211.00	6.21	37.00	
29								7.00	5.00	0.71	42.00	

(CONTINUED)

1990 Installations Under Plan E5

Primary Space Heating Fuel											
Measure Code	BLANK			ELEC			GAS			OIL	
	Quantity Installed			Quantity Installed			Quantity Installed			Quantity Installed	
	N	SUM	MEAN	N	SUM	MEAN	N	SUM	MEAN	N	N
30	.	.	.	.	.	.	.	.	.	.	24.00
31	3.00	2.00	0.67	.	.	.	15.00	17.00	1.13	72.00	72.00
32	24.00	650.00	27.08	.	.	.	14.00	9732.00	695.14	14.00	14.00
33	57.00	56.00	0.98	.	.	.	40.00	64.00	1.60	61.00	61.00
34	22.00	33.00	1.50	.	.	.	7.00	39.00	5.57	19.00	19.00
35	41.00	81.00	1.98	.	.	.	9.00	8.00	0.89	26.00	26.00
36	56.00	117.00	2.09	.	.	.	.	.	.	50.00	50.00
37	2.00	6.00	3.00	.	.	.	8.00	28.00	3.50	7.00	7.00
38	1.00	1.00	1.00	.	.	.	6.00	6.00	1.00	1.00	1.00
39	52.00	55.00	1.06	.	.	.	.	.	.	50.00	50.00
40	5.00	38.00	7.60	1.00	5.00	5.00	58.00	476.00	8.21	62.00	62.00
41	1.00	1.00	1.00	.	.	.	3.00	3.00	1.00	83.00	83.00
42	.	.	.	.	.	.	1.00	1.00	1.00	1.00	1.00
43	.	.	.	.	.	.	6.00	11.00	1.83	10.00	10.00
44	.	.	.	.	.	.	1.00	12.00	12.00	1.00	1.00
45	1.00	8.00	8.00	.	.	.	17.00	91.00	5.35	17.00	17.00

(CONTINUED)

1990 Installations Under Plan E5

Measure Code	Primary Space Heating Fuel									
	OIL					OTHER				
	Quantity Installed			N	Quantity Installed			N	Quantity Installed	
	SUM	MEAN	MEAN		SUM	MEAN	MEAN		SUM	MEAN
1	4.00	1.00								
4	229.00	10.41	1.00	1.00	10.00	10.00				
5	38.00	0.95	3.00	3.00	3.00	1.00	1.00	1.00	1.00	1.00
6	24.00	0.77	1.00	1.00	1.00	1.00				
7	127.00	1.53	5.00	5.00	8.00	1.60	1.60	1.00	4.00	4.00
8	254.00	2.25	4.00	4.00	7.00	1.75				
9	1238.00	12.38	4.00	4.00	51.00	12.75		1.00	8.00	8.00
10	179.00	2.18	3.00	3.00	7.00	2.33		1.00	2.00	2.00
11	371.00	10.60								
12	265.00	2.30	2.00	2.00	2.00	1.00		1.00	1.00	1.00
13	20.00	1.00								
14	231.00	77.00								
15	20.00	4.00						1.00	0.00	0.00
16	1561.00	74.33								
17	26.00	1.44								
18	21821.00	164.07								
19	157.00	78.50								
20	1108.00	221.60								
22	8.00	0.89								
23	1.00	1.00								
25	1.00	0.50								
26	86534.00	709.30						1.00	560.00	560.00
27	96.00	2.34	3.00	3.00	6.00	2.00		1.00	1.00	1.00
28	230.00	6.22	2.00	2.00	15.00	7.50		1.00	5.00	5.00
29	244.00	5.81	2.00	2.00	2.00	1.00				

(CONTINUED)

1990 Installations Under Plan E5

Primary Space Heating Fuel									
	OIL			OTHER			PROP		
	Quantity Installed		N	Quantity Installed		N	Quantity Installed		
	SUM	MEAN		SUM	MEAN		SUM	MEAN	
	Measure Code								
30	21.00	0.88	.	.	.	.	.	.	.
31	69.00	0.96	3.00	2.00	0.67	.	.	.	.
32	6782.00	484.43	1.00	1.00	1.00	.	.	.	.
33	84.00	1.38	5.00	7.00	1.40	1.00	3.00	3.00	3.00
34	19.00	1.00	1.00	1.00	1.00	.	.	.	.
35	31.00	1.19	1.00	1.00	1.00	.	.	.	.
36	93.00	1.86	.	.	.	.	.	.	.
37	14.00	2.00	.	.	.	.	.	.	.
38	2.00	2.00	.	.	.	.	.	.	.
39	100.00	2.00	.	.	.	.	.	.	.
40	327.00	5.27	3.00	13.00	4.33	2.00	25.00	12.50	12.50
41	78.00	0.94	3.00	2.00	0.67	.	.	.	.
42	1.00	1.00	.	.	.	.	.	.	.
43	14.00	1.40	2.00	2.00	1.00	.	.	.	.
44	208.00	208.00	.	.	.	.	.	.	.
45	139.00	8.18	.	.	.	.	.	.	.

Appendix C: Savings Based on Engineering Estimates

Appendix C provides supporting documentation for the engineering estimates of savings, as presented in chapter 4 of the main report.

Table of Contents:

C1.	Engineering Estimates of Savings Per Measure	C-3
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Section 1 provides supporting documentation of the energy savings assumptions that were made in the development of engineering estimates of savings. The engineering estimates were made for typical residential customer weatherization measures.

C2.	Savings from 1988 Installations	C-7
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Section 2 summarizes the engineering estimates of savings that resulted from 1988 installations, in greater detail than the savings presented in chapter 4 of the main report.

C3.	Savings from 1989 Installations	C-21
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Section 3 is similar to section 2, but includes data for 1989 installations only.

C4.	Savings from 1990 Installations	C-97
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Section 4 is similar to section 2, but includes data for 1990 installations only.





Appendix C: Savings Based on Engineering Estimates

Section 1: Engineering Estimates of Savings Per Measure



Engineering Estimates of Savings Per Measure				
Measure Code	Lifetime (years)	First Year Electricity Savings (kWh)	First Year Gas Savings (ccf)	First Year Oil Savings (gallons)
1	7	367.85	12.76	9.47
4	15	27.60	0.91	0.68
5	10	454.33	18.82	13.98
6	7	301.73	16.13	11.98
7	10	113.58	4.70	3.49
8	3	132.28	4.39	32.5
9	3	93.40	3.10	2.30
10	3	132.31	4.38	3.25
11	3	70.04	2.32	1.73
12	3	119.08	3.95	2.93
13	25	34.50	1.14	0.85
14	25	2.70	0.08	0.07
15	3	50.40	151.20	6.84
16	25	4.80	0.36	0.36
17	25	89.18	2.95	2.20
18	25	2.15	0.07	0.05
19	25	1.80	0.06	0.05
20	25	34.50	1.14	0.85
21	1	0.00	8.32	6.18
22	25	69.00	2.29	1.69
23	15	264.00	92.83	68.94
24	15	0.00	42.60	0.00
25	15	0.00	53.90	0.00
26	25	1.30	0.31	0.24
27	15	48.36	1.61	1.19



Engineering Estimates of Savings Per Measure				
Measure Code	Lifetime (years)	First Year Electricity Savings (kWh)	First Year Gas Savings (ccf)	First Year Oil Savings (gallons)
28	25	264.00	39.60	32.40
29	1	0.00	158.35	117.60
30	15	0.00	152.21	113.04
31	15	0.00	199.57	148.21
32	25	0.00	0.24	0.17
33	7	73.14	0.00	0.00
34	7	60.39	0.00	0.00
35	7	68.09	0.00	0.00
36	7	100.21	0.00	0.00
37	7	108.00	0.00	0.00
38	7	265.71	0.00	0.00
39	7	190.28	0.00	0.00
40	25	264.00	39.60	32.40
44	25	2.15	0.07	0.05
45	25	264.00	39.60	32.40
46	25	1.30	0.31	0.24
47	7	108.00	0.00	0.00
48	7	85.71	0.00	0.00
Notes: The following factors were used to calculate savings: gallon oil savings * 4.76131 = lb. propane savings 1 kWh = 3,413 Btu 1 ccf gas = 103 Btu 1 gallon oil = 138.69 Btu 1 lb. propane = 21,633 Btu				





Appendix C: Savings Based on Engineering Estimates

Section 2: Savings from 1988 Installations

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Fuel Savings From 1988 Installations				
	Electricity (kWh)	Gas (CCF)	Oil (Gallons)	Propane (Lbs)
Plan E1 First Year	12,315.74	1,798.70	1,583.86	0.00
Plan E1 Lifetime	101,137.84	9,570.90	9,415.97	0.00
Plan E2 First Year	0.00	0.00	248.36	0.00
Plan E2 Lifetime	0.00	0.00	323.20	0.00
Plan E3 First Year	57,896.77	11,361.39	19,138.56	363.67
Plan E3 Lifetime	490,510.32	58,055.64	117,132.47	2,095.74
Plan E4 First Year	0.00	0.00	19.40	0.00
Plan E4 Lifetime	0.00	0.00	102.04	0.00
Plan E5 First Year	0.00	0.00	148.21	0.00
Plan E5 Lifetime	0.00	0.00	2,224.00	0.00
Total First Year	70,212.51	13,160.09	21,138.39	363.67
Total Lifetime	591,648.16	67,626.54	129,197.68	2,095.74



Electricity Savings from 1988 Installations (kWh)			
	Space Heating	Water Heating	Total
Plan E1 First Year	7,318.0	4,997.0	12,315.00
Plan E1 Lifetime	47,277.0	53,791.8	101,068.80
Plan E2 First Year	0.0	0.0	0.00
Plan E2 Lifetime	0.0	0.0	0.00
Plan E3 First Year	22,585.0	35,312.0	57,897.00
Plan E3 Lifetime	104,354.2	385,672.5	490,026.70
Plan E4 First Year	0.0	0.0	0.00
Plan E4 Lifetime	0.0	0.0	0.00
Plan E5 First Year	0.0	0.0	0.00
Plan E5 Lifetime	0.0	0.0	0.00
Total First Year	29,903.00	40,309.00	70,212.00
Total Lifetime	151,631.20	439,464.30	591,095.50



Electricity Savings from 1988 Urban Installations (kWh)			
	Space Heating	Water Heating	Total
Plan E1 First Year	5,322.48	2,710.70	8,033.18
Plan E1 Lifetime	34,238.84	29,318.00	63,556.84
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	21,078.94	23,733.31	44,812.25
Plan E3 Lifetime	92,906.10	250,251.00	343,157.10
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	26,401.42	26,444.01	52,845.43
Total Lifetime	127,144.94	279,569.00	406,713.94



Electricity Savings from 1988 Rural Installations (kWh)

	Heating	Hot Water	Total
Plan E1 First Year	1,993.82	2,286.74	4,282.56
Plan E1 Lifetime	13,038.84	24,473.80	37,512.64
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	1,506.04	11,578.48	13,084.52
Plan E3 Lifetime	11,448.68	135,421.40	146,870.10
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	3,501.86	13,865.22	17,367.08
Total Lifetime	24,487.52	159,895.20	184,382.74



**Gas Savings from 1988 Installations
(CCF)**

	Heating	Hot Water	Total
Plan E1 First Year	1,426.20	375.00	1,801.20
Plan E1 Lifetime	5,394.40	4,755.90	10,150.30
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	8,549.50	2,825.00	11,374.50
Plan E3 Lifetime	30,667.80	28,621.00	59,288.80
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	9,975.70	3,200.00	13,175.70
Total Lifetime	36,062.20	33,376.90	69,439.10

**.. Gas Savings from 1988 Urban Installations
(CCF)**

	Space Heating	Water Heating	Total
Plan E1 First Year	579.60	286.27	865.87
Plan E1 Lifetime	2,790.40	3,720.70	6,511.10
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	1,294.00	801.70	2,095.70
Plan E3 Lifetime	5,738.70	7,811.50	13,550.20
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	1,873.60	1,087.97	2,961.57
Total Lifetime	8,529.10	11,532.20	20,061.30



Gas Savings from 1988 Rural Installations (CCF)			
	Space Heating	Water Heating	Total
Plan E1 First Year	844.62	89.11	933.73
Plan E1 Lifetime	2,603.82	1,035.20	3,639.02
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	7,255.57	2,023.56	9,279.13
Plan E3 Lifetime	24,929.10	20,809.50	45,738.60
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	8,100.19	2,112.67	10,212.86
Total Lifetime	27,532.92	21,844.70	49,377.62

**Oil Savings from 1988 Installations
(gallons)**

	Space Heating	Water Heating	Total
Plan E1 First Year	1,428.30	213.00	1,641.30
Plan E1 Lifetime	6,948.50	2,786.00	9,734.50
Plan E2 First Year	241.00	7.00	248.00
Plan E2 Lifetime	253.00	70.00	323.00
Plan E3 First Year	13,468.20	5,654.60	19,122.80
Plan E3 Lifetime	55,216.10	61,721.00	116,937.10
Plan E4 First Year	19.00	0.00	19.00
Plan E4 Lifetime	106.80	0.00	106.80
Plan E5 First Year	148.00	0.00	148.00
Plan E5 Lifetime	2,224.00	0.00	2,224.00
Total First Year	15,304.50	5,874.60	21,179.10
Total Lifetime	64,748.40	64,577.00	129,325.40



Oil Savings from 1988 Urban Installations (gallons)			
	Space Heating	Water Heating	Total
Plan E1 First Year	654.40	90.62	745.02
Plan E1 Lifetime	3,664.80	1,441.70	5,106.50
Plan E2 First Year	241.38	6.98	248.36
Plan E2 Lifetime	253.20	70.00	323.20
Plan E3 First Year	4,936.80	1,898.10	6,834.90
Plan E3 Lifetime	21,045.40	22,059.60	43,105.00
Plan E4 First Year	19.14	0.00	19.14
Plan E4 Lifetime	106.80	0.00	106.80
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	5,851.72	1,995.70	7,847.42
Total Lifetime	25,070.20	23,571.30	48,641.50



Oil Savings from 1988 Rural Installations (gallons)			
	Space Heating	Water Heating	Total
Plan E1 First Year	773.95	121.88	895.83
Plan E1 Lifetime	3,283.70	1,344.30	4,628.00
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	8,531.32	3,756.50	12,287.82
Plan E3 Lifetime	34,170.70	39,661.40	73,832.10
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	148.21	0.00	148.21
Plan E5 Lifetime	2,223.60	0.00	2,223.60
Total First Year	9,453.48	3,878.38	13,331.86
Total Lifetime	39,678.00	41,005.70	80,683.70



Propane Savings from 1988 Installations (lbs)			
	Space Heating	Water Heating	Total
Plan E1 First Year	0.00	0.00	0.00
Plan E1 Lifetime	0.00	0.00	0.00
Plan E2 First Year	0.00	0.00	0.00
Plan E2 Lifetime	0.00	0.00	0.00
Plan E3 First Year	228.00	136.00	364.00
Plan E3 Lifetime	1,048.00	1,224.50	2,272.50
Plan E4 First Year	0.00	0.00	0.00
Plan E4 Lifetime	0.00	0.00	0.00
Plan E5 First Year	0.00	0.00	0.00
Plan E5 Lifetime	0.00	0.00	0.00
Total First Year	228.00	136.00	364.00
Total Lifetime	1,048.00	1,224.50	2,272.50





Appendix C: Savings Based on Engineering Estimates

Section 3: Savings from 1989 Installations

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First Year

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By Primary Space Heating Fuel	
Total	C-29
Urban	C-30
Rural	C-31
Owners	C-32
Renters	C-33

Lifetime

By Urban/Rural Status	C-34
By Owner/Renter Status	C-35



	By Primary Space Heating Fuel	
	Total	C-36
	Urban	C-37
	Rural	C-38
	Owners	C-39
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Gas Savings		
First Year		
	By Urban/Rural Status	C-41
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	By Primary Space Heating Fuel	
	Total	C-43
	Urban	C-44
	Rural	C-45
	Owners	C-46
	Renters	C-47
Lifetime		
	By Urban/Rural Status	C-48
	By Owner/Renter Status	C-49
	By Primary Space Heating Fuel	
	Total	C-50
	Urban	C-51
	Rural	C-52
	Owners	C-53
	Renters	C-54
Oil Savings		
First Year		
	By Urban/Rural Status	C-55
	By Owner/Renter Status	C-56
	By Primary Space Heating Fuel	
	Total	C-57
	Urban	C-58
	Rural	C-59
	Owners	C-60
	Renters	C-61
Lifetime		
	By Urban/Rural Status	C-62
	By Owner/Renter Status	C-63
	By Primary Space Heating Fuel	
	Total	C-64
	Urban	C-65
	Rural	C-66
	Owners	C-67
	Renters	C-68



Propane Savings

First Year

By Urban/Rural Status	C-69
By Owner/Renter Status	C-70
By Primary Space Heating Fuel	
Total	C-71
Urban	C-72
Rural	C-73
Owners	C-74
Renters	C-75

Lifetime

By Urban/Rural Status	C-76
By Owner/Renter Status	C-77
By Primary Space Heating Fuel	
Total	C-78
Urban	C-79
Rural	C-80
Owners	C-81
Renters	C-82

Btu Savings

First Year

By Urban/Rural Status	C-83
By Owner/Renter Status	C-84
By Primary Space Heating Fuel	
Total	C-85
Urban	C-86
Rural	C-87
Owners	C-88
Renters	C-89

Lifetime

By Urban/Rural Status	C-90
By Owner/Renter Status	C-91
By Primary Space Heating Fuel	
Total	C-92
Urban	C-93
Rural	C-94
Owners	C-95
Renters	C-96





**First Year Fuel Savings from 1989 Installations
(kWh electricity, ccf gas, gallons oil, lbs propane)**

	FUEL						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	first year Btu savings
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	SUM
E_F_LAN							
1	.	241592.62	28049.91	20131.72	.	70.04	6507279.74
2	.	14675.81	3218.67	69871.08	.	.	10072031.63
3	.	486983.92	25033.95	18408.69	.	2017.61	6837321.04
4	.	52831.17	33593.66	14838.38	.	239.68	5703579.78
5	.	65328.80	22876.23	20757.34	.	3240.12	5528147.86
ALL	.	861412.32	112772.42	144007.21	.	5567.45	34648360.05

**Lifetime Fuel Savings from 1989 Installations
(kWh electricity, ccf gas, gallons oil, lbs propane)**

	FUEL							lifetime Btu savings
	BLANK	ELEC	GAS	OIL	OTHER	PROP		
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings		
	SUM	SUM	SUM	SUM	SUM	SUM		
E_PLAN								
1	.	1611888.04	129642.61	91863.98	.	938.69	31615484.83	
2	.	138414.08	46189.71	909890.16	.	.	131422613.68	
3	.	3314549.58	134290.51	112745.08	.	9988.13	40997168.68	
4	.	533791.76	630190.90	281889.26	.	719.05	105842270.72	
5	.	820477.28	436164.95	345352.07	.	63066.36	96986471.96	
ALL	.	6419120.74	1376478.68	1741740.55	.	74712.24	406864009.87	

First Year Electricity Savings from 1989 Installations (kWh)

	URB_RUR		
	RURAL	URBAN	
	first year fuel savings	first year fuel savings	
E_PLAN	SUM	SUM	
1	86896.76	154695.86	
2	7678.98	6996.83	
3	118676.97	368306.95	
4	14864.63	37966.54	
5	27912.07	37416.73	
ALL	256029.41	605382.91	

First Year Electricity Savings from 1989 Installations (kWh)

	Homeowners = H and Tenants = T			
	H	N	T	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	78700.55	946.25	161945.82	
2	11578.45	-	3097.36	
3	138633.81	-	348350.11	
4	19758.48	-	33072.69	
5	30094.94	-	35233.86	
ALL	278766.23	946.25	581699.84	

First Year Electricity Savings from 1989 Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	219.42	200587.29	10061.80	30031.24	692.87		
2	73.14	2906.91	485.28	10678.58	531.90		
3	2166.84	257228.40	175116.34	51529.56	869.64	73.14	
4	1255.53	36829.67	8293.02	6452.95			
5		57153.72	1292.09	6736.71	146.28		
ALL	3714.93	554705.99	195248.53	105429.04	2240.69	73.14	

First Year Electricity Savings from 1989 Urban Installations **(kWh)**

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	219.42	129944.11	4743.40	19209.64	579.29	
2	-	-	73.14	6923.69	-	
3	2166.84	165804.92	164802.90	34662.65	869.64	
4	1255.53	27143.84	5111.15	4456.02	-	
5	-	31227.09	951.35	5092.01	146.28	
ALL	3641.79	354119.96	175681.94	70344.01	1595.21	

First Year Electricity Savings from 1989 Rural Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN							
1	.	70643.18	5318.40	10821.60	113.58		.
2	73.14	2906.91	412.14	3754.89	531.90		.
3	.	91423.48	10313.44	16866.91	.	73.14	.
4	.	9685.83	3181.87	1996.93	.		.
5	.	25926.63	340.74	1644.70	.		.
ALL	73.14	200586.03	19566.59	35085.03	645.48	73.14	

First Year Electricity Savings from 1989 Owner Installations **(kWh)**

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	.	54700.15	1895.29	21790.48	314.63	
2	73.14	2906.91	73.14	7993.36	531.90	
3	.	92841.36	6328.26	38594.55	869.64	
4	1255.53	11918.87	2842.78	3741.30	.	
5	.	24712.86	878.21	4357.59	146.28	
ALL	1328.67	187080.15	12017.68	76477.28	1862.45	

First Year Electricity Savings from 1989 Renter Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	219.42	144940.89	8166.51	8240.76	378.24	-	-
2	-	-	412.14	2685.22	-	-	-
3	2166.84	164387.04	168788.08	12935.01	-	-	73.14
4	-	24910.80	5450.24	2711.65	-	-	-
5	-	32440.86	413.88	2379.12	-	-	-
ALL	2386.26	366679.59	183230.85	28951.76	378.24	-	73.14

Lifetime Electricity Savings from 1989 Installations (kWh)

	URB_RUR	
	RURAL	URBAN
	lifetime fuel savings	lifetime fuel savings
E_PLAN	SUM	SUM
1	508539.02	1103349.02
2	57602.40	80811.68
3	740220.00	2574329.58
4	152580.17	381211.59
5	347250.86	473226.42
ALL	1806192.45	4612926.29

Lifetime Electricity Savings from 1989 Installations (kWh)

	Homeowners = H and Tenants = T			
	H	N	T	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	592331.47	7609.18	1011947.39	
2	104818.69	-	33595.39	
3	997509.35	-	2317040.23	
4	196886.27	-	336905.49	
5	334437.76	-	486039.52	
ALL	2225983.54	7609.18	4185528.02	

Lifetime Electricity Savings from 1989 Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	1535.94	1190572.83	92431.96	321924.28	5423.03		
2	511.98	9479.73	4775.04	119730.53	3916.80		
3	15167.88	1489446.11	1268620.87	533011.53	7791.21		511.98
4	12327.36	374058.76	80116.62	67289.02			
5		734693.19	11227.85	73532.28	1023.96		
ALL	29543.16	3798250.62	1457172.34	1115487.64	18155.00		511.98

Lifetime Electricity Savings from 1989 Urban Installations (kWh)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	1535.94	851480.89	43216.63	202828.33	4287.23	
2	.	.	511.98	80299.70	.	
3	15167.88	1016270.20	1175161.83	359938.46	7791.21	
4	12327.36	279157.66	49582.55	40144.02	.	
5	.	406249.58	7820.45	58132.43	1023.96	
ALL	29031.18	2553158.33	1276293.44	741342.94	13102.40	

Lifetime Electricity Savings from 1989 Rural Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	.	339091.94	49215.33	119095.95	1135.80	.	
2	511.98	9479.73	4263.06	39430.83	3916.80	.	
3	.	473175.91	93459.04	173073.07	.	511.98	
4	.	94901.10	30534.07	27145.00	.	.	
5	.	328443.61	3407.40	15399.85	.	.	
ALL	511.98	1245092.29	180878.90	374144.70	5052.60	511.98	

Lifetime Electricity Savings from 1989 Owner Installations (kWh)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	-	336326.25	17944.03	235626.58	2434.61	
2	511.98	9479.73	511.98	90398.20	3916.80	
3	-	520014.86	57268.80	412434.48	7791.21	
4	12327.36	125151.97	25039.93	34367.01	-	
5	-	273802.88	7308.47	52302.45	1023.96	
ALL	12839.34	1264775.69	108073.21	825128.72	15166.58	

Lifetime Electricity Savings from 1989 Renter Installations (kWh)

Primary Space Heating Fuel							
BLANK	ELEC	GAS	OIL	OTHER	PROP		
lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
SUM	SUM	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN							
1	1535.94	846637.40	74487.93	86297.70	2988.42	.	.
2	.	.	4263.06	29332.33	.	.	.
3	15167.88	969431.25	1211352.07	120577.05	.	511.98	.
4	.	248906.79	55076.69	32922.01	.	.	.
5	.	460890.31	3919.38	71229.83	.	.	.
ALL	16703.82	2525865.75	1349099.13	261358.92	2988.42	511.98	.

First Year Gas Savings from 1989 Installations (ccf)

	URB_RUR	
	RURAL	URBAN
	first year fuel savings	first year fuel savings
E_PLAN	SUM	SUM
1	21151.89	6898.02
2	1750.73	1467.94
3	16074.80	8959.15
4	17605.92	15987.74
5	14029.03	8847.20
ALL	70612.37	42160.05

First Year Gas Savings from 1989 Installations (ccf)

	Homeowners = H and Tenants = T	
	H	T
	first year fuel savings	first year fuel savings
	SUM	SUM
E_PLAN		
1	8749.34	19300.57
2	1401.51	1817.16
3	8285.79	16748.16
4	9487.83	24105.83
5	11074.08	11802.15
ALL	38998.55	73773.87

First Year Gas Savings from 1989 Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	90.06	229.27	26005.11	1696.41	29.06	
2	.	.	2865.45	334.78	18.44	
3	161.52	175.27	23276.34	1420.82	.	
4	.	40.62	33351.97	201.07	.	
5	35.37	42.45	22777.49	2.10	18.82	
ALL	286.95	487.61	108276.36	3655.18	66.32	

First Year Gas Savings from 1989 Urban Installations **(ccf)**

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	OTHER
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	48.52	72.57	6239.01	508.86	29.06
2	.	.	1362.68	86.82	18.44
3	52.81	61.37	8163.32	681.65	.
4	.	.	15858.04	129.70	.
5	.	42.45	8804.75	.	.
ALL	101.33	176.39	40427.80	1407.03	47.50

First Year Gas Savings from 1989 Rural Installations **(ccf)**

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	41.54	156.70	19766.10	1187.55		
2		-	1502.77	247.96		
3	108.71	113.90	15113.02	739.17		
4	-	40.62	17493.93	71.37		
5	35.37	-	13972.74	2.10		18.82
ALL	185.62	311.22	67848.56	2248.15		18.82

First Year Gas Savings from 1989 Owner Installations **(ccf)**

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	4.70	44.35	7842.62	828.61	29.06	
2	-	-	1157.27	244.24	-	
3	73.31	-	7333.05	879.43	-	
4	-	-	9374.49	113.34	-	
5	-	21.62	11031.54	2.10	18.82	
ALL	78.01	65.97	36738.97	2067.72	47.88	

First Year Gas Savings from 1989 Renter Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	85.36	184.92	18162.49	867.80	-	
2	-	-	1708.18	90.54	18.44	
3	88.21	175.27	15943.29	541.39	-	
4	-	40.62	23977.48	87.73	-	
5	35.37	20.83	11745.95	-	-	
ALL	208.94	421.64	71537.39	1587.46	18.44	

Lifetime Gas Savings from 1989 Installations (ccf)

	URB_RUR	
	RURAL	URBAN
	lifetime fuel savings	lifetime fuel savings
	SUM	SUM
E_PLAN		
1	91768.21	37874.40
2	25699.93	20489.78
3	81164.32	53126.19
4	318951.50	311239.40
5	273477.41	162687.54
ALL	791061.37	585417.31

Lifetime Gas Savings from 1989 Installations (ccf)

	Homeowners = H and Tenants = T	
	H	T
	lifetime fuel savings	lifetime fuel savings
	SUM	SUM
E_PLAN		
1	42405.76	87236.85
2	12424.53	33765.18
3	46237.09	88053.42
4	158521.97	471668.93
5	214873.68	221291.27
ALL	474463.03	902015.65

Lifetime Gas Savings from 1989 Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	886.68	2171.59	109467.01	16814.13		303.20
2	..	.	42379.11	3639.94		170.66
3	1544.58	1597.99	116992.36	14155.58		.
4	.	521.70	627372.39	2296.81		.
5	311.61	418.11	435194.53	52.50		188.20
ALL	2742.87	4709.39	1331405.40	36958.96		662.06

Lifetime Gas Savings from 1989 Urban Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	491.32	677.31	31327.65	504.92	303.20	
2	.	.	19372.44	946.68	170.66	
3	457.57	530.57	45174.94	6963.11	.	
4	.	.	309581.56	1657.84	.	
5	.	418.11	162269.43	.	.	
ALL	948.89	1625.99	567726.02	14642.55	473.86	

Lifetime Gas Savings from 1989 Rural Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	395.36	1494.28	78139.36	11739.21		
2			23006.67	2693.26		
3	1087.01	1067.42	71817.42	7192.47		
4		521.70	317790.83	638.97		
5	311.61		272925.10	52.50	188.20	
ALL	1793.98	3083.40	763679.38	22316.41	188.20	

Lifetime Gas Savings from 1989 Owner Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	47.00	395.11	33516.76	8143.69	303.20	
2	.	.	9753.77	2670.76	.	
3	687.77	.	36788.71	8760.61	.	
4	.	.	157194.59	1327.38	.	
5	.	258.20	214374.78	52.50	188.20	
ALL	734.77	653.31	451628.61	20954.94	491.40	

Lifetime Gas Savings from 1989 Renter Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	lifetime fuel savings SUM	lifetime fuel savings SUM	lifetime fuel savings SUM	lifetime fuel savings SUM	lifetime fuel savings SUM	
E_PLAN						
1	839.68	1776.48	75950.25	8670.44	.	
2	.	.	32625.34	969.18	170.66	
3	856.81	1597.99	80203.65	5394.97	.	
4	.	521.70	470177.80	969.43	.	
5	311.61	159.91	220819.75	.	.	
ALL	2008.10	4056.08	879776.79	16004.02	170.66	

**First Year Oil Savings from 1989 Installations
(gallons)**

	URB_RUR			
	RURAL		URBAN	
	first year fuel savings		first year fuel savings	
E_PLAN	SUM		SUM	
1	9837.05		10294.67	
2	12162.40		57708.68	
3	8931.17		9477.52	
4	7111.27		7727.11	
5	10897.98		9859.36	
ALL	48939.87		95067.34	

First Year Oil Savings from 1989 Installations (gallons)

	Homeowners = H and Tenants = T	
	H	T
	first year fuel savings	first year fuel savings
	SUM	SUM
E_PLAN		
1	13379.58	6752.14
2	63518.08	6353.00
3	12222.82	6185.87
4	8899.57	5938.81
5	14792.41	5964.93
ALL	112812.46	31194.75

First Year Oil Savings from 1989 Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	13.98	32.94	20084.80	
2	.	.	.	69871.08	
3	28.85	23.66	15.47	18340.71	
4	.	.	47.62	14790.76	
5	.	.	.	20757.34	
ALL	28.85	37.64	96.03	143844.69	

First Year Oil Savings from 1989 Urban Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	.	.	.	10294.67
2	.	.	.	.	57708.68
3	28.85	20.17	15.47		9413.03
4	.	.	47.62		7679.49
5	.	.	.	.	9859.36
ALL	28.85	20.17	63.09		94955.23

First Year Oil Savings from 1989 Rural Installations (gallons)

	Primary Space Heating Fuel			
	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	13.98	32.94	9790.13	
2	.	.	12162.40	
3	3.49	.	8927.68	
4	.	.	7111.27	
5	.	.	10897.98	
ALL	17.47	32.94	48889.46	

First Year Oil Savings from 1989 Owner Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	.	.	.	13379.58
2	.	.	.	.	63518.08
3	28.85	3.49	15.47		12175.01
4	.	.	47.62		8851.95
5	.	.	.	.	14792.41
ALL	28.85	3.49	63.09		112717.03

First Year Oil Savings from 1989 Renter Installations (gallons)

	Primary Space Heating Fuel			
	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	13.98	32.94	6705.22	
2	-	-	6353.00	
3	20.17	-	6165.70	
4	-	-	5938.81	
5	-	-	5964.93	
ALL	34.15	32.94	31127.66	

Lifetime Oil Savings from 1989 Installations (gallons)

	URB_RUR			
	RURAL		URBAN	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	42214.97		49649.01	
2	127374.36		782515.80	
3	51570.70		61174.38	
4	145603.53		136285.73	
5	187666.23		157685.84	
ALL	554429.79		1187310.76	

Lifetime Oil Savings from 1989 Installations (gallons)

	Homeowners = H and Tenants = T			
	H		T	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	63656.64		28207.34	
2	851134.07		58756.09	
3	76643.76		36101.32	
4	167174.94		114714.32	
5	240264.18		105087.89	
ALL	1398873.59		342866.96	

Lifetime Oil Savings from 1989 Installations (gallons)

	Primary Space Heating Fuel			
	BLANK	ELEC	GAS	OIL
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM
E_PLAN				
1	.	139.80	293.46	91430.72
2	.	.	.	909890.16
3	354.50	277.10	118.76	111994.72
4	.	.	444.82	281444.44
5	.	.	.	345352.07
ALL	354.50	416.90	857.04	1740112.11

Lifetime Oil Savings from 1989 Urban Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	.	.	.	49649.01
2	.	.	.	.	782515.80
3	354.50	242.20	118.76	60458.92	
4	.	.	444.82	135840.91	
5	.	.	.	157685.84	
ALL	354.50	242.20	563.58	1186150.48	

Lifetime Oil Savings from 1989 Rural Installations (gallons)

	Primary Space Heating Fuel			
	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	139.80	293.46	41781.71	
2	.	.	127374.36	
3	34.90	.	51535.80	
4	.	.	145603.53	
5	.	.	187666.23	
ALL	174.70	293.46	553961.63	

Lifetime Oil Savings from 1989 Owner Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	.	.	.	63656.64
2	.	.	.	.	851134.07
3	354.50	34.90	118.76	76135.60	
4	.	.	444.82	166730.12	
5	.	.	.	240264.18	
ALL	354.50	34.90	563.58	1397920.61	

Lifetime Oil Savings from 1989 Renter Installations (gallons)

	Primary Space Heating Fuel			
	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	139.80	293.46	27774.08	
2	-	-	58756.09	
3	242.20	-	35859.12	
4	-	-	114714.32	
5	-	-	105087.89	
ALL	382.00	293.46	342191.50	

First Year Propane Savings from 1989 Installations (pounds)

	URB_RUR	
	RURAL	URBAN
	first year fuel savings	first year fuel savings
E_PLAN	SUM	SUM
1		70.04
3	1773.83	243.78
4	239.68	.
5	3240.12	.
ALL	5253.63	313.82

First Year Propane Savings from 1989 Installations (pounds)

	Homeowners = H and Tenants = T			
	H		T	
	first year fuel savings		first year fuel savings	
	SUM		SUM	
E_PLAN				
1	47.66		22.38	
3	442.80		1574.80	
4	.		239.68	
5	.		3240.12	
ALL	490.46		5076.98	

First Year Propane Savings from 1989 Installations (pounds)

	Primary Space Heating Fuel			
	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1		22.38	47.66	
3	204.93	.	1812.68	
4	.	.	239.68	
5	.	.	3240.12	
ALL	204.93	22.38	5340.14	

First Year Propane Savings from 1989 Urban Installations (pounds)

	Primary Space Heating Fuel		
	OTHER	PROP	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	22.38	47.66	
3	-	243.78	
ALL	22.38	291.44	

First Year Propane Savings from 1989 Rural Installations (pounds)

	Primary Space Heating Fuel		
	OIL	PROP	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
3	204.93	1568.90	
4	-	239.68	
5	-	3240.12	
ALL	204.93	5048.70	

First Year Propane Savings from 1989 Owner Installations **(pounds)**

	Primary Space Heating Fuel
	PROP
	first year fuel savings
	SUM
E_PLAN	
1	47.66
3	442.80
ALL	490.46

First Year Propane Savings from 1989 Renter Installations **(pounds)**

	Primary Space Heating Fuel			
	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	-	22.38	-	
3	204.93	-	1369.88	
4	-	-	239.68	
5	-	-	3240.12	
ALL	204.93	22.38	4849.68	

Lifetime Propane Savings from 1989 Installations (pounds)

	URB_RUR			
	RURAL		URBAN	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1				938.69
3		9212.80		775.33
4		719.05		.
5		63066.36		.
ALL		72998.21		1714.02

Lifetime Propane Savings from 1989 Installations (pounds)

	Homeowners = H and Tenants = T			
	H		T	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1		714.91		223.78
3		1580.37		8407.76
4		.		719.05
5		.		63066.36
ALL		2295.28		72416.95

Lifetime Propane Savings from 1989 Installations (pounds)

	Primary Space Heating Fuel			
	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1		223.78	714.91	
3	2099.26	.	7888.87	
4	.	.	719.05	
5	.	.	63066.36	
ALL	2099.26	223.78	72369.20	

Lifetime Propane Savings from 1989 Urban Installations (pounds)

	Primary Space Heating Fuel			
	OTHER		PROP	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	223.78		714.91	
3	-		775.33	
ALL	223.78		1490.24	

Lifetime Propane Savings from 1989 Rural Installations (pounds)

	Primary Space Heating Fuel		
	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	
E_PLAN			
3	2099.26	7113.54	
4	-	719.05	
5	-	63066.36	
ALL	2099.26	70898.95	

Lifetime Propane Savings from 1989 Owner Installations (pounds)

	Primary Space Heating Fuel
	PROP
	lifetime fuel savings
	SUM
E_PLAN	
1	714.91
3	1580.37
ALL	2295.28

Lifetime Propane Savings from 1989 Renter Installations (pounds)

	Primary Space Heating Fuel			
	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1		223.78		
3	2099.26		6308.50	
4			719.05	
5			63066.36	
ALL	2099.26	223.78	70093.91	

First Year Energy Savings from 1989 Installations (Btus)

	URB_RUR		
	RURAL	URBAN	
	first year Btu savings	first year Btu savings	
E_PLAN	SUM	SUM	
1	3839523.78	2667755.96	
2	1993336.80	8178694.83	
3	3337786.04	3499534.99	
4	2855589.87	2847989.91	
5	3121788.33	2406359.54	
ALL	15048024.82	19600335.23	

First Year Energy Savings from 1989 Installations (Btus)

		Homeowners = H and Tenants = T			
		H	N	T	
		first year Btu savings	first year Btu savings	first year Btu savings	
		SUM	SUM	SUM	
E_PLAN					
1		3026431.99	3229.55	3477618.20	
2		8993195.30	.	1078836.34	
3		3031355.60	.	3805965.44	
4		2278963.55	.	3424616.23	
5		3294903.61	.	2233244.25	
ALL		20624850.05	3229.55	14020280.45	

First Year Energy Savings from 1989 Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings
	SUM	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN							
1	10025.06	710158.12	2717435.70	3062787.76	5842.05	1031.04	
2	249.63	9921.28	296797.61	9761348.42	3714.69		
3	28033.19	899254.74	2997280.62	2870321.10	2968.08	39463.30	
4	4285.12	129883.52	3470161.41	2094064.63		5185.09	
5	3643.11	199438.00	2350491.37	2902044.18	2437.71	70093.50	
ALL	46236.11	1948655.67	11832166.71	20690566.09	14962.54	115772.93	

First Year Energy Savings from 1989 Urban Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	5746.44	450973.96	658807.25	1545742.86	5454.40	1031.04	
2	.	.	140605.67	8036189.84	1899.32	.	
3	16836.06	575010.68	1405439.79	1494006.71	2968.08	5273.67	
4	4285.12	92641.93	1657426.89	1093635.96	.	.	
5	.	110950.41	910136.21	1384773.67	499.25	.	
ALL	26867.63	1229576.97	4772415.81	13554349.04	10821.06	6304.72	

First Year Energy Savings from 1989 Rural Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	4278.62	259184.16	2058628.45	1517044.90	387.65		
2	249.63	9921.28	156191.94	1725158.58	1815.37		
3	11197.13	324244.07	1591840.83	1376314.39		34189.62	
4		37241.60	1812734.51	1000428.67		5185.09	
5	3643.11	88487.59	1440355.17	1517270.51	1938.46	70093.50	
ALL	19368.49	719078.69	7059750.90	7136217.05	4141.48	109468.21	

First Year Energy Savings from 1989 Owner Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	484.10	191259.66	814258.48	2015331.69	4067.01	1031.04	
2	249.63	9921.28	119448.44	8861760.57	1815.37	.	
3	11552.14	317351.59	779048.04	1910856.63	2968.08	9579.13	
4	4285.12	40679.10	981879.30	1252120.02	.	.	
5	.	86571.85	1139245.95	2066648.10	2437.71	.	
ALL	16570.99	645783.49	3833880.20	16106717.01	11288.18	10610.18	

First Year Energy Savings from 1989 Renter Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	9540.96	515668.90	1903177.22	1047456.08	1775.04	-	
2	-	-	177349.17	899587.85	1899.32	-	
3	16481.05	581903.15	2218232.59	959464.47	-	29884.17	
4	-	89204.42	2488282.11	841944.61	-	5185.09	
5	3643.11	112866.15	1211245.42	835396.08	-	70093.50	
ALL	29665.13	1299642.62	7998286.51	4583849.08	3674.36	105162.75	

Lifetime Energy Savings from 1989 Installations (Btus)

	URB_RUR		
	RURAL	URBAN	
	lifetime Btu savings	lifetime Btu savings	
E_PLAN	SUM	SUM	
1	17042563.49	14572921.33	
2	20509239.77	110913373.91	
3	18237936.74	22759231.94	
4	53582069.47	52260201.25	
5	56745084.42	40241387.54	
ALL	166116893.90	240747115.97	

Lifetime Energy Savings from 1989 Installations (Btus)

	Homeowners = H and Tenants = T			
	H	N	T	
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	
	SUM	SUM	SUM	
E_PLAN				
1	15233425.65	25970.13	16356089.04	
2	119681256.95	-	11741356.73	
3	18830830.99	-	22166337.69	
4	40185228.18	-	65657042.54	
5	56595634.24	-	40390807.72	
ALL	250526406.00	25970.13	156311633.73	

Lifetime Energy Savings from 1989 Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	96570.20	4306487.70	11631272.28	15511109.51	54579.47	15465.66	
2	1747.39	32354.32	4381345.54	126976220.41	30946.02		
3	260025.32	5286503.54	16396486.93	18855154.13	26591.40	172407.35	
4	42073.28	1330397.65	64954486.28	39499758.24		15555.27	
5	32095.83	2550573.19	44863357.24	48153251.76	22879.38	1364314.57	
ALL	432512.02	13506316.40	142226948.27	248995494.06	134996.26	1567742.86	

Lifetime Energy Savings from 1989 Urban Installations (Btus)

Primary Space Heating Fuel						
BLANK	ELEC	GAS	OIL	OTHER	PROP	
lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	
SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	55848.12	2975867.21	8100791.05	50702.98	15465.66	
2	-	-	108898687.22	17577.98	-	
3	148063.29	3556769.62	10330717.91	26591.40	16772.75	
4	42073.28	952765.09	19147544.87	-	-	
5	-	1429595.15	22067855.13	3494.78	-	
ALL	245984.69	8914997.07	168545596.18	98367.14	32238.41	

Lifetime Energy Savings from 1989 Rural Installations (Btus)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	PROP
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings
E_PLAN	SUM	SUM	SUM	SUM	SUM	SUM
1	40722.08	1330620.49	8257025.97	7410318.47	3876.49	.
2	1747.39	32354.32	2384236.83	18077533.19	13368.04	.
3	111962.03	1729733.92	7716169.96	8524436.23	.	155634.60
4	.	377632.55	32836668.27	20352213.37	.	15555.27
5	32095.83	1120978.04	28122914.76	26085396.63	19384.60	1364314.57
ALL	186527.33	4591319.33	79317015.79	80449897.88	36629.12	1535504.44

Lifetime Energy Savings from 1989 Owner Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	
E_PLAN	SUM	SUM	SUM	SUM	SUM	SUM	SUM
1	4841.00	1188577.82	3513469.25	10471532.99	39538.92	15465.66	
2	1747.39	32354.32	1004385.70	118627401.50	13368.04	-	
3	120005.91	1779651.00	4001166.37	12869228.07	26591.40	34188.23	
4	42073.28	427143.67	16338196.14	23377815.09	-	-	
5	-	961083.83	22105546.15	33506154.89	22879.38	-	
ALL	168667.58	4388810.64	46964763.61	198852132.54	102377.74	49653.89	

Lifetime Energy Savings from 1989 Renter Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	91729.20	3091939.75	8117803.02	5039576.53	15040.54		
2			3374959.84	8348818.90	17577.98		
3	140019.40	3506852.54	12395320.56	5985926.06		138219.12	
4		903253.97	48616290.14	16121943.15		15555.27	
5	32095.83	1589489.36	22757811.09	14647096.87		1364314.57	
ALL	263844.44	9091535.62	95262184.67	50143361.51	32618.52	1518088.96	

Appendix C: Savings Based on Engineering Estimates

Section 4: Savings from 1990 Installations

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By Owner/Renter Status	C-111



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	By Urban/Rural Status	C-124
	By Owner/Renter Status	C-125
	By Primary Space Heating Fuel	
	Total	C-126
	Urban	C-127
	Rural	C-128
	Owners	C-129
	Renters	C-130
Oil Savings		
First Year		
	By Urban/Rural Status	C-131
	By Owner/Renter Status	C-132
	By Primary Space Heating Fuel	
	Total	C-133
	Urban	C-134
	Rural	C-135
	Owners	C-136
	Renters	C-137
	Lifetime	
	By Urban/Rural Status	C-138
	By Owner/Renter Status	C-139
	By Primary Space Heating Fuel	
	Total	C-140
	Urban	C-141
	Rural	C-142
	Owners	C-143
	Renters	C-144

Propane Savings

First Year

By Urban/Rural Status	C-145
By Owner/Renter Status	C-146
By Primary Space Heating Fuel	
Total	C-147
Urban	C-148
Rural	C-149
Owners	C-150
Renters	C-151

Lifetime

By Urban/Rural Status	C-152
By Owner/Renter Status	C-153
By Primary Space Heating Fuel	
Total	C-154
Urban	C-155
Rural	C-156
Owners	C-157
Renters	C-158

Btu Savings

First Year

By Urban/Rural Status	C-159
By Owner/Renter Status	C-160
By Primary Space Heating Fuel	
Total	C-161
Urban	C-162
Rural	C-163
Owners	C-164
Renters	C-165

Lifetime

By Urban/Rural Status	C-166
By Owner/Renter Status	C-167
By Primary Space Heating Fuel	
Total	C-168
Urban	C-169
Rural	C-170
Owners	C-171
Renters	C-172





**First Year Fuel Savings from 1990 Installations
(kWh electricity, ccf gas, gallons oil, lbs propane)**

	FUEL						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	first year Btu savings
	first year fuel savings SUM	first year fuel savings SUM	first year fuel savings SUM	first year fuel savings SUM	first year fuel savings SUM	first year fuel savings SUM	
E_PLAN							SUM
1	.	128577.58	12223.78	9907.43	.	2002.70	3115270.54
2	.	44749.35	8947.43	42971.53	.	5268.01	7147999.15
3	.	477723.99	16558.61	24714.42	.	3650.40	6842620.85
3P	.	289724.65	80.59	902.39	.	.	1122283.47
4	.	125245.11	106613.74	64685.75	.	13600.82	20674170.09
5	.	106903.03	53985.79	94067.60	.	6848.38	19119782.92
ALL	.	1172923.71	198409.94	237249.12	.	31370.32	58022127.02



Lifetime Fuel Savings from 1990 Installations
(kWh electricity, ccf gas, gallons oil, lbs propane)

	FUEL							lifetime Btu savings
	BLANK	ELEC	GAS	OIL	OTHER	PROP		
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings		
	SUM	SUM	SUM	SUM	SUM	SUM		
E_PLAN								SUM
1	.	877886.65	55422.02	50899.61	.	13532.79	16056716.86	
2	.	371324.78	181373.61	587740.98	.	87083.79	103346493.42	
3	.	3147529.57	96445.45	146536.89	.	17602.94	41380405.53	
3P	.	2028072.55	241.77	4215.32	.	.	7531336.65	
4	.	1289590.70	2377017.66	1329482.39	.	304886.72	440215719.22	
5	.	831007.94	1104243.23	1400619.31	.	164516.97	314384170.57	
ALL	.	8545412.19	3814743.74	3519494.50	.	587623.22	922914842.26	

First Year Electricity Savings from 1990 Installations (kWh)

	Urban/Rural Location			
	RURAL		URBAN	
	first year fuel savings		first year fuel savings	
E_PLAN	SUM		SUM	
1	52507.45		76070.13	
2	17096.55		27652.80	
3	199863.72		277860.27	
3P	155375.08		134349.57	
4	62331.91		62913.20	
5	25914.29		80988.74	
ALL	513089.00		659834.71	

First Year Electricity Savings from 1990 Installations **(kWh)**

	Homeowners = H and Tenants = T		
	H	T	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	60103.68	68473.90	
2	24130.86	20618.49	
3	171896.09	305827.90	
3P	373.71	289350.94	
4	41823.98	83421.13	
5	28513.36	78389.67	
ALL	326841.68	846082.03	

First Year Electricity Savings from 1990 Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	1682.22	65835.62	13180.91	44378.50	2599.74	900.59	
2	287.51	3017.35	4510.75	36300.44	-	633.30	
3	8863.83	304310.15	26673.20	124067.22	11488.05	2321.54	
3P	93997.57	-	-	195727.08	-	-	
4	7806.38	42749.75	38146.67	33316.10	3024.59	201.62	
5	34767.68	4520.58	14213.95	51692.29	1549.11	219.42	
ALL	147345.19	420433.45	96725.48	485481.63	18661.49	4276.47	

First Year Electricity Savings from 1990 Urban Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	511.98	36883.36	4283.16	31904.05	1625.69	861.89	
2	287.51	601.41	4112.80	22164.06	.	487.02	
3	1802.54	213671.92	11982.03	45368.12	3430.41	1605.25	
3p	90913.60	.	.	43435.97	.	.	
4	7806.38	21782.00	11129.27	20599.86	1394.07	201.62	
5	32498.48	3270.46	6224.39	38274.07	721.34	.	
ALL	133820.49	276209.15	37731.65	201746.13	7171.51	3155.78	

First Year Electricity Savings from 1990 Rural Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
EPLAN	SUM	SUM	SUM	SUM	SUM	SUM	
1	1170.24	28952.26	8897.75	12474.45	974.05	38.70	
2	-	2415.94	397.95	14136.38	-	146.28	
3	7061.29	90638.23	14691.17	78699.10	8057.64	716.29	
3P	3083.97	-	-	152291.11	-	-	
4	-	20967.75	27017.40	12716.24	1630.52	0.00	
5	2209.20	1250.12	7989.56	13418.22	827.77	219.42	
ALL	13524.70	144224.30	58993.83	283735.50	11489.98	1120.69	

First Year Electricity Savings from 1990 Owner Installations (kWh)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	PROP
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	1462.80	36081.25	2542.69	18173.57	1389.36	454.01
2	287.51	3017.35	2122.53	18070.17	.	633.30
3	2163.19	97914.62	6198.26	55679.03	8798.86	1142.13
3P	373.71	.	.	.	.	.
4	.	22231.90	2486.76	14227.01	2878.31	.
5	1727.49	.	5747.67	19269.67	1549.11	219.42
ALL	6014.70	159245.12	19097.91	125419.45	14615.64	2448.86

First Year Electricity Savings from 1990 Renter Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	219.42	29754.37	10638.22	26204.93	1210.38	446.58	
2	.	.	2388.22	18230.27	.	.	
3	6700.64	206395.53	20474.94	68388.19	2689.19	1179.41	
3P	93623.86	.	.	195727.08	.	.	
4	7806.38	20517.85	35659.91	19089.09	146.28	201.62	
5	32980.19	4520.58	8466.28	32422.62	.	.	
ALL	141330.49	261188.33	77627.57	360062.18	4045.85	1827.61	

Lifetime Electricity Savings from 1990 Installations (kWh)

	Urban/Rural Location			
	RURAL		URBAN	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	327523.68		550362.97	
2	152819.33		218505.45	
3	1407091.90		1740437.67	
3p	1087625.56		940446.99	
4	613372.22		676218.48	
5	198598.08		632409.86	
ALL	3787030.77		4758381.42	

Lifetime Electricity Savings from 1990 Installations (kWh)

	Homeowners = H and Tenants = T	
	H	T
	lifetime fuel savings	lifetime fuel savings
	SUM	SUM
E_PLAN		
1	421719.77	456166.88
2	214979.54	156345.24
3	1250860.80	1896668.77
3P	2615.97	2025456.58
4	520023.54	769567.16
5	257610.19	573397.75
ALL	2667809.81	5877602.38

Lifetime Electricity Savings from 1990 Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	11775.54	344987.63	102859.67	386931.52	23309.34	8022.95	
2	2012.57	12336.93	37730.41	313789.55	.	5455.32	
3	62046.81	1723366.68	203338.13	1041186.60	100659.09	16932.26	
3P	657982.99	.	.	1370089.56	.	.	
4	54644.66	596499.46	282495.29	324819.89	29720.06	1411.34	
5	242953.76	49028.17	108184.36	415735.99	13569.72	1535.94	
ALL	1031416.33	2726218.87	734607.86	3852553.11	167258.21	33357.81	

Lifetime Electricity Savings from 1990 Urban Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	3583.86	213040.16	38190.21	274046.77	14446.52	7055.45	
2	2012.57	2621.31	34364.26	175075.95	.	4431.36	
3	12617.78	1175692.96	89936.85	420001.94	30951.39	11236.75	
3P	636395.20	.	.	304051.79	.	.	
4	54644.66	305465.43	91669.76	210450.33	12576.96	1411.34	
5	227489.36	45277.81	50894.45	303017.38	5730.86	.	
ALL	936743.43	1742097.67	305055.53	1686644.16	63705.73	24134.90	

Lifetime Electricity Savings from 1990 Rural Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	8191.68	131947.47	64669.46	112884.75	8862.82	967.50	
2	-	9715.62	3366.15	138713.60	-	1023.96	
3	49429.03	547673.72	113401.28	621184.66	69707.70	5695.51	
3P	21587.79	-	-	1066037.77	-	-	
4	-	291034.03	190825.53	114369.56	17143.10	0.00	
5	15464.40	3750.36	57289.91	112718.61	7838.86	1535.94	
ALL	94672.90	984121.20	429552.33	2165908.95	103552.48	9222.91	

Lifetime Electricity Savings from 1990 Owner Installations (kWh)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	10239.60	205219.23	19502.56	170432.24	12110.73	4215.41	
2	2012.57	12336.93	19069.38	176105.34	-	5455.32	
3	15142.33	595808.58	48955.82	505329.47	76948.21	8676.39	
3P	2615.97	-	-	-	-	-	
4	-	347084.57	17407.32	126835.55	28696.10	-	
5	12092.43	-	46194.42	184217.68	13569.72	1535.94	
ALL	42102.90	1160449.31	151126.50	1162920.28	131324.76	19883.06	

Lifetime Electricity Savings from 1990 Renter Installations (kWh)

Primary Space Heating Fuel							
BLANK	ELEC	GAS	OIL	OTHER	PROP		
lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings		
SUM	SUM	SUM	SUM	SUM	SUM		
E_PLAN							
1	1535.94	139768.40	83357.11	216499.28	11198.61	3807.54	
2	-	-	18661.03	137684.21	-	-	
3	46904.48	1127558.10	154382.31	535857.13	23710.88	8255.87	
3P	655367.02	-	-	1370089.56	-	-	
4	54644.66	249414.89	265087.97	197984.34	1023.96	1411.34	
5	230861.33	49028.17	61989.94	231518.31	-	-	
ALL	989313.43	1565769.56	583478.36	2689632.83	35933.45	13474.75	

First Year Gas Savings from 1990 Installations (ccf)

	Urban/Rural Location		
	RURAL	URBAN	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	7607.35	4616.43	
2	1544.52	7402.91	
3	6505.89	10052.72	
3P	80.59	-	
4	63600.18	43013.56	
5	34058.20	19927.59	
ALL	113396.73	85013.21	

First Year Gas Savings from 1990 Installations (ccf)

	Homeowners = H and Tenants = T		
	H	T	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	2551.85	9671.93	
2	4299.73	4647.70	
3	5014.38	11544.23	
3P	.	80.59	
4	15946.12	90667.62	
5	20221.39	33764.40	
ALL	48033.47	150376.47	

First Year Gas Savings from 1990 Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
E_PLAN	SUM	SUM	SUM	SUM	SUM	SUM
1	.	25.31	11679.26	509.81	9.40	
2	.	.	8661.97	285.46	.	
3	88.70	81.09	15192.18	1187.24	9.40	
3P	.	.	80.59	.	.	
4	.	45.75	105854.27	678.77	34.95	
5	.	.	53618.50	367.29	.	
ALL	88.70	152.15	195086.77	3028.57	53.75	

First Year Gas Savings from 1990 Urban Installations (ccf)

	Primary Space Heating Fuel				
	ELEC	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	11.08	4351.43	244.52	9.40	
2	.	7238.40	164.51	.	
3	76.39	9460.40	506.53	9.40	
4	45.75	42516.16	416.70	34.95	
5	.	19736.77	190.82	.	
ALL	133.22	83303.16	1523.08	53.75	

First Year Gas Savings from 1990 Rural Installations (ccf)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	14.23	7327.83	265.29	
2	.	.	1423.57	120.95	
3	88.70	4.70	5731.78	680.71	
3P	.	.	80.59	.	
4	.	.	6338.11	262.07	
5	.	.	33881.73	176.47	
ALL	88.70	18.93	111783.61	1505.49	

First Year Gas Savings from 1990 Owner Installations **(ccf)**

	Primary Space Heating Fuel			
	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	2342.11	209.74		
2	4178.74	120.99		
3	4471.25	533.73	9.40	
4	15692.47	218.70	34.95	
5	19928.44	292.95		
ALL	46613.01	1376.11	44.35	

First Year Gas Savings from 1990 Renter Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	-	25.31	9337.15	300.07	9.40	
2	-	-	4483.23	164.47	-	
3	88.70	81.09	10720.93	653.51	-	
3P	-	-	80.59	-	-	
4	-	45.75	90161.80	460.07	-	
5	-	-	33690.06	74.34	-	
ALL	88.70	152.15	148473.76	1652.46	9.40	

Lifetime Gas Savings from 1990 Installations (ccf)

	Urban/Rural Location			
	RURAL		URBAN	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	32158.39		23263.63	
2	22254.36		159119.25	
3	36090.33		60355.12	
3P	241.77		.	
4	1459620.40		917397.26	
5	699604.32		404638.91	
ALL	2249969.57		1564774.17	

Lifetime Gas Savings from 1990 Installations (ccf)

	Homeowners = H and Tenants = T		
	H	T	
	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	
E_PLAN			
1	13743.71	41678.31	
2	83813.91	97559.70	
3	30417.42	66028.03	
3P	-	241.77	
4	337950.64	2039067.02	
5	392398.37	711844.86	
ALL	858324.05	2956419.69	

Lifetime Gas Savings from 1990 Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	.	350.75	49142.04	5835.23	94.00	
2	.	.	177954.65	3418.96	.	
3	790.22	811.77	83324.42	11425.04	94.00	
3P	.	.	241.77	.	.	
4	.	430.11	2368826.59	7459.85	301.11	
5	.	.	1100207.00	4036.23	.	
ALL	790.22	1592.63	3779696.47	32175.31	489.11	

Lifetime Gas Savings from 1990 Urban Installations **(ccf)**

	Primary Space Heating Fuel					
	ELEC	GAS	OIL	PROP		
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	136.00	20420.13	2613.50	94.00		
2	.	157139.38	1979.87	.		
3	764.77	54533.80	4962.55	301.11		
4	430.11	912056.48	4609.56	2214.62		
5	.	402424.29	2214.62	.		
ALL	1330.88	1546574.08	16380.10	489.11		

Lifetime Gas Savings from 1990 Rural Installations **(ccf)**

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	214.75	28721.91	3221.73	
2	.	.	20815.27	1439.09	
3	790.22	47.00	28790.62	6462.49	
3P	.	.	241.77	.	
4	.	.	1456770.11	2850.29	
5	.	.	697782.71	1821.61	
ALL	790.22	261.75	2233122.39	15795.21	

Lifetime Gas Savings from 1990 Owner Installations (ccf)

	Primary Space Heating Fuel			
	GAS	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	11549.89	2193.82		
2	82436.28	1377.63		
3	25174.97	5148.45	94.00	
4	335115.43	2534.10	301.11	
5	389295.50	3102.87		
ALL	843572.07	14356.87	395.11	

Lifetime Gas Savings from 1990 Renter Installations (ccf)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1		350.75	37592.15	3641.41	94.00	
2			95518.37	2041.33		
3	790.22	811.77	58149.45	6276.59		
3P			241.77			
4		430.11	2033711.16	4925.75		
5			710911.50	933.36		
ALL	790.22	1592.63	2936124.40	17818.44	94.00	

First Year Oil Savings from 1990 Installations (gallons)

	Urban/Rural Location	
	RURAL	URBAN
	first year fuel savings	first year fuel savings
	SUM	SUM
E_PLAN		
1	4131.21	5776.22
2	14804.73	28166.80
3	13032.78	11681.64
3P	902.39	-
4	31478.51	33207.24
5	26608.92	67458.68
ALL	90958.54	146290.58

First Year Oil Savings from 1990 Installations (gallons)

	Homeowners = H and Tenants = T	
	H	T
	first year fuel savings	first year fuel savings
	SUM	SUM
E_PLAN		
1	6154.40	3753.03
2	28300.45	14671.08
3	13241.72	11472.70
3P	.	902.39
4	28712.30	35973.45
5	75031.59	19036.01
ALL	151440.46	85808.66

First Year Oil Savings from 1990 Installations (gallons)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	.	.	.	9903.94	3.49	
2	.	.	.	42971.53	.	
3	9.00	32.94	20.96	24651.52	.	
3P	.	.	.	902.39	.	
4	.	.	32.46	64653.29	.	
5	20.96	.	.	94046.64	.	
ALL	29.96	32.94	53.42	237129.31	3.49	

First Year Oil Savings from 1990 Urban Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	.	.	.	5776.22
2	.	.	.	.	28166.80
3	.	32.94	.	.	11648.70
4	.	.	32.46	.	33174.78
5	20.96	.	.	.	67437.72
ALL	20.96	32.94	32.46	.	146204.22

First Year Oil Savings from 1990 Rural Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	GAS	OIL	OTHER	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	.	4127.72	3.49	
2	.	.	14804.73	.	
3	9.00	20.96	13002.82	.	
3P	.	.	902.39	.	
4	.	0.00	31478.51	.	
5	.	.	26608.92	.	
ALL	9.00	20.96	90925.09	3.49	

First Year Oil Savings from 1990 Owner Installations (gallons)

	Primary Space Heating Fuel			
	BLANK	ELEC	OIL	OTHER
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings
	SUM	SUM	SUM	SUM
E_PLAN				
1	-	-	6150.91	3.49
2	-	-	28300.45	-
3	9.00	32.94	13199.78	-
4	-	-	28712.30	-
5	20.96	-	75010.63	-
ALL	29.96	32.94	151374.07	3.49

First Year Oil Savings from 1990 Renter Installations (gallons)

	Primary Space Heating Fuel		
	GAS	OIL	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1		3753.03	
2		14671.08	
3	20.96	11451.74	
3P		902.39	
4	32.46	35940.99	
5		19036.01	
ALL	53.42	85755.24	

Lifetime Oil Savings from 1990 Installations (gallons)

	Urban/Rural Location	
	RURAL	URBAN
	lifetime fuel savings	lifetime fuel savings
	SUM	SUM
E_PLAN		
1	19789.52	31110.09
2	197892.11	389848.87
3	74732.23	71804.66
3P	4215.32	.
4	652669.34	676813.05
5	490028.22	910591.09
ALL	1439326.74	2080167.76

Lifetime Oil Savings from 1990 Installations (gallons)

	Homeowners = H and Tenants = T			
	H		T	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	34139.93		16759.68	
2	402494.71		185246.27	
3	81641.49		64895.40	
3P	.		4215.32	
4	578317.75		751164.64	
5	1004266.96		396352.35	
ALL	2100860.84		1418633.66	

Lifetime Oil Savings from 1990 Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	OTHER
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	.	.	50864.71	34.90
2	.	.	.	587740.98	.
3	225.00	293.46	209.60	145808.83	.
3P	.	.	.	4215.32	.
4	.	.	497.10	1328985.29	.
5	209.60	.	.	1400409.71	.
ALL	434.60	293.46	706.70	3518024.84	34.90

Lifetime Oil Savings from 1990 Urban Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	.	.	31110.09	
2	.	.	.	389848.87	
3	.	293.46	.	71511.20	
4	.	.	497.10	676315.95	
5	209.60	.	.	910381.49	
ALL	209.60	293.46	497.10	2079167.60	

Lifetime Oil Savings from 1990 Rural Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	GAS	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	.	.	19754.62	34.90	
2	.	.	197892.11	.	
3	225.00	209.60	74297.63	.	
3P	.	.	4215.32	.	
4	.	0.00	652669.34	.	
5	.	.	490028.22	.	
ALL	225.00	209.60	1438857.24	34.90	

Lifetime Oil Savings from 1990 Owner Installations (gallons)

	Primary Space Heating Fuel				
	BLANK	ELEC	OIL	OTHER	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM	SUM
E_PLAN					
1	.	.	34105.03		34.90
2	.	.	402494.71		.
3	225.00	293.46	81123.03		.
4	.	.	578317.75		.
5	209.60	.	1004057.36		.
ALL	434.60	293.46	2100097.88		34.90

Lifetime Oil Savings from 1990 Renter Installations (gallons)

	Primary Space Heating Fuel		
	GAS	OIL	
	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	
E_PLAN			
1		16759.68	
2		185246.27	
3	209.60	64685.80	
3P		4215.32	
4	497.10	750667.54	
5		396352.35	
ALL	706.70	1417926.96	

**First Year Propane Savings from 1990 Installations
(pounds)**

	Urban/Rural Location	
	RURAL	URBAN
	first year fuel savings	first year fuel savings
	SUM	SUM
E_PLAN		
1	370.19	1632.51
2	2418.98	2849.03
3	1390.78	2259.62
4	11579.17	2021.65
5	6848.38	-
ALL	22607.51	8762.81

First Year Propane Savings from 1990 Installations **(pounds)**

	Homeowners = H and Tenants = T		
	H	T	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	1386.73	615.97	
2	5045.61	222.40	
3	1369.26	2281.14	
4	4419.88	9180.95	
5	5528.55	1319.84	
ALL	17750.02	13620.30	

First Year Propane Savings from 1990 Installations **(pounds)**

	Primary Space Heating Fuel				
	ELEC	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	86.13	111.99	350.81	1453.77	
2	.	.	898.55	4369.45	
3	.	.	439.99	3210.41	
4	.	.	121.56	13479.27	
5	.	.	.	6848.38	
ALL	86.13	111.99	1810.92	29361.28	

First Year Propane Savings from 1990 Urban Installations (pounds)

	Primary Space Heating Fuel			
	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	111.99	350.81	1169.71	
2	.	765.00	2084.03	
3	.	166.41	2093.21	
4	.	121.56	1900.10	
ALL	111.99	1403.78	7247.05	

First Year Propane Savings from 1990 Rural Installations **(pounds)**

	Primary Space Heating Fuel			
	ELEC	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	86.13	-	284.06	
2	-	133.55	2285.43	
3	-	273.58	1117.19	
4	-	-	11579.17	
5	-	-	6848.38	
ALL	86.13	407.14	22114.24	

First Year Propane Savings from 1990 Owner Installations (pounds)

	Primary Space Heating Fuel		
	OIL	PROP	
	first year fuel savings	first year fuel savings	
	SUM	SUM	
E_PLAN			
1	339.81	1046.92	
2	749.00	4296.61	
3	213.83	1155.43	
4	121.56	4298.32	
5	-	5528.55	
ALL	1424.20	16325.82	

First Year Propane Savings from 1990 Renter Installations (pounds)

	Primary Space Heating Fuel				
	ELEC	GAS	OIL	PROP	
	first year fuel savings	first year fuel savings	first year fuel savings	first year fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	86.13	111.99	11.00	406.85	
2	.	.	149.55	72.85	
3	.	.	226.16	2054.98	
4	.	.	.	9180.95	
5	.	.	.	1319.84	
ALL	86.13	111.99	386.71	13035.47	

Lifetime Propane Savings from 1990 Installations (pounds)

	Urban/Rural Location	
	RURAL	URBAN
	lifetime fuel savings	lifetime fuel savings
	SUM	SUM
E_PLAN		
1	1623.08	11909.70
2	58420.85	28662.94
3	6617.94	10985.01
4	263891.75	40994.97
5	164516.97	-
ALL	495070.59	92552.63

Lifetime Propane Savings from 1990 Installations (pounds)

	Homeowners = H and Tenants = T			
	H	T		
	lifetime fuel savings	lifetime fuel savings		
	SUM	SUM		
E_PLAN				
1	7530.92	6001.87		
2	84919.54	2164.25		
3	7314.61	10288.33		
4	91636.12	213250.60		
5	131521.09	32995.88		
ALL	322922.28	264700.93		

Lifetime Propane Savings from 1990 Installations (pounds)

	Primary Space Heating Fuel			
	ELEC	GAS	OIL	PROP
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings
	SUM	SUM	SUM	SUM
E_PLAN				
1	770.90	1119.86	3692.68	7949.34
2	.	.	8451.61	78632.18
3	.	.	4204.09	13398.85
4	.	.	985.16	303901.56
5	.	.	.	164516.97
ALL	770.90	1119.86	17333.55	568398.90

Lifetime Propane Savings from 1990 Urban Installations (pounds)

	Primary Space Heating Fuel			
	GAS	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	1119.86	3692.68	7097.16	
2	-	7166.49	21496.46	
3	-	1433.68	9551.33	
4	-	985.16	40009.81	
ALL	1119.86	13278.01	78154.76	

Lifetime Propane Savings from 1990 Rural Installations (pounds)

	Primary Space Heating Fuel			
	ELEC	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	
E_PLAN				
1	770.90	.	852.18	
2	.	1285.13	57135.72	
3	.	2770.42	3847.52	
4	.	.	263891.75	
5	.	.	164516.97	
ALL	770.90	4055.54	490244.14	

Lifetime Propane Savings from 1990 Owner Installations
(pounds)

	Primary Space Heating Fuel			
	OIL		PROP	
	lifetime fuel savings		lifetime fuel savings	
	SUM		SUM	
E_PLAN				
1	3417.72		4113.20	
2	6766.54		78153.00	
3	1947.90		5366.71	
4	985.16		90650.96	
5	-		131521.09	
ALL	13117.31		309804.97	

Lifetime Propane Savings from 1990 Renter Installations (pounds)

	Primary Space Heating Fuel				
	ELEC	GAS	OIL	PROP	
	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	lifetime fuel savings	
	SUM	SUM	SUM	SUM	
E_PLAN					
1	770.90	1119.86	274.97	3836.14	
2	.	.	1685.08	479.18	
3	.	.	2256.19	8032.14	
4	.	.	.	213250.60	
5	.	.	.	32995.88	
ALL	770.90	1119.86	4216.24	258593.94	

First Year Energy Savings from 1990 Installations (Btus)

	Urban/Rural Location			
	RURAL		URBAN	
	first year Btu savings		first year Btu savings	
E_PLAN	SUM		SUM	
1	1543730.85		1571539.69	
2	2323033.96		4824965.19	
3	3189844.52		3652776.33	
3P	663748.39		458535.08	
4	11379804.14		9294365.95	
5	7434982.25		11684800.67	
ALL	26535144.11		31486982.91	

First Year Energy Savings from 1990 Installations (Btus)

	Homeowners = H and Tenants = T	
	H	T
	first year Btu savings	first year Btu savings
	SUM	SUM
E_PLAN		
1	1351527.31	1763743.24
2	4559371.86	2588627.29
3	2969277.79	3873343.06
3P	1275.47	1121008.00
4	5862919.68	14811250.41
5	12705849.55	6413933.36
ALL	27450221.66	30571905.35

First Year Energy Savings from 1990 Installations (Btus)

Primary Space Heating Fuel						
BLANK	ELEC	GAS	OIL	OTHER	PROP	
first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	5741.42	229167.20	1250372.82	1585140.83	9356.94	35491.34
2	981.27	10298.22	907578.10	6132455.71	.	96685.86
3	40636.56	1051531.26	1658737.11	3974164.81	39208.71	78342.38
3P	320813.71	.	8300.77	793168.99	.	.
4	26643.17	150617.15	11037686.27	9153015.58	10322.93	295885.00
5	121364.25	15428.74	5571217.71	13257585.16	5287.11	148899.94
ALL	516180.39	1457042.56	20433892.79	34895531.08	64175.69	655304.51

First Year Energy Savings from 1990 Urban Installations (Btus)

Primary Space Heating Fuel							
BLANK	ELEC	GAS	OIL	OTHER	PROP		
first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings		
SUM	SUM	SUM	SUM	SUM	SUM		
E_PLAN							
1	1747.39	127024.15	465238.31	942767.18	5548.48	29214.19	
2	981.27	2052.61	759592.19	4015593.20	.	46745.92	
3	6152.07	741698.88	1015315.87	1826172.09	11707.99	51729.43	
3P	310288.12	.	.	148246.97	.	.	
4	26643.17	79054.22	4421650.56	4716867.29	4757.96	45392.76	
5	113824.25	11162.08	2054131.15	9503221.25	2461.93	.	
ALL	459636.27	960991.94	8715928.07	21152867.96	24476.36	173082.30	

First Year Energy Savings from 1990 Rural Installations (Btus)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	PROP
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings
	SUM	SUM	SUM	SUM	SUM	SUM
E_PLAN						
1	3994.03	102143.05	785134.51	642373.65	3808.46	6277.15
2	-	8245.60	147985.91	2116862.51	-	49939.93
3	34484.49	309832.38	643421.25	2147992.73	27500.73	26612.95
3P	10525.59	-	8300.77	644922.03	-	-
4	-	71562.93	6616035.72	4436148.29	5564.96	250492.24
5	7540.00	4266.66	3517086.56	3754363.91	2825.18	148899.94
ALL	56544.11	496050.62	11717964.71	13742663.11	39699.33	482222.22

First Year Energy Savings from 1990 Owner Installations **(Btus)**

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	4992.54	123145.31	249915.53	944050.53	5225.91	24197.49	
2	981.27	10298.22	437654.41	4015328.02	.	95109.93	
3	8631.18	338751.05	481693.41	2080310.00	30030.51	29861.64	
3P	1275.47	.	.	.	.	.	
4	.	75877.47	1624811.72	4055821.40	9823.67	96585.41	
5	8802.87	.	2072246.12	10499165.51	5287.11	120347.95	
ALL	24683.32	548072.04	4866321.20	21594675.47	50367.21	366102.43	

First Year Energy Savings from 1990 Renter Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	first year Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	748.88	106021.89	1000457.29	641090.30	4131.03	11293.85	
2	.	.	469923.68	2117127.68	.	1575.92	
3	32005.38	712780.21	1177043.70	1893854.81	9178.21	48480.74	
3P	319538.23	.	8300.77	793168.99	.	.	
4	26643.17	74739.67	9412874.55	5097194.18	499.25	199299.59	
5	112561.39	15428.74	3498971.59	2758419.65	.	28551.99	
ALL	491497.06	908970.52	15567571.59	13300855.61	13808.49	289202.09	

Lifetime Energy Savings from 1990 Installations (Btus)

	Urban/Rural Location	
	RURAL	URBAN
	Lifetime Btu savings	Lifetime Btu savings
	SUM	SUM
E_PLAN		
1	7209873.17	8846843.69
2	31523246.33	71823247.08
3	19027487.42	22352918.12
3P	4321591.08	3209745.58
4	248661821.58	191553897.64
5	144258069.72	170126100.85
ALL	455002089.30	467912752.96

Lifetime Energy Savings from 1990 Installations (Btus)

	Homeowners = H and Tenants = T		
	H	T	
	lifetime Btu savings	lifetime Btu savings	
	SUM	SUM	
E_PLAN			
1	7752714.91	8304001.95	
2	67025613.53	36320879.89	
3	18883277.38	22497128.15	
3P	8928.31	7522408.35	
4	118773009.29	321442709.92	
5	183423236.21	130960934.36	
ALL	395866779.64	527048062.62	

Lifetime Energy Savings from 1990 Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	40189.92	1230246.99	5436916.11	9055936.38	84395.06	209032.41	
2	6868.90	42105.94	18458102.84	83119746.83	-	1719668.91	
3	324363.67	6006162.76	9305477.72	25043522.78	343549.47	357329.13	
3P	2245695.94	-	24902.31	5260738.40	-	-	
4	186502.22	2080153.99	245022237.99	186215256.73	101434.56	6610133.72	
5	858270.61	167333.14	113690554.22	196057461.30	46313.45	3564237.84	
ALL	3661891.27	9526002.82	391938191.19	504752662.42	575692.55	12460402.00	

Lifetime Energy Savings from 1990 Urban Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	12231.71	741114.07	2257842.51	5599054.29	49305.97	187295.14	
2	6868.90	8946.53	16302641.36	55024633.19	-	480157.10	
3	43064.48	4132111.35	5923935.87	11893512.36	105637.09	254656.96	
3P	2172016.82	-	-	1037728.76	-	-	
4	186502.22	1086854.84	94323629.13	95012622.79	42925.16	901363.49	
5	805490.61	154533.17	41623404.63	127523113.03	19559.43	-	
ALL	3226174.75	6123559.96	160431453.50	296090664.41	217427.66	1823472.69	

Lifetime Energy Savings from 1990 Rural Installations (Btus)

	Primary Space Heating Fuel					
	BLANK	ELEC	GAS	OIL	OTHER	PROP
	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings
E_PLAN	SUM	SUM	SUM	SUM	SUM	SUM
	27958.20	489132.92	3179073.60	3456882.09	35089.09	21737.27
	-	33159.41	2155461.48	28095113.64	-	1239511.81
	281299.19	1874051.41	3381541.85	13150010.43	237912.38	102672.16
	73679.13	-	24902.31	4223009.64	-	-
4	-	993299.14	150698608.86	91202633.94	58509.40	5708770.23
5	52780.00	12799.98	72067149.59	68534348.28	26754.03	3564237.84
ALL	435716.52	3402442.87	231506737.70	208661998.01	358264.90	10636929.31

Lifetime Energy Savings from 1990 Owner Installations (Btus)

	Primary Space Heating Fuel						
	BLANK	ELEC	GAS	OIL	OTHER	PROP	
	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	Lifetime Btu savings	
	SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN							
1	34947.75	700413.23	1256200.91	5611610.75	46174.20	103368.06	
2	6868.90	42105.94	8556020.63	56711315.21	-	1709302.84	
3	82886.02	2074194.65	2760108.12	13548071.77	262624.24	155392.57	
3P	8928.31	-	-	-	-	-	
4	-	1184599.64	34576300.47	80922102.80	97939.79	1992066.59	
5	70340.89	-	40255098.06	140201045.81	46313.45	2850438.01	
ALL	203971.87	4001313.46	87403728.19	296594146.35	453051.69	6810568.07	

Lifetime Energy Savings from 1990 Renter Installations (Btus)

Primary Space Heating Fuel						
BLANK	ELEC	GAS	OIL	OTHER	PROP	
lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	lifetime Btu savings	
SUM	SUM	SUM	SUM	SUM	SUM	
E_PLAN						
1	5242.16	529833.76	4180715.20	3444325.62	38220.86	105664.35
2	.	.	9902082.21	26408431.62	.	10366.06
3	241477.65	3931968.11	6545369.60	11495451.01	80925.23	201936.56
3P	2236767.64	.	24902.31	5260738.40	.	.
4	186502.22	895554.35	210445937.52	105293153.93	3494.78	4618067.13
5	787929.72	167333.14	73435456.17	55856415.49	.	713799.84
ALL	3457919.40	5524689.36	304534463.00	207758516.07	122640.86	5649833.93

END

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