

Table 3.37. Energy Management Practices in FBSS Buildings in Federal Region 3, Number of Buildings, 1993

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	312	132	99	99	97	178	229
Building Floorspace (square feet)							
10,000 to 50,000	94	21	12	29	4	67	62
50,001 to 200,000	117	51	27	34	35	58	83
Over 200,000	101	60	60	36	58	53	84
Principal Building Activity							
Education	8	NC	2	3	NC	6	4
Health Care	41	29	15	9	12	4	37
Laboratory	37	10	3	11	16	16	20
Lodging	13	4	6	9	3	NC	9
Mercantile and Service	46	15	9	6	4	28	31
Office	124	62	54	47	56	104	104
All Others	43	12	10	14	6	20	24
Year Constructed							
1959 or Before	142	56	45	51	40	77	107
1960 to 1969	70	27	18	20	27	46	44
1970 to 1979	47	24	19	17	15	29	38
1980 to 1989	38	17	13	10	11	18	28
1990 to 1993	15	8	4	1	4	8	12
Federal Agency							
Department of Defense	22	7	6	6	8	7	13
General Services Administration ..	83	42	52	41	47	71	71
United States Postal Service	57	19	9	7	5	33	39
Veterans Administration	56	31	21	15	15	13	46
All Others	94	33	11	30	22	54	60
Energy Sources (more than one may apply)							
Electricity	311	131	98	99	97	178	228
Natural Gas	139	68	49	40	52	66	111
Fuel Oil	89	42	29	24	26	46	63
District Heat	154	70	57	54	55	91	119
District Chilled Water	57	26	13	17	20	27	41
Propane	5	NC	NC	1	1	4	3
Any Other	8	6	5	3	5	5	7
Energy End Uses (more than one may apply)							
Heating	307	132	98	98	96	175	227
Air Conditioning	305	131	95	97	96	175	224
Water Heating	303	130	96	98	94	172	225
Cooking	108	66	53	34	49	55	91
Manufacturing	50	28	20	13	18	22	33
Workers (main shift)							
Less than 50	71	17	13	23	4	43	45
50 to 99	39	12	4	11	1	26	25
100 to 499	107	39	21	33	36	58	75
500 or More	95	64	61	32	56	51	84
Weekly Operating Hours							
48 or Fewer	51	18	15	20	10	47	38
49 to 60	76	37	28	23	30	72	58
61 to 167	60	14	16	17	13	58	42
Open Continuously	125	63	40	39	44	1	91
Multibuilding Facility							
Yes	176	73	50	51	54	79	119
No	136	59	49	48	43	99	110

See footnotes at end of table.

**Table 3.37. Energy Management Practices in FBSS Buildings in
Federal Region 3, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Percent of Floorspace Heated							
Not Heated	5	NC	1	1	1	3	2
1 to 50	12	3	4	NC	2	6	8
51 to 100	295	129	94	98	94	169	219
Percent of Floorspace Cooled							
Not Cooled	13	2	6	5	3	5	7
1 to 50	30	8	6	10	5	21	19
51 to 100	269	122	87	84	89	152	203
Percent Lit When Open							
1 to 50	11	1	3	4	2	8	6
51 to 100	300	131	96	95	95	170	223
No Operating Hours	1	NC	NC	NC	NC	NC	NC
Don't Know	NC	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	34	19	13	14	6	25	29
Furnaces	16	1	1	5	2	12	12
Individual Space Heaters	75	39	29	31	27	44	60
District Heat	167	80	58	60	64	88	131
Boilers	93	40	28	27	24	54	67
Packaged-Heating Units	25	11	7	10	8	12	21
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	30	13	8	10	13	21	25
Heat Pumps	37	19	15	14	9	30	32
Individual A/C	80	36	28	32	28	47	61
District Chilled Water	72	38	20	17	26	30	52
Central Chillers	158	80	70	61	70	93	128
Packaged-A/C Units	127	65	50	43	44	74	101
Swamp Coolers	3	2	NC	2	2	1	3
Lighting Equipment (more than one may apply)							
Incandescent	184	77	64	60	61	100	132
Standard Fluorescent	300	130	97	98	94	173	223
Compact Fluorescent	80	43	44	31	33	56	73
High-Intensity Discharge	111	59	37	36	41	58	87
Electronic Ballast	135	82	66	53	57	84	125
Water-Heating Equipment (more than one may apply)							
Centralized System	223	95	69	75	76	130	165
Distributed System	71	29	25	23	18	37	57
Don't Know/ Not Ascertained	9	6	2	NC	NC	5	3
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	309	132	97	98	96	178	228
Building Shell	290	127	87	90	84	163	215
HVAC	303	132	97	98	96	174	227
Lighting	210	105	84	74	67	128	175

See footnotes at end of table.

**Table 3.37. Energy Management Practices in FBSS Buildings in
Federal Region 3, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling							
Insulation	240	110	70	75	69	135	176
Wall Insulation	117	61	31	29	29	69	87
Storm or Multiple							
Glazing	173	87	49	49	36	91	139
Tinted or Reflective Glass							
or Shading Film	158	83	47	40	56	94	117
Exterior or Interior Shading							
or Awnings	197	97	57	58	55	115	145
HVAC Conservation Features (more than one may apply)							
VAV System	84	59	33	25	37	37	75
Economizer Cycle	156	93	59	50	60	92	131
HVAC Maintenance	301	132	97	98	96	173	227
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	124	64	49	52	43	69	101
Natural Lighting Control							
Sensors	29	18	17	9	13	14	26
Occupancy Sensors	95	55	54	40	44	66	86
Time Clock	74	39	36	28	32	47	64
Manual Dimmer Switches	93	50	45	29	32	64	81

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey.

• HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.

Table 3.38. Energy Management Practices in FBSS Buildings in Federal Region 6, Number of Buildings, 1993

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	243	96	48	64	57	136	162
Building Floorspace (square feet)							
10,000 to 50,000	107	21	18	28	14	74	65
50,001 to 200,000	86	40	9	16	20	43	54
Over 200,000	50	35	21	20	23	19	43
Principal Building Activity							
Education	6	1	NC	NC	1	6	3
Health Care	35	28	9	6	10	6	31
Laboratory	29	10	3	1	3	14	9
Lodging	16	5	5	7	2	NC	13
Mercantile and Service	49	17	14	19	8	30	39
Office	76	30	16	25	30	61	50
All Others	32	5	1	6	3	19	17
Year Constructed							
1959 or Before	103	44	14	22	24	57	70
1960 to 1969	38	12	11	14	12	25	28
1970 to 1979	34	15	11	9	9	14	22
1980 to 1989	57	21	9	16	10	33	36
1990 to 1993	11	4	3	3	2	7	6
Federal Agency							
Department of Defense	22	6	5	10	6	16	13
General Services Administration ..	35	19	12	17	24	32	31
United States Postal Service	61	19	15	21	10	38	45
Veterans Administration	36	30	10	8	6	10	33
All Others	89	22	6	8	11	40	40
Energy Sources (more than one may apply)							
Electricity	243	96	48	64	57	136	162
Natural Gas	168	65	34	55	45	95	121
Fuel Oil	18	10	8	7	9	9	15
District Heat	68	36	11	5	12	36	40
District Chilled Water	30	22	12	5	10	16	25
Propane	5	1	2	NC	2	4	1
Any Other	8	4	3	NC	2	1	8
Energy End Uses (more than one may apply)							
Heating	242	96	48	64	57	136	162
Air Conditioning	241	95	47	64	57	136	161
Water Heating	238	95	47	62	56	133	160
Cooking	63	37	20	24	21	27	51
Manufacturing	28	13	8	14	9	16	21
Workers (main shift)							
Less than 50	70	10	10	19	10	43	41
50 to 99	44	15	4	9	9	27	26
100 to 499	80	36	11	14	13	47	50
500 or More	49	35	23	22	25	19	45
Weekly Operating Hours							
48 or Fewer	39	11	4	10	10	36	24
49 to 60	46	27	10	14	18	46	29
61 to 167	78	12	11	17	9	54	42
Open Continuously	80	46	23	23	20	NC	67
Multibuilding Facility							
Yes	148	69	29	33	29	64	95
No	95	27	19	31	28	72	67

See footnotes at end of table.

**Table 3.38. Energy Management Practices in FBSS Buildings in
Federal Region 6, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Percent of Floorspace Heated							
Not Heated	1	NC	NC	NC	NC	NC	NC
1 to 50	11	5	2	3	3	8	8
51 to 100	231	91	46	61	54	128	154
Percent of Floorspace Cooled							
Not Cooled	3	2	1	NC	1	NC	2
1 to 50	26	4	2	6	3	14	14
51 to 100	214	90	45	58	53	122	146
Percent Lit When Open							
1 to 50	15	4	1	3	3	10	10
51 to 100	227	92	47	61	54	126	152
No Operating Hours	1	NC	NC	NC	NC	NC	NC
Don't Know	NC	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	10	3	3	4	1	7	6
Furnaces	18	3	3	4	2	14	14
Individual Space Heaters	30	14	9	6	9	19	23
District Heat	82	47	13	12	14	41	53
Boilers	102	35	22	28	36	52	66
Packaged-Heating Units	59	17	18	21	15	39	45
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	29	10	7	8	3	18	24
Heat Pumps	11	6	2	4	1	7	8
Individual A/C	50	17	6	10	9	20	31
District Chilled Water	44	31	12	8	13	22	33
Central Chillers	122	54	23	32	40	59	84
Packaged-A/C Units	97	37	28	29	21	59	75
Swamp Coolers	12	6	1	1	2	6	8
Lighting Equipment (more than one may apply)							
Incandescent	135	52	25	27	35	64	80
Standard Fluorescent	235	92	47	60	56	132	157
Compact Fluorescent	29	18	8	10	15	21	27
High-Intensity Discharge	64	29	16	16	19	24	45
Electronic Ballast	59	34	21	22	25	34	53
Water-Heating Equipment (more than one may apply)							
Centralized System	163	66	27	39	37	98	107
Distributed System	71	27	19	22	18	34	51
Don't Know/ Not Ascertained	4	2	1	1	1	1	2
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	242	96	48	64	57	136	162
Building Shell	228	94	47	62	56	128	154
HVAC	236	96	47	61	56	130	158
Lighting	136	59	36	45	40	82	113

See footnotes at end of table.

**Table 3.38. Energy Management Practices in FBSS Buildings in
Federal Region 6, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling							
Insulation	196	82	42	53	43	106	129
Wall Insulation	122	49	26	35	25	58	76
Storm or Multiple							
Glazing	96	48	21	22	22	53	66
Tinted or Reflective Glass							
or Shading Film	127	59	39	41	42	69	98
Exterior or Interior Shading							
or Awnings	142	68	33	47	46	84	114
HVAC Conservation Features (more than one may apply)							
VAV System	65	40	16	20	25	32	47
Economizer Cycle	123	62	28	32	30	55	87
HVAC Maintenance	234	95	46	60	56	129	156
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	92	36	30	33	28	55	76
Natural Lighting Control							
Sensors	27	12	9	9	13	14	23
Occupancy Sensors	58	31	18	28	24	35	49
Time Clock	36	18	14	15	16	22	29
Manual Dimmer Switches	44	29	16	17	14	27	39

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey.

• HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.

Table 3.39. Energy Management Practices in FBSS Buildings in Federal Region 9, Number of Buildings, 1993

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	326	71	124	99	52	189	213
Building Floorspace (square feet)							
10,000 to 50,000	148	15	46	40	11	96	84
50,001 to 200,000	123	34	50	42	22	67	85
Over 200,000	55	22	28	17	19	26	44
Principal Building Activity							
Education	12	NC	1	2	1	7	4
Health Care	48	14	18	14	16	15	30
Laboratory	31	12	9	9	1	13	25
Lodging	22	2	8	8	1	1	11
Mercantile and Service	63	20	25	21	8	43	47
Office	92	18	43	27	17	75	65
All Others	58	5	20	18	8	35	31
Year Constructed							
1959 or Before	130	20	37	36	18	86	77
1960 to 1969	55	11	30	16	6	36	35
1970 to 1979	62	13	29	24	13	30	46
1980 to 1989	65	23	25	18	12	29	44
1990 to 1993	14	4	3	5	3	8	11
Federal Agency							
Department of Defense	78	14	17	26	6	52	36
General Services Administration ..	39	5	27	12	14	35	33
United States Postal Service	63	21	24	22	9	43	49
Veterans Administration	56	15	16	15	15	18	36
All Others	90	16	40	24	8	41	59
Energy Sources (more than one may apply)							
Electricity	325	71	123	98	52	189	212
Natural Gas	225	57	98	67	39	141	162
Fuel Oil	54	17	23	11	12	14	46
District Heat	74	13	21	24	15	29	39
District Chilled Water	27	6	6	14	8	10	15
Propane	10	1	4	2	1	4	5
Any Other	5	2	1	3	NC	2	3
Energy End Uses (more than one may apply)							
Heating	304	67	122	92	48	177	202
Air Conditioning	292	71	115	92	50	174	201
Water Heating	315	70	123	97	51	182	209
Cooking	70	23	42	25	22	25	54
Manufacturing	30	15	14	13	6	15	23
Workers (main shift)							
Less than 50	93	8	20	27	7	51	43
50 to 99	49	5	14	14	2	39	30
100 to 499	134	36	58	41	20	79	98
500 or More	50	22	32	17	23	20	42
Weekly Operating Hours							
48 or Fewer	80	8	20	21	3	67	29
49 to 60	65	9	27	18	14	59	45
61 to 167	68	14	26	26	8	63	52
Open Continuously	113	40	51	34	27	NC	87
Multibuilding Facility							
Yes	200	48	69	64	35	95	128
No	126	23	55	35	17	94	85

See footnotes at end of table.

**Table 3.39. Energy Management Practices in FBSS Buildings in
Federal Region 9, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Percent of Floorspace Heated							
Not Heated	22	4	2	7	4	12	11
1 to 50	28	6	6	11	3	20	18
51 to 100	276	61	116	81	45	157	184
Percent of Floorspace Cooled							
Not Cooled	40	1	12	8	4	19	16
1 to 50	55	9	14	13	7	32	39
51 to 100	231	61	98	78	41	138	158
Percent Lit When Open							
1 to 50	20	1	5	6	3	10	12
51 to 100	304	70	119	93	49	178	201
No Operating Hours	1	NC	NC	NC	NC	1	NC
Don't Know	1	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	40	12	23	15	3	21	34
Furnaces	25	2	9	10	2	18	16
Individual Space Heaters	33	8	17	13	3	24	28
District Heat	71	15	24	20	14	28	41
Boilers	146	40	67	47	25	92	102
Packaged-Heating Units	67	13	34	13	8	49	47
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	24	4	9	10	3	16	12
Heat Pumps	32	11	16	11	3	17	28
Individual A/C	52	7	18	13	4	35	38
District Chilled Water	31	13	15	12	10	7	17
Central Chillers	139	51	68	47	25	81	105
Packaged-A/C Units	151	34	65	44	27	99	112
Swamp Coolers	30	8	10	12	5	16	16
Lighting Equipment (more than one may apply)							
Incandescent	161	34	64	48	27	84	106
Standard Fluorescent	309	69	119	95	52	179	206
Compact Fluorescent	73	24	43	24	20	41	70
High-Intensity Discharge	75	25	34	24	17	40	56
Electronic Ballast	105	31	63	45	28	69	95
Water-Heating Equipment (more than one may apply)							
Centralized System	225	50	88	73	43	131	148
Distributed System	80	17	34	21	5	45	55
Don't Know/ Not Ascertained	10	3	1	3	3	6	6
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	319	71	122	98	52	186	213
Building Shell	248	59	99	82	40	147	166
HVAC	307	70	119	91	51	179	210
Lighting	217	60	101	67	41	126	162

See footnotes at end of table.

**Table 3.39. Energy Management Practices in FBSS Buildings in
Federal Region 9, Number of Buildings, 1993 (Continued)**

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling							
Insulation	185	51	78	60	31	99	124
Wall Insulation	113	35	41	41	18	59	73
Storm or Multiple							
Glazing	57	18	30	15	13	26	48
Tinted or Reflective Glass							
or Shading Film	133	34	63	50	24	78	101
Exterior or Interior Shading							
or Awnings	164	41	73	51	31	90	117
HVAC Conservation Features (more than one may apply)							
VAV System	75	33	39	25	18	37	64
Economizer Cycle	140	45	79	44	31	86	107
HVAC Maintenance	306	69	118	91	51	178	209
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	124	26	75	32	30	85	96
Natural Lighting Control							
Sensors	58	15	26	20	16	35	45
Occupancy Sensors	109	38	48	42	25	52	92
Time Clock	41	12	21	19	8	28	34
Manual Dimmer Switches	78	28	34	28	21	29	62

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey.

• HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.

**Table 3.40. Energy Management Practices in FBSS Buildings in
Federal Region 3, Floorspace, 1993**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	94,880	61,891	59,284	37,621	52,924	46,595	81,286
Building Floorspace (square feet)							
10,000 to 50,000	2,564	604	361	868	141	1,819	1,617
50,001 to 200,000	13,166	5,984	3,395	3,545	4,785	6,455	9,405
Over 200,000	79,149	55,303	55,528	33,208	47,998	38,322	70,264
Principal Building Activity							
Education	598	NC	171	298	NC	462	264
Health Care	14,559	12,399	8,137	1,597	6,289	206	13,789
Laboratory	5,165	1,827	361	1,969	3,891	2,512	3,238
Lodging	2,558	2,157	784	2,373	1,840	NC	908
Mercantile and Service	7,966	6,058	3,124	1,454	2,233	1,300	6,387
Office	56,881	36,854	42,364	28,924	37,641	40,781	51,485
All Others	7,152	2,596	4,343	1,006	1,030	1,335	5,215
Year Constructed							
1959 or Before	43,829	25,341	29,902	20,038	29,624	23,359	39,006
1960 to 1969	19,564	11,821	11,618	7,852	12,049	11,333	14,706
1970 to 1979	17,737	14,405	10,803	6,179	5,099	8,812	15,377
1980 to 1989	8,975	6,446	5,230	2,874	5,035	2,085	8,308
1990 to 1993	4,774	3,877	1,732	678	1,117	1,006	3,889
Federal Agency							
Department of Defense	13,988	11,136	10,164	9,261	10,573	1,615	11,708
General Services Administration ...	46,205	26,744	35,701	20,539	27,705	35,547	40,941
United States Postal Service	9,392	7,143	2,343	2,255	2,382	2,398	7,910
Veterans Administration	13,306	10,289	6,427	1,687	6,748	956	11,866
All Others	11,989	6,579	4,650	3,880	5,515	6,079	8,861
Energy Sources (more than one may apply)							
Electricity	94,161	61,172	58,565	37,621	52,924	46,595	80,567
Natural Gas	58,674	44,873	38,182	20,605	32,344	21,566	51,875
Fuel Oil	39,300	30,851	24,941	16,293	20,200	11,751	33,574
District Heat	63,991	41,010	46,603	25,813	37,204	34,089	58,464
District Chilled Water	22,922	14,652	15,190	12,406	15,253	8,564	20,544
Propane	941	NC	NC	222	148	793	683
Any Other	4,470	3,059	3,462	2,761	4,410	4,273	4,441
Energy End Uses (more than one may apply)							
Heating	94,063	61,891	59,084	37,421	52,665	46,237	80,919
Air Conditioning	93,454	61,172	58,313	37,392	52,665	46,376	80,147
Water Heating	93,138	61,222	58,136	37,421	51,717	45,692	80,336
Cooking	69,947	52,300	49,012	28,107	40,466	31,295	62,196
Manufacturing	27,041	23,953	18,390	13,925	16,741	9,251	23,383
Workers (main shift)							
Less than 50	4,102	816	1,085	1,308	837	2,115	1,818
50 to 99	1,903	501	248	687	19	1,198	1,175
100 to 499	13,632	5,390	2,879	4,455	5,263	6,874	10,165
500 or More	75,243	55,184	55,073	31,171	46,804	36,409	68,128
Weekly Operating Hours							
48 or Fewer	9,694	4,600	6,042	3,534	5,139	9,367	8,337
49 to 60	25,540	14,948	17,947	12,556	15,985	25,233	22,537
61 to 167	11,993	5,270	6,234	6,552	8,344	11,948	10,868
Open Continuously	47,653	37,072	29,062	14,979	23,457	47	39,545

See footnotes at end of table.

**Table 3.40. Energy Management Practices in FBSS Buildings in
Federal Region 3, Floorspace, 1993 (Continued)**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Multibuilding Facility							
Yes	43,861	25,196	22,808	16,938	21,997	19,405	32,434
No	51,018	36,695	36,476	20,683	30,927	27,190	48,852
Percent of Floorspace Heated							
Not Heated	817	NC	200	200	259	359	367
1 to 50	5,787	4,358	3,361	NC	761	974	4,913
51 to 100	88,275	57,532	55,723	37,421	51,904	45,263	76,006
Percent of Floorspace Cooled							
Not Cooled	3,582	2,200	1,407	1,784	2,120	286	1,360
1 to 50	9,874	4,917	5,325	3,964	2,880	5,171	8,668
51 to 100	81,424	54,773	52,552	31,873	47,924	41,138	71,258
Percent Lit When Open							
1 to 50	663	213	267	404	199	497	373
51 to 100	94,070	61,677	59,017	37,218	52,725	46,098	80,913
No Operating Hours	147	NC	NC	NC	NC	NC	NC
Don't Know	NC	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	10,922	8,197	6,244	7,066	4,762	8,592	9,016
Furnaces	1,694	107	24	1,233	69	1,452	1,467
Individual Space Heaters	34,923	26,031	25,674	20,648	22,670	17,774	31,921
District Heat	67,704	45,017	46,194	27,770	40,970	33,405	60,246
Boilers	20,082	14,594	8,858	7,222	9,644	9,068	15,822
Packaged-Heating Units	6,006	3,994	2,747	1,745	3,129	2,396	5,406
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	19,073	14,532	12,578	9,461	15,674	8,781	17,818
Heat Pumps	11,388	8,283	6,734	7,113	7,283	10,179	10,453
Individual A/C	28,082	16,973	16,389	13,066	16,626	16,959	25,361
District Chilled Water	28,194	19,658	17,670	12,419	17,815	9,149	23,639
Central Chillers	63,914	42,987	43,140	25,333	37,532	36,983	57,948
Packaged-A/C Units	56,664	40,812	42,232	26,167	34,415	28,362	53,394
Swamp Coolers	378	358	NC	358	358	20	378
Lighting Equipment (more than one may apply)							
Incandescent	64,981	42,602	42,505	28,368	39,568	31,825	55,041
Standard Fluorescent	91,986	60,750	58,634	37,421	51,125	45,556	79,292
Compact Fluorescent	49,455	33,756	37,128	21,471	30,245	26,730	45,161
High-Intensity Discharge	52,593	35,944	32,936	22,966	29,904	22,390	47,085
Electronic Ballast	65,560	46,236	48,576	30,043	40,191	36,741	61,700
Water-Heating Equipment (more than one may apply)							
Centralized System	63,477	41,930	41,517	27,532	39,892	33,365	56,221
Distributed System	24,696	14,649	13,987	9,890	11,824	11,994	21,429
Don't Know/							
Not Ascertained	4,965	4,642	2,632	NC	NC	333	2,686
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	94,361	61,891	59,024	37,421	52,665	46,595	81,027
Building Shell	84,557	57,447	51,419	33,287	43,488	38,508	73,116
HVAC	93,543	61,891	59,024	37,421	52,665	45,983	80,865
Lighting	80,953	55,202	56,297	34,439	44,519	42,120	73,667

See footnotes at end of table.

**Table 3.40. Energy Management Practices in FBSS Buildings in
Federal Region 3, Floorspace, 1993 (Continued)**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling							
Insulation	69,654	49,683	42,066	26,983	33,849	29,888	59,342
Wall Insulation	31,876	26,169	16,376	9,623	12,884	14,838	28,026
Storm or Multiple							
Glazing	46,141	33,757	26,289	15,709	20,126	11,659	39,905
Tinted or Reflective Glass or Shading Film	46,829	36,581	24,607	15,439	25,852	22,644	39,533
Exterior or Interior Shading or Awnings	57,183	38,723	32,446	20,681	23,889	32,193	47,638
HVAC Conservation Features (more than one may apply)							
VAV System	37,611	29,150	22,577	14,320	19,649	13,711	33,689
Economizer Cycle	61,089	44,488	40,658	25,654	35,957	29,237	57,386
HVAC Maintenance	93,402	61,891	59,024	37,421	52,665	45,896	80,865
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	44,741	32,503	29,046	23,785	27,006	22,524	39,714
Natural Lighting Control							
Sensors	17,743	12,598	12,151	5,843	10,858	9,442	16,630
Occupancy Sensors	62,261	42,365	47,987	29,458	37,976	36,119	57,610
Time Clock	46,555	34,709	32,755	20,406	27,052	25,802	42,629
Manual Dimmer Switches	49,824	37,475	38,239	23,774	29,434	26,104	48,332

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey. • HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.

**Table 3.41. Energy Management Practices in FBSS Buildings in
Federal Region 6, Floorspace, 1993**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	35,816	23,099	13,513	11,690	15,538	14,304	29,015
Building Floorspace (square feet)							
10,000 to 50,000	2,591	638	430	626	264	1,783	1,582
50,001 to 200,000	9,548	4,762	1,094	1,965	2,412	4,851	6,105
Over 200,000	23,677	17,698	11,989	9,099	12,862	7,670	21,328
Principal Building Activity							
Education	168	17	NC	NC	55	168	63
Health Care	12,094	11,662	6,935	2,754	6,770	1,435	11,812
Laboratory	3,331	1,633	99	244	72	979	1,264
Lodging	942	369	270	535	128	NC	597
Mercantile and Service	6,236	3,528	2,455	2,559	1,625	1,199	5,440
Office	10,799	5,607	3,720	5,237	6,615	9,274	8,868
All Others	2,247	283	33	361	274	1,250	972
Year Constructed							
1959 or Before	13,258	8,070	3,456	3,609	5,896	5,517	10,053
1960 to 1969	6,386	2,422	2,588	3,428	2,562	3,887	5,759
1970 to 1979	6,175	4,655	3,147	2,771	1,921	1,747	5,459
1980 to 1989	6,903	5,082	1,571	1,692	2,447	2,852	4,941
1990 to 1993	3,095	2,870	2,750	190	2,711	300	2,803
Federal Agency							
Department of Defense	1,668	848	779	1,129	1,133	793	1,277
General Services Administration ...	7,888	5,034	3,391	4,819	5,570	7,258	7,317
United States Postal Service	7,027	3,692	2,686	2,791	2,000	1,808	5,854
Veterans Administration	11,375	11,178	6,403	2,346	5,912	1,505	11,127
All Others	7,858	2,347	255	605	923	2,940	3,441
Energy Sources (more than one may apply)							
Electricity	35,816	23,099	13,513	11,690	15,538	14,304	29,015
Natural Gas	24,827	17,179	11,257	10,680	11,936	8,809	21,277
Fuel Oil	4,740	3,293	2,833	2,753	2,039	2,214	4,581
District Heat	13,437	9,499	5,031	1,376	5,836	5,034	9,972
District Chilled Water	7,980	6,984	5,258	1,818	4,647	2,669	7,577
Propane	200	135	24	NC	24	65	15
Any Other	2,850	2,458	1,436	NC	1,114	1,022	2,850
Energy End Uses (more than one may apply)							
Heating	35,734	23,099	13,513	11,690	15,538	14,304	29,015
Air Conditioning	35,273	22,638	13,052	11,690	15,538	14,304	28,555
Water Heating	35,221	22,638	13,052	11,657	15,518	14,251	28,535
Cooking	19,213	15,694	10,071	8,148	10,470	5,934	18,533
Manufacturing	5,335	3,545	2,597	2,957	2,378	2,549	5,140
Workers (main shift)							
Less than 50	2,548	415	204	498	247	1,291	1,510
50 to 99	2,026	944	231	577	566	1,044	1,241
100 to 499	9,029	4,647	730	1,275	1,774	4,652	5,211
500 or More	22,213	17,093	12,348	9,341	12,951	7,316	21,052
Weekly Operating Hours							
48 or Fewer	2,740	1,111	256	860	1,087	2,600	2,018
49 to 60	6,460	5,027	1,764	2,891	4,399	6,460	5,375
61 to 167	8,051	1,898	1,512	1,557	2,148	5,244	4,435
Open Continuously	18,565	15,063	9,982	6,381	7,904	NC	17,189

See footnotes at end of table.

**Table 3.41. Energy Management Practices in FBSS Buildings in
Federal Region 6, Floorspace, 1993 (Continued)**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Multibuilding Facility							
Yes	24,441	16,370	9,126	6,726	9,701	9,504	19,477
No	11,375	6,729	4,387	4,963	5,837	4,800	9,539
Percent of Floorspace Heated							
Not Heated	82	NC	NC	NC	NC	NC	NC
1 to 50	1,288	671	363	594	291	914	998
51 to 100	34,446	22,428	13,150	11,095	15,247	13,390	28,017
Percent of Floorspace Cooled							
Not Cooled	554	472	461	NC	11	NC	472
1 to 50	1,951	524	74	568	272	1,385	1,192
51 to 100	33,312	22,103	12,978	11,122	15,254	12,919	27,351
Percent Lit When Open							
1 to 50	1,062	326	183	102	272	742	687
51 to 100	34,672	22,773	13,330	11,587	15,265	13,562	28,328
No Operating Hours	82	NC	NC	NC	NC	NC	NC
Don't Know	NC	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	964	199	100	618	12	313	877
Furnaces	791	87	45	69	202	633	584
Individual Space Heaters	5,408	3,592	2,576	1,610	1,881	2,898	4,846
District Heat	15,205	11,254	5,546	2,221	5,867	5,657	11,614
Boilers	16,718	10,580	7,178	7,806	8,854	7,088	14,190
Packaged-Heating Units	7,574	4,982	4,016	3,421	4,743	2,044	6,566
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	4,706	2,379	2,207	1,630	673	2,260	4,432
Heat Pumps	1,549	829	88	618	162	462	1,372
Individual A/C	6,950	4,000	1,009	1,946	2,121	1,998	5,338
District Chilled Water	10,856	9,349	5,258	2,347	5,840	4,328	9,701
Central Chillers	21,596	13,285	7,116	8,219	9,365	8,337	17,893
Packaged-A/C Units	14,104	9,541	6,929	6,103	6,418	5,049	12,808
Swamp Coolers	2,015	1,559	148	148	1,114	1,194	1,725
Lighting Equipment (more than one may apply)							
Incandescent	20,248	10,360	6,777	5,719	7,664	8,096	14,588
Standard Fluorescent	35,057	22,511	13,480	11,251	15,376	14,073	28,529
Compact Fluorescent	7,942	6,385	3,388	4,430	4,995	4,926	7,516
High-Intensity Discharge	16,188	11,491	6,805	6,194	6,374	4,651	13,662
Electronic Ballast	15,861	12,411	9,798	5,856	9,417	5,353	15,050
Water-Heating Equipment (more than one may apply)							
Centralized System	23,206	15,886	8,690	6,361	9,660	9,882	18,644
Distributed System	11,827	6,606	4,337	5,271	5,846	4,344	9,855
Don't Know/ Not Ascertained	188	146	25	25	11	25	36
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	35,734	23,099	13,513	11,690	15,538	14,304	29,015
Building Shell	33,946	22,678	13,067	11,231	15,092	13,501	27,876
HVAC	35,425	23,099	13,488	11,643	15,396	13,995	28,826
Lighting	25,654	17,983	12,677	8,781	12,576	10,753	24,105

See footnotes at end of table.

Table 3.41. Energy Management Practices in FBSS Buildings in Federal Region 6, Floorspace, 1993 (Continued)
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling Insulation	28,249	19,380	11,688	8,794	11,081	10,088	23,169
Wall Insulation	20,550	14,492	9,928	6,991	8,650	5,384	16,527
Storm or Multiple Glazing	17,939	14,959	7,870	5,711	9,429	5,920	15,562
Tinted or Reflective Glass or Shading Film	24,768	17,244	11,836	8,557	12,800	10,141	21,955
Exterior or Interior Shading or Awnings	26,067	19,444	11,662	9,676	14,311	11,197	23,959
HVAC Conservation Features (more than one may apply)							
VAV System	18,518	14,894	8,839	6,867	11,160	6,306	15,889
Economizer Cycle	23,542	17,962	11,116	7,928	10,448	6,681	20,313
HVAC Maintenance	35,341	23,077	13,425	11,580	15,396	13,932	28,741
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	18,017	12,007	10,434	6,629	9,331	7,294	17,117
Natural Lighting Control Sensors	6,740	5,062	4,790	2,044	5,036	1,564	6,473
Occupancy Sensors	16,435	11,571	9,690	7,220	9,031	6,824	15,479
Time Clock	9,037	6,776	6,265	3,459	6,078	3,094	8,529
Manual Dimmer Switches	13,454	10,952	8,056	4,184	7,723	5,764	12,865

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey. • HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.

**Table 3.42. Energy Management Practices in FBSS Buildings in
Federal Region 9, Floorspace, 1993**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
All Buildings	44,316	18,231	24,699	17,444	14,570	21,974	34,547
Building Floorspace (square feet)							
10,000 to 50,000	3,858	436	1,386	1,069	300	2,485	2,297
50,001 to 200,000	12,680	4,094	5,859	4,233	2,738	6,395	9,384
Over 200,000	27,778	13,701	17,454	12,142	11,533	13,095	22,867
Principal Building Activity							
Education	628	NC	38	157	21	388	200
Health Care	9,903	5,388	5,402	3,398	4,851	1,121	7,886
Laboratory	2,601	961	733	438	198	862	2,371
Lodging	1,220	308	421	616	59	29	608
Mercantile and Service	8,194	5,503	3,193	4,125	2,155	2,210	6,960
Office	16,380	3,868	11,694	6,572	6,660	14,700	14,196
All Others	5,390	2,203	3,219	2,138	627	2,664	2,327
Year Constructed							
1959 or Before	13,553	3,502	5,791	3,575	3,030	7,954	9,006
1960 to 1969	9,082	2,592	6,668	3,934	2,470	6,759	7,807
1970 to 1979	12,041	5,705	7,827	6,295	4,538	5,016	9,904
1980 to 1989	7,955	5,825	3,750	2,818	3,570	1,581	6,772
1990 to 1993	1,684	607	664	821	964	664	1,058
Federal Agency							
Department of Defense	8,489	4,442	4,072	2,738	1,850	3,720	4,555
General Services Administration ...	12,505	2,654	10,566	5,688	6,245	11,989	11,490
United States Postal Service	8,387	5,667	3,291	4,169	2,221	2,356	7,332
Veterans Administration	8,824	4,000	3,668	3,412	3,179	1,410	6,664
All Others	6,111	1,469	3,104	1,437	1,076	2,500	4,506
Energy Sources (more than one may apply)							
Electricity	44,296	18,231	24,680	17,424	14,570	21,974	34,527
Natural Gas	34,703	14,480	21,884	13,331	12,586	19,537	29,791
Fuel Oil	11,127	3,891	6,989	3,202	4,972	3,376	10,692
District Heat	11,757	5,426	5,771	4,039	4,204	3,160	8,528
District Chilled Water	6,362	3,286	3,259	1,737	4,042	1,073	5,462
Propane	1,117	752	878	841	752	86	813
Any Other	2,606	2,134	1,234	2,192	NC	1,245	1,648
Energy End Uses (more than one may apply)							
Heating	41,921	16,963	24,668	16,711	13,679	21,377	32,765
Air Conditioning	41,907	18,231	24,044	17,169	14,403	21,037	33,718
Water Heating	42,984	17,689	24,395	17,290	14,029	21,651	33,938
Cooking	20,045	11,783	14,043	10,482	9,567	7,179	16,241
Manufacturing	7,693	5,481	4,723	4,029	2,286	1,638	5,395
Workers (main shift)							
Less than 50	3,684	371	816	1,371	308	2,001	1,871
50 to 99	2,161	145	567	596	61	1,534	1,294
100 to 499	14,017	4,852	6,555	3,828	2,400	7,606	10,947
500 or More	24,454	12,863	16,762	11,649	11,801	10,833	20,435
Weekly Operating Hours							
48 or Fewer	4,822	949	1,537	1,504	369	4,176	1,937
49 to 60	13,424	3,181	9,623	5,773	5,427	12,945	11,669
61 to 167	5,706	1,804	3,153	1,914	1,311	4,853	5,019
Open Continuously	20,364	12,297	10,387	8,252	7,463	NC	15,922

See footnotes at end of table.

**Table 3.42. Energy Management Practices in FBSS Buildings in
Federal Region 9, Floorspace, 1993 (Continued)**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Multibuilding Facility							
Yes	26,821	13,401	13,884	11,814	8,369	9,385	19,618
No	17,495	4,830	10,816	5,630	6,201	12,589	14,930
Percent of Floorspace Heated							
Not Heated	2,394	1,268	32	733	891	597	1,782
1 to 50	3,751	2,120	1,913	2,011	253	1,923	1,899
51 to 100	38,170	14,843	22,755	14,700	13,426	19,453	30,866
Percent of Floorspace Cooled							
Not Cooled	2,956	193	942	455	371	1,293	1,308
1 to 50	7,304	3,000	2,539	1,949	995	2,868	5,383
51 to 100	34,056	15,038	21,218	15,039	13,204	17,814	27,857
Percent Lit When Open							
1 to 50	1,847	260	604	848	283	857	952
51 to 100	42,375	17,971	24,096	16,596	14,288	21,088	33,595
No Operating Hours	29	NC	NC	NC	NC	29	NC
Don't Know	64	NC	NC	NC	NC	NC	NC
Heating Equipment (more than one may apply)							
Heat Pumps	3,081	1,477	2,456	894	412	1,414	2,941
Furnaces	1,204	507	722	763	510	558	499
Individual Space Heaters	4,933	1,634	3,373	2,609	1,923	3,201	4,180
District Heat	12,712	6,515	6,866	4,926	3,981	3,194	8,460
Boilers	24,010	9,045	15,566	11,129	8,573	15,082	20,352
Packaged-Heating Units	5,997	1,712	4,294	863	1,504	3,783	4,976
Cooling Equipment (more than one may apply)							
Residential-Type Central A/C	1,900	1,013	1,118	886	677	954	807
Heat Pumps	2,724	1,433	1,823	863	412	1,439	2,485
Individual A/C	5,723	1,620	2,404	1,684	726	3,678	4,953
District Chilled Water	7,647	5,146	5,465	3,138	4,034	1,058	4,932
Central Chillers	27,723	13,372	16,944	12,296	9,296	15,384	23,266
Packaged-A/C Units	23,989	8,856	14,389	10,548	9,034	13,817	20,197
Swamp Coolers	3,165	1,592	1,636	1,301	1,142	758	2,285
Lighting Equipment (more than one may apply)							
Incandescent	20,475	7,727	11,924	9,157	8,130	9,724	17,342
Standard Fluorescent	42,850	17,903	24,511	16,789	14,570	21,289	34,047
Compact Fluorescent	17,339	7,441	13,891	6,254	8,282	11,741	16,985
High-Intensity Discharge	18,736	10,875	10,570	9,828	6,651	7,978	14,352
Electronic Ballast	23,307	11,378	16,181	12,008	8,859	12,845	20,703
Water-Heating Equipment (more than one may apply)							
Centralized System	31,069	13,213	18,305	12,457	11,891	16,096	25,491
Distributed System	10,750	3,696	6,054	4,312	1,955	4,928	7,843
Don't Know/Not Ascertained	1,165	781	36	521	183	628	604
Energy Conservation Features (more than one may apply)							
Any Conservation Feature	44,023	18,231	24,624	17,432	14,570	21,853	34,547
Building Shell	34,105	15,836	19,745	14,266	11,712	15,481	26,983
HVAC	43,116	17,971	24,535	16,780	14,532	21,502	34,455
Lighting	34,825	15,999	20,778	13,223	12,803	17,791	29,501

See footnotes at end of table.

**Table 3.42. Energy Management Practices in FBSS Buildings in
Federal Region 9, Floorspace, 1993 (Continued)**
(Thousand Square Feet)

Building Characteristics	All Buildings	Energy Management and Control System	Energy Conservation Programs ¹	Energy Audit	HVAC Maintenance Staff ²	Off-Hour Equipment Reduction	Retrofit or Purchase of Energy Efficient Equipment
Building Shell Conservation Features (more than one may apply)							
Roof or Ceiling							
Insulation	27,234	15,092	16,156	12,807	9,157	9,929	21,217
Wall Insulation	17,462	10,333	10,951	9,275	7,263	5,872	13,563
Storm or Multiple							
Glazing	10,260	4,429	7,098	3,871	5,672	3,397	9,417
Tinted or Reflective Glass							
or Shading Film	22,381	10,096	14,637	9,488	8,991	9,823	19,110
Exterior or Interior Shading							
or Awnings	24,370	11,233	14,182	10,337	9,080	10,266	20,183
HVAC Conservation Features (more than one may apply)							
VAV System	15,577	7,683	10,148	6,474	8,209	6,212	13,029
Economizer Cycle	26,367	11,661	17,092	11,957	8,690	14,527	22,271
HVAC Maintenance	43,098	17,954	24,517	16,780	14,532	21,484	34,437
Lighting Conservation Features (more than one may apply)							
Specular Reflectors	21,850	7,520	15,832	5,450	10,376	13,481	20,033
Natural Lighting Control							
Sensors	13,760	6,808	8,689	4,365	6,208	6,717	12,187
Occupancy Sensors	25,245	12,584	15,295	11,847	11,003	11,773	22,559
Time Clock	10,539	5,499	8,426	5,292	5,304	5,810	9,778
Manual Dimmer Switches	14,455	7,269	9,461	5,939	7,711	5,206	12,377

¹ Building participates in any programs sponsored by the Federal Energy Management Program, in-house, utility, or third party.

² HVAC maintenance staff means at least one person spends at least half their working hours maintaining the heating/cooling equipment.

NC = No cases in responding sample.

Notes: • Total workers are the number of workers during the main shift. • See Glossary for explanation of abbreviations and definitions of terms used in this report. • These data are from 881 federally owned buildings having the following criteria: (1) located in Federal Regions 3, 6, or 9; (2) larger than 10,000 square feet; and (3) used for a commercial purpose, other than warehouse and storage. In addition, 9 out of 10 selected buildings were from agencies other than the Department of Defense. • Statistics for the "energy end uses" represent consumption in buildings that have end use, not consumption for a particular fuel for a particular end use. • A/C = Air Conditioning. • FBSS = Federal Buildings Supplemental Survey. • HVAC = Heating, Ventilation, and Air Conditioning. • VAV = Variable-Air Volume. • Data are for Fiscal Year 1993 (October 1, 1992 through September 30, 1993). • Because of rounding, data may not sum to totals.

Source: Energy Information Administration, Office of Energy Markets and End Use, 1993 Federal Buildings Supplemental Survey.