



United States
CONSUMER PRODUCT SAFETY COMMISSION
Washington, D.C. 20207

NOV 13 1996

MEMORANDUM

To: The Commission
Sadye E. Dunn, Secretary

Through: Eric A. Rubel, General Counsel *ER*
Pamela Gilbert, Executive Director *PG*

From: Ron Medford, Assistant Executive Director *RM*
Office of Hazard Identification and Reduction
Linda Smith, Directorate for Epidemiology and Health Sciences *LS*
Kimberly Long, Directorate for Epidemiology and Health Sciences *K.L.*

Subject: 1994 Residential Fire Loss Estimates

The attached report presents estimated product-related fire losses that occurred in residential structure fires attended by the fire service during 1994, the most recent year for which these data are available. Data for previous years are included as well.

Attachment

NOTE: This document has not been reviewed or accepted by the Commission.
Initial rch Date 11/13/96

CPSA 6 (b)(1) Cleared
11/14/96
No Mfrs/PrvtLbtrs od
Products Identified
Excepted by _____
Firms Notified, _____



1994 RESIDENTIAL FIRE LOSS ESTIMATES

Linda Smith, EHHA
Directorate for Epidemiology and Health Sciences

Kimberly Long, EHHA
Directorate for Epidemiology and Health Sciences

U.S. Consumer Product Safety Commission
Washington, DC 20207

CPSA 6 (b)(1) Cleared

x. 10/19/96
No Mfrs/PrvtLbrs

Table of Contents

Topic	Table
Executive Summary	
Part I - 1994 Fire Loss Estimates	
Selected Equipment	1
Selected Products	2
Heating Equipment	3
Electrical Equipment	4
Gas-Fired Equipment	5
Part II - Fire Loss Trends	
<u>Fires</u>	
Selected Equipment	6
Selected Products	7
Heating Equipment	8
Electrical Equipment	9
<u>Fire Deaths</u>	
Selected Equipment	10
Selected Products	11
Heating Equipment	12
Electrical Equipment	13
<u>Fire Injuries</u>	
Selected Equipment	14
Selected Products	15
Heating Equipment	16
Electrical Equipment	17
Methodology	

Executive Summary

The attached tables present estimated product-related fire losses that occurred in residential structure fires attended by the fire service during 1994, the most recent year for which these data are available. In addition, trend data for the latest five years available are presented. These estimates were derived from data provided by the U.S. Fire Administration (USFA) and the National Fire Protection Association (NFPA).

- An estimated 451,000 residential structure fires were attended by the fire departments in 1994. These fires resulted in an estimated 3,465 civilian deaths, 20,025 civilian injuries, and \$4.3 billion in property loss.¹ (Table 1)
- Fires in residential properties were about 73 percent of all structure fires in 1994. These fires accounted for 81 percent of all civilian deaths and 73 percent of all civilian injuries.
- Among products within CPSC jurisdiction (which excludes cigarettes), the products most frequently involved in fire deaths were ignition of upholstered furniture (20%), mattresses/bedding (14%), and heating equipment (14%). These three products accounted for a combined total of almost 50 percent of the fire deaths. (Tables 1 and 2)
- Cooking equipment, primarily ranges and ovens, was the most frequent product type involved in residential fires and injuries (about an estimated 25 percent for both). Heating equipment was the second leading product type involved in fires (17 percent). (Table 1)
- Electrical equipment was involved in about 34 percent of all residential structure fires, 22 percent of the deaths, and 32 percent of the injuries. These electrical fires were primarily associated with cooking equipment and electrical distribution systems. (Table 4)
- Between 1980 and 1994, estimated residential structure fires decreased about 40 percent. Estimated deaths associated with these fires decreased about 36 percent and estimated injuries decreased about 5 percent.

¹ Michael Karter, Jr., "Fire Loss in the United States in 1994", NFPA Journal, Sept./Oct. 1995, pp. 93 - 100.

Table 1
Estimated Fire Losses in Residential Structures
by Selected Kind of Equipment Involved, 1994

Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	451,000	3,465	20,025	\$4,317.0
Total Heating Equipment	75,100	490	1,970	\$622.4
Fixed Heater	22,100	150	380	\$162.9
Portable Heater	5,500	170	550	\$93.5
Central Heating	10,700	70	260	\$85.4
Fireplace	9,100	10	140	\$75.6
Chimney or Connector	15,700	10	50	\$88.3
Water Heater	8,200	30	430	\$76.4
Other or Unknown	3,900	40	150	\$40.2
Total Cooking Equipment	104,800	300	4,860	\$380.3
Range/Oven	88,500	210	4,200	\$287.1
Gas	24,800	90	1,020	\$67.4
Electric	51,000	70	2,660	\$172.6
Other or Unknown	12,700	50	530	\$47.2
All Other Cooking	16,300	90	650	\$93.2
Gas	2,300	30	100	\$12.3
Electric	7,900	30	310	\$38.1
Other or Unknown	6,000	20	240	\$42.8
Total Electric Distribution	42,900	370	1,440	\$615.1
Installed Wiring	15,200	140	380	\$245.7
Cord, Plug	7,400	100	470	\$119.4
Switch, Outlet	4,900	40	130	\$55.6
Lamp, Light Fixture	8,700	50	300	\$102.4
Other or Unknown	6,800	30	160	\$92.1
Total Appliances (Except Above)	30,700	80	1,030	\$233.7
TV, Radio, Phono	2,200	10	150	\$32.4
Dryer	15,300	10	330	\$72.1
Washing Machine	2,100	--	20	\$2.9
Heat Producing Appliance	3,800	40	250	\$49.7
Non-Heat Producing Appliance	900	10	70	\$12.5
Other or Unknown	6,400	20	210	\$64.1
Total Cooling, Air Conditioning	4,500	60	150	\$38.0

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the U.S. Fire Administration and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 2
Estimated Fire Losses in Residential Structures
by Selected Product Involved, 1994

Product	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	451,000	3,465	20,025	\$4,317.0
	By Form of Heat of Ignition			
Cigarette, Other Tobacco Prod.	28,000	880	2,540	\$316.1
Match	25,200	260	1,470	\$265.0
Child Play	9,100	140	750	\$102.7
Other	15,200	110	680	\$145.1
Unknown	900	10	40	\$17.2
Lighter	15,500	300	2,070	\$204.7
Child Play	10,600	230	1,560	\$147.8
Other	4,600	70	430	\$50.2
Unknown	300	--	70	\$6.7
Candle	7,400	80	870	\$93.3
	By Form of Material First Ignited			
Upholstered Furniture	14,300	680	1,780	\$244.5
Smoking Material Ignition	6,500	410	960	\$107.9
Open Flame Ignition	3,800	160	540	\$69.1
Other	4,000	110	280	\$67.5
Mattress, Bedding	30,200	490	3,160	\$341.6
Smoking Material Ignition	8,400	220	850	\$73.7
Open Flame Ignition	13,400	200	1,630	\$162.8
Other	8,400	70	670	\$105.1
Other Materials				
Electric Cable Insulation	34,200	170	770	\$262.5
Interior Wall Covering	17,100	160	540	\$295.3
Wearing Apparel-Worn	900	130	200	\$13.5
Wearing Apparel-Not Worn	15,800	110	970	\$138.9
Floor Covering	10,100	90	460	\$153.1
Curtains, Drapes	4,200	60	310	\$40.1
Magazine, Newspaper	6,300	70	260	\$63.4
Thermal Insulation	5,200	10	110	\$42.6
Cabinet, Desk	6,600	50	330	\$74.0
Trash, Rubbish	43,300	50	660	\$136.9
Toy, Game	800	*	70	\$5.5

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 3
Estimated Heating Equipment Fire Losses
in Residential Structures, 1994

Heating Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	451,000	3,465	20,025	\$4,317.0
Total Heating Equipment	75,100	490	1,970	\$622.4
Solid Fuel	32,500	70	220	\$181.8
Fixed Heater	13,800	40	80	\$63.5
Portable Heater	200	10	10	\$1.4
Fireplace	6,300	10	70	\$49.9
Central Furnace	500	10	10	\$5.2
Chimney	9,000	10	20	\$39.3
Chimney Connector	2,100	--	10	\$16.6
Other or Unknown	600	--	10	\$6.0
Gas-Fired	12,700	160	680	\$140.3
Fixed Heater	2,600	50	100	\$28.3
Portable Heater	800	30	60	\$10.7
Water Heater	4,900	20	310	\$48.4
Central Furnace	3,100	50	140	\$37.4
Other or Unknown	1,300	--	80	\$15.5
Electric	10,800	110	390	\$109.4
Fixed Heater	2,700	30	110	\$35.5
Portable Heater	2,400	60	210	\$39.0
Water Heater	1,600	10	20	\$11.2
Central Furnace	3,000	--	20	\$12.1
Other or Unknown	1,100	10	30	\$11.6
Liquid Fuel	5,100	50	240	\$49.2
Fixed Heater	700	*	20	\$4.0
Portable Heater	1,200	30	140	\$22.9
Water Heater	300	--	10	\$3.4
Central Furnace	2,500	10	40	\$14.6
Chimney or Connector	200	--	10	\$2.6
Other or Unknown	200	10	20	\$1.8
All Other, Unknown Fuel	13,900	100	440	\$141.6
Fixed Heater	2,300	20	60	\$31.6
Portable Heater	1,000	40	130	\$19.5
Fireplace	2,300	10	60	\$21.0
Water Heater	1,300	*	80	\$12.2
Central Furnace	1,600	10	50	\$16.2
Chimney	2,900	10	20	\$16.7
Chimney Connector	900	*	--	\$9.6
Other or Unknown	1,600	20	30	\$14.7

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 4
Estimated Electrical Equipment Fire Losses
in Residential Structures, 1994

Electrical Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	451,000	3,465	20,025	\$4,317.0
Total Electrical	155,100	750	6,320	\$1,299.1
Electrical Heating Equipment	10,800	110	390	\$109.4
Central Heating	3,000	--	20	\$12.1
Fixed Heater	2,700	30	110	\$35.5
Portable Heater	2,400	60	210	\$39.0
Water Heater	1,600	10	20	\$11.2
Other or Unknown	1,100	10	30	\$11.6
Electrical Cooking Equipment	58,900	100	2,970	\$210.7
Range/Oven	51,000	70	2,660	\$172.6
Toaster/Toaster Oven	3,200	20	130	\$13.7
Microwave Oven	1,600	10	60	\$8.2
Range/Oven Hood	800	--	20	\$3.5
Coffee Maker, Teapot	500	*	20	\$3.7
Deep Fat Fryer	300	--	10	\$4.2
Hot Plate	300	*	10	\$1.4
Other or Unknown	1,200	--	60	\$3.4
Electrical Distribution	42,900	370	1,440	\$615.1
Installed Wiring	15,200	140	380	\$245.1
Light Fixture	5,300	40	140	\$58.3
Receptacle	4,100	30	110	\$48.7
Extension Cord	3,200	40	200	\$50.7
Other Electrical Cord	3,200	50	200	\$52.8
Lamp, Light Bulb	3,400	20	160	\$44.1
Circuit Breaker	2,400	10	60	\$29.6
Switch	1,200	10	30	\$13.8
Meter	900	*	10	\$5.1
Fuse	800	*	20	\$10.7
Transformer	500	--	20	\$5.9
Other or Unknown	2,700	30	110	\$50.3
Electrical Appliances	22,700	60	780	\$205.0
Clothes Dryer	8,800	*	130	\$41.7
Fan	3,100	10	130	\$40.2
Washing Machine	1,600	--	20	\$2.2
Heat Tape	1,300	10	80	\$18.9
Television	1,300	10	80	\$22.3
Iron	1,000	*	60	\$12.0
Dishwasher	1,300	*	50	\$10.5
Radio, Cassette Player	1,100	10	70	\$18.6
Hair Dryer, Curling Iron	500	*	30	\$6.8
Electric Blanket	500	*	30	\$6.6
Other or Unknown	2,200	20	100	\$25.2

Table 4 (Continued)
Estimated Electrical Equipment Fire Losses
in Residential Structures, 1994

Electrical Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Cooling Equipment	3,800	40	120	\$31.2
Refrigerator, Freezer	1,200	10	50	\$12.0
Central Air Conditioning	900	--	10	\$5.8
Fixed Room Air Conditioning	600	20	30	\$3.2
Portable Air Conditioning	600	*	20	\$7.2
Other or Unknown	500	10	10	\$3.0

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 5
Estimated Fire Losses Involving Selected
Gas-Fired Equipment in Residential Structures, 1994

Gas-Fired Equipment	Fires	Civilian Deaths	Civilian Injuries	Property Loss (In Millions)
Total Residential	451,000	3,465	20,025	\$4,317.0
Total Gas-Fired Equipment	52,200	320	2,210	\$294.9
Gas Heating Equipment	12,700	160	680	\$140.3
Fixed Heater	2,600	50	100	\$28.3
Portable Heater	800	30	60	\$10.7
Central Furnace	3,100	50	140	\$37.4
Fireplace	300	--	*	\$2.6
Water Heater	4,900	20	310	\$48.4
Other or Unknown	1,000	--	70	\$13.0
Gas Cooking Equipment	27,100	120	1,120	\$79.7
Range/Oven	24,800	90	1,020	\$67.4
Open GrillGas	600	--	30	\$3.6
Portable Cooking	200	--	20	\$2.6
Other or Unknown	1,500	30	60	\$6.2
Gas Appliances (Except Above)	3,600	*	80	\$18.3
Dryer	3,300	*	70	\$14.1
Other or Unknown	300	--	10	\$4.2

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the U.S. Fire Administration and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 6
Trends in Estimated Residential Structure
Fires by Selected Kind of Equipment Involved, 1990 - 1994

Equipment	1980	1990	1991	1992	1993	1994
Total Residential	757,500	476,000	478,000	472,000	470,000	451,000
Total Heating Equipment	210,400	85,600	86,400	84,500	85,500	75,100
Fixed Heater	42,100	27,800	27,000	26,800	26,200	22,100
Portable Heater	6,500	5,300	5,400	5,300	5,700	5,500
Central Furnace	22,800	11,500	11,300	11,400	11,800	10,700
Fireplace	39,800	11,400	11,600	11,000	10,400	9,100
Chimney or Connector	77,800	17,400	18,300	17,400	18,900	15,700
Water Heater	15,400	8,700	8,800	8,500	8,500	8,200
Other or Unknown	5,900	3,400	4,000	4,100	4,000	3,900
Total Cooking Equipment	141,700	106,400	107,900	114,600	113,300	104,800
Range/Oven	124,900	92,500	93,100	98,200	96,700	88,500
Gas	40,400	28,400	28,700	29,500	29,000	24,800
Electric	63,100	50,100	50,300	53,800	53,400	51,000
Other or Unknown	21,400	14,000	14,100	14,900	14,300	12,700
All Other Cooking	16,800	13,900	14,800	16,400	16,600	16,300
Gas	1,300	1,600	1,700	1,900	2,100	2,300
Electric	9,000	6,700	7,400	8,000	8,100	7,900
Other or Unknown	6,400	5,600	5,700	6,500	6,400	6,000
Total Electrical Distribution	64,700	42,000	43,500	41,000	43,400	42,900
Installed Wiring	22,300	15,100	16,200	14,600	15,200	15,200
Cord, Plug	12,200	8,200	8,000	7,500	7,800	7,400
Switch, Outlet	7,400	4,700	5,000	4,800	5,200	4,900
Lamp, Light Fixture	12,100	7,900	7,600	7,800	8,400	8,700
Other or Unknown	10,700	6,200	6,600	6,400	6,800	6,800
Total Appliances (Except Above)	49,900	30,300	30,200	29,700	30,300	30,700
TV, Radio, Phono	9,700	2,500	2,400	2,300	2,100	2,200
Dryer	19,200	13,800	13,700	14,300	14,800	15,300
Washing Machine	3,400	2,500	2,400	2,500	2,400	2,100
Heat Producing Appliance	7,900	4,400	4,300	3,900	3,800	3,800
Other or Unknown	9,700	7,100	7,500	6,000	6,300	6,400
Total Cooling, Air Conditioning	6,400	5,200	5,300	4,800	4,900	4,500

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*)

Table 7
Trends in Estimated Residential Structure Fires
by Selected Product Involved, 1990-1994

Product	1980	1990	1991	1992	1993	1994
Total Residential	757,500	467,000	478,000	472,000	470,000	451,000
	By Form of Heat of Ignition					
Cigarette, Other Tobacco Prod.	79,400	33,100	31,900	30,200	29,300	28,000
Match	71,600	32,300	30,700	29,900	26,600	25,200
Child Play	25,600	10,200	9,900	10,200	9,200	9,100
Other, Unknown	46,000	22,100	20,800	19,700	17,400	16,100
Lighter	11,900	11,100	12,600	13,600	14,600	15,500
Child Play	8,500	7,400	8,500	9,300	9,900	10,600
Other, Unknown	3,400	3,700	4,100	4,200	4,700	4,900
Candle	8,800	5,700	6,200	6,300	6,600	7,400
	By Form of Material First Ignited					
Upholstered Furniture	38,600	16,700	16,600	15,600	14,700	14,300
Smoking Material Ignition	24,600	8,800	8,500	7,300	7,100	6,500
Open Flame Ignition	7,400	3,700	3,700	4,000	3,600	3,800
Other	6,600	4,200	4,400	4,300	4,000	4,000
Mattress, Bedding	68,000	32,400	32,900	31,800	31,300	30,200
Smoking Material Ignition	29,800	10,900	10,500	9,900	9,300	8,400
Open Flame Ignition	21,700	12,300	12,900	13,100	13,100	13,400
Other	16,500	9,200	9,500	8,800	8,900	8,400
Other Materials						
Electric Cable Insulation	46,400	34,000	36,700	34,600	35,900	34,200
Interior Wall Covering	34,200	18,400	18,600	17,900	18,400	17,100
Wearing Apparel-Worn	1,300	900	800	900	900	900
Wearing Apparel-Not Worn	20,900	14,900	16,100	16,200	16,200	15,800
Floor Covering	18,300	10,800	11,700	11,000	10,400	10,100
Curtains, Drapes	10,000	5,200	5,100	4,600	4,600	4,200
Magazine, Newspaper	11,000	6,300	6,900	6,700	6,600	6,300
Thermal Insulation	9,200	5,300	5,100	4,800	5,000	5,200
Cabinet, Desk	8,900	7,200	7,100	6,600	6,800	6,600
Toy, Game	1,400	800	900	800	900	800

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 8
Trends in Estimated Heating Equipment Fires
in Residential Structures, 1990 - 1994

Heating Equipment	1980	1990	1991	1992	1993	1994
Total Residential	757,500	467,000	478,000	472,000	470,000	451,000
Total Heating Equipment	210,400	85,600	86,400	84,500	85,500	75,100
Solid Fuel	112,000	41,200	40,800	39,200	39,500	32,500
Fixed Heater	22,200	18,900	17,900	17,700	17,400	13,800
Portable Heater	1,200	200	200	200	200	200
Fireplace	28,300	7,900	8,100	7,700	7,100	6,300
Central Furnace	2,000	800	600	600	600	500
Chimney	47,000	10,600	10,900	9,900	10,800	9,000
Chimney Connector	8,700	2,200	2,300	2,400	2,700	2,100
Other or Unknown	2,400	600	800	700	700	600
Gas-Fired	27,000	13,900	14,200	13,400	13,500	12,700
Fixed Heater	6,600	2,900	3,100	3,000	2,800	2,600
Portable Heater	600	800	700	700	900	800
Water Heater	11,200	5,800	5,700	5,400	5,100	4,900
Central Furnace	6,900	3,300	3,300	3,000	3,300	3,100
Other or Unknown	1,800	1,100	1,400	1,300	1,400	1,300
Electric	15,400	10,100	10,600	10,700	11,300	10,800
Fixed Heater	4,600	2,600	2,700	2,700	2,700	2,700
Portable Heater	3,000	2,300	2,400	2,400	2,400	2,400
Water Heater	1,100	1,300	1,400	1,400	1,600	1,600
Central Furnace	5,200	3,000	3,000	3,200	3,400	3,000
Other or Unknown	1,400	900	1,100	1,000	1,100	1,100
Liquid Fuel	9,400	5,500	5,400	5,600	5,500	5,100
Fixed Heater	1,700	800	800	800	800	700
Portable Heater	600	1,200	1,200	1,100	1,200	1,200
Water Heater	900	500	400	400	400	300
Central Furnace	4,800	2,600	2,600	2,800	2,600	2,500
Chimney or Connector	1,000	200	200	200	200	200
Other or Unknown	400	200	200	200	300	200
All Other, Unknown Fuel	46,600	14,900	15,300	15,600	15,700	13,900
Fixed Heater	7,000	2,500	2,400	2,700	2,400	2,300
Portable Heater	1,100	800	1,000	800	1,000	1,000
Fireplace	10,700	3,200	3,100	2,900	2,800	2,300
Water Heater	2,200	1,100	1,200	1,200	1,400	1,300
Central Furnace	3,900	1,900	1,800	1,900	1,800	1,600
Chimney	17,300	3,000	3,100	3,300	3,600	2,900
Chimney Connector	2,800	900	1,000	1,000	1,100	900
Other or Unknown	1,700	1,600	1,700	1,800	1,600	1,600

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*)

Table 9
Trends in Estimated Electrical Equipment Fires
In Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Total Residential	467,000	478,000	472,000	470,000	451,000
Total Electrical Equipment	152,500	154,700	156,300	160,900	155,100
Heating Equipment	10,100	10,600	10,700	11,300	10,800
Central Heating	3,000	3,000	3,200	3,400	3,000
Fixed Heater	2,600	2,700	2,700	2,700	2,700
Portable Heater	2,300	2,400	2,400	2,400	2,400
Water Heater	1,300	1,400	1,400	1,600	1,600
Other or Unknown	900	1,100	1,000	1,100	1,100
Cooking Equipment	56,900	57,700	61,800	61,500	58,900
Range/Oven	50,100	50,300	53,800	53,400	51,000
Toaster/Toaster Oven	2,500	2,700	3,000	3,200	3,200
Microwave Oven	1,200	1,200	1,200	1,200	1,600
Range/Oven Hood	800	900	1,000	1,000	800
Coffee Maker, Teapot	700	800	900	700	500
Deep Fat Fryer	400	300	300	300	300
Hot Plate	300	400	400	300	300
Other or Unknown	900	1,100	1,200	1,400	1,200
Electric Distribution	42,000	43,500	41,000	43,300	42,900
Installed Wiring	15,100	16,200	14,600	15,200	15,200
Light Fixture	5,100	4,800	4,800	5,200	5,300
Receptacle	3,900	3,500	3,700	4,000	4,100
Extension Cord	3,300	3,300	3,100	3,300	3,200
Other Electrical Cord	2,100	3,300	3,100	3,300	3,200
Lamp, Light Bulb	2,800	2,800	3,000	3,200	3,400
Circuit Breaker	1,600	1,300	1,800	2,000	2,400
Switch	700	1,000	1,100	1,200	1,200
Meter	700	800	800	800	900
Fuse	700	1,000	600	700	800
Transformer	400	500	400	400	500
Other or Unknown	5,600	5,000	4,000	4,000	2,700
Electrical Appliances	20,800	20,100	21,300	22,400	22,700
Clothes Dryer	7,500	7,600	8,000	8,400	8,800
Fan	2,800	2,600	3,500	3,300	3,100
Washing Machine	1,900	1,700	1,800	1,700	1,600
Heat Tape	2,000	1,800	1,200	1,400	1,300
Television	1,400	1,200	1,400	1,300	1,300
Iron	500	600	1,000	1,000	1,000
Dishwasher	400	600	900	1,000	1,300
Radio, Cassette Player	700	700	600	700	1,100
Hair Dryer, Curling Iron	700	600	700	700	500
Electric Blanket	900	900	500	600	500
Other or Unknown	2,000	1,800	1,700	2,300	2,200

Table 9 (Continued)
Trends in Estimated Electrical Equipment Fires
In Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Cooling Equipment	4,500	4,100	4,100	4,300	3,800
Refrigerator, Freezer	1,500	1,400	1,300	1,300	1,200
Central Air Conditioning	900	1,000	1,000	1,000	900
Fixed Room Air Conditioning	900	800	600	700	600
Portable Air Conditioning	600	600	500	600	600
Other or Unknown	600	300	700	700	500

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 10
Trends in Estimated Fire Deaths in Residential Structures
by Selected Kind of Equipment Involved, 1990-1994

Equipment	1980	1990	1991	1992	1993	1994
Total Residential	5,500	4,115	3,575	3,765	3,825	3,465
Total Heating Equipment	850	630	510	500	560	490
Fixed Heater	300	150	140	130	220	150
Portable Heater	90	260	200	160	170	170
Central Furnace	90	70	30	50	50	70
Fireplace	100	20	40	30	10	10
Chimney or Connector	100	60	20	30	10	10
Water Heater	90	60	50	60	50	30
Other or Unknown	50	20	30	30	40	40
Total Cooking Equipment	420	350	280	270	340	300
Range/Oven	320	300	240	220	260	210
Gas	200	120	100	90	90	90
Electric	70	120	90	90	120	70
Other or Unknown	50	60	50	40	40	50
All Other Cooking	100	50	30	40	90	90
Gas	10	10	--	*	40	30
Electric	30	20	20	10	30	30
Other or Unknown	60	20	10	30	20	20
Total Electric Distribution	470	340	280	320	330	370
Installed Wiring	180	80	70	130	70	140
Cord, Plug	150	150	120	110	130	100
Switch, Outlet	20	30	30	10	20	40
Lamp, Light Fixture	30	70	50	30	70	50
Other or Unknown	90	10	20	40	40	30
Total Appliances (Except Above)	260	100	90	80	90	80
TV, Radio, Phono	150	30	40	30	30	10
Dryer	--	20	10	10	10	10
Washing Machine	--	--	--	--	--	--
Heat-Producing Appliance	40	30	20	10	30	40
Other or Unknown	70	20	30	30	10	20
Total Cooling, Air Conditioning	30	10	20	10	10	60

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 11
Trends in Estimated Fire Deaths in Residential
Structures by Selected Product Involved, 1990-1994

Product	1980	1990	1991	1992	1993	1994
Total Residential	5,500	4,115	3,575	3,765	3,825	3,465
By Form of Heat of Ignition						
Cigarette, Other Tobacco Prod.	1,980	1,200	890	1,040	1,010	880
Match	510	310	320	320	340	260
Child Play	190	140	160	120	160	140
Other, Unknown	320	180	170	200	180	220
Lighter	340	190	280	240	250	300
Child Play	240	140	240	200	170	230
Other, Unknown	100	50	40	40	80	70
Candle	20	100	60	100	80	80
By Form of Material First Ignited						
Upholstered Furniture	1,400	890	700	640	670	680
Smoking Material Ignition	1,150	610	470	490	450	410
Open Flame Ignition	200	140	150	80	110	160
Other	50	140	80	70	110	110
Mattress, Bedding	980	640	640	650	610	490
Smoking Material Ignition	570	330	280	320	340	220
Open Flame Ignition	260	180	200	190	190	200
Other	160	120	160	140	80	70
Other Materials						
Electric Cable Insulation	170	140	120	110	180	170
Interior Wall Covering	520	300	220	240	260	160
Wearing Apparel-Worn	150	110	120	130	110	130
Wearing Apparel-Not Worn	120	120	120	80	100	110
Floor Covering	230	110	140	150	140	90
Curtains, Drapes	20	40	10	20	40	60
Magazine, Newspaper	70	50	70	60	60	70
Thermal Insulation	10	*	--	30	*	10
Cabinet, Desk	70	50	60	30	60	50
Toy, Game	--	*	*	*	*	*

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 12
Trends in Estimated Heating Equipment Fire Deaths
In Residential Structures, 1990 - 1994

Heating Equipment	1980	1990	1991	1992	1993	1994
Total Residential	5,500	4,115	3,575	3,765	3,825	3,465
Total Heating Equipment	850	630	510	500	560	490
Solid Fuel	350	110	80	90	150	70
Fixed Heater	120	30	30	60	120	40
Portable Heater	10	10	--	10	*	10
Fireplace	90	10	30	10	10	10
Central Furnace	30	20	--	*	--	10
Chimney	60	20	10	10	10	10
Chimney Connector	30	20	10	*	*	--
Other or Unknown	10	--	--	*	10	--
Gas-Fired	150	190	160	130	110	160
Fixed Heater	30	50	50	20	40	50
Portable Heater	10	40	40	30	10	30
Water Heater	70	40	50	50	30	20
Central Furnace	40	40	20	30	30	50
Other or Unknown	--	10	10	*	10	--
Electric	70	110	90	110	110	110
Fixed Heater	20	10	10	20	30	30
Portable Heater	50	100	80	70	70	60
Water Heater	--	--	--	*	*	10
Central Heating	--	--	--	10	10	--
Other or Unknown	--	--	--	10	10	10
Liquid Fuel	120	80	30	50	40	50
Fixed Heater	70	10	10	10	10	*
Portable Heater	20	60	20	30	30	30
Water Heater	--	10	*	*	*	--
Central Furnace	30	--	--	10	--	10
Chimney or Connector	--	--	--	10	--	--
Other or Unknown	--	--	--	--	--	10
All Other, Unknown Fuel	160	150	140	120	140	100
Fixed Heater	60	50	40	30	30	20
Portable Heater	10	50	50	30	50	40
Fireplace	30	--	10	20	--	10
Water Heater	10	10	*	10	20	*
Central Furnace	--	10	10	10	20	10
Chimney	10	10	10	10	--	10
Chimney Connector	--	10	--	--	--	*
Other or Unknown	40	10	20	20	20	20

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 13
Trends in Estimated Electrical Equipment Fire Deaths
In Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Total Residential	4,120	3,575	3,765	3,825	3,465
Total Electrical	770	660	700	800	750
Heating Equipment	110	90	110	110	110
Central Heating	*	*	10	10	--
Fixed Heater	10	10	20	30	30
Portable Heater	100	80	70	70	60
Water Heater	*	*	*	*	10
Other or Unknown	*	*	10	10	10
Cooking Equipment	140	110	100	150	100
Range/Oven	120	90	90	120	70
Toaster/Toaster Oven	10	5	*	20	20
Microwave Oven	*	5	*	10	10
Range/Oven Hood	*	*	*	*	--
Coffee Maker, Teapot	*	*	*	*	*
Deep Fat Fryer	*	5	*	*	--
Hot Plate	*	*	*	*	*
Other or Unknown	*	5	10	*	--
Electric Distribution	340	280	320	330	370
Installed Wiring	80	70	130	70	140
Light Fixture	30	30	10	50	40
Receptacle	30	20	10	20	30
Extension Cord	20	50	50	60	40
Other Electrical Cord	40	50	40	50	50
Lamp, Light Bulb	40	20	10	20	20
Circuit Breaker	*	5	10	10	10
Switch	*	5	*	10	10
Meter	*	*	*	*	*
Fuse	*	*	*	*	*
Transformer	*	*	*	*	--
Other or Unknown	100	30	60	40	30
Electrical Appliances	80	85	80	90	60
Clothes Dryer	10	10	10	*	*
Fan	10	20	10	20	10
Washing Machine	*	*	*	*	--
Heat Tape	10	10	10	10	10
Television	20	20	20	20	10
Iron	*	*	*	*	*
Dishwasher	*	*	10	10	*
Radio, Cassette Player	10	10	10	10	10
Hair Dryer, Curling Iron	10	*	*	*	*
Electric Blanket	10	5	*	*	*
Other or Unknown	*	10	10	20	20

Table 13 (Continued)
Trends in Estimated Electrical Equipment Fire Deaths
In Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Cooling Equipment	10	30	10	10	40
Refrigerator, Freezer	10	20	*	10	10
Central Air Conditioning	*	*	*	*	--
Fixed Room Air Conditioning	*	10	*	*	20
Portable Air Conditioning	*	*	*	*	*
Other or Unknown	*	*	*	*	10

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 14
Trends in Estimated Fire Injuries in Residential Structures
by Selected Kind of Equipment Involved, 1990-1994

Equipment	1980	1990	1991	1992	1993	1994
Total Residential	21,100	20,650	21,850	21,600	22,600	20,025
Total Heating Equipment	3,180	2,140	2,210	2,200	2,530	1,970
Fixed Heater	760	510	450	550	570	380
Portable Heater	320	550	530	530	760	550
Central Furnace	450	280	290	300	270	260
Fireplace	450	120	150	150	150	140
Chimney or Connector	170	100	140	100	100	50
Water Heater	950	530	560	480	510	430
Other or Unknown	90	50	90	100	170	150
Total Cooking Equipment	4,680	5,320	5,360	5,310	5,840	4,860
Range/Oven	4,100	4,770	4,780	4,670	5,190	4,200
Gas	1,210	1,230	1,280	1,190	1,200	1,020
Electric	2,160	2,860	2,840	2,780	3,240	2,660
Other or Unknown	730	680	660	700	760	530
All Other Cooking	580	550	580	630	650	650
Gas	50	100	80	110	100	100
Electric	230	220	280	330	340	310
Other or Unknown	290	230	220	190	210	240
Total Electrical Distribution	1,600	1,370	1,700	1,630	1,720	1,440
Installed Wiring	390	340	360	410	430	380
Cord, Plug	450	530	680	530	610	470
Switch, Outlet	110	130	210	190	150	130
Lamp, Light Fixture	390	250	270	320	330	300
Other or Unknown	260	130	180	180	190	160
Total Appliances (Except Above)	1,090	1,030	1,080	1,060	1,110	1,030
TV, Radio, Phono	310	170	160	180	170	150
Dryer	240	230	290	330	360	330
Washing Machine	40	40	20	20	20	20
Heat-Producing Appliance	210	280	280	240	240	250
Other or Unknown	300	310	330	220	210	280
Total Cooling, Air Conditioning	160	130	190	140	150	150

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 15
Trends in Estimated Fire Injuries in Residential
Structures by Selected Product Involved, 1990-1994

Product	1990	1991	1992	1993	1994
Total Residential	20,650	21,850	21,600	22,600	20,025
Cigarette, Other Tobacco Prod.	3,110	2,880	2,870	3,010	2,540
Match	1,740	1,730	1,690	1,640	1,470
Child Play	880	810	870	780	750
Other, Unknown	860	920	820	860	720
Lighter	1,440	1,840	1,900	2,030	2,070
Child Play	1,100	1,430	1,530	1,600	1,560
Other, Unknown	340	410	370	430	510
Candle	560	670	610	670	870
Upholstered Furniture	2,100	2,080	1,740	1,970	1,780
Smoking Material Ignition	1,260	1,160	880	1,060	960
Open Flame Ignition	530	580	490	490	540
Other	310	340	370	420	280
Mattress, Bedding	3,100	3,390	3,580	3,540	3,160
Smoking Material Ignition	1,200	1,110	1,250	1,120	850
Open Flame Ignition	1,270	1,450	1,550	1,580	1,630
Other	630	830	780	840	670
Other Materials					
Electric Cable Insulation	720	840	760	940	770
Interior Wall Covering	750	810	760	760	540
Wearing Apparel-Worn	180	200	240	230	200
Wearing Apparel-Not Worn	800	940	880	900	970
Floor Covering	550	600	520	560	460
Curtains, Drapes	370	390	310	370	310
Magazine, Newspaper	270	300	330	320	260
Thermal Insulation	70	60	80	70	110
Cabinet, Desk	390	570	380	480	330
Toy, Game	80	110	60	60	70

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.
Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*)

Table 16
Trends in Estimated Heating Equipment Fire Injuries
In Residential Structures, 1990 - 1994

Heating Equipment	1980	1990	1991	1992	1993	1994
Total Residential	21,100	20,650	21,850	21,600	22,600	20,025
Total Heating Equipment	3,180	2,140	2,210	2,210	2,530	1,970
Solid Fuel	630	310	300	290	310	220
Fixed Heater	180	130	110	120	140	80
Portable Heater	*	20	*	10	--	10
Fireplace	280	70	70	70	100	70
Central Furnace	40	10	*	20	*	10
Chimney	60	50	80	40	50	20
Chimney Connector	60	20	20	10	20	10
Other or Unknown	*	10	10	20	*	10
Gas-Fired	1,360	770	860	830	800	680
Fixed Heater	270	130	140	180	180	100
Portable Heater	10	70	80	80	60	60
Water Heater	790	430	460	410	360	310
Central Furnace	230	110	140	130	150	140
Other or Unknown	50	30	40	30	40	80
Electric	440	440	390	380	610	390
Fixed Heater	160	130	80	100	120	110
Portable Heater	200	230	240	200	420	210
Water Heater	20	30	10	20	30	20
Central Furnace	40	40	30	40	30	20
Other or Unknown	10	10	30	20	20	30
Liquid Fuel	170	260	220	280	270	240
Fixed Heater	20	30	40	30	30	20
Portable Heater	30	160	100	160	150	140
Water Heater	40	20	20	10	40	10
Central Furnace	40	50	50	60	40	40
Chimney or Connector	10	--	*	*	*	10
Other or Unknown	20	--	10	10	10	20
All Other, Unknown Fuel	590	360	430	440	540	440
Fixed Heater	120	90	80	110	110	60
Portable Heater	60	80	110	80	140	130
Fireplace	120	40	60	70	50	60
Water Heater	90	50	60	50	90	80
Central Furnace	100	70	60	50	50	50
Chimney	10	--	20	30	20	20
Chimney Connector	10	10	10	10	10	--
Other or Unknown	70	20	30	40	80	30

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Table 17
Trends in Estimated Electrical Equipment Fire Injuries
in Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Total Residential	20,650	21,850	21,600	22,600	20,025
Total Electrical Equipment	6,390	6,920	6,790	7,660	6,320
Heating Equipment	440	390	380	610	390
Central Furnace	40	30	40	30	20
Fixed Heater	130	80	100	120	110
Portable Heater	230	240	200	420	210
Water Heater	30	10	20	30	20
Other or Unknown	10	30	20	20	30
Cooking Equipment	3,080	3,120	3,110	3,580	2,970
Range/Oven	2,860	2,840	2,780	3,240	2,660
Toasters/Toaster Oven	80	100	120	100	130
Microwave Oven	40	50	50	60	60
Range/Oven Hood	10	30	30	40	20
Coffee Maker, Teapot	20	30	40	30	20
Deep Fat Fryer	40	10	30	40	10
Hot Plate	10	10	10	10	10
Other or Unknown	20	50	50	60	60
Electric Distribution	1,370	1,700	1,630	1,720	1,440
Installed Wiring	340	360	410	430	380
Light Fixture	100	140	140	120	140
Receptacle	120	140	150	120	110
Extension Cord	220	270	220	250	200
Other Electrical Cord	140	280	210	260	200
Lamp, Light Bulb	150	120	180	210	160
Circuit Breaker	30	20	60	40	60
Switch	20	40	40	40	30
Meter	10	10	*	10	10
Fuse	20	20	20	20	20
Transformer	*	10	10	20	20
Other or Unknown	220	290	190	200	110
Electrical Appliances	740	760	760	870	780
Clothes Dryer	130	130	170	150	130
Fan	130	120	130	170	130
Washing Machine	30	20	20	20	20
Heat Tape	100	100	70	90	80
Television	70	70	120	100	80
Iron	30	40	60	60	60
Dishwasher	20	20	30	30	50
Radio, Cassette Player	30	40	50	60	70
Hair Dryer, Curling Iron	40	40	40	40	30
Electric Blanket	50	60	20	40	30
Other or Unknown	110	120	50	110	100

Table 17 (Continued)
Trends in Estimated Electrical Equipment Fire Injuries
in Residential Structures, 1990-1994

Electrical Equipment	1990	1991	1992	1993	1994
Cooling Equipment	110	155	110	130	120
Refrigerator, Freezer	60	60	30	60	50
Central Air Conditioning	*	5	20	20	10
Fixed Room Air Conditioning	20	60	30	20	30
Portable Air Conditioning	20	30	20	30	20
Other or Unknown	10	*	10	*	10

Source: U.S. Consumer Product Safety Commission/EHHA, from data obtained from the USFA and NFPA.

Note: Detail may not add to total due to rounding. Estimates less than 10 are denoted by an asterisk(*).

Methodology

The estimates were derived from data provided by the U.S. Fire Administration (USFA) and the National Fire Protection Association (NFPA). As in previous years, proportions observed in the USFA's National Fire Incident Reporting System (NFIRS) were applied to aggregate national fire loss estimates derived from a sample survey conducted by NFPA². These data capture only fires attended by the fire departments. It should be noted that product-specific death estimates fluctuate year-to-year and that a small increase or decrease in any one year is not sufficient to denote a trend.

The estimates for products listed below³ were derived from a review of fire service incident reports that included product specification beyond that identified in current NFIRS codes. The proportions were applied to national estimates for these codes, derived as described in footnote 2, and summed across the NFIRS codes in which they appeared. The estimation methodology for deaths, injuries and property loss involving these products assumed that they occurred in the same proportion as fires.

² John R. Hall, Jr. and Beatrice Harwood, "The National Estimates Approach to U.S. Fire Statistics", Fire Technology, May 1989, Volume 25, Number 2, pp. 99-113.

³ Toasters and toaster ovens, microwave ovens, coffee makers and teapots, hotplates, receptacles, extension cords, other electrical cords, circuit breakers, switches, fuses, fans, heat tapes, televisions, irons, dishwashers, radios and cassette players, hair dryers and curling irons, and electric blankets.