

**Table 3.52. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 3, 1993**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>All Buildings</b> .....	<b>3,015</b>	<b>19,577</b>	<b>47.11</b>	<b>12.5</b>	<b>241.6</b>	<b>0.58</b>	<b>12.34</b>
<b>Building Floorspace (square feet)</b>							
10,000 to 50,000 .....	187	6,034	195.10	119.6	56.2	1.82	9.32
50,001 to 200,000 .....	805	12,786	115.92	60.9	138.1	1.25	10.80
Over 200,000 .....	2,022	33,707	36.06	8.9	446.2	.48	13.24
<b>Principal Building Activity</b>							
Education .....	19	4,754	72.05	48.5	55.7	.84	11.72
Health Care .....	422	20,091	50.04	31.7	208.0	.52	10.35
Laboratory .....	765	26,372	217.10	130.6	292.3	2.41	11.08
Lodging .....	37	5,326	76.24	83.8	64.3	.92	12.07
Mercantile and Service .....	69	23,105	33.16	2.1	283.6	.41	12.27
Office .....	1,372	19,883	31.08	7.9	275.0	.43	13.83
All Others .....	331	15,747	65.43	23.4	184.2	.77	11.70
<b>Year Constructed</b>							
1959 or Before .....	1,500	18,992	43.45	8.6	228.9	.52	12.05
1960 to 1969 .....	954	19,865	63.78	26.5	250.6	.80	12.62
1970 to 1979 .....	244	22,214	27.09	10.2	355.4	.43	16.00
1980 to 1989 .....	197	19,678	78.56	44.4	170.4	.68	8.66
1990 to 1993 .....	120	19,987	40.21	32.3	247.6	.50	12.39
<b>Federal Agency</b>							
Department of Defense .....	462	35,532	39.22	11.3	558.3	.62	15.71
General Services Administration ..	1,009	21,476	29.05	7.1	294.9	.40	13.73
United States Postal Service .....	42	20,837	32.06	1.4	261.9	.40	12.57
Veterans Administration .....	407	14,520	68.33	49.6	146.5	.69	10.09
All Others .....	1,095	17,115	107.26	53.3	179.2	1.12	10.47
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	3,015	19,577	47.11	12.5	241.6	.58	12.34
Natural Gas .....	1,337	34,290	37.97	7.6	476.7	.53	13.90
Fuel Oil .....	749	39,431	32.81	11.7	599.0	.50	15.19
District Heat .....	3,015	19,577	47.11	12.5	241.6	.58	12.34
District Chilled Water .....	1,273	22,731	55.62	19.8	289.3	.71	12.73
Propane .....	40	19,769	59.28	52.7	173.6	.52	8.78
Any Other .....	70	23,281	22.00	8.1	174.9	.17	7.51
<b>Energy End Uses (more than one may apply)</b>							
Heating .....	3,015	19,577	47.11	12.5	241.6	.58	12.34
Air Conditioning .....	3,011	19,683	47.08	12.5	242.9	.58	12.34
Water Heating .....	3,001	19,742	47.33	12.5	243.5	.58	12.33
Cooking .....	1,834	32,757	36.26	8.7	431.1	.48	13.16
Manufacturing .....	845	42,260	43.59	10.5	536.9	.55	12.70
<b>Workers (main shift)</b>							
Less than 50 .....	190	6,118	97.49	242.8	58.6	.93	9.57
50 to 99 .....	130	7,240	138.75	106.3	70.1	1.34	9.68
100 to 499 .....	791	15,818	118.23	66.5	176.2	1.32	11.14
500 or More .....	1,904	34,620	34.99	8.4	460.4	.47	13.30
<b>Weekly Operating Hours</b>							
48 or Fewer .....	354	11,798	51.57	22.1	123.3	.54	10.45
49 to 60 .....	754	15,718	35.71	13.5	224.1	.51	14.26
61 to 167 .....	249	13,816	38.52	16.6	146.3	.41	10.59
Open Continuously .....	1,658	28,583	56.12	10.7	347.0	.68	12.14

See footnotes at end of table.

**Table 3.52. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 3, 1993 (Continued)**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>HVAC Conservation Features</b> (more than one may apply)							
VAV System .....	814	21,434	38.85	8.8	277.7	0.50	12.96
Economizer Cycle .....	1,819	23,326	43.17	9.5	300.8	.56	12.89
HVAC Maintenance .....	2,983	19,755	47.09	12.4	244.1	.58	12.35
<b>Energy Management Practices</b> (more than one may apply)							
Energy Management and Control System .....	1,583	22,609	38.59	8.5	284.6	.49	12.59
Energy Conservation Programs <sup>1</sup> .....	1,533	26,898	32.90	8.5	366.2	.45	13.62
Energy Audit .....	1,071	19,836	41.50	15.3	257.4	.54	12.98
HVAC Maintenance Staff <sup>2</sup> .....	1,491	27,101	40.07	8.0	383.7	.57	14.16
<b>Off-Hours Reduction in Equipment (more than one may apply)</b>							
Heating .....	1,160	15,468	35.82	13.8	198.6	.46	12.84
Cooling .....	1,162	15,284	35.84	13.8	196.1	.46	12.83
Hot Water .....	718	17,090	39.04	15.6	215.0	.49	12.58
Lighting .....	1,235	15,063	37.98	15.6	191.6	.48	12.72
<b>Building Generates Electricity</b>							
Yes .....	1,017	29,044	41.37	9.1	364.2	.52	12.54
No .....	1,998	16,793	50.70	15.4	205.6	.62	12.24

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

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

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. • 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 3.53. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 6, 1993**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>All Buildings .....</b>	<b>982</b>	<b>14,439</b>	<b>73.07</b>	<b>40.0</b>	<b>156.2</b>	<b>0.79</b>	<b>10.82</b>
<b>Building Floorspace (square feet)</b>							
10,000 to 50,000 .....	95	4,525	164.13	117.6	46.9	1.70	10.36
50,001 to 200,000 .....	392	12,639	105.24	50.4	138.9	1.16	10.99
Over 200,000 .....	495	30,938	54.19	31.0	333.4	.58	10.78
<b>Principal Building Activity</b>							
Education .....	5	2,676	152.90	118.9	18.8	1.08	7.04
Health Care .....	271	18,077	40.07	24.9	175.7	.39	9.72
Laboratory .....	463	27,242	194.80	140.6	318.7	2.28	11.70
Lodging .....	24	4,892	85.13	95.9	58.4	1.02	11.94
Mercantile and Service .....	(*)	2	.01	(*)	(*)	(*)	12.50
Office .....	151	8,362	55.54	17.5	92.3	.61	11.04
All Others .....	67	6,723	62.15	70.5	57.9	.54	8.61
<b>Year Constructed</b>							
1959 or Before .....	570	12,950	98.54	50.2	140.9	1.07	10.88
1960 to 1969 .....	105	15,026	102.66	36.4	169.0	1.15	11.25
1970 to 1979 .....	56	14,012	57.43	15.8	116.6	.48	8.32
1980 to 1989 .....	191	17,362	65.95	45.9	188.1	.71	10.83
1990 to 1993 .....	60	29,909	21.69	23.1	352.5	.26	11.78
<b>Federal Agency</b>							
Department of Defense .....	14	4,687	57.04	27.6	28.4	.35	6.05
General Services Administration ..	44	8,724	38.67	14.3	103.6	.46	11.87
United States Postal Service .....	(*)	2	.01	(*)	(*)	(*)	12.50
Veterans Administration .....	286	15,053	41.14	25.9	146.1	.40	9.71
All Others .....	638	15,953	129.38	67.6	181.1	1.47	11.35
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	982	14,439	73.07	40.0	156.2	.79	10.82
Natural Gas .....	222	14,786	41.55	24.4	142.6	.40	9.64
Fuel Oil .....	63	8,971	59.38	24.8	88.7	.59	9.89
District Heat .....	982	14,439	73.07	40.0	156.2	.79	10.82
District Chilled Water .....	343	12,688	46.70	21.9	133.2	.49	10.50
Propane .....	7	3,659	308.31	122.0	13.9	1.17	3.81
Any Other .....	58	19,307	47.21	31.3	181.1	.44	9.38
<b>Energy End Uses (more than one may apply)</b>							
Heating .....	982	14,439	73.07	40.0	156.2	.79	10.82
Air Conditioning .....	982	14,439	73.07	40.0	156.2	.79	10.82
Water Heating .....	982	14,439	73.07	40.0	156.2	.79	10.82
Cooking .....	264	15,551	39.46	23.2	145.9	.37	9.38
Manufacturing .....	13	3,210	53.79	40.8	21.5	.36	6.71
<b>Workers (main shift)</b>							
Less than 50 .....	97	4,633	91.20	204.8	50.3	.99	10.86
50 to 99 .....	27	5,471	146.86	70.0	65.3	1.75	11.93
100 to 499 .....	494	18,310	121.45	75.8	202.2	1.34	11.04
500 or More .....	363	24,188	44.72	21.2	252.1	.47	10.42
<b>Weekly Operating Hours</b>							
48 or Fewer .....	106	10,583	103.08	132.1	117.2	1.14	11.08
49 to 60 .....	232	11,579	82.25	41.6	113.1	.80	9.77
61 to 167 .....	325	17,103	104.44	47.6	202.2	1.23	11.82
Open Continuously .....	319	16,815	49.28	28.2	176.2	.52	10.48

See footnotes at end of table.

**Table 3.53. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 6, 1993 (Continued)**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>HVAC Conservation Features</b> (more than one may apply)							
VAV System .....	393	16,388	47.64	28.4	167.9	0.49	10.24
Economizer Cycle .....	555	15,409	58.61	34.1	157.7	.60	10.23
HVAC Maintenance .....	979	14,612	72.98	39.9	158.0	.79	10.82
<b>Energy Management Practices</b> (more than one may apply)							
Energy Management and Control System .....	610	16,955	64.26	35.6	176.4	.67	10.40
Energy Conservation Programs <sup>1</sup> .....	194	17,672	38.63	18.9	168.7	.37	9.55
Energy Audit .....	69	13,806	50.17	16.7	125.7	.46	9.10
HVAC Maintenance Staff <sup>2</sup> .....	195	16,235	33.38	19.8	171.2	.35	10.54
<b>Off-Hours Reduction in Equipment (more than one may apply)</b>							
Heating .....	387	13,361	88.47	46.6	140.6	.93	10.52
Cooling .....	408	13,613	85.40	43.1	144.2	.90	10.59
Hot Water .....	77	8,526	52.16	17.6	84.5	.52	9.91
Lighting .....	363	11,706	93.25	42.4	134.0	1.07	11.45
<b>Building Generates Electricity</b>							
Yes .....	154	19,291	32.86	25.4	199.8	.34	10.36
No .....	828	13,792	94.68	44.8	150.4	1.03	10.91

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

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

(\*) = Value rounds to zero in the units displayed.

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. • 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 3.54. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 9, 1993**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>All Buildings</b> .....	<b>834</b>	<b>11,269</b>	<b>70.93</b>	<b>36.0</b>	<b>122.5</b>	<b>0.77</b>	<b>10.87</b>
<b>Building Floorspace (square feet)</b>							
10,000 to 50,000 .....	88	3,376	109.56	49.5	38.6	1.25	11.43
50,001 to 200,000 .....	353	10,092	96.22	49.2	113.6	1.08	11.25
Over 200,000 .....	393	30,226	53.94	27.6	314.2	.56	10.40
<b>Principal Building Activity</b>							
Education .....	14	7,224	85.32	85.0	70.3	.83	9.73
Health Care .....	503	13,963	64.92	30.7	138.9	.65	9.95
Laboratory .....	97	24,275	253.76	178.2	286.9	3.00	11.82
Lodging .....	43	3,587	63.25	120.6	46.9	.83	13.07
Mercantile and Service .....	5	2,455	84.17	25.8	29.5	1.01	12.01
Office .....	52	6,499	26.83	11.6	80.6	.33	12.40
All Others .....	120	11,979	152.30	109.7	151.0	1.92	12.61
<b>Year Constructed</b>							
1959 or Before .....	230	6,377	76.08	38.7	76.9	.92	12.05
1960 to 1969 .....	138	12,511	85.08	48.5	127.1	.86	10.16
1970 to 1979 .....	323	17,955	66.77	28.5	200.2	.74	11.15
1980 to 1989 .....	144	15,950	62.91	46.9	143.8	.57	9.02
1990 to 1993 .....	NC	NC	NC	NC	NC	NC	NC
<b>Federal Agency</b>							
Department of Defense .....	169	7,327	51.06	40.4	93.6	.65	12.78
General Services Administration ..	34	17,050	29.46	11.7	201.4	.35	11.81
United States Postal Service .....	NC	NC	NC	NC	NC	NC	NC
Veterans Administration .....	526	11,692	76.78	34.0	117.0	.77	10.01
All Others .....	105	26,299	235.43	171.1	310.3	2.78	11.80
<b>Energy Sources (more than one may apply)</b>							
Electricity .....	828	11,346	70.57	35.8	123.0	.77	10.84
Natural Gas .....	509	18,859	76.28	39.1	204.6	.83	10.85
Fuel Oil .....	163	18,081	54.54	27.4	188.3	.57	10.41
District Heat .....	834	11,269	70.93	36.0	122.5	.77	10.87
District Chilled Water .....	349	13,941	61.01	35.5	137.2	.60	9.84
Propane .....	NC	NC	NC	NC	NC	NC	NC
Any Other .....	78	39,199	60.17	33.5	461.9	.71	11.78
<b>Energy End Uses (more than one may apply)</b>							
Heating .....	834	11,582	71.26	36.0	125.9	.77	10.87
Air Conditioning .....	751	11,919	70.01	35.7	125.8	.74	10.55
Water Heating .....	786	10,919	68.76	34.4	116.3	.73	10.65
Cooking .....	462	23,080	64.64	32.5	238.7	.67	10.34
Manufacturing .....	161	20,132	105.63	52.0	203.9	1.07	10.13
<b>Workers (main shift)</b>							
Less than 50 .....	61	3,412	70.49	404.0	41.9	.87	12.28
50 to 99 .....	22	3,583	57.02	46.0	42.9	.68	11.98
100 to 499 .....	445	11,416	104.29	52.6	127.7	1.17	11.18
500 or More .....	306	27,799	49.01	21.7	279.3	.49	10.05
<b>Weekly Operating Hours</b>							
48 or Fewer .....	75	3,566	60.41	33.8	38.4	.65	10.77
49 to 60 .....	177	13,594	80.07	36.4	161.0	.95	11.84
61 to 167 .....	39	39,376	129.21	116.5	590.6	1.94	15.00
Open Continuously .....	543	13,922	67.82	34.4	142.9	.70	10.27

See footnotes at end of table.

**Table 3.54. District Heat Consumption and Expenditure Intensities  
in FBSS Buildings in Federal Region 9, 1993 (Continued)**

Building Characteristics	District Heat Consumption				District Heat Expenditures		
	Total (million pounds)	per Building (thousand pounds)	per Square foot (pounds)	per Worker (thousand pounds)	per Building (thousand dollars)	per Square Foot (dollars)	per Thousand Pound (dollars)
<b>HVAC Conservation Features (more than one may apply)</b>							
VAV System .....	274	21,070	56.85	30.5	196.6	0.53	9.33
Economizer Cycle .....	472	16,281	82.92	42.0	172.5	.88	10.59
HVAC Maintenance .....	832	11,721	71.28	36.0	127.4	.77	10.87
<b>Energy Management Practices (more than one may apply)</b>							
Energy Management and Control System .....	298	22,919	54.91	30.0	245.9	.59	10.73
Energy Conservation Programs <sup>1</sup> .....	402	19,142	69.66	31.9	209.1	.76	10.92
Energy Audit .....	248	10,343	61.46	31.5	110.1	.65	10.64
HVAC Maintenance Staff <sup>2</sup> .....	255	17,031	60.77	33.6	180.0	.64	10.57
<b>Off-Hours Reduction in Equipment (more than one may apply)</b>							
Heating .....	153	10,204	70.48	35.2	117.7	.81	11.53
Cooling .....	139	7,709	60.63	27.6	86.6	.68	11.24
Hot Water .....	48	7,956	34.19	14.5	94.3	.41	11.85
Lighting .....	160	6,953	57.61	27.8	81.4	.67	11.71
<b>Building Generates Electricity</b>							
Yes .....	242	24,229	65.80	35.6	285.6	.78	11.79
No .....	592	9,244	73.27	36.1	97.0	.77	10.49

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

<sup>2</sup> 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. • 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.