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# THE DEVELOPMENT AND CRITICAL REVIEW OF ANNUAL STOCK AND GROSS INVESTMENT DATA FOR RESIDENTIAL ENERGY-USING CAPITAL

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ABSTRACT

The purpose of this paper is to develop pooled time-series cross-sectional stock and gross investment data for residential energy-using capital by state over the period 1960 to 1974. In the process of doing so, it is necessary to examine theoretical issues and empirical techniques, and to evaluate the accuracy of data sources currently available. One section of the paper is devoted to a careful theoretical and empirical discussion of appliance depreciation rates and their relationship to average appliance lifetimes. Another discusses benchmarking techniques and the conditions under which they are liable to be effective. The remainder of the paper concerns the development and evaluation of the actual data series. Whereas most of the discussion focuses on household appliances, the techniques discussed, evaluated, and utilized should be of wider interest. Similar techniques will allow construction of accurate gross investment data for household heating equipment.

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TABLE OF CONTENTS

## INTRODUCTION AND OVERVIEW

The existing body of residential energy demand models is characterized by two types of difficulties: inadequate theoretical specifications and inadequate data. Inadequacies in the theoretical specifications of past modeling attempts are discussed in some detail in Hartman [8], along with suggestions for future modeling attempts. The purpose of this paper is to introduce some of the data sources currently available, to assess critically their quality, and to indicate desirable extensions and improvements.

This paper discusses the appliance stock and gross investment data developed for the MIT Energy Laboratory study of residential energy demand. Annual appliance stock data were needed for the short run analysis of energy demand ([13] and [8]). Annual appliance gross investment data were needed for the long run analysis of energy demand ([2] and [8]). Both analyses use pooled time series cross-sectional data for states over the period 1960 to 1974.

The principal sources of data considered in this paper are as follows.

- Merchandising Week (MW). The statistical issues of this magazine furnish survey information concerning appliance saturation rates and sales. In addition, information is provided about expected appliance lifetimes, and appliance shipments at the national level.

- U.S. Census of Housing. The census provides estimates of appliance stocks and housing stocks for the census years 1960 and 1970.

- Association of Home Appliance Manufacturers (AHAM) Gas Appliance Manufacturers' Association (GAMA). These organizations provide survey information about manufacturers' shipments of appliances, disaggregated to the state level. The former covers electric and gas dryers (and washers), while the

latter covers gas ranges, gas water heaters, and residential gas-fired heating equipment.

- Electric Power Research Institute (EPRI). Data Resources, Inc. (DRI). DRI developed a wealth of information in the study it carried out for EPRI [3]. For the electric appliances, its data base includes census data, MW survey data aggregated to the state level, and estimated annual appliance stocks. Furthermore, DRI estimates housing stocks by state and year, broken down according to heating fuel.

- Midwest Research Institute (MRI). This organization provides data on appliance choice at the household level. These data are not discussed in this paper, but are mentioned because of their potential importance. The MRI data will be incorporated into the MIT Energy Laboratory data base.

The above list does not cover all potentially valuable data sources, nor all of the data sources used in the long and short run analyses of residential energy demand ([2] and[13]). Furthermore, not all data provided by the listed organizations are referred to above. Rather, the list is intended to introduce the sources of data actually used and discussed in this paper.

Section A is devoted to a careful theoretical and empirical discussion of appliance depreciation rates and their relationship to average appliance lifetimes . In section B, the quality of the EPRI annual stock data for electric appliances is assessed, and alternative methods are used to generate new annual stock data for both electric and gas appliances. In section C, annual gross investment data are developed for both electric and gas appliances. Section D outlines the benchmarking techniques used in sections B and C, and discusses their probable effectiveness. Following the conclusions and references, there are three appendices. The first examines briefly some of the problems encountered in trying to construct gross investment data for household

heating equipment. The second examines the stochastic nature of the electric appliance gross investment data developed in section C. Finally, Appendix 3 provides printouts of the series discussed and developed in this paper.

Whereas most of the discussion focuses on household appliances, the techniques discussed, evaluated, and utilized should be of wider interest. The conclusions illustrate this implicitly, as well as summarize the discussion and results of the paper.

## A. NATIONAL APPLIANCE STOCK DEPRECIATION

The purpose of this section is to estimate national depreciation rates (more precisely, deterioration rates) for the various electric and gas appliances. Appliance depreciation rates are of interest for two reasons.

(i) Appliance stocks $K_t$ are related to gross investment $I_t$ through the formula

$$K_{t+1} = I_t + (1 - \delta)K_t \qquad (1)$$

where $\delta$ is the appliance depreciation rate. One use of this formula (discussed later in this section) is the construction of accurate yearly national appliance stocks from census national appliance stocks and yearly national appliance shipments. A related use of equation (1) (discussed in section C) is the construction of state appliance gross investment data from annual state appliance stock data.

(ii) The depreciation rate of an appliance is closely related to its average lifetime, which in turn affects the annualized capital cost of owning the appliance.

The raw data for estimating national appliance depreciation rates are as follows. For each appliance, 1960 and 1970 stocks are found in the Census of Housing [12]. National shipments are reported by Merchandising Week [10].

Assuming census stocks (and other annual stocks) are mid-year estimates, and manufacturer's shipments lag behind retail sales by six months, the appropriate relationship between stocks and flows, repeated from above, is

$$K_{t+1} = I_t + (1 - \delta)K_t \qquad (1)$$

where $K_t$ represents national stocks, $I_t$ represents national shipments, and $\delta$ represents the depreciation rate. Letting 0 and 10 represent 1960 and 1970, so that $K_0$ and $K_{10}$ are census stocks, and $K_1$ through $K_9$ are unobserved intercensus stocks,

$$K_{10} = I_9 + (1 - \delta)K_9$$
$$= I_9 + (1 - \delta)I_8 + (1 - \delta)^2K_8$$

and so on until

$$K_{10} = I_9 + (1 - \delta)I_8 + \ldots + (1 - \delta)^9I_0 + (1 - \delta)^{10}K_0.$$

In summation notation,

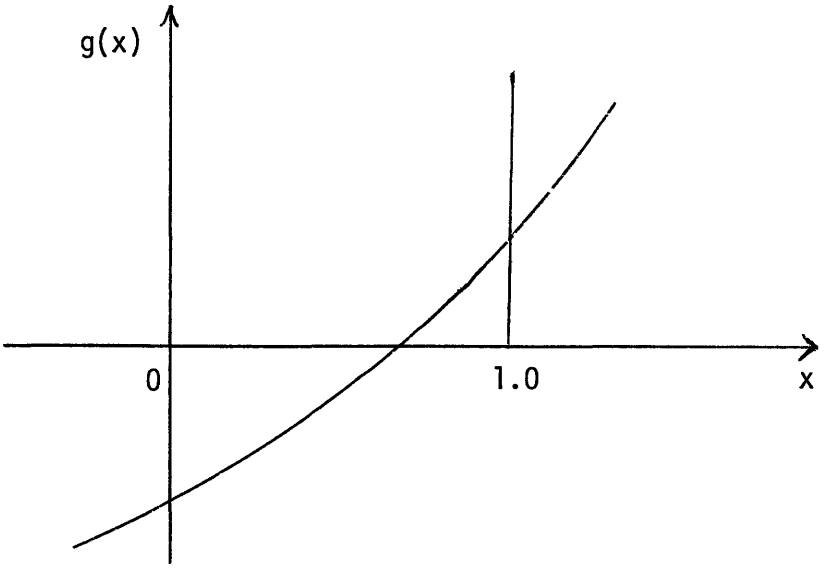
$$K_{10} = \sum_{t=0}^{9} I_t(1 - \delta)^{9-t} + (1 - \delta)^{10}K_0 \qquad (2)$$

Equation (2) is used in estimating appliance depreciation rates.

The appropriate value of $\delta$ is calculated by estimating the roots of equation (2). Specifically, a Newton-Raphson algorithm is used to find the values of x for which

$$g(x) = \sum_{t=0}^{9} I_t x^{9-t} + K_0x^{10} - K_{10} = 0$$

where $x = 1 - \delta$ represents the percentage of the stock surviving from one year to the next. Remembering that all the I's and K's are positive, it is easily seen that $g(0) < 0$, and that $g'(x)$ and $g''(x)$ are both positive for all $x > 0$. It immediately follows that $g(x)$ has only one positive root, which represents the correct value of $x = 1 - \delta$. Assuming $\delta > 0$, it should lie between 0 and 1. Graphically, $g(x)$ has the following shape.




As a consequence of its curvature, the Newton-Raphson algorithm should converge directly to the unique positive root of g(x) if 1.0 is chosen as the initial guess for x.

Estimated results of equation (2) for several appliances are shown in Table 1. (All appliances are electric unless designated as gas.) Depreciation rates for the electric appliances agree with those calculated by DRI [3]. Average lifetimes are calculated as reciprocals of depreciation rates, an identity which holds if exponential depreciation is assumed (see following discussion). For some appliances, average life expectancies are listed in Merchandising Week [11]. These are listed in column 5. In some cases, the calculated lifetimes seem high, in comparison with either intuition or (where available) the MW figures. Errors in the data might be the reason, but another quite

Table 1

APPLIANCE DEPRECIATION RATES AND AVERAGE LIFETIMES

| 1) code number of appliance | 2) type of appliance | 3) depreciation rate = $\delta$ from equation 2 | 4) calculated average lifetime = $1/\delta$ | 5) average lifetimes from MW [11] | 6) ratio of 1970 stock to 1960 stock | 7) 1970 stock (thousands) |
|---|---|---|---|---|---|---|
| 1 | refrigerators | .0603 | 16.6 | | 1.196 | 63440 |
| 2 | freezers | .0215 | 46.5 | | 1.836 | 17900 |
| 4 | electric ranges | .0483 | 20.7 | 15 | 1.576 | 25760 |
| 10 | gas ranges | .0599 | 16.7 | 15 | 1.145 | 31244 |
| 5 | electric water heaters | .0433 | 23.1 | | 1.491 | 16100 |
| 11 | gas water heaters | .0582 | 17.2 | | 1.358 | 34667 |
| 8 | electric dryers | .0130 | 76.9 | 14 | 2.957 | 18630 |
| 12 | gas dryers | .0330 | 30.3 | 14 | 2.823 | 7840 |
| 6 | washers (auto/semi-auto) | .0632 | 15.8 | 11 | 1.834 | 37990 |
| 7 | washers (wringer & spinner) | .1350 | 7.4 | | 0.406 | 7110 |

Data sources for Equation (2): National Shipments $I_t$ from Merchandising Week [10]; Census stocks $K_0$, $K_{10}$ from the Census of Housing [12].

plausible explanation is explored below.

The identity between average appliance lifetimes and reciprocals of depreciation rates depends on the assumption of exponential depreciation. Only under exponential depreciation is there a well-defined constant depreciation rate $\delta$ independent of the age structure of the stock, a feature which makes exponential depreciation quite convenient and hence often used in both theoretical and empirical economic work. Under exponential depreciation, the fraction of appliances (of a given type) installed in year 0 which will still be operating t years later is

$$F(t) = e^{-\delta t}$$

The probability density function for how long a given unit will last before decaying is

$$f(t) = - F'(t) = \delta e^{\delta t}$$

The depreciation rate for appliances of age t is hence given by

$$\delta(t) = \frac{f(t)}{F(t)} = \frac{\delta e^{-\delta t}}{e^{-\delta t}} = \delta$$

which is a constant, independent of age, as mentioned earlier. Average appliance lifetime is

$$AL = \int_0^\infty t\, f(t)\, dt = \int_0^\infty t(\delta e^{-\delta t})dt = 1/\delta$$

which is the formula that was used in estimating average lifetimes in Table 1, column 4.

However, it does not seem completely realistic that the depreciation rate of an appliance should be independent of its age. Consider two

dryers, one 2 years old and the other 12 years old, which are both in good working condition at the beginning of the year. Under exponential depreciation, the two dryers are equally likely to survive the year in good working condition. Intuitively, however, it would seem that the older dryer has a greater chance of breaking down during the year. Furthermore, the relevant depreciation rate is not the percentage chance an appliance will break down, but rather the percentage chance it will be retired from service during the year. The older dryer has a smaller chance of being repaired if it does break down, and a larger chance of being retired due to obsolescence even it if doesn't break down. Thus depreciation rates would be expected to increase with the age of an appliance, not remain constant as predicted by the exponential model of depreciation.

Before discussing a realistic pattern of stock depreciation, it is worthwhile mentioning another model of depreciation sometimes used in economics ( see [6] for example[1]). This is the "one hoss shay" assumption, according to which all appliances of a given type last the same number of years before falling apart. The "one hoss shay" assumption and the exponential depreciation assumption are compared graphically in Figure 1.

Intuitively, the actual pattern of stock depreciation should be somewhere between these two, as illustrated in Figure 2.

Algebraically, the function

$$F(t) = \frac{1 + e^{-\alpha\tau}}{1 + e^{\alpha(t-\tau)}} = \frac{e^{\alpha\tau} + 1}{e^{\alpha\tau} + e^{\alpha t}}$$

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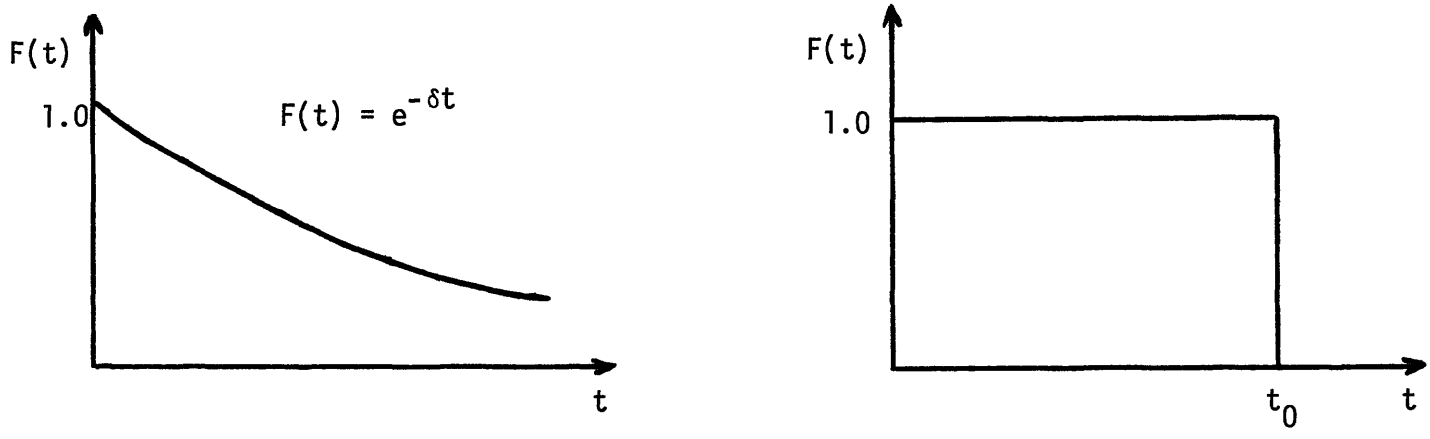
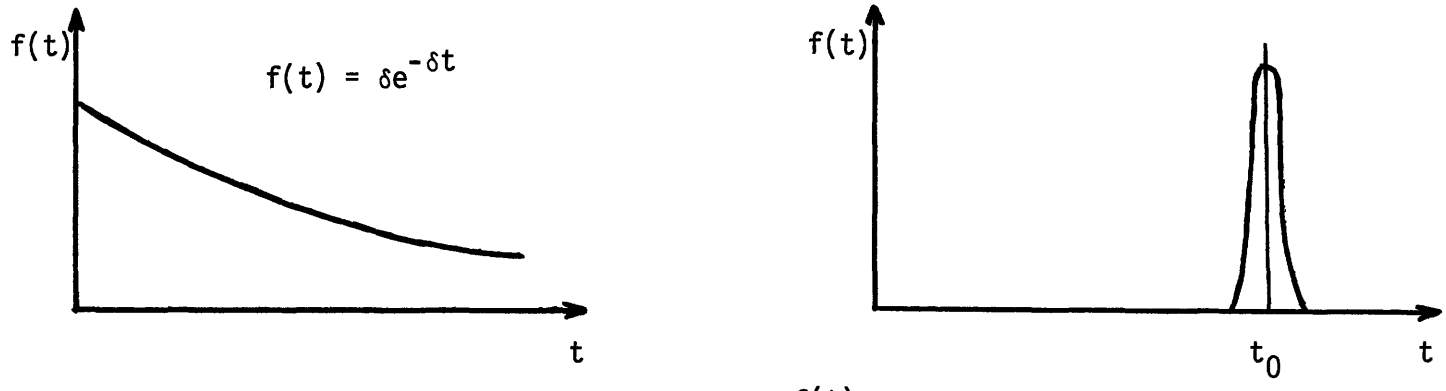
[1] discussed in section 2 of DRI [3].

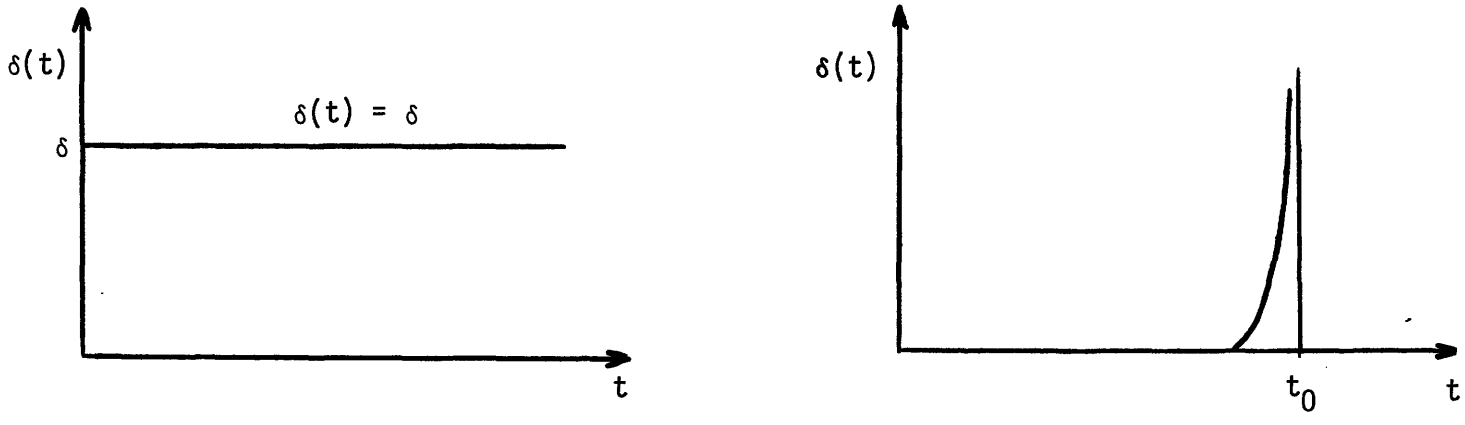
1A: fraction of appliances still in operation t years after installation




1B: probability density function of appliance lifetime




1C: depreciation rate as a function of age = $\frac{f(t)}{F(t)}$

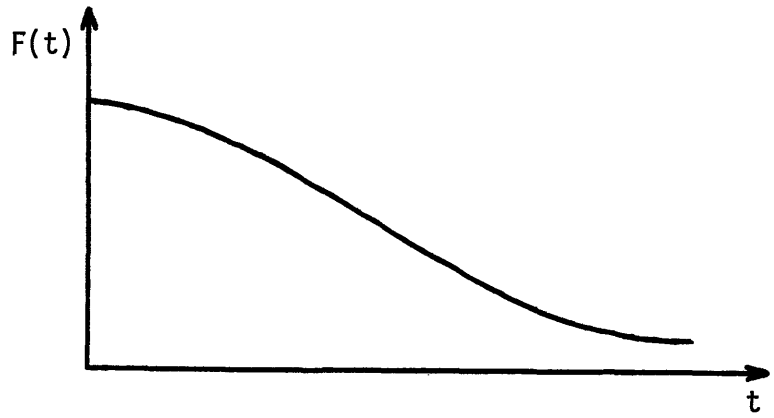



EXPONENTIAL DEPRECIATION

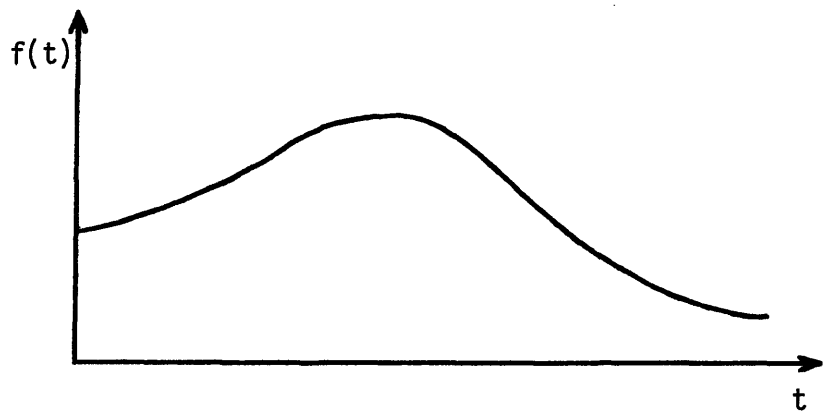
" ONE HOSS SHAY" DEPRECIATION

Figure 1: TWO ALTERNATIVE DEPRECIATION PATTERNS

2A: fraction of appliances still in operation t years after installation




2B: probability density function of appliance lifetime




2C: depreciation rate as a function of age = $\frac{f(t)}{F(t)}$


Figure 2: A REALISTIC PORTRAYAL OF APPLIANCE DEPRECIATION

might be appropriate to approximate Figure 2A. Note that if $\tau$ is large and negative,

$$F(t) = \frac{e^{\alpha\tau} + 1}{e^{\alpha\tau} + e^{\alpha t}} \approx \frac{1}{e^{\alpha t}} = e^{-\alpha t}$$

so that exponential depreciation results. Also, if $\tau$ has the positive value $t_0$ and $\alpha$ is large and positive, then

$$F(t) = \frac{1 + e^{-\alpha t_0}}{1 + e^{\alpha(t-t_0)}} \approx \frac{1}{1 + e^{\alpha(t-t_0)}} \approx \begin{cases} 1 \text{ for } t < t_0 \\ 0 \text{ for } t > t_0 \end{cases}$$

so that "one hoss shay" depreciation results. With finite positive values of both $\alpha$ and $t$, the graph of the function looks much as in Figure 2A, intermediate between exponential and "one hoss shay" depreciation.

Consider now an arbitrary pattern of depreciation. $F(t)$ represents the fraction of appliances still in operation $t$ years after installation. The probability density function for how long a given unit will last before decaying is related to $F(t)$ by

$$f(t) = -F'(t)$$

The depreciation rate for appliances of age $t$ is given by

$$\delta(t) = \frac{f(t)}{F(t)} \tag{3}$$

Average appliance lifetime is

$$AL = \int_0^\infty t\, f(t)\, dt = \int_0^\infty F(t)dt \tag{4}$$

where the second equality follows from integration by parts.[1]

How does this average appliance lifetime relate to the observed depreciation rate? To answer this, let g(t) represent gross investment (the number of appliances installed) t years ago. The current stock should be

$$K = \int_0^\infty g(t)\, F(t)dt$$

and the current rate of appliance decay should be

$$D = \int_0^\infty g(t)\, f(t)dt$$

The appliance depreciation rate currently observed is thus

---

[1]Let $u(t) = t$ and $v'(t) = f(t)$.
Then $u'(t) = 1$ and $v(t) = -F(t)$.
Hence

$$\int_0^\infty t\, f(t)dt = -tF(t)\Big|_0^\infty + \int_0^\infty F(t)dt$$

It is necessary only to demonstrate that $tF(t) \to 0$ as $t \to \infty$. Making the clearly allowable assumption that $\delta(t)$ has a positive greatest lower bound $\delta_n$, it follows that

$$-\frac{d}{dt}\log F(t) = \frac{f(t)}{F(t)} = \delta(t) \geq \delta_n, \text{ all } t > 0.$$

Integrating and then exponentiating shows that

$$F(t) \leq \exp(\gamma - \delta_n t), \text{ all } t > 0$$

for some constant value of $\gamma$. It immediately follows by use of l'Hopital's rule that $tF(t) \to 0$ as $t \to \infty$.

$$d = \frac{D}{K} = \frac{\int_0^\infty g(t)\ f(t)dt}{\int_0^\infty g(t)\ F(t)dt} = \frac{\int_0^\infty g(t)\ F(t)\ \delta(t)dt}{\int_0^\infty g(t)\ F(t)\ dt} \qquad (5)$$

where the second equality follows from equation (3).

Now let $d_0$ be the depreciation rate observed in the steady state where $g(t) = g_0$ forever into the past. Then

$$d_0 = \frac{\int_0^\infty g_0 f(t)dt}{\int_0^\infty g_0\ F(t)dt} = \frac{g_0 \int_0^\infty f(t)dt}{g_0 \int_0^\infty F(t)dt} = \frac{1}{\int_0^\infty F(t)dt} = \frac{1}{AL} \qquad (6)$$

where the last equality follows from equation (4). In this steady state situation, average appliance lifetime is the reciprocal of the observed depreciation rate, no matter what the actual pattern of stock depreciation.

What happens out of steady state? Copying part of equation (5), the appliance depreciation rate currently observed is

$$d = \frac{\int_0^\infty g(t)\ F(t)\ \delta(t)\ dt}{\int_0^\infty g(t)\ F(t)\ dt}\ .$$

The steady state depreciation rate may be written as

$$d_0 = \frac{\int_0^\infty F(t)\ \delta(t)\ dt}{\int_0^\infty F(t)\ dt}$$

by use of equations (3) and (6). Both d and $d_0$ are thus weighted averages of $\delta(t)$. Suppose gross investment (and hence the stock of the appliance) has been increasing over time. Then inclusion of g(t) in the formula for d will give newer appliances relatively more weight than in the formula for $d_0$. Assuming the actual pattern of stock depreciation is as depicted in Figure 2, so that newer appliances have lower depreciation rates, the observed depreciation rate d will be smaller than the steady state rate $d_0$. Forming the average appliance lifetime as the reciprocal of the observed depreciation rate will, therefore, overstate the actual average appliance lifetime.

The predictions of the above paragraphs are borne out by Table 1. For appliances whose ratio of 1970 to 1960 stock is close to unity, the estimated average lifetimes (column 4) correspond reasonably well with intuition and/or the Merchandising Week figures. For appliances whose ratio of 1970 to 1960 stock is high, the estimated average lifetimes seem too high.

In order to estimate average appliance lifetimes more accurately from census stock and yearly shipment data, one could perhaps estimate coefficients $\alpha$ and $\tau$ for the depreciation formula

$$F(t) = \frac{1 + e^{-\alpha\tau}}{1 + e^{\alpha(t-\tau)}} .$$

The average lifetime of an appliance would then be given by the integral[1]

$$AL = \int_0^\infty \frac{1 + e^{-\alpha\tau}}{1 + e^{\alpha(t-\tau)}} \, dt$$

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[1] See equation (4).

which could be solved by numerical integration. However, estimation of $\alpha$ and $\tau$ might not be possible. Since two parameters must be estimated, it would be necessary to have at least three census years of stock data, together with national shipment data for all years in between. It is unlikely that all these data are available (prior to the 1980 census).

Of what value then are the depreciation rates calculated in Table 1? Certainly they should be used with caution in computing average appliance lifetimes. For this purpose, educated guesses by people familiar with the industry may be better, such as the MW estimates. On the other hand, whenever the formula

$$K_{t+1} = I_t + (1 - \delta)K_t$$

is used to convert between appliance stocks and gross investment, it is the actual depreciation rate rather than the steady state depreciation rate that should be used.

To what extent is the actual depreciation rate d of the preceding theoretical discussion equivalent to the calculated depreciation rates of Table 1? Equation (2), which was used to calculate depreciation rates, implicitly assumes the depreciation rate $\delta$ is constant over time. Under the restrictive assumption of exponential depreciation, the actual depreciation rate is always constant over time, and is always equal to the steady state depreciation rate $d_0$ whose reciprocal is average appliance lifetime. For a general pattern of depreciation, neither of these conditions is guaranteed to hold, except under special circumstances. For example, if gross investment has been increasing or decreasing at a steady exponential rate forever into the past, then the

actual depreciation rate will be exactly constant over time.[1,2]

The best that can be stated confidently is that the appliance depreciation rates calculated from equation (2) are averages of the actual appliance depreciation rates over the period 1960 to 1970. Given this caveat, the depreciation rates calculated in Table 1 are appropriate for two purposes mentioned in the introduction to this section:(a) the construction of accurate yearly national appliance stocks (discussed in the next paragraph), and (b) the construction of yearly state by state gross investment data from yearly state by state appliance stock data (discussed in Section C). It should be noted in reference to the latter that actual appliance depreciation rates may vary among states, since some states may have relatively steady state numbers of an

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[1]Let $g(t) = Ae^{-\gamma t}$. Using equation (5), the current depreciation rate is

$$\frac{\int_0^\infty Ae^{-\gamma t} f(t)\, dt}{\int_0^\infty Ae^{-\gamma t} F(t)\, dt}$$

The depreciation rate $\tau$ periods hence is

$$\frac{\int_0^\infty Ae^{-\gamma (t-\tau)} f(t)\, dt}{\int_0^\infty Ae^{-\gamma (t-\tau)} F(t)\, dt}$$

This is seen equal to the current depreciation rate upon cancellation of the constant factor $e^{\gamma\tau}$ from both numerator and denominator.

[2]Only if the steady exponential rate is actually zero, however, will this constant actual depreciation rate equal the steady state depreciation rate $d_0$ whose reciprocal is average appliance lifetime.

appliance, and others may have rapidly increasing numbers of the appliance (and hence comparatively lower actual depreciation rates). The depreciation rates calculated in Table 1 are still the best single set of depreciation rates to use, since they should be national averages of the actual state depreciation rates.

Once appliance depreciation rates were estimated, they were used to calculate yearly national appliance stocks from 1960 to 1974. For each appliance, the 1960 stock was set equal to the census value, and stocks in all following years were calculated recursively by the formula

$$K_{t+1} = I_t + (1 - \delta)K_t$$

where $K_t$ represents national stocks, $I_t$ represents national shipments, and $\delta$ is the estimated depreciation rate. The way $\delta$ was calculated ensures that the 1970 stock thus generated should equal the value given in the census.

## B. TECHNIQUES FOR THE DEVELOPMENT OF APPLIANCE STOCK DATA BY STATE

The development of annual appliance stock data by state has been necessary for the short-run analysis of energy demand ([13] and [8]). The EPRI study [3] is one source of annual stock data for the electric appliances. A different method was used to generate annual stock data for the gas appliances. Problems with the EPRI data and uncertainties about the original gas appliance stock data led to construction of yet another set of annual appliance stock data, this time for both the electric and gas appliances.

The EPRI stock data for electric appliances (and some of their problems) are discussed in the first part of this section. The alternative method of constructing stock data for both electric and gas appliances is discussed in the second part of this section. Finally, the comparative merit of the two methods is considered. Discussion of the original set of gas appliance stock data is postponed to the end of section C.

The two basic sources of raw data used by DRI in the construction of the EPRI appliance stock data are Merchandising Week [10] and the Census of Housing [12]. The census reports state by state appliance stocks for 1960 and 1970. Merchandising Week (MW) surveys electric utility companies each year and reports the results in its statistical issues. Usually only some of the utilities in a state reply to the MW survey. The utilities that do reply make estimates of appliance saturation rates and appliance sales within their districts. These are printed in Merchandising Week, along with the number of customers served by each utility.

DRI tabulates the survey information for the electric appliances and includes it in their dataset. Only the saturation rate data are used in their appliance stock estimates, and that is all that will be discussed in section B. For each state and year, DRI reports the total number of customers served by utilities which report saturation rates for a given appliance. It then computes a statewide saturation rate by taking a weighted average of the saturation rates of the reporting utilities.

DRI computes a first approximation to the stock of a given appliance (by state and year) by multiplying the saturation rates computed above times the values of the housing stock calculated elsewhere in their data set. This is not the measure of appliance stocks actually used in their empirical work. Instead, they perform two correction procedures designed to improve the quality of the estimates. First, for each state, they benchmark the saturation rates for a given appliance to the 1960 and 1970 census rates.(For a discussion of benchmarking, see section D). They multiply these benchmarked saturation rates by their housing stock variable in order to form state appliance stocks. Now, for each year, the state appliance stocks are all increased or decreased by the same percentage in order to make their national sum equal to the national stock of the appliance.[1,2]

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[1]Algebraically, if $K_1$ and $K_N$ represent state and national stocks for a given year, corrected state stocks $KC_i$ are formed by

$$KC_i = (K_N / \sum_{i=1}^{50} K_i) K_i \ .$$

[2]DRI calculates national appliance stocks in an identical manner to section A of this paper.

However, the appliance stock estimates thus generated by DRI seem quite inaccurate for at least some states.[1] It is not at all unusual for the estimated state stock of an appliance to decrease by 1/3 or more from one year to the next, and then jump back up to its first year value a year or two later (see Table 2 for illustration). There are two reasons for this, both relating to the Merchandising Week data DRI was forced to rely on. First, utility companies do not always have accurate knowledge of appliance saturation rates in their districts. Second, the utility companies in a state responding to the survey may vary from year to year (see Table 3 for illustration). For example, suppose that in years 1 and 3 each of the two large utilities in a state responds to the survey, but that in year 2 only the utility with the (much) smaller saturation rate of electric dryers responds. Then the estimated stock of electric dryers will seem much smaller in year 2 than in either years 1 or 3, even though in reality it was roughly constant. Neither of the correction factors used by DRI (benchmarking to census saturation rates and making state stocks sum to national stocks) will correct this problem of the MW data to any significant extent.[2]

Since appliance stocks are to be used as right-hand side variables in the short run analysis of energy demand [13], it seemed worthwhile

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[1]DRI is at least somewhat aware of the inaccuracy of its appliance stock estimates. In view of the importance of water heating in energy consumption, DRI uses an alternate method to develop better stock data for water heaters [3].

[2]See section D for a discussion of the probable effectiveness of benchmarking in improving the MW saturation data.

Table 2 Annual Stocks of Electric Ranges[1] 1960-1974 (Thousands)

| STATE[2] | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 441 | 513 | 551 | 590 | 545 | 586 | 601 | 599 | 629 | 626 | 614 | 625 | 628 | 659 | 671 |
| 2 | 30 | 33 | 35 | 42 | 41 | 42 | 42 | 43 | 47 | 45 | 48 | 54 | 55 | 67 | 68 |
| 3 | 73 | 77 | 104 | 114 | 125 | 133 | 143 | 177 | 184 | 195 | 209 | 241 | 282 | 299 | 327 |
| 4 | 72 | 79 | 88 | 107 | 101 | 121 | 109 | 144 | 129 | 131 | 139 | 160 | 151 | 177 | 186 |
| 5 | 937 | 1131 | 1133 | 1252 | 1477 | 1495 | 1685 | 1821 | 1874 | 1963 | 2078 | 2789 | 2222 | 2491 | 2591 |
| 6 | 179 | 194 | 223 | 243 | 265 | 294 | 318 | 321 | 342 | 355 | 372 | 413 | 462 | 553 | 565 |
| 7 | 324 | 348 | 346 | 367 | 393 | 442 | 462 | 482 | 479 | 504 | 528 | 541 | 553 | 649 | 658 |
| 8 | 46 | 45 | 45 | 47 | 47 | 48 | 52 | 53 | 58 | 61 | 73 | 75 | 81 | 85 | 86 |
| 9 | 876 | 927 | 1011 | 1054 | 1128 | 1179 | 1265 | 1327 | 1378 | 1441 | 1576 | 1666 | 1831 | 1960 | 2188 |
| 10 | 514 | 548 | 559 | 556 | 579 | 635 | 684 | 613 | 767 | 862 | 779 | 892 | 899 | 872 | 1041 |
| 11 | 96 | 104 | 106 | 109 | 120 | 123 | 128 | 132 | 141 | 144 | 152 | 157 | 165 | 170 | 180 |
| 12 | 169 | 173 | 177 | 178 | 182 | 189 | 189 | 188 | 189 | 189 | 194 | 202 | 201 | 207 | 211 |
| 13 | 580 | 635 | 694 | 499 | 508 | 559 | 590 | 705 | 745 | 802 | 790 | 902 | 917 | 933 | 956 |
| 14 | 480 | 531 | 397 | 541 | 557 | 593 | 549 | 582 | 611 | 632 | 654 | 673 | 682 | 703 | 745 |
| 15 | 246 | 275 | 280 | 274 | 311 | 313 | 333 | 335 | 340 | 357 | 363 | 379 | 404 | 472 | 478 |
| 16 | 191 | 219 | 227 | 246 | 261 | 267 | 276 | 295 | 293 | 314 | 315 | 328 | 335 | 363 | 344 |
| 17 | 264 | 351 | 281 | 399 | 293 | 311 | 228 | 252 | 276 | 529 | 450 | 434 | 476 | 504 | 525 |
| 18 | 69 | 77 | 88 | 135 | 152 | 141 | 152 | 154 | 172 | 171 | 178 | 193 | 213 | 227 | 193 |
| 19 | 108 | 113 | 114 | 116 | 111 | 147 | 161 | 161 | 162 | 165 | 170 | 178 | 181 | 196 | 192 |
| 20 | 224 | 247 | 261 | 290 | 298 | 312 | 335 | 363 | 341 | 651 | 380 | 390 | 425 | 446 | 494 |
| 21 | 475 | 518 | 540 | 544 | 578 | 628 | 639 | 696 | 648 | 722 | 746 | 771 | 803 | 816 | 823 |
| 22 | 948 | 1003 | 1026 | 1015 | 1065 | 1157 | 1200 | 1257 | 1293 | 1239 | 1252 | 1217 | 1246 | 1285 | 1331 |
| 23 | 359 | 380 | 392 | 548 | 472 | 491 | 526 | 530 | 514 | 555 | 564 | 581 | 487 | 498 | 636 |
| 24 | 120 | 86 | 86 | 70 | 107 | 157 | 146 | 151 | 201 | 215 | 237 | 258 | 265 | 292 | 302 |
| 25 | 308 | 354 | 364 | 349 | 362 | 376 | 377 | 400 | 438 | 435 | 484 | 488 | 516 | 520 | 508 |
| 26 | 112 | 84 | 118 | 88 | 72 | 132 | 137 | 141 | 145 | 145 | 149 | 158 | 161 | 165 | 176 |
| 27 | 159 | 174 | 192 | 191 | 195 | 203 | 214 | 218 | 221 | 233 | 247 | 257 | 294 | 299 | 269 |
| 28 | 54 | 54 | 10 | 94 | 100 | 82 | 102 | 101 | 102 | 101 | 101 | 85 | 91 | 97 | 0 |
| 29 | 84 | 99 | 95 | 97 | 101 | 101 | 114 | 120 | 128 | 132 | 140 | 148 | 165 | 160 | 174 |
| 30 | 295 | 1006 | 1119 | 348 | 278 | 399 | 369 | 432 | 443 | 470 | 486 | 507 | 542 | 539 | 1641 |
| 31 | 57 | 58 | 47 | 86 | 91 | 91 | 92 | 90 | 94 | 95 | 100 | 100 | 90 | 94 | 94 |
| 32 | 843 | 985 | 1105 | 1429 | 1374 | 1502 | 1636 | 1829 | 1903 | 1140 | 1265 | 1283 | 980 | 2223 | 2050 |
| 33 | 768 | 887 | 914 | 941 | 985 | 1017 | 1070 | 1099 | 1125 | 1124 | 1157 | 1189 | 1209 | 1254 | 1258 |
| 34 | 95 | 115 | 128 | 159 | 148 | 138 | 147 | 143 | 155 | 137 | 129 | 131 | 149 | 156 | 158 |
| 35 | 971 | 963 | 1030 | 983 | 1048 | 1136 | 1162 | 1240 | 1322 | 1377 | 1457 | 1468 | 1437 | 1460 | 1487 |
| 36 | 94 | 105 | 112 | 149 | 200 | 212 | 187 | 156 | 285 | 215 | 231 | 244 | 248 | 365 | 371 |
| 37 | 467 | 481 | 507 | 524 | 542 | 549 | 573 | 568 | 586 | 602 | 621 | 651 | 651 | 672 | 681 |
| 38 | 1038 | 1088 | 1142 | 1171 | 1150 | 1236 | 1234 | 1343 | 1339 | 1424 | 1456 | 1471 | 1452 | 1421 | 1373 |
| 39 | 81 | 80 | 102 | 102 | 105 | 115 | 118 | 124 | 125 | 130 | 131 | 135 | 139 | 136 | 153 |
| 40 | 361 | 380 | 491 | 524 | 507 | 526 | 528 | 597 | 704 | 532 | 532 | 555 | 560 | 593 | 611 |
| 41 | 83 | 90 | 93 | 97 | 107 | 108 | 111 | 113 | 118 | 117 | 116 | 120 | 106 | 128 | 146 |
| 42 | 680 | 752 | 748 | 751 | 741 | 686 | 738 | 993 | 993 | 982 | 964 | 936 | 1024 | 1056 | 1099 |
| 43 | 424 | 504 | 543 | 671 | 588 | 677 | 726 | 810 | 860 | 923 | 960 | 1006 | 1027 | 1068 | 1056 |
| 44 | 154 | 163 | 171 | 178 | 181 | 183 | 191 | 194 | 197 | 201 | 206 | 207 | 227 | 254 | 265 |
| 45 | 43 | 45 | 29 | 56 | 50 | 51 | 49 | 59 | 73 | 76 | 80 | 83 | 77 | 80 | 82 |
| 46 | 469 | 521 | 544 | 586 | 610 | 639 | 664 | 687 | 724 | 708 | 770 | 818 | 862 | 912 | 987 |
| 47 | 794 | 855 | 871 | 893 | 885 | 913 | 936 | 959 | 993 | 1038 | 1044 | 1054 | 1082 | 1076 | 1088 |
| 48 | 158 | 223 | 167 | 179 | 191 | 200 | 181 | 211 | 202 | 212 | 215 | 213 | 224 | 228 | 357 |
| 49 | 475 | 543 | 552 | 568 | 580 | 594 | 630 | 657 | 640 | 626 | 663 | 634 | 723 | 741 | 804 |
| 50 | 37 | 44 | 41 | 42 | 68 | 68 | 61 | 77 | 65 | 67 | 52 | 59 | 92 | 79 | 63 |

[1]From EPRI [4].

[2]States are listed in alphabetical order. See Table 5 (Appendix 3) for a listing.

Table 3 Annual Coverage Rates for Electric Ranges[1] 1960-1974 (percent)

| State[2] | Year | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 74 | 63 | 62 | 56 | 63 | 56 | 0 | 0 | 67 | 61 | 65 | 66 | 61 | 60 | 60 |
| 2 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 30 | 49 | 48 | 55 | 52 | 23 | 41 |
| 3 | 93 | 93 | 93 | 92 | 94 | 92 | 90 | 70 | 70 | 71 | 72 | 71 | 58 | 58 | 57 |
| 4 | 73 | 56 | 56 | 55 | 49 | 58 | 58 | 57 | 57 | 55 | 6 | 6 | 6 | 6 | 6 |
| 5 | 95 | 89 | 94 | 89 | 87 | 88 | 93 | 93 | 95 | 94 | 94 | 95 | 94 | 77 | 78 |
| 6 | 87 | 82 | 76 | 70 | 70 | 69 | 61 | 61 | 60 | 70 | 70 | 68 | 69 | 69 | 69 |
| 7 | 90 | 92 | 94 | 95 | 95 | 70 | 71 | 74 | 95 | 108 | 109 | 108 | 109 | 84 | 83 |
| 8 | 64 | 63 | 63 | 62 | 71 | 69 | 71 | 61 | 70 | 61 | 61 | 59 | 60 | 70 | 86 |
| 9 | 73 | 73 | 73 | 73 | 72 | 67 | 73 | 73 | 74 | 73 | 74 | 75 | 75 | 77 | 76 |
| 10 | 63 | 62 | 64 | 0 | 64 | 64 | 4 | 4 | 4 | 4 | 4 | 56 | 61 | 4 | 4 |
| 11 | 92 | 93 | 92 | 94 | 81 | 86 | 94 | 90 | 84 | 94 | 94 | 93 | 94 | 95 | 93 |
| 12 | 59 | 56 | 57 | 57 | 57 | 56 | 56 | 56 | 56 | 56 | 55 | 55 | 57 | 57 | 58 |
| 13 | 23 | 23 | 23 | 91 | 75 | 74 | 77 | 89 | 87 | 88 | 81 | 83 | 82 | 83 | 82 |
| 14 | 45 | 37 | 14 | 56 | 56 | 57 | 57 | 42 | 42 | 42 | 43 | 43 | 43 | 43 | 42 |
| 15 | 48 | 51 | 46 | 61 | 34 | 45 | 47 | 52 | 50 | 46 | 45 | 24 | 46 | 21 | 21 |
| 16 | 60 | 56 | 55 | 55 | 57 | 58 | 58 | 58 | 60 | 61 | 59 | 59 | 60 | 61 | 96 |
| 17 | 61 | 34 | 57 | 24 | 54 | 54 | 65 | 65 | 65 | 32 | 82 | 75 | 55 | 45 | 45 |
| 18 | 63 | 62 | 63 | 67 | 62 | 61 | 61 | 61 | 62 | 62 | 62 | 62 | 62 | 62 | 63 |
| 19 | 0 | 0 | 0 | 75 | 90 | 91 | 74 | 72 | 72 | 9 | 92 | 92 | 90 | 87 | 91 |
| 20 | 56 | 53 | 53 | 47 | 48 | 48 | 48 | 48 | 48 | 23 | 47 | 48 | 48 | 48 | 48 |
| 21 | 97 | 95 | 92 | 89 | 88 | 91 | 77 | 88 | 88 | 84 | 82 | 82 | 82 | 81 | 81 |
| 22 | 88 | 87 | 88 | 86 | 86 | 86 | 87 | 87 | 87 | 89 | 85 | 85 | 86 | 85 | 85 |
| 23 | 83 | 84 | 86 | 14 | 94 | 76 | 83 | 78 | 65 | 71 | 70 | 70 | 71 | 70 | 65 |
| 24 | 46 | 44 | 45 | 44 | 49 | 62 | 50 | 21 | 3 | 4 | 3 | 4 | 4 | 3 | 3 |
| 25 | 79 | 64 | 64 | 68 | 71 | 68 | 69 | 71 | 68 | 67 | 70 | 63 | 64 | 64 | 65 |
| 26 | 2 | 0 | 2 | 0 | 66 | 66 | 65 | 0 | 63 | 65 | 65 | 64 | 64 | 64 | 64 |
| 27 | 50 | 47 | 46 | 46 | 47 | 47 | 46 | 42 | 42 | 52 | 51 | 51 | 53 | 56 | 23 |
| 28 | 0 | 0 | 2 | 52 | 44 | 43 | 46 | 45 | 45 | 45 | 46 | 47 | 47 | 47 | 0 |
| 29 | 59 | 71 | 71 | 70 | 71 | 73 | 71 | 0 | 0 | 70 | 70 | 69 | 69 | 83 | 71 |
| 30 | 98 | 98 | 97 | 97 | 86 | 96 | 96 | 96 | 96 | 96 | 141 | 96 | 96 | 74 | 70 |
| 31 | 2 | 7 | 6 | 45 | 43 | 49 | 42 | 45 | 45 | 45 | 46 | 46 | 47 | 47 | 47 |
| 32 | 27 | 46 | 26 | 46 | 45 | 47 | 48 | 48 | 49 | 95 | 95 | 96 | 95 | 17 | 34 |
| 33 | 77 | 81 | 81 | 80 | 80 | 80 | 80 | 80 | 80 | 82 | 80 | 81 | 80 | 81 | 80 |
| 34 | 1 | 0 | 0 | 3 | 1 | 0 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| 35 | 78 | 76 | 75 | 88 | 88 | 89 | 89 | 89 | 86 | 89 | 80 | 80 | 80 | 80 | 80 |
| 36 | 73 | 72 | 73 | 74 | 30 | 32 | 0 | 32 | 1 | 30 | 31 | 32 | 33 | 1 | 1 |
| 37 | 104 | 104 | 107 | 65 | 58 | 57 | 65 | 108 | 106 | 107 | 107 | 103 | 48 | 48 | 42 |
| 38 | 93 | 94 | 96 | 94 | 94 | 93 | 86 | 93 | 82 | 81 | 82 | 82 | 75 | 66 | 61 |
| 39 | 29 | 29 | 29 | 29 | 28 | 29 | 29 | 28 | 28 | 28 | 28 | 28 | 28 | 27 | 27 |
| 40 | 27 | 27 | 27 | 289 | 29 | 29 | 29 | 29 | 30 | 30 | 31 | 31 | 32 | 29 | 30 |
| 41 | 29 | 35 | 36 | 31 | 31 | 31 | 31 | 13 | 56 | 57 | 57 | 35 | 35 | 30 | 30 |
| 42 | 34 | 45 | 44 | 44 | 44 | 38 | 43 | 26 | 28 | 28 | 28 | 28 | 22 | 20 | 19 |
| 43 | 81 | 77 | 77 | 61 | 77 | 77 | 78 | 75 | 74 | 68 | 77 | 77 | 67 | 73 | 49 |
| 44 | 96 | 94 | 95 | 95 | 93 | 93 | 92 | 93 | 93 | 88 | 87 | 89 | 86 | 91 | 85 |
| 45 | 50 | 49 | 49 | 71 | 24 | 23 | 72 | 71 | 24 | 24 | 24 | 24 | 73 | 71 | 71 |
| 46 | 109 | 136 | 107 | 105 | 105 | 105 | 105 | 104 | 104 | 104 | 104 | 102 | 103 | 103 | 103 |
| 47 | 79 | 79 | 72 | 85 | 85 | 83 | 86 | 87 | 83 | 86 | 88 | 70 | 84 | 88 | 86 |
| 48 | 47 | 44 | 44 | 44 | 4 | 44 | 38 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 5 |
| 49 | 79 | 71 | 14 | 69 | 69 | 66 | 68 | 70 | 31 | 69 | 69 | 69 | 69 | 32 | 32 |
| 50 | 27 | 24 | 16 | 17 | 20 | 19 | 19 | 32 | 18 | 21 | 18 | 17 | 3 | 15 | 0 |

[1]Coverage rates are defined by $\frac{CUST}{ELCR}$ where

ELCR = customers served by all utilities in the state [4]
CUST = customers served by utilities reporting saturation rates of electric ranges [4]

[2]States are listed in alphabetical order. See Table 5 (Appendix 3) for a listing.

to construct an alternative data set which would not be subject to such large random errors, so as to reduce any errors in variables problems in the estimation. This was done as follows.

The first (and most important) step in constructing the new appliance stock data uses only state by state census appliance stocks for 1960 and 1970. The saturation rate for a particular appliance in the state is assumed to satisfy the equation

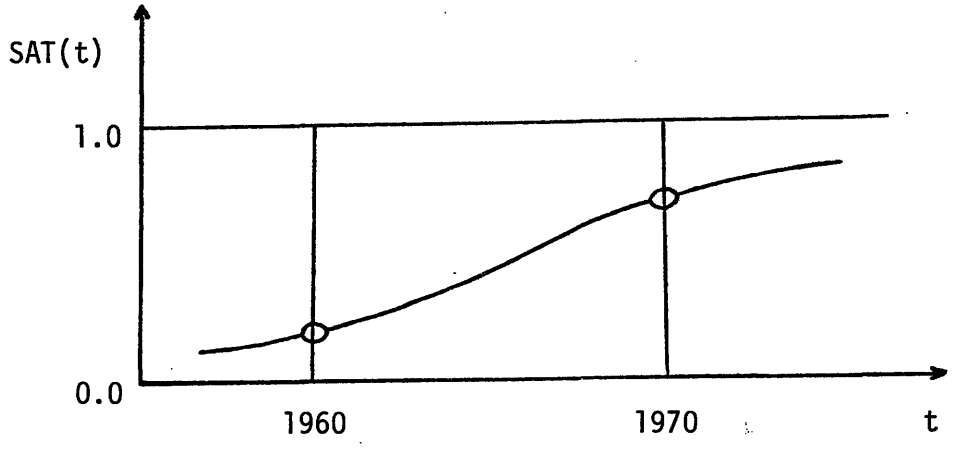
$$SAT(t) = \frac{1}{1 + e^{\alpha+\beta t}}$$

where $\alpha$ and $\beta$ are chosen so that SAT(1960) and SAT(1970) equal the census values. This is shown diagramatically in Figure 3. The particular functional form employed for SAT(t) is identical to that used in logit probability models (see [5]). Its main advantage is that it combines smoothness with the property that saturation rates are assured of being between 0 and 1 for all t.

FIGURE 3: A smooth curve of the form

$$\frac{1}{1 + e^{\alpha+\beta t}}$$

is fitted through the census saturation rates.



The second step involves a slightly better (but more complicated) method than used by DRI to ensure that the sum of state stocks equals the national stock of a given appliance, as calculated in section A. Instead of increasing or decreasing all state stocks by the same percentage for a given year to ensure they add up to the national stock, they are increased or decreased by a percentage proportional to (1 - SAT). This has the advantage that states which already have high saturation rates are not in danger of being upwardly corrected to have saturation rates unreasonably close to or even greater than one.

By way of numerical example, suppose the country had only three states, with the following housing stocks and appliance saturation rates (before the final correction procedure):

$H_1 = 100$ $\quad SAT_1 = .10$

$H_2 = 200$ $\quad SAT_2 = .50$

$H_3 = 100$ $\quad SAT_3 = .90$

Suppose the national stock of the appliance $K_N$ in the same year has already been calculated as 220. The DRI correction procedure forms corrected saturation rates CSAT using the equation[1]

$$CSAT_i = \left(\frac{K_N}{\Sigma K_i}\right) SAT_i$$

where $K_i$ are the uncorrected state appliance stocks

$$K_i = H_i * SAT_i \ .$$

---

[1]Multiplying each side of this equation by the housing stock $H_i$ transforms it to the equivalent form $KC_i = (K_N/\Sigma K_i)K_i$ which was seen in a previous footnote.

For the numerical example, the DRI correction procedure works as follows:

| State | $H_i$ | $SAT_i$ | $K_i$ | $CSAT_i = (220/200)SAT_i$ | $CAST_i - SAT_i$ |
|---|---|---|---|---|---|
| 1 | 100 | .100 | 10 | .110 | .010 |
| 2 | 200 | .500 | 100 | .550 | .050 |
| 3 | 100 | .900 | 90 | .990 | .090 |

The correction procedure used here works as follows. (The details of how it works are left to the next paragraph.)

| State | $H_i$ | $SAT_i$ | $CSAT_i$ | $CSAT_i - SAT_i$ |
|---|---|---|---|---|
| 1 | 100 | .100 | .126 | .026 |
| 2 | 200 | .500 | .574 | .074 |
| 3 | 100 | .900 | .926 | .026 |

In terms of absolute (rather than percentage) changes in saturation rates, revisions are proportional to SAT using DRI's method, and proportional to SAT(1 - SAT) using the method here (see the last columns in the above two small tables).

A more precise description of how this second step works is necessary. For a given appliance and year, let $H_K$ and $SAT_K$ be the housing stock and first-round saturation rate for state K. Let B be the national appliance stock in the same year. Define $X_K$ by

$$X_K = \ln\left(\frac{SAT_K}{1 - SAT_K}\right) .$$

The inverse function f is given by

$$SAT_K = \frac{e^{X_K}}{1 + e^{X_K}} = f(X_K) .$$

Now consider the expression

$$\sum_K H_K \, f(X_K + z) - B \ .$$

If this expression is zero for $z = 0$, then the sum of state stocks already equals the national stock, and there is no need to correct the first-round saturation rates. Otherwise, we must use the Newton-Raphson algorithm to find the value of z for which it is zero. Denoting this value of z by $z_0$, corrected saturation rates are defined by

$$CSAT_K = f(X_K + z_0) \ .$$

Assuming that the amount of correction necessary is small ($z_0$ is small), then

$$CSAT_K - SAT_K \simeq f'(X_K) z_0 \ .$$

Since

$$f'(X) = \frac{e^X}{(1 + e^X)^2} = f(X)(1 - f(X))$$

it follows that

$$CSAT_K - SAT_K \simeq f(X_K)(1 - f(X_K)) z_0 = SAT_K(1 - SAT_K) z_0 .$$

Thus revisions in the saturation rate are proportional to SAT(1 - SAT) as long as the revisions are small. Even if the necessary revisions are large, all of the corrected saturation rates will lie between 0 and 1.

Which method generates the better appliance stock data? The method here basically fits a special type of time trend through the census saturation rates. The DRI method basically benchmarks the incomplete MW saturation data to the census saturation rates. In both cases, the state stocks are revised slightly so as to add up to the national stocks year

by year, a procedure probably carried out better here than by DRI, but which is probably not a very important correction in either case (amounting on average to only a few percent).[1]

The method used here has the disadvantage of relying mainly on just census data in generating intercensus saturation rates. The method DRI uses has the disadvantage of relying on the incomplete MW data. Since appliance stocks are to be used as right hand side variables in the short run demand specifications, minimizing errors in the data so as to minimize errors in variables problems in the estimation is an important goal. The data generated here should never be too far from the truth, since appliance stocks presumably won't deviate too far from a smooth trend curve. The data generated by DRI, on the other hand, can be seen to deviate widely from the truth at least some of the time, for reasons discussed earlier having to do with inaccuracies and incompleteness in the MW data. My a priori guess is that the appliance stock data generated here should be more suitable for use in the short-run modeling than the DRI data, but that it would be worthwhile to utilize both.

It should be noted that the method used here to generate appliance stock data for the short-run analysis would not be appropriate for generating appliance gross investment data for the long-run analysis,

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[1]This correction procedure might even have undesirable results some of the time. If the data for 49 states were perfectly correct, but for one state were significantly in error, the correction procedure would introduce a slight amount of error into the data for the first 49 states, and improve the data for the last state only by a small amount.

even if census data existed for gross investment. There are two basic reasons. First, appliance gross investment would not be expected to remain close to a smooth trend curve. (The first difference of a series is not so smooth as the original.) Second, since gross investment is used as a left hand side variable in the long-run analysis, an attempt should be made to retain as much of the richness in its variation as possible.

## C. TECHNIQUES FOR THE DEVELOPMENT OF GROSS INVESTMENT DATA BY STATE

The development of annual appliance gross investment data by state has been necessary for the long-run analysis of energy demand ([2] and [8]). Two possible methods of forming electric appliance gross investment are examined in the first part of this section. Only the second method generated acceptable data. A similar (but not identical) method of generating gas appliance gross investment, and an additional set of electric dryer gross investment, is discussed next. The construction of the original gas appliance stock data (alluded to in section B) is discussed at the end of the section.

The first possible method of forming electric appliance gross investment relies on the formula

$$G_t = K_{t+1} - (1 - \delta)K_t \qquad (7)$$

where $G_t$ represents annual gross investment, $K_t$ represents annual appliance stocks, and $\delta$ is the estimated national appliance depreciation rate (from section A). Two possible sets of annual appliance stock data (both discussed in section B) might be used in equation (7). These are examined in turn below.

Suppose the EPRI annual stock data for electric appliances are used in equation (7). The trouble here is that even moderate percentage random errors in the stock data will cause quite serious errors in the gross investment data, since annual gross investment is generally a small percentage of the stock. Given that the EPRI stock data are subject to a significant degree of random error (see discussion in section B), unacceptably large inaccuracies would be expected in at least some of the

gross investment data. In fact, many of the gross investment figures turn out to be negative, whereas by the very definition of gross investment they should be positive.

Suppose the alternative annual appliance stock data developed in section B are used in equation (7). This would be inappropriate since these stock data were derived from only census data and annual national stocks (in turn derived from census data and annual national shipments). Any gross investment data generated from these stocks would thus be devoid of any richness of variation over time in response to changes in the right-hand side variables at the state level.

The second method of constructing electric appliance gross investment relies on the appliance sales data in the EPRI data base, derived as follows. As part of the annual Merchandising Week (MW) survey mentioned in section B, electric utilities are asked to estimate annual sales within their districts. Each utility responding to the survey is listed in MW's statistical issue, along with the number of customers it serves and its appliance sales estimates. DRI tabulates this information and includes it in the EPRI data base. For each state and year, it calculates the total number of customers served by utilities which report sales for a given appliance, and the total reported sales of the appliance.

Gross investment is formed here by adjusting reported state sales by the coverage rate to obtain an estimate of total state sales. In particular,

$$G = \left(\frac{ELCR}{CUST}\right) * S$$

where

ELCR = customers served by all utilities in the state [4]

CUST = customers served by utilities reporting sales of the appliance [4]

S = reported state sales of the appliance [4].

The gross investment data thus formed, although probably not terribly accurate, are judged to be superior to those formed using the first method.

In using the gross investment data as left-hand side variables in the long-run demand specifications, it is useful to examine their stochastic nature. Two sources of inaccuracy exist. First, utility companies do not know appliance sales exactly. Second, not all utilities respond to the survey, with coverage varying widely among states and years. All observations where coverage is less than 10% were thrown out of the sample, including some observations where coverage is actually zero. Among the remaining observations, those having higher coverage rates are presumably on the average more accurate. A simple model of variations in the accuracy of the data is given in Appendix 2. The results of this model might be used as part of an attempt to correct for heteroscedasticity.

The raw data for gas appliance and alternate electric dryer gross investment comes from GAMA [7] for gas ranges and water heaters and from AHAM [1] for gas and electric dryers. These organizations report annual manufacturers' shipments to the various states. Coverage is not complete (especially for the GAMA data) since not all manufacturers report their

state by state shipments.

In order to form gross investment data, the sum of reported state shipments was divided by national shipments (from MW) to obtain a national coverage rate for each year. Reported state shipments were then divided by national coverage rates to generate the gross investment data. Potential errors clearly remain. Still, if each manufacturer ships to a large number of states, actual coverage rates might not vary much among states, and the errors might not be very bad. The problem is bound to be much less for dryers (where coverage rates are very close to one) than for ranges and water heaters (where coverage rates vary from .55 to .80).

The gas appliance gross investment data described above were used to generate the original gas appliance stock data (by state) alluded to in section B. The first step of this process uses the formula

$$K_{t+1} = K_t + N_t \qquad (8)$$

where $N_t$ represents annual net investment and $K_t$ represents annual appliance stocks. The 1960 stock ($K_{1960}$) is set equal to the census value, and equation (8) is used recursively to generate stocks from 1961 to 1974. There are two possible methods of forming annual net investment. In the first method,

$$N_t = G_t * PN_t \qquad (9)$$

where $N_t$ and $G_t$ are annual net and gross investment (by state) and $PN_t$ is an estimate of the percentage of national sales of the appliance which are new purchases rather than replacement purchases (from Merchandising Week [10] ). Equation (8) thus becomes

$$K_{t+1} = K_t + G_t * PN_t \qquad (10)$$

In the second method,

$$N_t = G_t - \delta K_t \qquad (11)$$

where $\delta$ is the national appliance depreciation rate calculated in section A, so that equation (8) becomes

$$K_{t+1} = (1 - \delta)K_t + G_t. \qquad (12)$$

Each method has the disadvantage of relying on a parameter estimated at the national level. The first method has the additional disadvantage that equation (9), and hence equation (10), holds exactly only if all appliances which deteriorate are actually replaced. It appears that the second method would be at least slightly preferable for this reason. However, this difficulty was not thought of in time, and the first method was the one actually used.

Before proceeding to the second step, it is interesting to look at the ratio of the 1970 stocks generated in the first step to the corresponding census values. The extent to which these ratios cluster closely to one is a joint test of the accuracy of the gas appliance gross investment data $G_t$ and the procedure relied on in the first step. The results are presented in Table 4. It should be noted that the way national depreciation rates were calculated in section A ensures that the average of the ratio across states (weighted by 1970 census stocks) should equal one when the second method is used. The results seem reasonable. There are two possible reasons for deviation of the ratios from one; inaccuracies in the gross investment data $G_t$, and inaccuracies or variation among states in the national parameters $PN_t$ and $\delta$. It turns out that for method 1 there is a very strong tendency

TABLE 4: RATIOS OF FIRST STEP 1970 GAS APPLIANCE STOCKS TO 1970 CENSUS GAS APPLIANCE STOCKS

| Appliance | Number of states with ratios between | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | .0<br>.50 | .50<br>.67 | .67<br>.83 | .83<br>1.00 | 1.00<br>1.20 | 1.20<br>1.50 | 1.50<br>2.00 | 2.00<br>∞ |
| gas ranges method 1 | 1 | 1 | 0 | 3 | 24 | 20 | 1 | 0 |
| gas water heaters method 1 | 1 | 0 | 5 | 15 | 24 | 1 | 2 | 2 |
| gas dryers method 1 | 0 | 5 | 20 | 17 | 8 | 0 | 0 | 0 |
| gas ranges method 2 | 0 | 2 | 7 | 14 | 14 | 10 | 3 | 0 |
| gas water heaters method 2 | 0 | 1 | 1 | 20 | 20 | 4 | 1 | 3 |
| gas dryers method 2 | 0 | 1 | 7 | 17 | 21 | 4 | 0 | 0 |

for states with ratios much below (above) one to be those with the highest (lowest) growth rates for a particular appliance. This is presumably because in a state where the stock of an appliance is growing rapidly, a greater fraction of retail sales is for new rather than replacement investment compared to the national average. Hence, use of the national figure $PN_t$ in equation (10) should lead to an estimated 1970 state stock that is too low.

The first step gas appliance stock estimates are now benchmarked to the 1970 census stocks. (For a discussion of benchmarking, see section D.) For stock estimates derived from gross investment figures (as here), benchmarking should be quite effective in improving the quality of the data. The original gas appliance stock data used in the short-run demand specifications [13] are the benchmarked method 1 first-step estimates equation (10)). Another (significantly less important) correction procedure which might have been carried out (but wasn't) would be to adjust the annual state by state stocks to make them add up to the annual national gas appliance stocks calculated in section A, using one of the methods discussed in section B.

## D. BENCHMARKING TECHNIQUES

A short discussion of the benchmarking techniques utilized in sections B and C is given here.

The basic purpose of benchmarking is the improvement of a yearly raw data source by the use of census data. For example, let $K_0$ through $K_{14}$ represent appliance stocks (or saturation rates) for a state from 1960 to 1974, calculated from a raw data source and assumed to be imprecise due to inaccuracies or incompleteness in the raw data source. $C_0$ and $C_{10}$ are the 1960 and 1970 census stocks of the appliance, assumed to be reasonably accurate. The object is to obtain corrected stocks $KC_0$ through $KC_{14}$ which correspond to the census stocks $C_0$ and $C_{10}$ in the census years.

A graphical illustration of how benchmarking works is given in Figure 4.

Two possible benchmarking techniques are presented algebraically below. The first method defines corrected stocks as

$$KC_t = (\alpha e^{\beta t})K_t.$$

$\alpha$ and $\beta$, defined so that corrected stocks equal census stocks in the census years, are equal to

$$\alpha = \frac{C_0}{K_0}$$

$$\beta = \frac{1}{10} \ln\left(\frac{C_{10}}{K_{10}} / \frac{C_0}{K_0}\right) .$$

The second method defines corrected stocks as

$$KC_t = (\alpha + \gamma t)K_t.$$

Again, $\alpha$ and $\gamma$ are defined so that the corrected stocks equal census

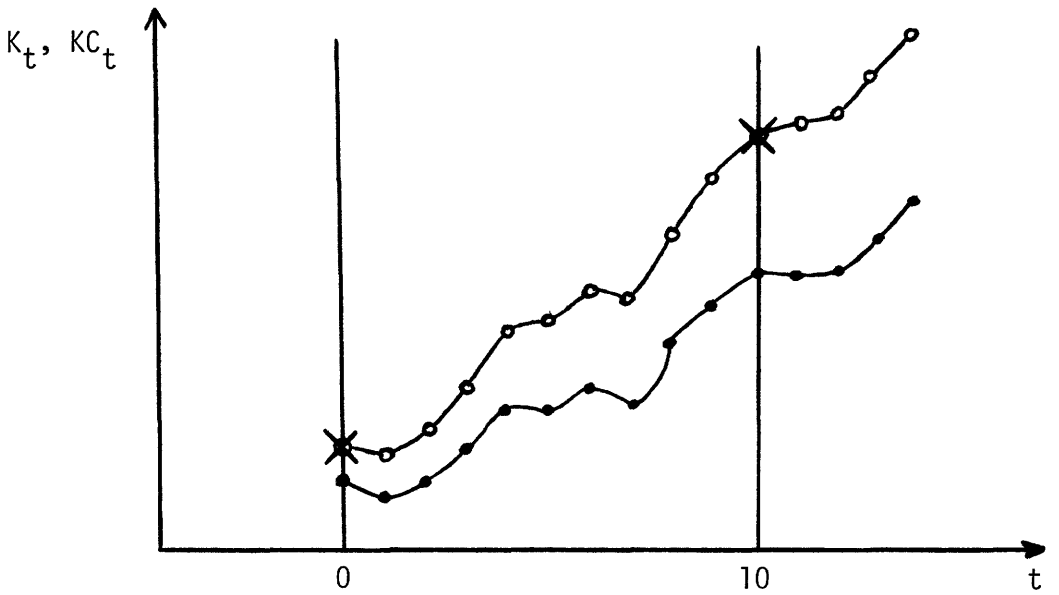


Figure 4: A Graphical Illustration of Benchmarking

- original stock estimates $K_t$

x census stocks $C_0$ and $C_{10}$

o corrected stock estimates $KC_t$

stocks in the census years; here they are equal to

$$\alpha = \frac{C_0}{K_0}$$

$$\gamma = \frac{1}{10}\left(\frac{C_{10}}{K_{10}} - \frac{C_0}{K_0}\right).$$

Benchmarking in sections B and C was always carried out using the first method. In constructing the EPRI data base, DRI used both methods at various times [3]. Note that if the ratios $C_0/K_0$ and $C_{10}/K_{10}$ are not too different from 1.0 (which will be the case if the $K_t$ series has any accuracy whatsoever) then the benchmarked stocks $KC_t$ will be extremely similar (for all t) using the two different methods. Thus it makes very little difference which benchmarking method is used.

It should be noted that benchmarking a series of stocks or saturation rates may or may not significantly improve the accuracy of the series, depending on how systematic the existing inaccuracies in the series are over time. This is illustrated algebraically as follows. Suppose the original stock estimates $K_t$ are related to the actual stocks $C_t$ by the formula

$$K_t = (1 + a + bt + \eta_t)C_t$$

where a, b, and $\eta_t$ are assumed small to simplify the algebraic development. Rewriting the last equation, the percentage inaccuracy in the original stock estimates is given by

$$\frac{K_t - C_t}{C_t} = a + bt + \eta_t.$$

The systematic portion is represented by a + bt, and the random portion by the error term $\eta_t$. The second benchmarking scheme outlined earlier defines corrected stocks $KC_t$ by

$$KC_t = (\alpha + \gamma t)K_t.$$

To evaluate $\alpha$ and $\gamma$, note that

$$C_t = \frac{K_t}{1 + a + bt + \eta_t} \simeq (1 - a - bt - \eta_t)K_t$$

where second order terms have been ignored by assumption that a, b, and $\eta_t$ are small. $\alpha$ and $\gamma$ are thus given by

$$\alpha = \frac{C_0}{K_0} \simeq 1 - a - \eta_0$$

$$\gamma = \frac{1}{10}\left(\frac{C_{10}}{K_{10}} - \frac{C_0}{K_0}\right) \simeq -b - \frac{\eta_{10} - \eta_0}{10}.$$

It follows that

$$KC_t = (\alpha + \gamma t)K_t$$

$$\simeq \left(1 - a - \eta_0 - \left[b + \frac{\eta_{10} - \eta_0}{10}\right]t\right)(1 + a + bt + \eta_t)C_t$$

$$\simeq \left[1 + \eta_t - \eta_{10}\left(\frac{t}{10}\right) - \eta_0\left(\frac{10 - t}{10}\right)\right]C_t$$

where second order terms in a, b, and $\eta_t$ have once again been ignored. Rewriting the last equation,

$$\frac{KC_t - C_t}{C_t} \simeq \eta_t - \eta_{10}\left(\frac{t}{10}\right) - \eta_0\left(\frac{10 - t}{10}\right).$$

Assuming the random error terms $\eta_t$ are independent over time with expectation zero, the inaccuracy of the benchmarked intercensus stock estimates is characterized by

$$\text{var}\left(\frac{KC_t - C_t}{C_t}\right) = \left[1 + \left(\frac{t}{10}\right)^2 + \left(\frac{10 - t}{10}\right)^2\right] \sigma_\eta^2 .$$

The inaccuracy of the original stock estimates is similarly characterized by

$$\text{var}\left(\frac{K_t - C_t}{C_t}\right) = (a + bt)^2 + \sigma_\eta^2 .$$

Comparing the two variances above, it is seen that benchmarking eliminates (more generally reduces) systematic inaccuracies in the original stock estimates, but actually increases random inaccuracies.

The algebraic development in the above paragraph illustrates the intuitively reasonable statement that benchmarking is more effective in improving the quality of a yearly raw data series, the more systematic are the existing inaccuracies in the series over time. Consider now DRI's benchmarking of the Merchandising Week appliance saturation rates (discussed in section B). Suppose that in state A one particular utility always responds to the survey, but none of the others does. Benchmarking will probably be reasonably helpful for such a state, since the major reason for inaccuracy in the state saturation rate estimates might be that saturation rates in the part of the state serviced by the reporting utility are always high or low compared to other parts of the state. Suppose that in state B each of three utilities reports some of the time, and that they all have significantly different saturation rates for a

particular appliance. Then inaccuracies in the state saturation rate will be random over time (depending on which utilities report in a given year) and a simple benchmarking scheme might not improve the data very much.

Conclusions

In section A, national depreciation rates are estimated for the various electric and gas appliances. Appliance depreciation rates are of interest for two reasons. First, appliance stocks $K_t$ are related to appliance gross investment $I_t$ through the formula

$$K_{t+1} = I_t + (1 - \delta)K_t. \qquad (1)$$

Second, the depreciation rate of an appliance is closely related to its average lifetime, which in turn affects the annualized capital cost of owning the appliance. Appliance depreciation rates are calculated by solving the equation

$$K_{10} = \sum_{t=0}^{9} I_t(1 - \delta)^{9-t} + (1 - \delta)^{10}K_0 \qquad (2)$$

for $\delta$, where $K_0$ and $K_{10}$ are census stocks, and $I_t$ represents national shipments for the years in between. A careful theoretical discussion follows the empricial results, concerning the relationship between calculated depreciation rates and average appliance lifetimes. It is shown that the reciprocal of the calculated depreciation rate should equal the average appliance lifetime, if either the actual depreciation pattern is exponential (geometric decay), or in the steady state situation that the gross investment and stock of the appliance are constant over time. For an appliance with a realistic depreciation pattern, and whose numbers are increasing over time, the reciprocal of the calculated depreciation rate will exceed the actual average appliance lifetime. National depreciation rates calculated from equation (2) are thus of questionable value in computing average appliance lifetimes.

On the other hand, they are quite appropriate for use in equation (1) to convert between stocks and gross investment, and are used for this purpose in sections B and C. Finally, at the end of section A, equation (1) is used to calculate accurate annual national appliance stocks.

In section B, annual appliance stock data by state are discussed and developed. DRI [3] generates data for the electric appliances by benchmarking the Merchandising Week saturation rate survey data to census saturation rates. Two sets of data are generated in this study. One set of gas appliance stock data, discussed in section C, is derived from gas appliance gross investment data by use of equation (1). An alternate set of data for both electric and gas appliances is generated by fitting a special type of time trend through census saturation rates. Correction procedures to ensure state stocks sum to national stocks are employed in both the DRI data and the alternate data here. The correction procedure here is better (although more complicated) that that used by DRI, but in neither case is it judged to be of primary importance. All three sets of stock data are judged suitable for use, but differ widely in their undesirable aspects. The DRI data have the advantage of being formed in a direct manner, but the accompanying disadvantage of containing some relatively large random errors due to incompleteness in the raw data source. The alternate set of data here should be devoid of large random errors at the expense of being formed indirectly through a type of trending procedure. There is no definite reason to prefer one set of data to the other. However, since appliance stocks are to be used as right-hand side variables in the short-run demand specifications,

minimizing erros in variables problems in the estimation might favor the latter set of data.

In section C, annual appliance gross investment data by state are discussed and developed. The first method considered, which does not generate acceptable data, forms gross investment from stock data by use of equation (1). The trouble is that even moderate percentage random errors in the stock data will cause quite serious errors in the gross investment data. Also, if the stock data are derived by a trending procedure so as not to have significant random error, the gross investment data will be devoid of the richness of variation that would be expected and ought to be retained for their use as left-hand side variables. As a general rule, it is better to generate gross investment data directly. Data for the electric appliances are derived from Merchandising Week sales survey data tabulated by DRI [3]. Data for gas appliances and an additional set for electric dryers are derived from manufacturers' shipments data compiled by AHAM [1] and GAMA [7]. These sets of data are judged acceptable for use, their accuracy limited primarily by the coverage rates of the raw data sources.

Section D gives a brief description of the benchmarking techniques utilized in sections B and C. An algebraic argument illustrates the proposition that benchmarking is more effective in improving the quality of a raw data series, the more systematic are the existing inaccuracies in the series over time. The probable effectiveness of DRI's benchmarking the Merchandising Week appliance saturation rates is then discussed.

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APPENDIX 1

No acceptable set of gross investment data for household heating equipment has yet been developed. The main reason is that the data collection efforts were concluded before we had a clear idea of exactly what raw data should be obtained. The following discussion outlines some of the problems encountered in trying to construct gross investment data for household heating equipment, and some of the possible solutions. Many parallels should be noticed with the earlier discussion of appliance data (Sections A through C).

The calculation of national depreciation rates for household heating equipment has not yet proved possible. To construct a national depreciation rate, it is necessary to have census stock data for 1960 and 1970, and national shipments data for the years in between. Both exist, but the categories do not necessarily correspond. The Census of Housing [12] breaks down household heating equipment in two ways, by heating fuel and by method of heat distribution (steam or hot water, warm air furnace, etc.). The Hydronics Institute and Current Industrial Reports[1] list annual national shipments for some finely divided sub-categories (for example, oil-fired forced air furnaces). Not all sub-categories are covered, however, and it is not obvious that they may be aggregated to obtain the categories in the census.

Annual stocks (by state) of household heating equipment by heating fuel are estimated by DRI [3] and included in the EPRI data base [4].

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[1]Bureau of the Census, "Selected Heating and Cooking Equipment," Current Industrial Reports, Series MA-34N.

Electrically-heated houses and gas-heated houses are estimated directly, while oil-heated houses and houses heated with other fuels are generated from the residual (total minus electricity minus gas). The data for electrically-heated houses and gas-heated houses seem much superior to the EPRI appliance stock data discussed in Section B. The data for oil-heated houses and houses heated with other fuels are probably somewhat weaker, since they are estimated from a residual.

One way to generate gross investment data by state for household heating equipment might be to follow the first procedure discussed in Section C. Namely, let

$$G_t = K_{t+1} - (1 - \delta)K_t$$

where $G_t$ represents annual gross investment, $K_t$ represents annual stocks, and $\delta$ is the depreciation rate. $\delta$ would ideally be estimated using equation (2) of Section A, but (as just mentioned) this has not yet been possible. Alternatively, a depreciation rate might be assumed. The results should not be as bad here as in Section C, since the EPRI household heating equipment stocks have less random error than the EPRI appliance stocks. Still, even a moderate degree of random error in the stock data would be expected to manifest itself seriously in the gross investment data. In fact, if a depreciation rate of 4% is assumed for each fuel[1], the gross investment figures turn out to be virtually all positive for total houses, electrically-heated houses, and gas-

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[1]Four percent seems somewhat high for a steady state depreciation rate for household heating equipment (I think). However, for a fuel such as oil, whose share is declining over time, the actual depreciation rate might very well be above 4% (see discussion in Section A).

heated houses, but many turn out to be negative for oil-heated houses. The presence of negative gross investment figures in addition to the use of an arbitrary depreciation rate make this set of data unacceptable.

The ideal way to generate gross investment data for household heating equipment would be to do it directly, using one of the methods in Section C which generated the appliance gross investment data in Tables 25-34. This would mean using estimated annual sales or manufacturers' shipments data by state. Manufacturers' shipments data by state are available for gas-fired household heating equipment from GAMA [7]. Sales or shipments data for electric and oil household heating equipment, which I am currently unaware of at the state level, might very well also exist.

APPENDIX 2

The following model examines the stochastic nature of the electric[1] appliance gross investment data generated in section C.

In order to compare the accuracy of different observations characterized by different reporting rates, it is necessary to make a number of simplifying assumptions, which although somewhat unrealistic hopefully capture some of the essence of the problem. Suppose all utilities are of the same size, which is assumed sufficiently small that there are many in each state. Appliance sales for utility i in a given state have a true value of $\mu + \eta_i$, where $\eta_i$ is a random variable, but the utility reports a value $\mu + \eta_i + \varepsilon_i$, where $\varepsilon_i$ is a random error term indicating the utility does not know sales in its region with certainty. Suppose M utilities report to the MW survey out of a total possible N. Total reported sales will be

$$S = \sum_{i=1}^{M} (\mu + \eta_i + \varepsilon_i) = M\mu + \sum_{i=1}^{M} \eta_i + \sum_{i=1}^{M} \varepsilon_i \cdot$$

Dividing reported sales (S) by the coverage rate (M/N) yields estimated state gross investment (G)

$$G = N\mu + \frac{N}{M} \sum_{i=1}^{M} \eta_i + \frac{N}{M} \sum_{i=1}^{M} \varepsilon_i \cdot$$

Actual gross investment is given by

---

[1]Unfortunately, gas appliance data are not as easily characterized.

$$G_0 = \sum_{i=1}^{N} (\mu + \eta_i) = N\mu + \sum_{i=1}^{N} \eta_i \ .$$

The difference is

$$G - G_0 = \sum_{i=1}^{M} (\frac{N}{M} - 1)\eta_i + \sum_{i=1}^{M} \frac{N}{M} \varepsilon_i - \sum_{i=M+1}^{N} \eta_i \ .$$

Assuming independence of all random terms, the variance of this is

$$\sigma^2 = E\left[(G - G_0)^2\right] = M(\frac{N}{M} - 1)^2 \sigma_\eta^2 + M(\frac{N}{M})^2 \sigma_\varepsilon^2 + (N - M) \sigma_\eta^2$$

$$= N\left[(\frac{N}{M} - 1) \sigma_\eta^2 + \frac{N}{M} \sigma_\varepsilon^2\right]$$

and rearranging terms slightly shows that

$$\frac{\sigma^2}{\sigma_\eta^2} = N\left[\frac{N}{M}(1 + \frac{\sigma_\varepsilon^2}{\sigma_\eta^2}) - 1\right] \qquad (13)$$

Some assumption must be made about $\sigma_\varepsilon^2 / \sigma_\eta^2$. For example, suppose the ratio is one. Then equation (13) becomes

$$\frac{\sigma^2}{\sigma_\eta^2} = N\left[\frac{2}{CR} - 1\right]$$

where CR = M/N is the coverage ratio. The N outside the brackets has the obvious significance that gross investment estimates have higher variance for larger states (coverage rates equal).[1] The term inside the

---

[1]If expressed in terms of gross investment per capita, the N would be replaced by 1/N, since

$$\text{var}\ (G - G_0)/N = \frac{1}{N^2} \text{var}(G - G_0) \ .$$

brackets shows how the variance depends on the coverage rate. For a coverage rate of 1/4, it is about four times as large as for a coverage rate of 3/4.

## APPENDIX 3: THE DATA BASE

This section provides printouts of those series discussed or developed in sections B and C that were considered appropriate for utilization in the short-run analysis of energy demand ([13] and [8]), or the long-run analysis of energy demand ([2] and [8]). These printouts are designed to be easily readable; hence in many cases the figures in the actual data base were rounded off. In each table, states are numbered in alphabetical order, a listing of which is provided in Table 5. The data are presented here in the same order as discussed in the text, as follows:

Tables 6 to 13 - annual electric appliance stock data from EPRI [4]

Table 14 - housing stock data from EPRI [4]

Tables 15 to 24 - alternate annual stock data for both electric and gas appliances, derived from census [12]

Tables 25 to 30 - annual electric appliance gross investment and coverage rates, derived from EPRI [4]

Tables 31 to 34 - annual gas appliance and alternate electric dryer gross investment, derived from GAMA [7] and AHAM [1]

Tables 35 to 37 - original annual gas appliance stock data, derived from GAMA [7] and AHAM [1].

Each group of series and the data sources used to derive it are outlined in more detail immediately before the series are listed. For the most complete discussion of the series, however, refer back to sections B and C.

TABLE 5: AN ALPHABETICAL LISTING OF THE STATES

| | |
|---|---|
| 1 | Alabama |
| 2 | Alaska |
| 3 | Arizona |
| 4 | Arkansas |
| 5 | California |
| 6 | Colorado |
| 7 | Connecticut |
| 8 | Delaware |
| 9 | Florida |
| 10 | Georgia |
| 11 | Hawaii |
| 12 | Idaho |
| 13 | Illinois |
| 14 | Indiana |
| 15 | Iowa |
| 16 | Kansas |
| 17 | Kentucky |
| 18 | Louisiana |
| 19 | Maine |
| 20 | Maryland and the District of Columbia |
| 21 | Massachusetts |
| 22 | Michigan |
| 23 | Minnesota |
| 24 | Mississippi |
| 25 | Missouri |
| 26 | Montana |
| 27 | Nebraska |
| 28 | Nevada |
| 29 | New Hampshire |
| 30 | New Jersey |
| 31 | New Mexico |
| 32 | New York |
| 33 | North Carolina |
| 34 | North Dakota |
| 35 | Ohio |
| 36 | Oklahoma |
| 37 | Oregon |
| 38 | Pennsylvania |
| 39 | Rhode Island |
| 40 | South Carolina |
| 41 | South Dakota |
| 42 | Tennessee |
| 43 | Texas |
| 44 | Utah |
| 45 | Vermont |
| 46 | Virginia |
| 47 | Washington |
| 48 | West Virginia |
| 49 | Wisconsin |
| 50 | Wyoming |

TABLES 6-13: EPRI ANNUAL STOCK DATA FOR THE ELECTRIC APPLIANCES

These series come directly from the EPRI data base [4]. The two basic sources of raw data used in their construction are Merchandising Week [10] and the U.S. Census of Housing [12].

See section B for further discussion.

TABLE 14: EPRI ANNUAL HOUSING STOCK DATA

This series comes directly from the EPRI data base [4]. It is used throughout the paper to convert between appliance stocks and appliance saturation rates.

TABLE 6 STOCK OF REFRIGERATORS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 918 | 1059 | 1060 | 1060 | 1053 | 1048 | 1060 | 1070 | 1078 | 1097 | 1074 | 1078 | 1093 | 1137 | 1139 |
| 2 | 59 | 59 | 62 | 68 | 70 | 70 | 69 | 69 | 74 | 78 | 83 | 85 | 87 | 94 | 96 |
| 3 | 387 | 410 | 427 | 448 | 462 | 470 | 483 | 504 | 518 | 542 | 566 | 613 | 667 | 723 | 756 |
| 4 | 540 | 665 | 697 | 716 | 713 | 670 | 698 | 693 | 698 | 702 | 639 | 655 | 713 | 721 | 721 |
| 5 | 5238 | 5371 | 5474 | 5739 | 5968 | 6155 | 6432 | 6539 | 6636 | 6707 | 6797 | 6940 | 7122 | 7274 | 7435 |
| 6 | 551 | 583 | 606 | 634 | 638 | 644 | 652 | 660 | 677 | 690 | 713 | 748 | 802 | 851 | 884 |
| 7 | 774 | 793 | 802 | 827 | 840 | 860 | 876 | 895 | 909 | 931 | 952 | 969 | 985 | 1004 | 1017 |
| 8 | 134 | 138 | 139 | 145 | 147 | 151 | 158 | 161 | 165 | 166 | 169 | 173 | 176 | 181 | 183 |
| 9 | 1659 | 1718 | 1790 | 1852 | 1917 | 1984 | 2043 | 2120 | 2199 | 2284 | 2395 | 2526 | 2662 | 2857 | 2974 |
| 10 | 1109 | 1136 | 1138 | 1193 | 1214 | 1269 | 1266 | 1347 | 1394 | 1419 | 1422 | 1450 | 1468 | 1513 | 1532 |
| 11 | 157 | 161 | 165 | 163 | 174 | 180 | 185 | 189 | 194 | 202 | 209 | 215 | 224 | 232 | 241 |
| 12 | 201 | 206 | 207 | 191 | 211 | 211 | 213 | 215 | 218 | 220 | 226 | 235 | 244 | 254 | 262 |
| 13 | 3182 | 3213 | 3283 | 3350 | 3393 | 3428 | 3492 | 3519 | 3550 | 3594 | 3621 | 3629 | 3684 | 3740 | 3772 |
| 14 | 1430 | 1507 | 1506 | 1548 | 1561 | 1581 | 1610 | 1620 | 1649 | 1653 | 1664 | 1682 | 1693 | 1717 | 1643 |
| 15 | 861 | 932 | 913 | 933 | 931 | 921 | 913 | 912 | 922 | 916 | 923 | 928 | 923 | 923 | 923 |
| 16 | 695 | 767 | 765 | 772 | 774 | 769 | 762 | 751 | 757 | 753 | 750 | 754 | 753 | 757 | 752 |
| 17 | 879 | 907 | 963 | 1023 | 989 | 1009 | 1035 | 1051 | 1069 | 1079 | 1021 | 1079 | 1111 | 1145 | 1164 |
| 18 | 929 | 954 | 952 | 987 | 1019 | 918 | 1053 | 1065 | 1087 | 1095 | 1103 | 1129 | 1152 | 1175 | 1185 |
| 19 | 290 | 299 | 299 | 299 | 291 | 299 | 303 | 304 | 305 | 305 | 312 | 318 | 325 | 339 | 329 |
| 20 | 1153 | 1217 | 1243 | 1271 | 1333 | 1374 | 1388 | 1416 | 1432 | 1468 | 1481 | 1515 | 1562 | 1603 | 1654 |
| 21 | 1581 | 1621 | 1631 | 1680 | 1682 | 1698 | 1712 | 1737 | 1776 | 1788 | 1804 | 1823 | 1854 | 1887 | 1905 |
| 22 | 2331 | 2367 | 2380 | 2419 | 2461 | 2521 | 2575 | 2609 | 2655 | 2696 | 2731 | 2782 | 2836 | 2892 | 2931 |
| 23 | 1016 | 1059 | 1069 | 1076 | 1055 | 1082 | 1111 | 1128 | 1151 | 1154 | 1181 | 1197 | 1203 | 1216 | 1245 |
| 24 | 583 | 607 | 615 | 613 | 640 | 654 | 653 | 672 | 632 | 634 | 661 | 715 | 745 | 799 | 814 |
| 25 | 1410 | 1534 | 1530 | 1528 | 1551 | 1576 | 1585 | 1583 | 1592 | 1587 | 1588 | 1603 | 1612 | 1624 | 1627 |
| 26 | 203 | 187 | 210 | 186 | 185 | 226 | 226 | 222 | 223 | 217 | 226 | 232 | 237 | 243 | 249 |
| 27 | 446 | 475 | 494 | 477 | 476 | 481 | 490 | 483 | 476 | 478 | 491 | 502 | 483 | 507 | 557 |
| 28 | 95 | 103 | 113 | 138 | 148 | 148 | 148 | 152 | 156 | 160 | 166 | 173 | 183 | 196 | 200 |
| 29 | 186 | 188 | 190 | 208 | 208 | 210 | 214 | 218 | 225 | 228 | 232 | 244 | 250 | 256 | 263 |
| 30 | 1849 | 1848 | 1922 | 1965 | 2033 | 2084 | 2135 | 2174 | 2228 | 2222 | 2257 | 2341 | 2387 | 2448 | 2483 |
| 31 | 262 | 273 | 282 | 303 | 310 | 309 | 302 | 297 | 299 | 300 | 305 | 315 | 328 | 345 | 352 |
| 32 | 5371 | 5439 | 5456 | 5343 | 5686 | 5729 | 5788 | 5896 | 5937 | 5995 | 6026 | 6008 | 6095 | 6169 | 6144 |
| 33 | 1244 | 1417 | 1428 | 1438 | 1473 | 1488 | 1513 | 1528 | 1563 | 1542 | 1559 | 1601 | 1613 | 1656 | 1673 |
| 34 | 178 | 189 | 192 | 189 | 197 | 198 | 197 | 185 | 193 | 193 | 188 | 194 | 198 | 201 | 204 |
| 35 | 2945 | 3084 | 3106 | 3153 | 3187 | 3232 | 3256 | 3281 | 3320 | 3351 | 3379 | 3409 | 3467 | 3511 | 3548 |
| 36 | 767 | 781 | 775 | 789 | 819 | 833 | 837 | 849 | 883 | 849 | 896 | 922 | 937 | 986 | 1001 |
| 37 | 581 | 570 | 604 | 625 | 638 | 651 | 659 | 665 | 683 | 698 | 714 | 747 | 771 | 804 | 823 |
| 38 | 3437 | 3481 | 3494 | 3512 | 3534 | 3612 | 3677 | 3716 | 3735 | 3770 | 3786 | 3837 | 3877 | 3930 | 3976 |
| 39 | 267 | 268 | 263 | 271 | 280 | 283 | 286 | 288 | 292 | 297 | 300 | 303 | 307 | 309 | 311 |
| 40 | 628 | 657 | 660 | 687 | 628 | 711 | 729 | 732 | 747 | 751 | 766 | 788 | 785 | 803 | 813 |
| 41 | 199 | 209 | 205 | 211 | 207 | 207 | 207 | 206 | 206 | 206 | 207 | 211 | 210 | 215 | 205 |
| 42 | 1035 | 1057 | 1076 | 1106 | 1124 | 1138 | 1167 | 1191 | 1214 | 1233 | 1256 | 1305 | 1332 | 1378 | 1424 |
| 43 | 2939 | 3142 | 3221 | 3342 | 3313 | 3429 | 3457 | 3511 | 3554 | 3553 | 3625 | 3720 | 3791 | 3932 | 3955 |
| 44 | 251 | 259 | 268 | 276 | 279 | 284 | 289 | 290 | 293 | 296 | 304 | 313 | 326 | 343 | 355 |
| 45 | 114 | 117 | 117 | 118 | 120 | 122 | 124 | 128 | 131 | 133 | 136 | 137 | 139 | 143 | 144 |
| 46 | 1113 | 1156 | 1196 | 1230 | 1262 | 1292 | 1318 | 1347 | 1376 | 1409 | 1432 | 1490 | 1533 | 1588 | 1631 |
| 47 | 942 | 986 | 1010 | 1033 | 1033 | 1046 | 1062 | 1084 | 1113 | 1139 | 1161 | 1163 | 1183 | 1212 | 1223 |
| 48 | 540 | 568 | 553 | 548 | 544 | 542 | 537 | 559 | 562 | 561 | 565 | 568 | 582 | 590 | 593 |
| 49 | 1176 | 1308 | 1310 | 1318 | 1333 | 1349 | 1354 | 1346 | 1361 | 1348 | 1357 | 1346 | 1419 | 1435 | 1445 |
| 50 | 103 | 120 | 111 | 112 | 112 | 111 | 110 | 109 | 105 | 103 | 108 | 111 | 112 | 111 | 121 |

TABLE 7 STOCK OF HOME FREEZERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 177 | 212 | 230 | 242 | 239 | 243 | 273 | 302 | 329 | 323 | 428 | 498 | 414 | 469 | 502 |
| 2 | 15 | 17 | 22 | 28 | 27 | 25 | 26 | 28 | 27 | 28 | 34 | 40 | 36 | 47 | 56 |
| 3 | 69 | 83 | 101 | 101 | 107 | 107 | 115 | 106 | 114 | 122 | 130 | 144 | 145 | 144 | 169 |
| 4 | 116 | 143 | 170 | 206 | 230 | 183 | 176 | 219 | 228 | 236 | 245 | 255 | 186 | 220 | 233 |
| 5 | 839 | 926 | 994 | 1006 | 1103 | 1130 | 1209 | 1270 | 1310 | 1506 | 1424 | 1481 | 1504 | 1565 | 1607 |
| 6 | 136 | 150 | 193 | 216 | 202 | 188 | 214 | 255 | 257 | 240 | 243 | 296 | 329 | 390 | 428 |
| 7 | 101 | 114 | 117 | 131 | 141 | 174 | 187 | 191 | 168 | 188 | 203 | 222 | 239 | 378 | 383 |
| 8 | 27 | 33 | 32 | 37 | 58 | 55 | 57 | 48 | 61 | 49 | 47 | 50 | 50 | 66 | 74 |
| 9 | 210 | 228 | 210 | 226 | 248 | 212 | 260 | 276 | 268 | 295 | 478 | 508 | 549 | 592 | 642 |
| 10 | 222 | 230 | 233 | 364 | 396 | 474 | 668 | 603 | 645 | 699 | 500 | 748 | 755 | 831 | 1667 |
| 11 | 29 | 29 | 29 | 30 | 36 | 35 | 39 | 42 | 37 | 41 | 43 | 50 | 55 | 52 | 55 |
| 12 | 78 | 84 | 87 | 95 | 102 | 90 | 95 | 97 | 104 | 114 | 118 | 125 | 130 | 135 | 140 |
| 13 | 533 | 739 | 791 | 444 | 398 | 601 | 704 | 791 | 824 | 953 | 891 | 1051 | 948 | 1000 | 1048 |
| 14 | 345 | 360 | 368 | 437 | 411 | 416 | 464 | 475 | 508 | 546 | 550 | 541 | 605 | 629 | 665 |
| 15 | 263 | 289 | 294 | 327 | 375 | 367 | 370 | 374 | 354 | 386 | 393 | 405 | 421 | 451 | 453 |
| 16 | 161 | 159 | 177 | 158 | 166 | 206 | 214 | 214 | 236 | 251 | 275 | 280 | 286 | 301 | 302 |
| 17 | 150 | 205 | 181 | 192 | 200 | 203 | 213 | 232 | 239 | 345 | 314 | 287 | 310 | 385 | 489 |
| 18 | 224 | 272 | 289 | 338 | 378 | 382 | 406 | 435 | 449 | 416 | 439 | 456 | 481 | 522 | 512 |
| 19 | 46 | 46 | 48 | 48 | 39 | 71 | 81 | 80 | 81 | 75 | 78 | 86 | 86 | 97 | 97 |
| 20 | 78 | 95 | 109 | 146 | 189 | 215 | 243 | 277 | 293 | 427 | 363 | 379 | 403 | 417 | 460 |
| 21 | 115 | 109 | 123 | 128 | 146 | 160 | 175 | 189 | 197 | 211 | 237 | 253 | 317 | 387 | 419 |
| 22 | 448 | 482 | 511 | 493 | 532 | 639 | 686 | 709 | 718 | 786 | 797 | 862 | 894 | 934 | 1036 |
| 23 | 322 | 341 | 362 | 379 | 510 | 505 | 504 | 549 | 531 | 521 | 513 | 518 | 473 | 485 | 564 |
| 24 | 145 | 149 | 136 | 135 | 176 | 162 | 200 | 193 | 349 | 302 | 305 | 330 | 352 | 382 | 389 |
| 25 | 284 | 316 | 333 | 417 | 369 | 372 | 393 | 410 | 448 | 465 | 519 | 506 | 527 | 548 | 567 |
| 26 | 78 | 89 | 89 | 90 | 90 | 110 | 111 | 112 | 113 | 113 | 114 | 128 | 133 | 136 | 157 |
| 27 | 136 | 151 | 166 | 168 | 174 | 183 | 193 | 198 | 201 | 209 | 218 | 228 | 245 | 263 | 305 |
| 28 | 20 | 26 | 33 | 42 | 49 | 34 | 49 | 47 | 49 | 45 | 44 | 45 | 48 | 51 | 54 |
| 29 | 25 | 28 | 32 | 42 | 45 | 41 | 42 | 43 | 46 | 50 | 51 | 70 | 51 | 86 | 57 |
| 30 | 216 | 264 | 289 | 309 | 312 | 406 | 388 | 310 | 436 | 368 | 402 | 478 | 459 | 492 | 468 |
| 31 | 61 | 71 | 69 | 65 | 65 | 59 | 73 | 75 | 92 | 96 | 104 | 109 | 109 | 130 | 133 |
| 32 | 514 | 566 | 669 | 686 | 1404 | 969 | 1123 | 1178 | 1368 | 911 | 978 | 995 | 953 | 1610 | 1694 |
| 33 | 272 | 346 | 394 | 416 | 475 | 491 | 511 | 546 | 601 | 541 | 590 | 623 | 667 | 650 | 718 |
| 34 | 81 | 103 | 115 | 110 | 94 | 125 | 98 | 106 | 100 | 146 | 110 | 118 | 137 | 148 | 150 |
| 35 | 547 | 652 | 667 | 737 | 779 | 780 | 847 | 879 | 935 | 973 | 977 | 1011 | 1033 | 1073 | 1089 |
| 36 | 142 | 142 | 163 | 190 | 213 | 234 | 227 | 221 | 276 | 267 | 277 | 286 | 292 | 459 | 466 |
| 37 | 189 | 218 | 225 | 273 | 334 | 368 | 370 | 414 | 272 | 297 | 331 | 350 | 480 | 545 | 598 |
| 38 | 527 | 565 | 611 | 656 | 673 | 751 | 737 | 792 | 838 | 865 | 893 | 909 | 914 | 810 | 817 |
| 39 | 14 | 20 | 20 | 10 | 11 | 12 | 12 | 20 | 27 | 31 | 33 | 34 | 38 | 53 | 60 |
| 40 | 130 | 143 | 145 | 166 | 166 | 183 | 204 | 215 | 239 | 255 | 271 | 287 | 295 | 329 | 362 |
| 41 | 74 | 84 | 91 | 96 | 93 | 106 | 116 | 108 | 101 | 98 | 106 | 112 | 101 | 195 | 184 |
| 42 | 217 | 228 | 230 | 249 | 270 | 280 | 315 | 367 | 408 | 443 | 468 | 509 | 512 | 516 | 590 |
| 43 | 639 | 722 | 767 | 818 | 1130 | 910 | 967 | 999 | 1147 | 1145 | 1149 | 1204 | 1333 | 1380 | 1289 |
| 44 | 65 | 76 | 76 | 83 | 88 | 94 | 100 | 102 | 116 | 115 | 119 | 168 | 175 | 199 | 190 |
| 45 | 24 | 22 | 40 | 36 | 48 | 42 | 60 | 73 | 92 | 73 | 41 | 47 | 116 | 124 | 125 |
| 46 | 202 | 217 | 218 | 220 | 280 | 281 | 292 | 292 | 328 | 422 | 419 | 396 | 358 | 370 | 485 |
| 47 | 249 | 293 | 301 | 315 | 317 | 338 | 365 | 401 | 426 | 480 | 483 | 533 | 515 | 550 | 564 |
| 48 | 86 | 121 | 108 | 112 | 113 | 129 | 139 | 153 | 157 | 152 | 158 | 169 | 172 | 174 | 177 |
| 49 | 326 | 373 | 415 | 437 | 451 | 404 | 453 | 430 | 556 | 476 | 541 | 559 | 590 | 593 | 623 |
| 50 | 36 | 53 | 39 | 70 | 66 | 67 | 82 | 65 | 58 | 57 | 53 | 52 | 82 | 46 | 80 |

TABLE 8 STOCK OF ROOM AIR CONDITIONERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 171 | 208 | 218 | 277 | 268 | 296 | 303 | 364 | 405 | 314 | 513 | 587 | 511 | 539 | 552 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 51 | 58 | 65 | 75 | 79 | 88 | 78 | 72 | 88 | 93 | 96 | 108 | 128 | 117 | 103 |
| 4 | 84 | 101 | 132 | 155 | 187 | 121 | 118 | 218 | 175 | 198 | 280 | 299 | 249 | 277 | 282 |
| 5 | 449 | 522 | 582 | 923 | 1008 | 977 | 1424 | 1556 | 1656 | 1061 | 1331 | 1600 | 1460 | 1553 | 1593 |
| 6 | 26 | 20 | 75 | 79 | 96 | 71 | 82 | 94 | 141 | 68 | 92 | 108 | 147 | 264 | 194 |
| 7 | 57 | 70 | 55 | 69 | 89 | 113 | 138 | 164 | 160 | 258 | 310 | 331 | 367 | 612 | 620 |
| 8 | 25 | 31 | 33 | 40 | 43 | 45 | 53 | 62 | 64 | 81 | 86 | 90 | 102 | 96 | 102 |
| 9 | 336 | 384 | 472 | 483 | 682 | 722 | 836 | 814 | 981 | 1011 | 1287 | 1385 | 1479 | 1534 | 1719 |
| 10 | 150 | 173 | 173 | 187 | 239 | 397 | 533 | 617 | 708 | 868 | 550 | 617 | 640 | 878 | 973 |
| 11 | 2 | 1 | 2 | 2 | 2 | 5 | 7 | 9 | 21 | 24 | 29 | 32 | 34 | 34 | 38 |
| 12 | 12 | 16 | 18 | 15 | 17 | 11 | 13 | 16 | 19 | 24 | 27 | 32 | 49 | 48 | 52 |
| 13 | 472 | 517 | 602 | 632 | 838 | 915 | 1060 | 1321 | 1265 | 1379 | 1561 | 1667 | 1660 | 1792 | 1805 |
| 14 | 128 | 149 | 161 | 236 | 218 | 247 | 266 | 261 | 394 | 433 | 473 | 533 | 550 | 585 | 548 |
| 15 | 104 | 113 | 124 | 148 | 187 | 171 | 227 | 243 | 257 | 292 | 297 | 343 | 352 | 329 | 329 |
| 16 | 218 | 256 | 286 | 264 | 294 | 307 | 323 | 337 | 344 | 359 | 383 | 395 | 397 | 386 | 336 |
| 17 | 84 | 79 | 80 | 110 | 161 | 172 | 222 | 244 | 260 | 253 | 343 | 360 | 371 | 403 | 417 |
| 18 | 267 | 320 | 433 | 408 | 500 | 507 | 559 | 614 | 676 | 622 | 673 | 705 | 732 | 790 | 682 |
| 19 | 3 | 5 | 6 | 5 | 5 | 15 | 15 | 13 | 11 | 11 | 9 | 8 | 9 | 12 | 14 |
| 20 | 91 | 89 | 133 | 149 | 151 | 176 | 201 | 232 | 359 | 258 | 429 | 460 | 489 | 520 | 568 |
| 21 | 85 | 98 | 116 | 140 | 122 | 127 | 168 | 194 | 258 | 342 | 402 | 444 | 491 | 559 | 601 |
| 22 | 123 | 145 | 147 | 138 | 172 | 223 | 287 | 318 | 395 | 432 | 514 | 522 | 498 | 533 | 617 |
| 23 | 61 | 84 | 92 | 87 | 75 | 156 | 166 | 237 | 314 | 322 | 331 | 356 | 423 | 431 | 447 |
| 24 | 111 | 92 | 100 | 102 | 171 | 192 | 260 | 258 | 259 | 301 | 339 | 460 | 506 | 578 | 619 |
| 25 | 264 | 332 | 351 | 403 | 335 | 354 | 412 | 457 | 522 | 558 | 627 | 679 | 714 | 735 | 720 |
| 26 | 7 | 6 | 7 | 18 | 23 | 32 | 30 | 25 | 21 | 19 | 17 | 24 | 32 | 33 | 37 |
| 27 | 98 | 117 | 134 | 134 | 147 | 118 | 169 | 189 | 193 | 192 | 201 | 215 | 229 | 241 | 243 |
| 28 | 6 | 6 | 6 | 18 | 18 | 18 | 23 | 22 | 24 | 25 | 26 | 73 | 83 | 88 | 90 |
| 29 | 6 | 6 | 7 | 7 | 7 | 10 | 23 | 21 | 19 | 20 | 25 | 52 | 54 | 69 | 73 |
| 30 | 348 | 355 | 389 | 465 | 606 | 603 | 761 | 856 | 906 | 1210 | 1305 | 1378 | 868 | 928 | 925 |
| 31 | 17 | 23 | 65 | 83 | 93 | 92 | 89 | 78 | 40 | 48 | 66 | 59 | 62 | 73 | 74 |
| 32 | 682 | 770 | 877 | 675 | 954 | 898 | 1014 | 862 | 1277 | 1725 | 2343 | 2683 | 1992 | 1271 | 1127 |
| 33 | 118 | 160 | 185 | 205 | 249 | 247 | 284 | 286 | 349 | 477 | 488 | 562 | 608 | 600 | 596 |
| 34 | 3 | 7 | 7 | 7 | 7 | 20 | 22 | 21 | 27 | 22 | 20 | 4 | 39 | 39 | 50 |
| 35 | 216 | 237 | 266 | 337 | 398 | 419 | 490 | 453 | 608 | 751 | 791 | 847 | 952 | 972 | 939 |
| 36 | 267 | 280 | 287 | 367 | 341 | 336 | 328 | 441 | 318 | 468 | 488 | 534 | 544 | 415 | 421 |
| 37 | 21 | 41 | 52 | 68 | 85 | 89 | 88 | 80 | 55 | 53 | 61 | 65 | 70 | 128 | 148 |
| 38 | 393 | 458 | 531 | 557 | 487 | 466 | 628 | 757 | 1022 | 1166 | 1308 | 1384 | 1265 | 1394 | 1430 |
| 39 | 13 | 24 | 18 | 19 | 20 | 24 | 27 | 27 | 34 | 47 | 50 | 51 | 65 | 74 | 82 |
| 40 | 83 | 96 | 119 | 132 | 140 | 157 | 180 | 207 | 274 | 287 | 305 | 302 | 305 | 307 | 318 |
| 41 | 14 | 20 | 32 | 33 | 43 | 45 | 51 | 47 | 48 | 47 | 52 | 55 | 65 | 52 | 76 |
| 42 | 256 | 317 | 344 | 435 | 472 | 561 | 513 | 462 | 554 | 678 | 705 | 758 | 842 | 920 | 993 |
| 43 | 1055 | 1215 | 1338 | 1305 | 1147 | 1380 | 1413 | 1459 | 1585 | 1818 | 2051 | 2087 | 2047 | 2122 | 2058 |
| 44 | 17 | 16 | 27 | 25 | 29 | 47 | 44 | 38 | 39 | 55 | 52 | 50 | 59 | 69 | 75 |
| 45 | 2 | 3 | 4 | 3 | 3 | 2 | 2 | 7 | 6 | 8 | 6 | 8 | 7 | 8 | 8 |
| 46 | 149 | 166 | 182 | 227 | 230 | 232 | 233 | 264 | 339 | 535 | 535 | 597 | 520 | 538 | 553 |
| 47 | 30 | 27 | 32 | 50 | 33 | 33 | 40 | 51 | 60 | 75 | 79 | 89 | 84 | 108 | 108 |
| 48 | 34 | 93 | 32 | 45 | 149 | 151 | 89 | 102 | 89 | 97 | 105 | 121 | 123 | 125 | 126 |
| 49 | 62 | 74 | 69 | 77 | 94 | 116 | 146 | 164 | 180 | 271 | 283 | 307 | 397 | 346 | 376 |
| 50 | 4 | 5 | 5 | 6 | 5 | 5 | 5 | 3 | 4 | 4 | 9 | 5 | 10 | 10 | 10 |

TABLE 9 STOCK OF ELECTRIC RANGES (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 441 | 513 | 551 | 590 | 545 | 586 | 601 | 599 | 629 | 626 | 614 | 625 | 628 | 659 | 671 |
| 2 | 30 | 33 | 35 | 42 | 41 | 42 | 42 | 43 | 47 | 45 | 48 | 54 | 55 | 67 | 68 |
| 3 | 73 | 77 | 104 | 114 | 125 | 133 | 143 | 177 | 184 | 195 | 209 | 241 | 282 | 299 | 327 |
| 4 | 72 | 79 | 88 | 107 | 101 | 121 | 109 | 144 | 129 | 131 | 139 | 160 | 151 | 177 | 186 |
| 5 | 937 | 1131 | 1133 | 1252 | 1477 | 1495 | 1685 | 1821 | 1874 | 1963 | 2078 | 2789 | 2222 | 2491 | 2591 |
| 6 | 179 | 194 | 223 | 243 | 265 | 294 | 318 | 321 | 342 | 355 | 372 | 413 | 462 | 553 | 565 |
| 7 | 324 | 348 | 346 | 367 | 393 | 442 | 462 | 482 | 479 | 504 | 528 | 541 | 553 | 649 | 658 |
| 8 | 46 | 45 | 45 | 47 | 47 | 48 | 52 | 53 | 58 | 61 | 73 | 75 | 81 | 85 | 86 |
| 9 | 876 | 927 | 1011 | 1054 | 1128 | 1179 | 1265 | 1327 | 1378 | 1441 | 1576 | 1666 | 1831 | 1960 | 2188 |
| 10 | 514 | 548 | 559 | 556 | 579 | 635 | 684 | 613 | 767 | 862 | 779 | 892 | 899 | 872 | 1041 |
| 11 | 96 | 104 | 106 | 109 | 120 | 123 | 128 | 132 | 141 | 144 | 152 | 157 | 165 | 170 | 180 |
| 12 | 169 | 173 | 177 | 178 | 182 | 189 | 189 | 188 | 189 | 189 | 194 | 202 | 201 | 207 | 211 |
| 13 | 580 | 635 | 694 | 499 | 508 | 559 | 590 | 705 | 745 | 802 | 790 | 902 | 917 | 933 | 956 |
| 14 | 480 | 531 | 397 | 541 | 557 | 593 | 549 | 582 | 611 | 632 | 654 | 673 | 682 | 703 | 745 |
| 15 | 246 | 275 | 280 | 274 | 311 | 313 | 333 | 335 | 340 | 357 | 363 | 379 | 404 | 472 | 478 |
| 16 | 191 | 219 | 227 | 246 | 261 | 267 | 276 | 295 | 293 | 314 | 315 | 328 | 335 | 363 | 344 |
| 17 | 264 | 351 | 281 | 399 | 293 | 311 | 228 | 252 | 276 | 529 | 450 | 434 | 476 | 504 | 525 |
| 18 | 69 | 77 | 88 | 135 | 152 | 141 | 152 | 164 | 172 | 171 | 178 | 193 | 213 | 227 | 193 |
| 19 | 108 | 113 | 114 | 116 | 111 | 147 | 161 | 161 | 162 | 165 | 170 | 178 | 181 | 196 | 192 |
| 20 | 224 | 247 | 261 | 290 | 298 | 312 | 335 | 363 | 341 | 651 | 380 | 390 | 425 | 446 | 494 |
| 21 | 475 | 518 | 540 | 544 | 578 | 628 | 639 | 696 | 648 | 722 | 746 | 771 | 803 | 816 | 823 |
| 22 | 948 | 1003 | 1026 | 1015 | 1065 | 1157 | 1200 | 1257 | 1293 | 1239 | 1252 | 1217 | 1246 | 1285 | 1331 |
| 23 | 359 | 380 | 392 | 548 | 472 | 491 | 526 | 530 | 514 | 555 | 564 | 581 | 487 | 498 | 636 |
| 24 | 120 | 86 | 86 | 70 | 107 | 157 | 146 | 151 | 201 | 215 | 237 | 258 | 265 | 292 | 302 |
| 25 | 308 | 354 | 364 | 349 | 362 | 376 | 377 | 400 | 438 | 435 | 484 | 488 | 516 | 520 | 508 |
| 26 | 112 | 84 | 118 | 88 | 72 | 132 | 137 | 141 | 145 | 145 | 149 | 158 | 161 | 165 | 176 |
| 27 | 159 | 174 | 192 | 191 | 195 | 203 | 214 | 218 | 221 | 233 | 247 | 257 | 294 | 299 | 269 |
| 28 | 54 | 54 | 10 | 94 | 100 | 82 | 102 | 101 | 102 | 101 | 101 | 85 | 91 | 97 | 0 |
| 29 | 84 | 99 | 95 | 97 | 101 | 101 | 114 | 120 | 128 | 132 | 140 | 148 | 165 | 160 | 174 |
| 30 | 295 | 1006 | 1119 | 348 | 278 | 399 | 369 | 432 | 443 | 470 | 486 | 507 | 542 | 539 | 1641 |
| 31 | 57 | 58 | 47 | 86 | 91 | 91 | 92 | 90 | 94 | 95 | 100 | 100 | 90 | 94 | 94 |
| 32 | 843 | 985 | 1105 | 1429 | 1374 | 1502 | 1636 | 1829 | 1903 | 1140 | 1265 | 1283 | 980 | 2223 | 2050 |
| 33 | 768 | 887 | 914 | 941 | 985 | 1017 | 1070 | 1099 | 1125 | 1124 | 1157 | 1189 | 1209 | 1254 | 1258 |
| 34 | 95 | 115 | 128 | 159 | 148 | 138 | 147 | 143 | 155 | 137 | 129 | 131 | 149 | 156 | 158 |
| 35 | 971 | 963 | 1030 | 983 | 1048 | 1136 | 1162 | 1240 | 1322 | 1377 | 1457 | 1468 | 1437 | 1460 | 1487 |
| 36 | 94 | 105 | 112 | 149 | 200 | 212 | 187 | 166 | 285 | 215 | 231 | 244 | 248 | 365 | 371 |
| 37 | 467 | 481 | 507 | 524 | 542 | 549 | 573 | 568 | 586 | 602 | 621 | 651 | 651 | 672 | 681 |
| 38 | 1038 | 1088 | 1142 | 1171 | 1150 | 1236 | 1234 | 1343 | 1339 | 1424 | 1456 | 1471 | 1452 | 1421 | 1373 |
| 39 | 81 | 80 | 102 | 102 | 105 | 115 | 118 | 124 | 125 | 130 | 131 | 135 | 139 | 136 | 153 |
| 40 | 361 | 380 | 491 | 524 | 507 | 526 | 528 | 557 | 704 | 532 | 532 | 555 | 560 | 593 | 611 |
| 41 | 83 | 90 | 93 | 97 | 107 | 108 | 111 | 113 | 118 | 117 | 116 | 120 | 106 | 128 | 146 |
| 42 | 680 | 752 | 748 | 751 | 741 | 686 | 738 | 993 | 993 | 982 | 964 | 936 | 1024 | 1056 | 1099 |
| 43 | 424 | 504 | 543 | 671 | 588 | 677 | 726 | 810 | 860 | 923 | 960 | 1006 | 1027 | 1068 | 1056 |
| 44 | 154 | 163 | 171 | 178 | 181 | 183 | 191 | 194 | 197 | 201 | 206 | 207 | 227 | 254 | 265 |
| 45 | 43 | 45 | 29 | 56 | 50 | 51 | 49 | 59 | 73 | 76 | 80 | 83 | 77 | 80 | 82 |
| 46 | 469 | 521 | 544 | 586 | 610 | 639 | 664 | 687 | 724 | 708 | 770 | 818 | 862 | 912 | 987 |
| 47 | 794 | 855 | 871 | 893 | 885 | 913 | 936 | 959 | 993 | 1038 | 1044 | 1054 | 1082 | 1076 | 1088 |
| 48 | 158 | 223 | 167 | 179 | 191 | 200 | 181 | 211 | 202 | 212 | 215 | 213 | 224 | 228 | 357 |
| 49 | 475 | 543 | 552 | 568 | 580 | 594 | 630 | 657 | 640 | 626 | 663 | 634 | 723 | 741 | 804 |
| 50 | 37 | 44 | 41 | 42 | 68 | 68 | 61 | 77 | 65 | 67 | 52 | 59 | 92 | 79 | 63 |

TABLE 10 STOCK OF ELECTRIC WATER HEATERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 251 | 297 | 305 | 371 | 313 | 378 | 384 | 394 | 400 | 389 | 434 | 423 | 413 | 437 | 450 |
| 2 | 16 | 16 | 16 | 21 | 22 | 22 | 18 | 18 | 19 | 25 | 26 | 23 | 22 | 26 | 27 |
| 3 | 33 | 39 | 38 | 35 | 42 | 44 | 48 | 59 | 53 | 70 | 76 | 92 | 129 | 132 | 149 |
| 4 | 26 | 49 | 84 | 90 | 64 | 119 | 133 | 154 | 167 | 172 | 64 | 105 | 210 | 255 | 446 |
| 5 | 347 | 375 | 422 | 403 | 515 | 523 | 555 | 514 | 542 | 587 | 600 | 597 | 656 | 788 | 894 |
| 6 | 66 | 120 | 78 | 79 | 76 | 48 | 40 | 40 | 51 | 78 | 80 | 91 | 83 | 89 | 139 |
| 7 | 139 | 146 | 151 | 154 | 166 | 201 | 179 | 182 | 191 | 198 | 227 | 230 | 242 | 231 | 234 |
| 8 | 27 | 25 | 28 | 29 | 37 | 38 | 38 | 33 | 46 | 41 | 41 | 34 | 34 | 38 | 42 |
| 9 | 967 | 1017 | 1098 | 1144 | 1205 | 1295 | 1345 | 1399 | 1451 | 1523 | 1709 | 1816 | 1981 | 2138 | 2277 |
| 10 | 344 | 354 | 343 | 377 | 395 | 392 | 453 | 548 | 543 | 582 | 568 | 376 | 398 | 654 | 720 |
| 11 | 87 | 88 | 91 | 97 | 108 | 112 | 117 | 124 | 133 | 137 | 145 | 151 | 159 | 159 | 165 |
| 12 | 168 | 174 | 174 | 177 | 179 | 179 | 178 | 179 | 182 | 183 | 185 | 190 | 195 | 206 | 213 |
| 13 | 392 | 469 | 245 | 316 | 275 | 298 | 352 | 457 | 466 | 394 | 454 | 615 | 468 | 462 | 469 |
| 14 | 428 | 442 | 450 | 465 | 463 | 476 | 500 | 579 | 595 | 582 | 548 | 562 | 578 | 544 | 562 |
| 15 | 245 | 452 | 423 | 334 | 388 | 376 | 383 | 341 | 467 | 320 | 253 | 243 | 248 | 328 | 335 |
| 16 | 51 | 62 | 58 | 60 | 59 | 60 | 356 | 63 | 60 | 61 | 63 | 68 | 73 | 84 | 68 |
| 17 | 166 | 220 | 165 | 271 | 157 | 161 | 112 | 114 | 121 | 285 | 299 | 165 | 211 | 236 | 255 |
| 18 | 21 | 24 | 26 | 30 | 51 | 61 | 66 | 75 | 84 | 75 | 83 | 90 | 103 | 120 | 108 |
| 19 | 85 | 92 | 87 | 88 | 83 | 109 | 123 | 123 | 122 | 109 | 108 | 112 | 115 | 128 | 124 |
| 20 | 123 | 123 | 137 | 151 | 165 | 301 | 172 | 177 | 198 | 547 | 223 | 236 | 246 | 259 | 288 |
| 21 | 148 | 152 | 155 | 162 | 199 | 212 | 188 | 238 | 245 | 247 | 281 | 311 | 330 | 329 | 344 |
| 22 | 554 | 559 | 603 | 576 | 596 | 635 | 660 | 676 | 686 | 701 | 701 | 705 | 746 | 759 | 762 |
| 23 | 303 | 322 | 354 | 487 | 479 | 480 | 405 | 442 | 363 | 388 | 402 | 392 | 336 | 346 | 514 |
| 24 | 57 | 65 | 61 | 79 | 92 | 259 | 113 | 115 | 267 | 208 | 169 | 190 | 219 | 225 | 233 |
| 25 | 178 | 199 | 200 | 154 | 203 | 205 | 208 | 193 | 211 | 212 | 230 | 232 | 233 | 235 | 219 |
| 26 | 60 | 54 | 72 | 61 | 81 | 86 | 90 | 77 | 81 | 74 | 67 | 43 | 44 | 45 | 44 |
| 27 | 96 | 100 | 106 | 100 | 99 | 97 | 102 | 93 | 91 | 100 | 101 | 107 | 94 | 100 | 103 |
| 28 | 49 | 50 | 52 | 68 | 199 | 118 | 155 | 144 | 130 | 115 | 87 | 82 | 87 | 93 | 95 |
| 29 | 41 | 47 | 48 | 49 | 49 | 54 | 56 | 58 | 62 | 66 | 71 | 77 | 83 | 117 | 97 |
| 30 | 165 | 179 | 185 | 194 | 63 | 194 | 223 | 209 | 210 | 232 | 243 | 250 | 270 | 176 | 217 |
| 31 | 27 | 26 | 15 | 10 | 6 | 9 | 11 | 9 | 22 | 24 | 29 | 30 | 22 | 11 | 14 |
| 32 | 410 | 415 | 369 | 511 | 529 | 508 | 521 | 503 | 506 | 536 | 524 | 540 | 524 | 654 | 660 |
| 33 | 670 | 782 | 807 | 824 | 919 | 950 | 1006 | 1080 | 1108 | 1067 | 1105 | 1134 | 1253 | 1272 | 1293 |
| 34 | 75 | 97 | 103 | 100 | 105 | 80 | 98 | 93 | 100 | 79 | 96 | 95 | 97 | 104 | 99 |
| 35 | 543 | 561 | 551 | 560 | 567 | 636 | 641 | 643 | 662 | 689 | 704 | 732 | 1036 | 827 | 839 |
| 36 | 16 | 16 | 19 | 35 | 46 | 69 | 66 | 62 | 56 | 54 | 78 | 95 | 94 | 325 | 330 |
| 37 | 458 | 470 | 486 | 484 | 516 | 526 | 539 | 564 | 555 | 571 | 594 | 619 | 672 | 701 | 706 |
| 38 | 590 | 605 | 593 | 614 | 624 | 643 | 628 | 699 | 738 | 792 | 803 | 782 | 771 | 723 | 736 |
| 39 | 20 | 33 | 26 | 26 | 31 | 37 | 44 | 36 | 54 | 57 | 41 | 63 | 67 | 73 | 74 |
| 40 | 314 | 330 | 393 | 480 | 459 | 478 | 481 | 577 | 695 | 511 | 506 | 523 | 531 | 557 | 568 |
| 41 | 77 | 93 | 91 | 97 | 101 | 108 | 115 | 78 | 95 | 97 | 96 | 97 | 102 | 194 | 209 |
| 42 | 510 | 621 | 618 | 613 | 595 | 540 | 588 | 878 | 865 | 851 | 840 | 880 | 896 | 929 | 969 |
| 43 | 109 | 124 | 132 | 198 | 187 | 185 | 166 | 183 | 287 | 254 | 312 | 354 | 356 | 372 | 362 |
| 44 | 63 | 68 | 66 | 76 | 61 | 56 | 56 | 56 | 53 | 56 | 55 | 69 | 56 | 68 | 64 |
| 45 | 28 | 29 | 27 | 44 | 37 | 38 | 49 | 57 | 57 | 60 | 65 | 69 | 94 | 99 | 102 |
| 46 | 346 | 328 | 318 | 425 | 406 | 449 | 475 | 512 | 542 | 593 | 622 | 663 | 711 | 762 | 830 |
| 47 | 777 | 817 | 835 | 845 | 865 | 866 | 886 | 904 | 922 | 979 | 981 | 1019 | 986 | 1015 | 1023 |
| 48 | 77 | 132 | 92 | 100 | 109 | 103 | 105 | 130 | 131 | 141 | 135 | 146 | 150 | 244 | 217 |
| 49 | 432 | 476 | 496 | 484 | 475 | 466 | 482 | 464 | 510 | 505 | 502 | 506 | 466 | 523 | 525 |
| 50 | 14 | 24 | 20 | 19 | 9 | 16 | 9 | 12 | 15 | 15 | 14 | 16 | 17 | 18 | 19 |

TABLE 11 STOCK OF AUTOMATIC WASHERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 319 | 329 | 291 | 286 | 257 | 231 | 193 | 151 | 109 | 55 | 662 | 721 | 725 | 747 | 770 |
| 2 | 20 | 18 | 18 | 19 | 17 | 12 | 10 | 8 | 4 | 4 | 48 | 41 | 33 | 45 | 46 |
| 3 | 172 | 169 | 165 | 161 | 161 | 139 | 116 | 94 | 67 | 36 | 342 | 377 | 387 | 406 | 433 |
| 4 | 160 | 204 | 227 | 225 | 168 | 163 | 87 | 95 | 59 | 30 | 365 | 376 | 407 | 431 | 431 |
| 5 | 2602 | 2383 | 2263 | 1874 | 1959 | 1693 | 1524 | 1019 | 787 | 456 | 4210 | 4247 | 4367 | 4796 | 4852 |
| 6 | 246 | 233 | 218 | 209 | 180 | 159 | 131 | 100 | 70 | 35 | 483 | 516 | 548 | 609 | 567 |
| 7 | 422 | 416 | 393 | 358 | 329 | 282 | 242 | 182 | 117 | 63 | 679 | 702 | 721 | 686 | 695 |
| 8 | 67 | 61 | 52 | 44 | 39 | 33 | 27 | 22 | 15 | 8 | 124 | 128 | 129 | 131 | 132 |
| 9 | 681 | 655 | 635 | 579 | 591 | 509 | 410 | 316 | 224 | 116 | 1364 | 1391 | 1512 | 1679 | 1809 |
| 10 | 410 | 391 | 349 | 411 | 364 | 335 | 287 | 221 | 164 | 84 | 903 | 909 | 909 | 841 | 958 |
| 11 | 81 | 78 | 71 | 68 | 55 | 49 | 39 | 31 | 21 | 11 | 146 | 153 | 153 | 173 | 175 |
| 12 | 96 | 92 | 88 | 83 | 72 | 60 | 49 | 38 | 26 | 13 | 155 | 161 | 169 | 176 | 184 |
| 13 | 969 | 1077 | 851 | 841 | 373 | 361 | 410 | 328 | 239 | 191 | 1892 | 2146 | 1697 | 1861 | 1655 |
| 14 | 487 | 469 | 425 | 430 | 386 | 346 | 264 | 194 | 152 | 72 | 941 | 982 | 1020 | 926 | 830 |
| 15 | 241 | 249 | 226 | 223 | 194 | 159 | 141 | 115 | 49 | 45 | 527 | 532 | 544 | 509 | 171 |
| 16 | 287 | 292 | 263 | 221 | 205 | 176 | 144 | 110 | 73 | 39 | 489 | 501 | 516 | 540 | 543 |
| 17 | 211 | 266 | 305 | 154 | 166 | 150 | 139 | 112 | 80 | 36 | 508 | 496 | 451 | 530 | 562 |
| 18 | 414 | 408 | 359 | 255 | 393 | 333 | 277 | 216 | 121 | 72 | 749 | 768 | 743 | 781 | 887 |
| 19 | 95 | 88 | 88 | 80 | 64 | 73 | 59 | 48 | 33 | 18 | 196 | 216 | 224 | 235 | 230 |
| 20 | 439 | 547 | 478 | 455 | 658 | 598 | 502 | 406 | 258 | 113 | 841 | 896 | 946 | 979 | 1044 |
| 21 | 772 | 798 | 792 | 707 | 689 | 608 | 511 | 391 | 251 | 124 | 1219 | 1250 | 1295 | 1296 | 1320 |
| 22 | 941 | 935 | 853 | 938 | 701 | 644 | 542 | 421 | 300 | 144 | 1737 | 1808 | 1898 | 1966 | 2017 |
| 23 | 283 | 268 | 268 | 329 | 227 | 257 | 194 | 102 | 59 | 56 | 647 | 656 | 659 | 741 | 818 |
| 24 | 171 | 170 | 161 | 135 | 120 | 97 | 102 | 63 | 35 | 18 | 364 | 448 | 528 | 574 | 610 |
| 25 | 421 | 421 | 374 | 342 | 301 | 269 | 225 | 182 | 124 | 63 | 885 | 1038 | 1076 | 1100 | 1102 |
| 26 | 83 | 100 | 139 | 107 | 104 | 138 | 114 | 85 | 50 | 25 | 148 | 289 | 295 | 303 | 330 |
| 27 | 148 | 147 | 150 | 133 | 121 | 106 | 92 | 61 | 51 | 27 | 313 | 335 | 364 | 383 | 408 |
| 28 | 47 | 41 | 34 | 76 | 93 | 81 | 64 | 50 | 35 | 18 | 101 | 76 | 81 | 87 | 90 |
| 29 | 78 | 75 | 68 | 66 | 57 | 58 | 36 | 37 | 34 | 22 | 158 | 169 | 170 | 163 | 167 |
| 30 | 918 | 861 | 812 | 745 | 693 | 597 | 509 | 382 | 269 | 146 | 1469 | 1532 | 1562 | 1672 | 1701 |
| 31 | 106 | 188 | 233 | 186 | 166 | 122 | 102 | 78 | 57 | 30 | 183 | 196 | 210 | 228 | 233 |
| 32 | 2148 | 2971 | 2716 | 2219 | 2361 | 1795 | 1656 | 1196 | 824 | 294 | 3149 | 2543 | 2937 | 2933 | 2863 |
| 33 | 410 | 483 | 452 | 420 | 398 | 337 | 319 | 248 | 174 | 84 | 973 | 1006 | 1020 | 1047 | 1187 |
| 34 | 35 | 32 | 86 | 123 | 58 | 37 | 30 | 24 | 18 | 10 | 94 | 107 | 81 | 91 | 93 |
| 35 | 1142 | 1205 | 935 | 1002 | 844 | 824 | 717 | 563 | 369 | 188 | 2095 | 2188 | 2263 | 2320 | 2351 |
| 36 | 275 | 286 | 400 | 274 | 235 | 199 | 160 | 122 | 83 | 58 | 525 | 541 | 551 | 463 | 470 |
| 37 | 296 | 282 | 279 | 251 | 217 | 184 | 152 | 122 | 89 | 46 | 509 | 538 | 560 | 597 | 612 |
| 38 | 1308 | 1271 | 1202 | 1066 | 1003 | 945 | 784 | 621 | 465 | 243 | 2322 | 2368 | 2412 | 2150 | 2197 |
| 39 | 102 | 100 | 95 | 63 | 60 | 54 | 49 | 42 | 29 | 15 | 182 | 184 | 188 | 193 | 199 |
| 40 | 209 | 201 | 205 | 224 | 210 | 193 | 158 | 119 | 91 | 41 | 457 | 495 | 436 | 510 | 517 |
| 41 | 43 | 42 | 49 | 46 | 48 | 41 | 34 | 28 | 18 | 9 | 100 | 105 | 122 | 119 | 124 |
| 42 | 319 | 269 | 243 | 283 | 214 | 185 | 161 | 99 | 73 | 38 | 736 | 946 | 1124 | 1176 | 1080 |
| 43 | 1240 | 1102 | 1140 | 973 | 912 | 861 | 662 | 499 | 331 | 181 | 2125 | 2351 | 2509 | 2332 | 3007 |
| 44 | 123 | 120 | 113 | 106 | 98 | 84 | 72 | 56 | 40 | 20 | 220 | 243 | 262 | 275 | 249 |
| 45 | 40 | 42 | 41 | 36 | 32 | 27 | 24 | 19 | 17 | 9 | 88 | 92 | 85 | 88 | 89 |
| 46 | 385 | 440 | 401 | 361 | 318 | 272 | 242 | 174 | 125 | 65 | 825 | 850 | 875 | 906 | 930 |
| 47 | 496 | 566 | 516 | 458 | 378 | 338 | 297 | 235 | 166 | 91 | 839 | 866 | 832 | 860 | 864 |
| 48 | 143 | 168 | 138 | 115 | 151 | 139 | 114 | 67 | 62 | 32 | 296 | 300 | 335 | 340 | 376 |
| 49 | 332 | 346 | 320 | 315 | 309 | 265 | 225 | 172 | 116 | 68 | 773 | 777 | 848 | 792 | 860 |
| 50 | 42 | 47 | 52 | 81 | 71 | 60 | 48 | 34 | 19 | 12 | 75 | 77 | 72 | 59 | 75 |

DRI OBVIOUSLY MADE A MISTAKE IN BENCHMARKING THIS SERIES.

TABLE 12 STOCK OF CONVENTIONAL WASHERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 309 | 350 | 321 | 297 | 234 | 238 | 233 | 173 | 144 | 148 | 123 | 113 | 79 | 70 | 47 |
| 2 | 14 | 9 | 9 | 9 | 7 | 7 | 6 | 6 | 5 | 4 | 7 | 6 | 66 | 6 | 6 |
| 3 | 90 | 94 | 93 | 82 | 66 | 71 | 67 | 56 | 51 | 39 | 38 | 38 | 41 | 41 | 43 |
| 4 | 214 | 223 | 158 | 100 | 149 | 137 | 223 | 146 | 84 | 76 | 89 | 135 | 68 | 64 | 64 |
| 5 | 881 | 574 | 542 | 1044 | 1415 | 1449 | 528 | 927 | 936 | 970 | 242 | 178 | 192 | 290 | 249 |
| 6 | 164 | 172 | 153 | 131 | 132 | 103 | 135 | 105 | 100 | 62 | 54 | 59 | 78 | 51 | 133 |
| 7 | 185 | 178 | 154 | 163 | 124 | 136 | 118 | 100 | 60 | 51 | 55 | 51 | 51 | 52 | 52 |
| 8 | 39 | 25 | 23 | 22 | 21 | 17 | 18 | 16 | 14 | 12 | 10 | 11 | 11 | 9 | 9 |
| 9 | 296 | 291 | 325 | 221 | 330 | 405 | 388 | 110 | 98 | 108 | 102 | 76 | 59 | 51 | 53 |
| 10 | 299 | 316 | 345 | 209 | 203 | 215 | 236 | 166 | 228 | 277 | 96 | 98 | 99 | 102 | 105 |
| 11 | 42 | 41 | 44 | 39 | 11 | 14 | 17 | 20 | 11 | 15 | 10 | 13 | 5 | 8 | 4 |
| 12 | 72 | 65 | 29 | 39 | 37 | 36 | 32 | 29 | 26 | 25 | 22 | 22 | 21 | 22 | 20 |
| 13 | 1263 | 1397 | 1055 | 870 | 1672 | 1917 | 2023 | 1637 | 1720 | 723 | 543 | 459 | 391 | 397 | 397 |
| 14 | 615 | 679 | 634 | 551 | 554 | 536 | 469 | 425 | 337 | 287 | 254 | 242 | 182 | 139 | 155 |
| 15 | 478 | 602 | 563 | 487 | 459 | 485 | 414 | 365 | 335 | 259 | 213 | 190 | 187 | 197 | 147 |
| 16 | 259 | 281 | 272 | 243 | 189 | 165 | 148 | 128 | 123 | 93 | 88 | 81 | 72 | 60 | 68 |
| 17 | 484 | 538 | 525 | 729 | 479 | 444 | 485 | 409 | 376 | 333 | 257 | 77 | 59 | 60 | 61 |
| 18 | 262 | 259 | 252 | 279 | 666 | 137 | 145 | 141 | 792 | 115 | 101 | 103 | 9 | 9 | 9 |
| 19 | 144 | 142 | 121 | 121 | 122 | 89 | 75 | 61 | 38 | 28 | 45 | 23 | 26 | 21 | 18 |
| 20 | 274 | 245 | 300 | 297 | 139 | 126 | 123 | 113 | 113 | 263 | 116 | 106 | 97 | 93 | 84 |
| 21 | 356 | 333 | 277 | 224 | 201 | 178 | 166 | 169 | 140 | 111 | 90 | 86 | 62 | 52 | 53 |
| 22 | 978 | 986 | 955 | 836 | 903 | 647 | 616 | 582 | 507 | 472 | 414 | 413 | 388 | 366 | 361 |
| 23 | 562 | 528 | 462 | 357 | 365 | 301 | 241 | 369 | 342 | 224 | 304 | 189 | 143 | 97 | 98 |
| 24 | 188 | 202 | 190 | 57 | 156 | 86 | 58 | 72 | 174 | 149 | 86 | 88 | 67 | 48 | 49 |
| 25 | 634 | 666 | 609 | 556 | 507 | 419 | 391 | 347 | 308 | 268 | 267 | 170 | 162 | 163 | 209 |
| 26 | 78 | 79 | 54 | 86 | 89 | 29 | 27 | 24 | 25 | 22 | 27 | 16 | 17 | 17 | 12 |
| 27 | 216 | 208 | 211 | 192 | 136 | 172 | 151 | 170 | 126 | 92 | 82 | 90 | 14 | 15 | 11 |
| 28 | 13 | 24 | 38 | 34 | 14 | 27 | 20 | 2 | 2 | 3 | 3 | 19 | 20 | 22 | 22 |
| 29 | 69 | 69 | 69 | 69 | 57 | 45 | 45 | 34 | 23 | 17 | 17 | 14 | 15 | 12 | 13 |
| 30 | 500 | 429 | 337 | 314 | 221 | 282 | 246 | 192 | 232 | 153 | 124 | 107 | 111 | 144 | 86 |
| 31 | 71 | 46 | 28 | 19 | 28 | 35 | 29 | 31 | 24 | 22 | 33 | 31 | 34 | 33 | 34 |
| 32 | 931 | 417 | 439 | 694 | 729 | 763 | 797 | 382 | 391 | 325 | 300 | 282 | 339 | 335 | 394 |
| 33 | 479 | 560 | 575 | 591 | 588 | 602 | 254 | 205 | 172 | 176 | 180 | 183 | 185 | 211 | 280 |
| 34 | 115 | 126 | 99 | 122 | 116 | 138 | 132 | 133 | 131 | 124 | 56 | 37 | 88 | 90 | 97 |
| 35 | 1279 | 1180 | 1154 | 1216 | 1177 | 951 | 853 | 809 | 718 | 690 | 582 | 631 | 604 | 645 | 650 |
| 36 | 204 | 128 | 107 | 78 | 103 | 235 | 168 | 148 | 129 | 81 | 65 | 67 | 23 | 11 | 12 |
| 37 | 161 | 138 | 100 | 121 | 110 | 105 | 86 | 82 | 62 | 60 | 49 | 47 | 5 | 12 | 12 |
| 38 | 1572 | 1591 | 1580 | 1555 | 1570 | 1221 | 1126 | 1087 | 869 | 887 | 735 | 531 | 707 | 751 | 681 |
| 39 | 68 | 48 | 41 | 57 | 50 | 44 | 38 | 19 | 20 | 19 | 19 | 18 | 16 | 13 | 11 |
| 40 | 176 | 122 | 121 | 100 | 62 | 63 | 64 | 64 | 64 | 64 | 65 | 66 | 66 | 68 | 68 |
| 41 | 121 | 176 | 167 | 187 | 144 | 110 | 134 | 46 | 51 | 56 | 61 | 63 | 74 | 65 | 123 |
| 42 | 448 | 438 | 342 | 333 | 325 | 316 | 295 | 248 | 370 | 194 | 186 | 138 | 117 | 121 | 125 |
| 43 | 603 | 604 | 513 | 373 | 387 | 275 | 300 | 268 | 250 | 213 | 232 | 197 | 158 | 154 | 159 |
| 44 | 79 | 70 | 59 | 54 | 47 | 45 | 37 | 31 | 28 | 26 | 26 | 16 | 18 | 23 | 24 |
| 45 | 54 | 56 | 42 | 43 | 36 | 37 | 31 | 32 | 30 | 17 | 17 | 14 | 14 | 13 | 11 |
| 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47 | 233 | 166 | 142 | 176 | 157 | 128 | 118 | 98 | 83 | 73 | 65 | 65 | 37 | 44 | 42 |
| 48 | 323 | 328 | 308 | 297 | 136 | 251 | 231 | 218 | 197 | 174 | 174 | 155 | 157 | 159 | 161 |
| 49 | 670 | 722 | 683 | 594 | 535 | 478 | 448 | 427 | 410 | 377 | 354 | 352 | 241 | 334 | 319 |
| 50 | 36 | 16 | 42 | 18 | 23 | 21 | 27 | 24 | 27 | 17 | 12 | 12 | 26 | 22 | 18 |

TABLE 13 STOCK OF ELECTRIC DRYERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 52 | 69 | 79 | 98 | 123 | 139 | 199 | 200 | 244 | 290 | 310 | 355 | 383 | 415 | 447 |
| 2 | 13 | 16 | 21 | 33 | 32 | 28 | 23 | 24 | 21 | 32 | 40 | 35 | 19 | 43 | 45 |
| 3 | 15 | 20 | 23 | 26 | 32 | 34 | 46 | 62 | 76 | 94 | 107 | 124 | 152 | 181 | 224 |
| 4 | 20 | 21 | 35 | 38 | 52 | 46 | 51 | 68 | 79 | 87 | 152 | 158 | 110 | 123 | 135 |
| 5 | 511 | 611 | 688 | 676 | 823 | 933 | 1059 | 1231 | 1341 | 1495 | 1719 | 1830 | 1797 | 1921 | 2013 |
| 6 | 62 | 85 | 96 | 108 | 122 | 136 | 156 | 167 | 200 | 231 | 262 | 290 | 333 | 418 | 461 |
| 7 | 106 | 127 | 128 | 149 | 170 | 192 | 223 | 257 | 273 | 315 | 361 | 384 | 408 | 512 | 519 |
| 8 | 22 | 24 | 26 | 30 | 41 | 43 | 45 | 51 | 55 | 61 | 66 | 71 | 76 | 74 | 79 |
| 9 | 109 | 123 | 158 | 171 | 225 | 250 | 287 | 526 | 413 | 496 | 586 | 645 | 778 | 977 | 1089 |
| 10 | 61 | 75 | 75 | 94 | 122 | 144 | 225 | 140 | 294 | 356 | 420 | 482 | 499 | 727 | 743 |
| 11 | 11 | 12 | 14 | 16 | 20 | 23 | 25 | 32 | 40 | 48 | 56 | 61 | 62 | 70 | 67 |
| 12 | 58 | 64 | 69 | 73 | 79 | 87 | 93 | 101 | 107 | 114 | 122 | 124 | 115 | 120 | 124 |
| 13 | 301 | 385 | 401 | 270 | 328 | 386 | 434 | 537 | 573 | 664 | 728 | 872 | 692 | 724 | 762 |
| 14 | 280 | 319 | 200 | 273 | 297 | 331 | 382 | 446 | 506 | 539 | 576 | 610 | 654 | 544 | 548 |
| 15 | 137 | 336 | 241 | 300 | 304 | 285 | 314 | 310 | 325 | 308 | 322 | 319 | 338 | 405 | 409 |
| 16 | 91 | 104 | 122 | 140 | 174 | 193 | 209 | 226 | 236 | 264 | 260 | 281 | 297 | 320 | 303 |
| 17 | 75 | 95 | 99 | 120 | 138 | 151 | 160 | 173 | 206 | 252 | 274 | 261 | 269 | 346 | 365 |
| 18 | 53 | 60 | 79 | 107 | 131 | 138 | 153 | 174 | 211 | 220 | 246 | 270 | 296 | 316 | 271 |
| 19 | 31 | 41 | 40 | 40 | 47 | 72 | 78 | 85 | 98 | 104 | 107 | 108 | 115 | 127 | 108 |
| 20 | 101 | 119 | 141 | 187 | 212 | 241 | 274 | 319 | 294 | 480 | 380 | 406 | 467 | 500 | 556 |
| 21 | 140 | 174 | 199 | 237 | 281 | 317 | 362 | 424 | 405 | 440 | 485 | 511 | 560 | 559 | 584 |
| 22 | 428 | 573 | 611 | 574 | 619 | 749 | 778 | 855 | 881 | 831 | 850 | 874 | 936 | 982 | 1020 |
| 23 | 158 | 185 | 213 | 223 | 229 | 238 | 263 | 364 | 397 | 390 | 413 | 429 | 348 | 357 | 485 |
| 24 | 21 | 19 | 20 | 24 | 36 | 58 | 85 | 78 | 68 | 95 | 155 | 212 | 268 | 334 | 352 |
| 25 | 125 | 132 | 140 | 158 | 168 | 189 | 211 | 233 | 270 | 306 | 386 | 377 | 392 | 409 | 410 |
| 26 | 55 | 55 | 78 | 77 | 88 | 105 | 108 | 112 | 119 | 117 | 117 | 140 | 145 | 149 | 169 |
| 27 | 77 | 87 | 104 | 112 | 123 | 133 | 155 | 175 | 182 | 203 | 217 | 229 | 278 | 292 | 373 |
| 28 | 9 | 10 | 11 | 28 | 41 | 17 | 56 | 54 | 54 | 50 | 50 | 33 | 35 | 38 | 40 |
| 29 | 21 | 31 | 31 | 33 | 33 | 38 | 48 | 60 | 73 | 73 | 86 | 95 | 114 | 132 | 123 |
| 30 | 159 | 182 | 212 | 243 | 324 | 292 | 361 | 336 | 422 | 532 | 488 | 511 | 531 | 589 | 642 |
| 31 | 22 | 22 | 19 | 31 | 34 | 38 | 44 | 49 | 64 | 70 | 82 | 85 | 96 | 104 | 106 |
| 32 | 451 | 501 | 553 | 597 | 676 | 685 | 747 | 1121 | 1154 | 1180 | 1198 | 1081 | 1006 | 953 | 852 |
| 33 | 50 | 64 | 78 | 81 | 118 | 130 | 188 | 200 | 257 | 299 | 367 | 415 | 553 | 583 | 643 |
| 34 | 52 | 66 | 73 | 66 | 83 | 74 | 108 | 104 | 113 | 88 | 100 | 88 | 120 | 122 | 110 |
| 35 | 665 | 739 | 803 | 796 | 855 | 945 | 1041 | 1177 | 1244 | 1348 | 1393 | 1456 | 1481 | 1459 | 1497 |
| 36 | 43 | 52 | 68 | 94 | 128 | 146 | 160 | 184 | 186 | 192 | 245 | 267 | 251 | 216 | 219 |
| 37 | 215 | 248 | 276 | 286 | 299 | 329 | 327 | 387 | 394 | 411 | 440 | 480 | 505 | 538 | 591 |
| 38 | 496 | 565 | 625 | 683 | 731 | 823 | 895 | 1014 | 985 | 1151 | 1224 | 1303 | 1309 | 1238 | 1247 |
| 39 | 21 | 24 | 32 | 24 | 31 | 38 | 45 | 47 | 62 | 78 | 84 | 92 | 101 | 110 | 117 |
| 40 | 24 | 26 | 27 | 29 | 31 | 40 | 55 | 75 | 144 | 149 | 170 | 185 | 181 | 200 | 205 |
| 41 | 43 | 52 | 53 | 58 | 78 | 78 | 87 | 85 | 86 | 93 | 94 | 102 | 104 | 123 | 150 |
| 42 | 110 | 125 | 140 | 131 | 144 | 160 | 204 | 304 | 360 | 386 | 468 | 501 | 538 | 551 | 583 |
| 43 | 173 | 252 | 284 | 308 | 353 | 427 | 475 | 538 | 645 | 782 | 893 | 990 | 1023 | 1116 | 973 |
| 44 | 45 | 52 | 56 | 69 | 78 | 75 | 93 | 99 | 114 | 112 | 121 | 135 | 158 | 170 | 142 |
| 45 | 13 | 16 | 18 | 20 | 25 | 27 | 29 | 36 | 42 | 46 | 53 | 57 | 54 | 57 | 57 |
| 46 | 95 | 137 | 156 | 182 | 189 | 222 | 264 | 278 | 315 | 391 | 418 | 487 | 524 | 636 | 692 |
| 47 | 343 | 420 | 433 | 465 | 472 | 500 | 538 | 586 | 620 | 664 | 724 | 710 | 753 | 773 | 780 |
| 48 | 94 | 152 | 125 | 145 | 161 | 162 | 170 | 207 | 198 | 224 | 228 | 240 | 249 | 301 | 320 |
| 49 | 233 | 282 | 317 | 333 | 358 | 359 | 409 | 434 | 478 | 488 | 537 | 544 | 633 | 651 | 684 |
| 50 | 19 | 35 | 34 | 48 | 34 | 35 | 43 | 29 | 39 | 45 | 49 | 51 | 52 | 47 | 49 |

TABLE 14 STOCK OF HOUSES (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 918 | 1053 | 1047 | 1054 | 1052 | 1056 | 1065 | 1069 | 1069 | 1072 | 1074 | 1079 | 1083 | 1116 | 1118 |
| 2 | 59 | 59 | 62 | 68 | 70 | 71 | 70 | 71 | 76 | 77 | 83 | 85 | 87 | 96 | 97 |
| 3 | 387 | 409 | 426 | 444 | 457 | 470 | 483 | 497 | 516 | 539 | 566 | 613 | 660 | 709 | 741 |
| 4 | 540 | 664 | 667 | 674 | 664 | 662 | 656 | 651 | 651 | 642 | 639 | 648 | 648 | 656 | 655 |
| 5 | 5238 | 5428 | 5594 | 5796 | 6015 | 6187 | 6315 | 6460 | 6574 | 6680 | 6797 | 6945 | 7128 | 7303 | 7457 |
| 6 | 551 | 584 | 606 | 630 | 635 | 641 | 649 | 657 | 675 | 689 | 713 | 747 | 794 | 841 | 874 |
| 7 | 774 | 791 | 798 | 822 | 839 | 859 | 877 | 891 | 908 | 930 | 952 | 969 | 985 | 1004 | 1017 |
| 8 | 134 | 137 | 138 | 144 | 148 | 152 | 157 | 160 | 164 | 166 | 169 | 173 | 176 | 181 | 182 |
| 9 | 1659 | 1717 | 1779 | 1843 | 1905 | 1976 | 2037 | 2113 | 2197 | 2289 | 2395 | 2525 | 2677 | 2868 | 2983 |
| 10 | 1109 | 1141 | 1148 | 1181 | 1212 | 1245 | 1296 | 1329 | 1368 | 1399 | 1422 | 1450 | 1468 | 1513 | 1548 |
| 11 | 157 | 161 | 165 | 164 | 174 | 179 | 185 | 189 | 195 | 202 | 209 | 215 | 224 | 232 | 241 |
| 12 | 201 | 206 | 207 | 208 | 209 | 212 | 212 | 214 | 218 | 220 | 226 | 235 | 244 | 254 | 262 |
| 13 | 3182 | 3258 | 3296 | 3334 | 3378 | 3422 | 3464 | 3500 | 3538 | 3586 | 3621 | 3660 | 3715 | 3771 | 3804 |
| 14 | 1430 | 1529 | 1526 | 1551 | 1566 | 1582 | 1607 | 1620 | 1643 | 1651 | 1664 | 1682 | 1693 | 1717 | 1730 |
| 15 | 861 | 930 | 909 | 929 | 925 | 918 | 914 | 912 | 918 | 914 | 923 | 927 | 923 | 924 | 925 |
| 16 | 695 | 774 | 768 | 773 | 771 | 765 | 759 | 757 | 754 | 750 | 750 | 752 | 751 | 755 | 751 |
| 17 | 879 | 923 | 950 | 981 | 970 | 976 | 981 | 991 | 1003 | 1006 | 1021 | 1019 | 1046 | 1073 | 1085 |
| 18 | 929 | 947 | 954 | 982 | 1006 | 1025 | 1042 | 1056 | 1081 | 1092 | 1103 | 1124 | 1147 | 1170 | 1184 |
| 19 | 290 | 298 | 296 | 295 | 295 | 294 | 297 | 301 | 304 | 305 | 312 | 318 | 325 | 339 | 330 |
| 20 | 1153 | 1234 | 1262 | 1296 | 1329 | 1364 | 1393 | 1415 | 1437 | 1458 | 1481 | 1511 | 1545 | 1581 | 1616 |
| 21 | 1581 | 1615 | 1629 | 1639 | 1662 | 1676 | 1700 | 1725 | 1750 | 1777 | 1804 | 1823 | 1854 | 1885 | 1904 |
| 22 | 2331 | 2362 | 2380 | 2407 | 2451 | 2503 | 2555 | 2594 | 2645 | 2691 | 2731 | 2782 | 2837 | 2894 | 2933 |
| 23 | 1016 | 1057 | 1066 | 1093 | 1107 | 1118 | 1128 | 1138 | 1155 | 1162 | 1181 | 1197 | 1203 | 1229 | 1244 |
| 24 | 583 | 598 | 606 | 622 | 619 | 623 | 626 | 634 | 640 | 638 | 661 | 677 | 684 | 734 | 748 |
| 25 | 1410 | 1566 | 1562 | 1559 | 1567 | 1576 | 1585 | 1583 | 1592 | 1587 | 1588 | 1603 | 1612 | 1624 | 1627 |
| 26 | 203 | 204 | 205 | 209 | 210 | 213 | 215 | 219 | 223 | 223 | 226 | 232 | 237 | 243 | 249 |
| 27 | 446 | 466 | 498 | 480 | 480 | 485 | 489 | 488 | 485 | 477 | 491 | 502 | 507 | 518 | 529 |
| 28 | 95 | 105 | 115 | 131 | 139 | 145 | 142 | 147 | 152 | 158 | 166 | 173 | 183 | 196 | 200 |
| 29 | 186 | 190 | 193 | 198 | 200 | 203 | 209 | 215 | 221 | 226 | 232 | 241 | 250 | 258 | 263 |
| 30 | 1849 | 1891 | 1934 | 1971 | 2017 | 2064 | 2111 | 2151 | 2187 | 2221 | 2257 | 2294 | 2340 | 2383 | 2417 |
| 31 | 262 | 271 | 278 | 288 | 295 | 297 | 292 | 289 | 293 | 298 | 305 | 315 | 325 | 339 | 346 |
| 32 | 5371 | 5439 | 5507 | 5590 | 5672 | 5731 | 5796 | 5871 | 5925 | 5977 | 6026 | 6056 | 6100 | 6176 | 6212 |
| 33 | 1244 | 1393 | 1412 | 1432 | 1448 | 1465 | 1484 | 1503 | 1530 | 1539 | 1559 | 1585 | 1603 | 1645 | 1656 |
| 34 | 178 | 180 | 182 | 186 | 185 | 186 | 186 | 185 | 187 | 186 | 188 | 190 | 193 | 196 | 198 |
| 35 | 2945 | 3058 | 3082 | 3128 | 3160 | 3209 | 3242 | 3260 | 3306 | 3345 | 3379 | 3415 | 3464 | 3515 | 3544 |
| 36 | 767 | 782 | 789 | 808 | 819 | 833 | 837 | 849 | 865 | 877 | 896 | 922 | 937 | 967 | 982 |
| 37 | 581 | 588 | 606 | 623 | 637 | 651 | 660 | 653 | 681 | 698 | 714 | 747 | 774 | 800 | 819 |
| 38 | 3437 | 3474 | 3493 | 3520 | 3554 | 3592 | 3635 | 3654 | 3703 | 3752 | 3786 | 3825 | 3865 | 3919 | 3958 |
| 39 | 267 | 270 | 272 | 274 | 278 | 281 | 285 | 288 | 293 | 297 | 300 | 303 | 307 | 309 | 311 |
| 40 | 628 | 658 | 663 | 690 | 696 | 711 | 730 | 734 | 744 | 749 | 766 | 787 | 784 | 802 | 812 |
| 41 | 199 | 207 | 204 | 210 | 208 | 207 | 207 | 207 | 208 | 206 | 207 | 212 | 213 | 216 | 218 |
| 42 | 1035 | 1053 | 1071 | 1090 | 1112 | 1134 | 1159 | 1183 | 1210 | 1231 | 1256 | 1305 | 1325 | 1372 | 1418 |
| 43 | 2939 | 3147 | 3206 | 3284 | 3330 | 3389 | 3429 | 3493 | 3578 | 3552 | 3625 | 3707 | 3770 | 3872 | 3935 |
| 44 | 251 | 259 | 265 | 273 | 276 | 282 | 286 | 287 | 292 | 296 | 304 | 312 | 325 | 341 | 350 |
| 45 | 114 | 117 | 116 | 116 | 118 | 120 | 124 | 127 | 130 | 132 | 136 | 137 | 139 | 143 | 144 |
| 46 | 1112 | 1157 | 1186 | 1221 | 1254 | 1285 | 1313 | 1342 | 1374 | 1407 | 1432 | 1475 | 1518 | 1572 | 1614 |
| 47 | 942 | 977 | 994 | 1018 | 1022 | 1039 | 1050 | 1076 | 1110 | 1139 | 1161 | 1164 | 1181 | 1210 | 1222 |
| 48 | 540 | 562 | 559 | 555 | 555 | 554 | 554 | 556 | 557 | 558 | 565 | 573 | 582 | 590 | 598 |
| 49 | 1176 | 1306 | 1310 | 1316 | 1329 | 1338 | 1341 | 1331 | 1347 | 1353 | 1357 | 1368 | 1381 | 1398 | 1405 |
| 50 | 103 | 112 | 103 | 108 | 108 | 106 | 105 | 106 | 107 | 106 | 108 | 111 | 113 | 116 | 121 |

## TABLES 15 TO 24: ALTERNATE ANNUAL STOCK DATA FOR ELECTRIC AND GAS APPLIANCES

These series were derived using the U.S. Census of Housing [12] as the principal raw data source. They are expressed as saturation rates both here and in the data base. Conversion to appliance stocks requires only multiplication by the series of annual housing stocks (Table 14).

See section B for further discussion.

TABLE 15 SATURATION RATE OF HOME FREEZERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 186 | 199 | 220 | 239 | 259 | 279 | 302 | 323 | 342 | 363 | 384 | 406 | 429 | 452 | 491 |
| 2 | 244 | 255 | 272 | 288 | 304 | 320 | 337 | 352 | 365 | 380 | 393 | 408 | 424 | 439 | 470 |
| 3 | 170 | 172 | 181 | 186 | 193 | 198 | 204 | 209 | 212 | 216 | 218 | 223 | 228 | 232 | 248 |
| 4 | 209 | 220 | 237 | 254 | 272 | 288 | 306 | 323 | 337 | 353 | 369 | 386 | 404 | 421 | 455 |
| 5 | 152 | 154 | 162 | 169 | 175 | 181 | 186 | 190 | 195 | 199 | 203 | 207 | 212 | 216 | 232 |
| 6 | 237 | 242 | 255 | 265 | 277 | 287 | 297 | 307 | 314 | 322 | 330 | 338 | 348 | 356 | 380 |
| 7 | 126 | 132 | 142 | 151 | 160 | 167 | 177 | 186 | 193 | 202 | 209 | 218 | 228 | 236 | 258 |
| 8 | 200 | 204 | 214 | 222 | 231 | 237 | 246 | 253 | 258 | 264 | 269 | 274 | 282 | 288 | 308 |
| 9 | 119 | 123 | 132 | 139 | 147 | 154 | 162 | 171 | 176 | 184 | 190 | 198 | 207 | 214 | 234 |
| 10 | 194 | 204 | 220 | 234 | 250 | 265 | 282 | 296 | 310 | 324 | 338 | 353 | 370 | 386 | 417 |
| 11 | 181 | 181 | 186 | 190 | 194 | 197 | 200 | 202 | 202 | 203 | 203 | 204 | 205 | 205 | 218 |
| 12 | 372 | 382 | 400 | 415 | 431 | 446 | 461 | 474 | 485 | 497 | 508 | 520 | 532 | 543 | 571 |
| 13 | 162 | 167 | 176 | 185 | 194 | 202 | 211 | 218 | 225 | 232 | 237 | 245 | 254 | 260 | 281 |
| 14 | 234 | 240 | 251 | 260 | 272 | 281 | 291 | 299 | 306 | 313 | 320 | 328 | 336 | 344 | 367 |
| 15 | 299 | 307 | 322 | 335 | 348 | 361 | 374 | 385 | 394 | 404 | 413 | 424 | 435 | 445 | 471 |
| 16 | 223 | 234 | 249 | 263 | 278 | 292 | 306 | 319 | 330 | 343 | 355 | 367 | 382 | 395 | 424 |
| 17 | 166 | 174 | 189 | 202 | 216 | 230 | 245 | 258 | 269 | 283 | 297 | 311 | 325 | 341 | 371 |
| 18 | 231 | 242 | 259 | 274 | 291 | 307 | 324 | 339 | 352 | 367 | 380 | 396 | 412 | 427 | 458 |
| 19 | 156 | 161 | 172 | 181 | 191 | 200 | 211 | 220 | 228 | 236 | 244 | 253 | 263 | 272 | 295 |
| 20 | 142 | 148 | 158 | 169 | 179 | 190 | 200 | 211 | 218 | 228 | 237 | 249 | 260 | 269 | 295 |
| 21 | 70 | 74 | 244 | 86 | 93 | 98 | 105 | 111 | 116 | 121 | 128 | 134 | 142 | 148 | 165 |
| 22 | 185 | 190 | 105 | 214 | 225 | 236 | 246 | 257 | 265 | 274 | 283 | 293 | 304 | 314 | 338 |
| 23 | 310 | 318 | 240 | 347 | 360 | 373 | 386 | 397 | 406 | 416 | 425 | 436 | 447 | 457 | 483 |
| 24 | 242 | 257 | 473 | 299 | 321 | 342 | 365 | 385 | 404 | 424 | 444 | 464 | 486 | 506 | 543 |
| 25 | 194 | 202 | 199 | 228 | 242 | 255 | 268 | 279 | 290 | 302 | 313 | 325 | 338 | 350 | 378 |
| 26 | 386 | 393 | 199 | 419 | 431 | 442 | 454 | 463 | 470 | 478 | 485 | 493 | 502 | 509 | 533 |
| 27 | 296 | 306 | 339 | 337 | 352 | 367 | 382 | 394 | 404 | 417 | 429 | 441 | 454 | 466 | 494 |
| 28 | 200 | 204 | 165 | 221 | 228 | 235 | 242 | 248 | 251 | 257 | 260 | 265 | 272 | 277 | 295 |
| 29 | 132 | 137 | 61 | 154 | 165 | 172 | 183 | 190 | 198 | 205 | 213 | 222 | 231 | 240 | 260 |
| 30 | 114 | 117 | 223 | 132 | 139 | 146 | 153 | 158 | 163 | 170 | 175 | 181 | 188 | 194 | 211 |
| 31 | 223 | 231 | 80 | 255 | 265 | 277 | 288 | 297 | 306 | 315 | 323 | 333 | 343 | 352 | 377 |
| 32 | 93 | 97 | 203 | 111 | 119 | 125 | 133 | 139 | 146 | 153 | 158 | 167 | 174 | 181 | 200 |
| 33 | 212 | 223 | 334 | 256 | 273 | 288 | 306 | 322 | 336 | 352 | 367 | 383 | 400 | 416 | 449 |
| 34 | 448 | 456 | 279 | 487 | 501 | 514 | 528 | 538 | 547 | 557 | 565 | 575 | 585 | 594 | 619 |
| 35 | 180 | 186 | 216 | 209 | 221 | 232 | 244 | 254 | 262 | 272 | 281 | 292 | 302 | 313 | 338 |
| 36 | 176 | 185 | 408 | 211 | 223 | 236 | 249 | 260 | 271 | 283 | 294 | 306 | 319 | 330 | 359 |
| 37 | 311 | 322 | 323 | 353 | 370 | 385 | 400 | 414 | 425 | 437 | 449 | 461 | 475 | 487 | 515 |
| 38 | 148 | 154 | 213 | 172 | 183 | 190 | 200 | 209 | 216 | 223 | 231 | 239 | 248 | 256 | 278 |
| 39 | 53 | 56 | 147 | 65 | 72 | 78 | 83 | 88 | 95 | 101 | 107 | 112 | 121 | 128 | 144 |
| 40 | 198 | 208 | 125 | 239 | 254 | 269 | 285 | 299 | 311 | 325 | 339 | 355 | 370 | 385 | 416 |
| 41 | 361 | 371 | 389 | 404 | 419 | 434 | 449 | 461 | 472 | 484 | 494 | 506 | 519 | 530 | 557 |
| 42 | 203 | 214 | 232 | 246 | 264 | 281 | 299 | 315 | 329 | 345 | 361 | 377 | 395 | 412 | 445 |
| 43 | 204 | 212 | 223 | 234 | 245 | 256 | 265 | 276 | 283 | 292 | 300 | 309 | 319 | 328 | 352 |
| 44 | 250 | 259 | 276 | 290 | 305 | 319 | 334 | 347 | 359 | 371 | 383 | 396 | 410 | 423 | 452 |
| 45 | 205 | 212 | 223 | 234 | 245 | 255 | 265 | 274 | 282 | 290 | 297 | 307 | 316 | 325 | 348 |
| 46 | 175 | 183 | 195 | 207 | 218 | 231 | 242 | 254 | 263 | 274 | 283 | 296 | 308 | 319 | 345 |
| 47 | 251 | 260 | 279 | 294 | 310 | 325 | 342 | 357 | 369 | 384 | 397 | 411 | 427 | 441 | 472 |
| 48 | 153 | 161 | 175 | 186 | 199 | 211 | 225 | 237 | 246 | 260 | 271 | 283 | 297 | 311 | 339 |
| 49 | 269 | 279 | 294 | 307 | 321 | 334 | 348 | 360 | 369 | 380 | 390 | 402 | 414 | 425 | 452 |
| 50 | 337 | 348 | 366 | 381 | 397 | 412 | 428 | 441 | 452 | 465 | 477 | 489 | 502 | 514 | 543 |

TABLE 16 SATURATION RATE OF ROOM AIR CONDITIONERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 180 | 189 | 200 | 211 | 228 | 260 | 292 | 325 | 370 | 406 | 460 | 511 | 544 | 552 | 575 |
| 2 | 8 | 6 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3 | 125 | 120 | 116 | 111 | 111 | 119 | 125 | 130 | 142 | 147 | 162 | 176 | 180 | 170 | 167 |
| 4 | 149 | 160 | 170 | 180 | 195 | 227 | 256 | 288 | 332 | 367 | 422 | 473 | 508 | 517 | 541 |
| 5 | 82 | 83 | 86 | 88 | 93 | 105 | 116 | 130 | 148 | 162 | 189 | 216 | 232 | 230 | 240 |
| 6 | 46 | 48 | 50 | 51 | 55 | 63 | 72 | 80 | 93 | 105 | 125 | 146 | 158 | 160 | 169 |
| 7 | 72 | 79 | 88 | 97 | 111 | 134 | 160 | 189 | 228 | 264 | 319 | 375 | 417 | 436 | 470 |
| 8 | 186 | 197 | 211 | 223 | 242 | 279 | 314 | 352 | 400 | 439 | 497 | 550 | 585 | 595 | 620 |
| 9 | 189 | 202 | 216 | 228 | 250 | 288 | 324 | 364 | 413 | 453 | 513 | 566 | 602 | 613 | 638 |
| 10 | 130 | 139 | 148 | 156 | 170 | 195 | 222 | 251 | 290 | 322 | 373 | 421 | 454 | 462 | 486 |
| 11 | 15 | 18 | 21 | 24 | 30 | 38 | 49 | 62 | 80 | 102 | 134 | 172 | 208 | 230 | 264 |
| 12 | 58 | 59 | 59 | 60 | 62 | 69 | 75 | 83 | 93 | 102 | 119 | 134 | 143 | 139 | 144 |
| 13 | 144 | 153 | 163 | 174 | 190 | 220 | 250 | 283 | 325 | 362 | 417 | 469 | 504 | 514 | 540 |
| 14 | 87 | 93 | 98 | 105 | 115 | 134 | 153 | 176 | 207 | 232 | 274 | 316 | 347 | 355 | 377 |
| 15 | 119 | 124 | 130 | 135 | 147 | 167 | 189 | 213 | 244 | 269 | 313 | 353 | 382 | 386 | 404 |
| 16 | 302 | 306 | 309 | 310 | 320 | 347 | 371 | 396 | 429 | 453 | 495 | 531 | 551 | 545 | 554 |
| 17 | 93 | 100 | 109 | 116 | 130 | 153 | 176 | 204 | 242 | 274 | 324 | 374 | 410 | 422 | 450 |
| 18 | 276 | 288 | 301 | 313 | 334 | 373 | 408 | 446 | 493 | 529 | 582 | 629 | 658 | 663 | 683 |
| 19 | 11 | 11 | 11 | 13 | 13 | 15 | 17 | 19 | 22 | 24 | 28 | 33 | 36 | 35 | 37 |
| 20 | 144 | 151 | 160 | 169 | 183 | 209 | 237 | 267 | 305 | 338 | 388 | 436 | 468 | 476 | 498 |
| 21 | 52 | 57 | 62 | 68 | 75 | 92 | 107 | 126 | 153 | 177 | 217 | 259 | 290 | 302 | 328 |
| 22 | 51 | 55 | 59 | 63 | 69 | 82 | 95 | 111 | 132 | 151 | 183 | 216 | 241 | 248 | 267 |
| 23 | 59 | 65 | 73 | 79 | 92 | 111 | 133 | 158 | 193 | 225 | 274 | 325 | 366 | 383 | 416 |
| 24 | 186 | 197 | 209 | 222 | 242 | 277 | 311 | 350 | 397 | 435 | 493 | 545 | 580 | 590 | 614 |
| 25 | 181 | 186 | 190 | 195 | 205 | 230 | 251 | 277 | 310 | 335 | 378 | 418 | 442 | 441 | 455 |
| 26 | 35 | 35 | 36 | 36 | 37 | 42 | 46 | 51 | 57 | 62 | 73 | 83 | 88 | 86 | 88 |
| 27 | 214 | 217 | 221 | 223 | 232 | 256 | 277 | 301 | 332 | 355 | 396 | 433 | 454 | 450 | 461 |
| 28 | 64 | 65 | 68 | 69 | 74 | 83 | 93 | 105 | 120 | 133 | 156 | 179 | 193 | 191 | 200 |
| 29 | 35 | 36 | 38 | 40 | 43 | 50 | 57 | 65 | 77 | 87 | 105 | 123 | 135 | 138 | 147 |
| 30 | 184 | 200 | 218 | 237 | 263 | 307 | 351 | 398 | 455 | 503 | 568 | 626 | 665 | 681 | 709 |
| 31 | 64 | 68 | 73 | 77 | 83 | 97 | 112 | 130 | 153 | 174 | 208 | 242 | 267 | 273 | 291 |
| 32 | 124 | 133 | 142 | 151 | 167 | 194 | 222 | 253 | 294 | 328 | 382 | 433 | 468 | 479 | 505 |
| 33 | 92 | 98 | 106 | 112 | 125 | 146 | 167 | 194 | 227 | 257 | 304 | 350 | 383 | 393 | 418 |
| 34 | 21 | 22 | 26 | 28 | 32 | 39 | 47 | 56 | 69 | 82 | 103 | 128 | 148 | 156 | 172 |
| 35 | 70 | 74 | 80 | 84 | 93 | 109 | 125 | 144 | 169 | 190 | 228 | 265 | 292 | 297 | 318 |
| 36 | 333 | 334 | 337 | 338 | 347 | 374 | 397 | 422 | 455 | 477 | 518 | 553 | 571 | 564 | 573 |
| 37 | 36 | 36 | 37 | 38 | 40 | 45 | 50 | 56 | 64 | 70 | 83 | 96 | 102 | 102 | 106 |
| 38 | 111 | 119 | 126 | 134 | 147 | 171 | 195 | 222 | 258 | 288 | 338 | 385 | 418 | 427 | 451 |
| 39 | 48 | 51 | 54 | 58 | 64 | 74 | 86 | 100 | 119 | 135 | 163 | 193 | 214 | 220 | 237 |
| 40 | 128 | 137 | 146 | 154 | 170 | 197 | 223 | 255 | 295 | 329 | 382 | 432 | 467 | 476 | 502 |
| 41 | 70 | 75 | 80 | 87 | 96 | 112 | 130 | 149 | 177 | 202 | 242 | 282 | 311 | 319 | 341 |
| 42 | 240 | 251 | 264 | 274 | 295 | 332 | 367 | 404 | 451 | 488 | 542 | 591 | 622 | 628 | 649 |
| 43 | 339 | 342 | 345 | 347 | 357 | 386 | 410 | 436 | 470 | 494 | 536 | 572 | 591 | 585 | 595 |
| 44 | 66 | 69 | 70 | 73 | 78 | 88 | 98 | 111 | 129 | 142 | 167 | 191 | 208 | 208 | 218 |
| 45 | 21 | 21 | 21 | 22 | 22 | 26 | 29 | 32 | 37 | 40 | 48 | 55 | 59 | 58 | 61 |
| 46 | 129 | 137 | 144 | 153 | 166 | 191 | 217 | 245 | 283 | 314 | 363 | 411 | 442 | 450 | 473 |
| 47 | 30 | 30 | 31 | 31 | 32 | 36 | 40 | 44 | 51 | 55 | 65 | 74 | 79 | 78 | 80 |
| 48 | 62 | 65 | 68 | 70 | 77 | 89 | 102 | 116 | 135 | 152 | 181 | 211 | 231 | 234 | 248 |
| 49 | 51 | 56 | 61 | 65 | 73 | 88 | 102 | 121 | 144 | 167 | 204 | 242 | 272 | 282 | 306 |
| 50 | 41 | 41 | 42 | 42 | 43 | 48 | 52 | 58 | 65 | 69 | 80 | 92 | 97 | 95 | 97 |

TABLE 17 SATURATION RATE OF ELECTRIC RANGES (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 462 | 459 | 467 | 475 | 487 | 499 | 512 | 522 | 527 | 541 | 551 | 558 | 570 | 585 | 605 |
| 2 | 488 | 484 | 490 | 496 | 507 | 517 | 528 | 537 | 540 | 552 | 560 | 566 | 576 | 589 | 608 |
| 3 | 180 | 186 | 200 | 214 | 232 | 251 | 271 | 291 | 307 | 330 | 351 | 371 | 395 | 423 | 457 |
| 4 | 129 | 130 | 137 | 144 | 153 | 162 | 172 | 181 | 188 | 200 | 209 | 218 | 232 | 246 | 267 |
| 5 | 170 | 174 | 184 | 194 | 208 | 222 | 237 | 251 | 262 | 279 | 295 | 309 | 328 | 349 | 377 |
| 6 | 311 | 319 | 337 | 353 | 376 | 398 | 421 | 443 | 459 | 484 | 505 | 524 | 548 | 574 | 605 |
| 7 | 407 | 408 | 421 | 434 | 451 | 467 | 485 | 500 | 510 | 528 | 543 | 555 | 572 | 592 | 616 |
| 8 | 330 | 328 | 336 | 344 | 356 | 367 | 381 | 390 | 397 | 410 | 421 | 429 | 442 | 458 | 479 |
| 9 | 494 | 495 | 509 | 521 | 538 | 555 | 572 | 587 | 597 | 614 | 628 | 639 | 655 | 673 | 695 |
| 10 | 448 | 444 | 451 | 458 | 469 | 480 | 492 | 502 | 506 | 518 | 527 | 534 | 545 | 559 | 579 |
| 11 | 594 | 594 | 605 | 616 | 630 | 644 | 659 | 671 | 679 | 693 | 704 | 713 | 726 | 740 | 758 |
| 12 | 806 | 801 | 804 | 806 | 811 | 816 | 821 | 824 | 824 | 829 | 833 | 834 | 839 | 844 | 853 |
| 13 | 176 | 172 | 176 | 177 | 184 | 189 | 195 | 199 | 200 | 205 | 211 | 214 | 220 | 228 | 240 |
| 14 | 325 | 321 | 325 | 330 | 338 | 346 | 355 | 362 | 364 | 373 | 380 | 385 | 393 | 404 | 423 |
| 15 | 279 | 279 | 288 | 297 | 310 | 322 | 336 | 348 | 355 | 370 | 382 | 392 | 406 | 423 | 446 |
| 16 | 265 | 269 | 282 | 294 | 310 | 327 | 344 | 360 | 372 | 390 | 407 | 421 | 440 | 462 | 490 |
| 17 | 292 | 294 | 306 | 316 | 333 | 349 | 366 | 381 | 390 | 409 | 425 | 438 | 455 | 476 | 503 |
| 18 | 72 | 74 | 79 | 86 | 95 | 102 | 112 | 123 | 130 | 142 | 153 | 165 | 179 | 195 | 217 |
| 19 | 362 | 367 | 382 | 397 | 417 | 436 | 457 | 475 | 488 | 509 | 528 | 543 | 563 | 585 | 613 |
| 20 | 188 | 186 | 190 | 195 | 204 | 212 | 221 | 228 | 232 | 242 | 250 | 256 | 265 | 277 | 294 |
| 21 | 292 | 292 | 302 | 311 | 325 | 339 | 353 | 367 | 375 | 390 | 404 | 414 | 429 | 448 | 472 |
| 22 | 390 | 385 | 389 | 394 | 402 | 411 | 420 | 427 | 429 | 439 | 445 | 450 | 458 | 470 | 488 |
| 23 | 345 | 346 | 357 | 367 | 383 | 398 | 414 | 428 | 436 | 453 | 467 | 478 | 494 | 513 | 538 |
| 24 | 200 | 204 | 217 | 228 | 245 | 262 | 279 | 296 | 308 | 328 | 346 | 362 | 382 | 406 | 436 |
| 25 | 211 | 209 | 217 | 223 | 234 | 244 | 255 | 264 | 269 | 282 | 292 | 300 | 311 | 325 | 347 |
| 26 | 553 | 549 | 556 | 563 | 574 | 585 | 596 | 605 | 609 | 620 | 629 | 635 | 645 | 658 | 675 |
| 27 | 347 | 349 | 362 | 374 | 390 | 408 | 425 | 441 | 452 | 470 | 486 | 499 | 517 | 537 | 563 |
| 28 | 547 | 539 | 543 | 546 | 553 | 561 | 569 | 574 | 575 | 583 | 588 | 591 | 598 | 608 | 624 |
| 29 | 440 | 443 | 457 | 470 | 488 | 506 | 524 | 541 | 551 | 570 | 586 | 598 | 615 | 635 | 659 |
| 30 | 156 | 154 | 158 | 163 | 171 | 177 | 186 | 193 | 195 | 204 | 212 | 217 | 226 | 237 | 253 |
| 31 | 211 | 212 | 220 | 228 | 241 | 253 | 265 | 277 | 285 | 299 | 311 | 322 | 336 | 353 | 377 |
| 32 | 153 | 152 | 156 | 160 | 167 | 174 | 181 | 188 | 190 | 199 | 205 | 211 | 218 | 230 | 245 |
| 33 | 598 | 600 | 612 | 624 | 639 | 654 | 670 | 683 | 691 | 706 | 718 | 728 | 741 | 756 | 774 |
| 34 | 524 | 526 | 540 | 554 | 572 | 589 | 606 | 622 | 632 | 649 | 664 | 675 | 691 | 708 | 730 |
| 35 | 319 | 318 | 327 | 336 | 349 | 362 | 375 | 387 | 394 | 408 | 420 | 429 | 443 | 460 | 483 |
| 36 | 117 | 123 | 132 | 142 | 154 | 169 | 184 | 198 | 209 | 228 | 245 | 260 | 279 | 304 | 333 |
| 37 | 772 | 771 | 779 | 786 | 795 | 805 | 814 | 822 | 826 | 835 | 841 | 847 | 854 | 862 | 873 |
| 38 | 294 | 292 | 299 | 306 | 316 | 328 | 339 | 349 | 353 | 366 | 376 | 383 | 395 | 410 | 431 |
| 39 | 293 | 295 | 307 | 319 | 334 | 350 | 367 | 382 | 392 | 410 | 425 | 438 | 455 | 476 | 503 |
| 40 | 552 | 552 | 563 | 574 | 589 | 604 | 619 | 632 | 639 | 654 | 666 | 676 | 689 | 704 | 724 |
| 41 | 408 | 410 | 422 | 434 | 451 | 467 | 485 | 500 | 509 | 527 | 541 | 553 | 570 | 589 | 613 |
| 42 | 637 | 637 | 648 | 658 | 672 | 686 | 699 | 711 | 718 | 731 | 742 | 750 | 762 | 775 | 791 |
| 43 | 135 | 139 | 148 | 158 | 170 | 183 | 197 | 209 | 220 | 236 | 251 | 264 | 282 | 302 | 329 |
| 44 | 592 | 588 | 595 | 601 | 612 | 622 | 632 | 641 | 644 | 655 | 663 | 669 | 678 | 690 | 707 |
| 45 | 373 | 381 | 400 | 419 | 442 | 465 | 489 | 512 | 528 | 553 | 574 | 593 | 615 | 640 | 670 |
| 46 | 407 | 407 | 417 | 428 | 443 | 457 | 472 | 486 | 493 | 509 | 522 | 532 | 547 | 565 | 588 |
| 47 | 799 | 798 | 804 | 810 | 818 | 826 | 833 | 840 | 843 | 851 | 856 | 860 | 867 | 874 | 884 |
| 48 | 282 | 279 | 288 | 296 | 307 | 318 | 330 | 341 | 345 | 359 | 370 | 378 | 390 | 406 | 428 |
| 49 | 394 | 390 | 399 | 406 | 418 | 429 | 441 | 451 | 456 | 469 | 479 | 486 | 498 | 513 | 533 |
| 50 | 351 | 351 | 361 | 371 | 385 | 400 | 415 | 428 | 436 | 452 | 465 | 475 | 490 | 508 | 532 |

TABLE 18 SATURATION RATE OF ELECTRIC WATER HEATERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 263 | 260 | 271 | 279 | 292 | 305 | 319 | 330 | 347 | 369 | 389 | 410 | 436 | 463 | 499 |
| 2 | 264 | 256 | 258 | 260 | 265 | 269 | 274 | 279 | 286 | 297 | 309 | 320 | 335 | 351 | 377 |
| 3 | 82 | 80 | 83 | 87 | 91 | 95 | 100 | 105 | 110 | 119 | 128 | 137 | 148 | 162 | 181 |
| 4 | 47 | 47 | 51 | 54 | 58 | 62 | 68 | 73 | 79 | 88 | 97 | 107 | 119 | 133 | 153 |
| 5 | 63 | 61 | 62 | 64 | 65 | 68 | 70 | 73 | 75 | 80 | 84 | 89 | 97 | 105 | 116 |
| 6 | 115 | 107 | 107 | 105 | 105 | 103 | 105 | 103 | 103 | 107 | 110 | 111 | 116 | 121 | 130 |
| 7 | 175 | 171 | 174 | 177 | 184 | 190 | 197 | 202 | 209 | 222 | 234 | 246 | 262 | 279 | 305 |
| 8 | 194 | 188 | 190 | 193 | 197 | 202 | 207 | 211 | 218 | 228 | 239 | 249 | 263 | 278 | 302 |
| 9 | 545 | 543 | 554 | 566 | 581 | 595 | 611 | 624 | 640 | 662 | 681 | 700 | 721 | 742 | 769 |
| 10 | 300 | 294 | 300 | 306 | 314 | 322 | 332 | 339 | 351 | 369 | 384 | 400 | 421 | 442 | 474 |
| 11 | 537 | 536 | 547 | 559 | 573 | 587 | 603 | 616 | 633 | 654 | 674 | 693 | 714 | 736 | 763 |
| 12 | 800 | 789 | 787 | 784 | 784 | 783 | 784 | 783 | 785 | 790 | 795 | 799 | 806 | 813 | 826 |
| 13 | 120 | 112 | 111 | 111 | 111 | 111 | 112 | 112 | 114 | 117 | 121 | 125 | 130 | 135 | 147 |
| 14 | 291 | 279 | 281 | 282 | 283 | 287 | 292 | 294 | 299 | 310 | 319 | 328 | 341 | 356 | 380 |
| 15 | 279 | 265 | 260 | 258 | 257 | 256 | 257 | 255 | 256 | 262 | 265 | 271 | 279 | 288 | 305 |
| 16 | 70 | 68 | 68 | 69 | 69 | 69 | 72 | 73 | 74 | 78 | 80 | 84 | 88 | 95 | 103 |
| 17 | 183 | 181 | 189 | 195 | 204 | 214 | 226 | 236 | 248 | 265 | 283 | 301 | 323 | 347 | 380 |
| 18 | 22 | 24 | 27 | 30 | 33 | 38 | 42 | 48 | 54 | 63 | 72 | 83 | 96 | 112 | 134 |
| 19 | 283 | 274 | 278 | 281 | 286 | 291 | 297 | 302 | 310 | 323 | 335 | 347 | 363 | 380 | 407 |
| 20 | 102 | 101 | 103 | 107 | 111 | 114 | 119 | 123 | 129 | 138 | 146 | 154 | 167 | 180 | 200 |
| 21 | 91 | 89 | 93 | 98 | 103 | 110 | 116 | 121 | 130 | 140 | 152 | 163 | 179 | 195 | 220 |
| 22 | 228 | 218 | 218 | 220 | 222 | 223 | 227 | 228 | 232 | 242 | 249 | 257 | 268 | 281 | 301 |
| 23 | 292 | 283 | 283 | 286 | 290 | 294 | 300 | 304 | 310 | 322 | 333 | 344 | 359 | 375 | 401 |
| 24 | 96 | 101 | 110 | 121 | 133 | 147 | 162 | 177 | 197 | 221 | 246 | 274 | 307 | 342 | 389 |
| 25 | 121 | 116 | 116 | 117 | 119 | 121 | 124 | 125 | 128 | 134 | 139 | 144 | 152 | 161 | 175 |
| 26 | 296 | 282 | 278 | 274 | 274 | 273 | 273 | 272 | 273 | 279 | 283 | 288 | 296 | 306 | 323 |
| 27 | 209 | 199 | 195 | 193 | 191 | 190 | 191 | 190 | 190 | 195 | 200 | 203 | 209 | 218 | 232 |
| 28 | 494 | 479 | 478 | 477 | 479 | 481 | 485 | 486 | 491 | 502 | 511 | 520 | 533 | 547 | 571 |
| 29 | 216 | 213 | 218 | 223 | 232 | 240 | 249 | 257 | 268 | 283 | 299 | 315 | 334 | 356 | 386 |
| 30 | 87 | 83 | 84 | 84 | 87 | 88 | 91 | 93 | 96 | 101 | 106 | 111 | 117 | 125 | 138 |
| 31 | 100 | 93 | 91 | 89 | 88 | 88 | 88 | 87 | 87 | 88 | 91 | 92 | 96 | 98 | 106 |
| 32 | 74 | 70 | 70 | 72 | 73 | 74 | 74 | 75 | 78 | 82 | 84 | 88 | 93 | 100 | 109 |
| 33 | 522 | 523 | 537 | 552 | 570 | 587 | 606 | 622 | 640 | 664 | 686 | 707 | 731 | 754 | 782 |
| 34 | 411 | 404 | 409 | 415 | 423 | 431 | 441 | 449 | 460 | 477 | 493 | 509 | 529 | 549 | 579 |
| 35 | 179 | 172 | 172 | 172 | 175 | 177 | 181 | 183 | 188 | 195 | 203 | 209 | 221 | 232 | 251 |
| 36 | 21 | 22 | 26 | 29 | 34 | 39 | 45 | 51 | 60 | 70 | 83 | 97 | 115 | 137 | 167 |
| 37 | 756 | 749 | 752 | 756 | 761 | 766 | 773 | 778 | 785 | 795 | 805 | 814 | 825 | 836 | 851 |
| 38 | 167 | 162 | 163 | 166 | 170 | 174 | 179 | 183 | 189 | 198 | 207 | 217 | 228 | 242 | 265 |
| 39 | 73 | 73 | 77 | 80 | 87 | 92 | 98 | 103 | 111 | 123 | 133 | 144 | 158 | 176 | 199 |
| 40 | 480 | 479 | 492 | 506 | 522 | 537 | 555 | 570 | 588 | 612 | 634 | 655 | 679 | 703 | 734 |
| 41 | 380 | 371 | 375 | 379 | 386 | 393 | 402 | 408 | 418 | 434 | 448 | 463 | 481 | 501 | 530 |
| 42 | 478 | 479 | 493 | 508 | 526 | 543 | 562 | 579 | 598 | 624 | 647 | 669 | 694 | 719 | 750 |
| 43 | 35 | 36 | 39 | 42 | 46 | 50 | 55 | 59 | 65 | 73 | 82 | 91 | 102 | 116 | 135 |
| 44 | 242 | 225 | 216 | 208 | 202 | 195 | 190 | 185 | 181 | 180 | 179 | 177 | 179 | 181 | 188 |
| 45 | 239 | 246 | 263 | 281 | 302 | 324 | 349 | 371 | 398 | 432 | 464 | 497 | 533 | 571 | 617 |
| 46 | 300 | 297 | 306 | 316 | 328 | 339 | 353 | 365 | 381 | 402 | 422 | 442 | 467 | 493 | 528 |
| 47 | 782 | 774 | 774 | 775 | 777 | 780 | 784 | 786 | 790 | 798 | 805 | 812 | 821 | 830 | 844 |
| 48 | 138 | 138 | 144 | 151 | 160 | 169 | 179 | 188 | 200 | 216 | 232 | 250 | 271 | 294 | 327 |
| 49 | 358 | 344 | 342 | 339 | 341 | 341 | 343 | 343 | 346 | 355 | 362 | 370 | 381 | 393 | 415 |
| 50 | 130 | 124 | 123 | 121 | 121 | 121 | 123 | 123 | 125 | 129 | 132 | 135 | 140 | 148 | 160 |

TABLE 19 SATURATION RATE OF AUTOMATIC WASHERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 334 | 347 | 370 | 394 | 422 | 451 | 482 | 514 | 540 | 570 | 594 | 612 | 633 | 656 | 686 |
| 2 | 325 | 336 | 355 | 376 | 400 | 427 | 455 | 483 | 507 | 534 | 556 | 571 | 590 | 611 | 641 |
| 3 | 420 | 423 | 436 | 450 | 468 | 487 | 507 | 527 | 543 | 561 | 575 | 582 | 593 | 606 | 628 |
| 4 | 288 | 301 | 322 | 346 | 373 | 402 | 433 | 465 | 493 | 524 | 549 | 568 | 591 | 615 | 648 |
| 5 | 472 | 473 | 483 | 495 | 510 | 525 | 543 | 560 | 573 | 588 | 599 | 603 | 611 | 621 | 641 |
| 6 | 428 | 439 | 460 | 482 | 507 | 533 | 561 | 589 | 611 | 636 | 656 | 669 | 686 | 704 | 730 |
| 7 | 530 | 535 | 551 | 568 | 587 | 607 | 629 | 650 | 666 | 684 | 698 | 706 | 717 | 730 | 750 |
| 8 | 487 | 498 | 520 | 542 | 567 | 594 | 621 | 647 | 669 | 692 | 711 | 723 | 738 | 755 | 778 |
| 9 | 384 | 388 | 401 | 415 | 433 | 452 | 473 | 494 | 510 | 529 | 543 | 551 | 563 | 577 | 600 |
| 10 | 357 | 370 | 392 | 416 | 444 | 473 | 503 | 534 | 560 | 588 | 612 | 628 | 648 | 670 | 699 |
| 11 | 502 | 508 | 524 | 541 | 561 | 582 | 604 | 626 | 643 | 662 | 677 | 685 | 697 | 711 | 732 |
| 12 | 457 | 466 | 485 | 505 | 528 | 553 | 578 | 604 | 624 | 646 | 664 | 675 | 690 | 706 | 730 |
| 13 | 295 | 304 | 321 | 339 | 361 | 385 | 411 | 437 | 459 | 485 | 505 | 519 | 537 | 557 | 587 |
| 14 | 330 | 339 | 358 | 378 | 401 | 425 | 452 | 479 | 501 | 527 | 547 | 561 | 578 | 598 | 627 |
| 15 | 274 | 288 | 311 | 336 | 365 | 396 | 430 | 464 | 493 | 526 | 554 | 575 | 600 | 626 | 661 |
| 16 | 400 | 411 | 431 | 453 | 479 | 505 | 534 | 562 | 585 | 611 | 631 | 645 | 662 | 681 | 708 |
| 17 | 232 | 244 | 264 | 285 | 309 | 336 | 366 | 396 | 423 | 454 | 479 | 499 | 522 | 548 | 583 |
| 18 | 428 | 438 | 458 | 479 | 503 | 529 | 556 | 583 | 604 | 629 | 648 | 661 | 677 | 695 | 720 |
| 19 | 318 | 333 | 359 | 386 | 417 | 450 | 484 | 520 | 549 | 583 | 610 | 630 | 654 | 680 | 712 |
| 20 | 369 | 375 | 390 | 407 | 427 | 448 | 471 | 495 | 513 | 535 | 552 | 562 | 576 | 592 | 618 |
| 21 | 475 | 481 | 498 | 516 | 537 | 559 | 582 | 605 | 623 | 644 | 660 | 669 | 682 | 696 | 719 |
| 22 | 388 | 399 | 419 | 441 | 466 | 492 | 520 | 548 | 571 | 597 | 618 | 631 | 649 | 668 | 696 |
| 23 | 272 | 285 | 307 | 330 | 357 | 386 | 418 | 450 | 478 | 509 | 536 | 555 | 578 | 604 | 638 |
| 24 | 286 | 297 | 316 | 339 | 364 | 392 | 421 | 451 | 477 | 506 | 530 | 547 | 568 | 592 | 624 |
| 25 | 288 | 300 | 320 | 342 | 367 | 395 | 425 | 455 | 481 | 510 | 534 | 551 | 572 | 596 | 628 |
| 26 | 411 | 421 | 440 | 461 | 484 | 509 | 536 | 563 | 584 | 608 | 627 | 640 | 656 | 674 | 700 |
| 27 | 324 | 339 | 365 | 392 | 423 | 456 | 491 | 526 | 555 | 588 | 615 | 636 | 659 | 684 | 716 |
| 28 | 473 | 473 | 482 | 493 | 507 | 522 | 539 | 555 | 567 | 582 | 592 | 595 | 602 | 612 | 631 |
| 29 | 408 | 422 | 445 | 470 | 498 | 527 | 558 | 588 | 613 | 640 | 663 | 678 | 697 | 717 | 744 |
| 30 | 485 | 489 | 502 | 517 | 534 | 553 | 573 | 593 | 608 | 627 | 640 | 646 | 657 | 669 | 690 |
| 31 | 387 | 393 | 409 | 426 | 446 | 467 | 490 | 513 | 532 | 553 | 570 | 579 | 593 | 609 | 634 |
| 32 | 390 | 390 | 400 | 411 | 425 | 440 | 457 | 474 | 486 | 502 | 513 | 517 | 525 | 535 | 555 |
| 33 | 320 | 335 | 359 | 386 | 416 | 448 | 482 | 516 | 546 | 578 | 605 | 625 | 648 | 673 | 705 |
| 34 | 193 | 207 | 228 | 251 | 279 | 311 | 346 | 382 | 414 | 451 | 483 | 509 | 539 | 571 | 611 |
| 35 | 375 | 386 | 406 | 427 | 452 | 478 | 506 | 534 | 557 | 583 | 603 | 617 | 635 | 654 | 682 |
| 36 | 343 | 352 | 370 | 390 | 412 | 437 | 463 | 490 | 512 | 537 | 557 | 570 | 587 | 606 | 635 |
| 37 | 489 | 498 | 516 | 536 | 559 | 583 | 608 | 632 | 651 | 673 | 690 | 700 | 714 | 730 | 752 |
| 38 | 371 | 381 | 401 | 423 | 448 | 474 | 502 | 530 | 553 | 579 | 600 | 614 | 631 | 651 | 679 |
| 39 | 367 | 377 | 396 | 417 | 441 | 466 | 493 | 520 | 543 | 568 | 588 | 601 | 619 | 638 | 666 |
| 40 | 319 | 332 | 353 | 376 | 403 | 431 | 462 | 492 | 518 | 548 | 572 | 589 | 610 | 632 | 664 |
| 41 | 212 | 223 | 242 | 264 | 290 | 316 | 348 | 379 | 407 | 439 | 467 | 488 | 513 | 540 | 577 |
| 42 | 299 | 311 | 335 | 359 | 387 | 417 | 449 | 481 | 509 | 540 | 566 | 585 | 608 | 633 | 666 |
| 43 | 399 | 402 | 415 | 429 | 447 | 465 | 486 | 507 | 522 | 541 | 555 | 562 | 573 | 587 | 610 |
| 44 | 474 | 486 | 509 | 532 | 558 | 586 | 614 | 641 | 664 | 688 | 707 | 721 | 737 | 754 | 778 |
| 45 | 347 | 363 | 388 | 415 | 446 | 479 | 513 | 547 | 576 | 608 | 634 | 653 | 676 | 699 | 730 |
| 46 | 334 | 344 | 363 | 383 | 407 | 433 | 461 | 489 | 512 | 538 | 560 | 574 | 592 | 613 | 642 |
| 47 | 499 | 507 | 524 | 543 | 565 | 587 | 611 | 634 | 652 | 673 | 689 | 698 | 711 | 726 | 748 |
| 48 | 255 | 267 | 287 | 309 | 335 | 363 | 393 | 424 | 451 | 482 | 508 | 526 | 549 | 575 | 609 |
| 49 | 274 | 290 | 313 | 338 | 367 | 398 | 432 | 467 | 496 | 530 | 558 | 579 | 603 | 630 | 665 |
| 50 | 397 | 412 | 437 | 464 | 493 | 524 | 557 | 589 | 615 | 644 | 668 | 685 | 705 | 726 | 754 |

TABLE 20 SATURATION RATE OF CONVENTIONAL WASHERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 324 | 279 | 251 | 226 | 205 | 186 | 170 | 153 | 138 | 124 | 110 | 97 | 88 | 79 | 70 |
| 2 | 235 | 200 | 180 | 162 | 148 | 134 | 123 | 111 | 100 | 91 | 80 | 72 | 65 | 59 | 54 |
| 3 | 222 | 186 | 165 | 146 | 130 | 116 | 103 | 93 | 82 | 73 | 64 | 56 | 50 | 44 | 39 |
| 4 | 385 | 335 | 302 | 274 | 250 | 226 | 207 | 186 | 167 | 151 | 134 | 117 | 107 | 95 | 86 |
| 5 | 160 | 130 | 111 | 96 | 83 | 72 | 63 | 54 | 47 | 40 | 34 | 29 | 25 | 22 | 19 |
| 6 | 287 | 241 | 211 | 185 | 163 | 144 | 128 | 112 | 97 | 86 | 74 | 64 | 56 | 49 | 43 |
| 7 | 232 | 193 | 167 | 146 | 128 | 111 | 98 | 87 | 74 | 65 | 57 | 48 | 42 | 37 | 32 |
| 8 | 283 | 236 | 203 | 175 | 152 | 132 | 115 | 98 | 84 | 72 | 61 | 52 | 44 | 38 | 33 |
| 9 | 167 | 137 | 119 | 102 | 91 | 79 | 69 | 62 | 54 | 47 | 41 | 35 | 31 | 27 | 22 |
| 10 | 260 | 218 | 190 | 166 | 146 | 128 | 114 | 100 | 87 | 75 | 65 | 56 | 49 | 42 | 37 |
| 11 | 264 | 214 | 181 | 153 | 130 | 111 | 95 | 80 | 68 | 57 | 47 | 39 | 33 | 28 | 22 |
| 12 | 346 | 295 | 262 | 232 | 207 | 184 | 163 | 146 | 128 | 112 | 97 | 83 | 74 | 65 | 57 |
| 13 | 385 | 337 | 307 | 279 | 256 | 234 | 214 | 197 | 177 | 161 | 144 | 129 | 116 | 106 | 96 |
| 14 | 417 | 366 | 332 | 300 | 274 | 249 | 227 | 205 | 185 | 166 | 148 | 130 | 116 | 103 | 93 |
| 15 | 543 | 489 | 452 | 416 | 385 | 355 | 328 | 301 | 274 | 249 | 223 | 199 | 181 | 162 | 148 |
| 16 | 361 | 311 | 279 | 250 | 225 | 202 | 181 | 162 | 144 | 129 | 114 | 98 | 88 | 78 | 69 |
| 17 | 534 | 484 | 450 | 418 | 390 | 363 | 339 | 314 | 288 | 265 | 242 | 218 | 202 | 184 | 169 |
| 18 | 271 | 232 | 207 | 185 | 167 | 151 | 137 | 123 | 110 | 98 | 88 | 77 | 69 | 62 | 56 |
| 19 | 483 | 421 | 378 | 337 | 302 | 269 | 240 | 212 | 186 | 162 | 140 | 120 | 105 | 91 | 79 |
| 20 | 273 | 232 | 208 | 186 | 169 | 152 | 138 | 124 | 111 | 100 | 88 | 78 | 69 | 63 | 56 |
| 21 | 218 | 180 | 154 | 134 | 116 | 101 | 88 | 77 | 65 | 57 | 49 | 42 | 36 | 31 | 27 |
| 22 | 403 | 353 | 321 | 292 | 267 | 242 | 222 | 202 | 181 | 165 | 147 | 130 | 117 | 106 | 96 |
| 23 | 540 | 491 | 457 | 426 | 398 | 371 | 347 | 323 | 297 | 274 | 251 | 228 | 209 | 191 | 176 |
| 24 | 315 | 276 | 251 | 230 | 212 | 195 | 181 | 166 | 152 | 139 | 125 | 112 | 103 | 95 | 87 |
| 25 | 434 | 382 | 348 | 316 | 290 | 265 | 242 | 221 | 199 | 180 | 161 | 142 | 129 | 115 | 103 |
| 26 | 387 | 334 | 297 | 265 | 237 | 213 | 190 | 170 | 149 | 133 | 116 | 100 | 88 | 78 | 69 |
| 27 | 472 | 416 | 377 | 341 | 310 | 279 | 255 | 228 | 204 | 183 | 161 | 140 | 125 | 111 | 98 |
| 28 | 133 | 105 | 88 | 73 | 62 | 52 | 44 | 37 | 31 | 26 | 22 | 18 | 15 | 13 | 11 |
| 29 | 361 | 301 | 259 | 223 | 193 | 165 | 143 | 121 | 102 | 87 | 73 | 61 | 51 | 43 | 37 |
| 30 | 264 | 217 | 186 | 160 | 138 | 119 | 102 | 88 | 74 | 64 | 54 | 45 | 39 | 33 | 28 |
| 31 | 259 | 225 | 204 | 186 | 172 | 158 | 148 | 135 | 125 | 114 | 103 | 93 | 87 | 79 | 73 |
| 32 | 169 | 142 | 125 | 110 | 97 | 88 | 79 | 69 | 62 | 55 | 49 | 43 | 38 | 34 | 30 |
| 33 | 373 | 321 | 287 | 255 | 228 | 204 | 184 | 163 | 144 | 128 | 111 | 97 | 86 | 74 | 66 |
| 34 | 633 | 581 | 543 | 506 | 473 | 440 | 410 | 379 | 347 | 318 | 288 | 258 | 236 | 212 | 193 |
| 35 | 421 | 372 | 341 | 311 | 288 | 264 | 244 | 223 | 204 | 186 | 167 | 149 | 137 | 124 | 112 |
| 36 | 254 | 214 | 188 | 166 | 147 | 130 | 116 | 102 | 91 | 79 | 69 | 60 | 53 | 47 | 41 |
| 37 | 265 | 223 | 194 | 170 | 148 | 130 | 116 | 102 | 88 | 77 | 65 | 57 | 50 | 43 | 38 |
| 38 | 446 | 398 | 366 | 338 | 313 | 288 | 269 | 249 | 228 | 209 | 190 | 171 | 157 | 143 | 130 |
| 39 | 246 | 205 | 179 | 157 | 138 | 121 | 107 | 93 | 82 | 70 | 62 | 53 | 46 | 40 | 35 |
| 40 | 269 | 228 | 203 | 180 | 162 | 144 | 130 | 116 | 103 | 92 | 80 | 70 | 63 | 56 | 50 |
| 41 | 594 | 544 | 510 | 477 | 448 | 419 | 393 | 367 | 339 | 313 | 287 | 260 | 241 | 220 | 203 |
| 42 | 419 | 367 | 332 | 299 | 272 | 246 | 223 | 202 | 181 | 162 | 143 | 125 | 112 | 100 | 89 |
| 43 | 194 | 163 | 144 | 129 | 116 | 105 | 95 | 84 | 75 | 68 | 61 | 53 | 48 | 43 | 39 |
| 44 | 306 | 259 | 228 | 200 | 179 | 158 | 140 | 125 | 110 | 96 | 83 | 72 | 63 | 55 | 49 |
| 45 | 462 | 401 | 357 | 316 | 282 | 250 | 222 | 195 | 170 | 148 | 128 | 107 | 93 | 80 | 70 |
| 46 | 374 | 328 | 299 | 272 | 250 | 228 | 211 | 193 | 175 | 158 | 144 | 128 | 116 | 106 | 96 |
| 47 | 235 | 194 | 167 | 144 | 125 | 110 | 96 | 83 | 72 | 63 | 54 | 45 | 39 | 34 | 30 |
| 48 | 577 | 530 | 499 | 469 | 443 | 417 | 395 | 371 | 346 | 323 | 299 | 274 | 256 | 236 | 220 |
| 49 | 556 | 505 | 471 | 438 | 409 | 381 | 356 | 330 | 304 | 279 | 256 | 231 | 213 | 194 | 177 |
| 50 | 342 | 295 | 264 | 237 | 214 | 191 | 174 | 157 | 139 | 125 | 110 | 97 | 87 | 77 | 69 |

TABLE 21 SATURATION RATE OF ELECTRIC DRYERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 55 | 64 | 74 | 88 | 103 | 123 | 144 | 172 | 204 | 240 | 278 | 316 | 360 | 409 | 464 |
| 2 | 213 | 227 | 245 | 264 | 286 | 310 | 336 | 366 | 396 | 429 | 459 | 486 | 517 | 549 | 586 |
| 3 | 38 | 44 | 51 | 59 | 69 | 80 | 95 | 111 | 132 | 154 | 180 | 204 | 236 | 271 | 314 |
| 4 | 37 | 43 | 52 | 63 | 74 | 91 | 110 | 134 | 161 | 194 | 228 | 265 | 310 | 359 | 417 |
| 5 | 93 | 100 | 110 | 120 | 132 | 146 | 162 | 180 | 200 | 222 | 245 | 265 | 290 | 316 | 351 |
| 6 | 109 | 121 | 135 | 153 | 174 | 195 | 222 | 251 | 285 | 320 | 356 | 390 | 428 | 469 | 516 |
| 7 | 134 | 146 | 162 | 179 | 199 | 221 | 246 | 274 | 305 | 339 | 372 | 402 | 436 | 473 | 516 |
| 8 | 160 | 172 | 186 | 203 | 222 | 242 | 265 | 293 | 321 | 351 | 380 | 406 | 437 | 469 | 508 |
| 9 | 62 | 69 | 79 | 88 | 102 | 116 | 134 | 156 | 179 | 205 | 234 | 260 | 293 | 329 | 373 |
| 10 | 53 | 62 | 74 | 87 | 103 | 123 | 147 | 175 | 208 | 245 | 285 | 324 | 371 | 421 | 479 |
| 11 | 69 | 78 | 88 | 101 | 115 | 132 | 152 | 175 | 200 | 231 | 260 | 291 | 325 | 365 | 411 |
| 12 | 279 | 295 | 314 | 334 | 357 | 381 | 407 | 437 | 466 | 497 | 525 | 549 | 577 | 606 | 640 |
| 13 | 92 | 97 | 102 | 110 | 119 | 128 | 139 | 151 | 165 | 180 | 194 | 207 | 223 | 242 | 265 |
| 14 | 190 | 198 | 207 | 218 | 231 | 244 | 260 | 278 | 296 | 316 | 335 | 351 | 370 | 392 | 419 |
| 15 | 156 | 166 | 177 | 190 | 207 | 223 | 242 | 265 | 288 | 314 | 339 | 360 | 386 | 414 | 448 |
| 16 | 126 | 138 | 151 | 166 | 184 | 203 | 225 | 250 | 277 | 307 | 336 | 363 | 395 | 429 | 469 |
| 17 | 83 | 91 | 101 | 112 | 126 | 143 | 161 | 183 | 205 | 232 | 259 | 285 | 315 | 348 | 389 |
| 18 | 56 | 63 | 70 | 80 | 93 | 106 | 121 | 140 | 162 | 186 | 213 | 239 | 269 | 302 | 345 |
| 19 | 106 | 117 | 132 | 147 | 166 | 186 | 209 | 237 | 268 | 301 | 334 | 365 | 401 | 440 | 485 |
| 20 | 84 | 93 | 102 | 114 | 126 | 140 | 158 | 179 | 200 | 225 | 249 | 273 | 300 | 330 | 369 |
| 21 | 86 | 95 | 105 | 116 | 130 | 146 | 165 | 186 | 209 | 236 | 262 | 287 | 316 | 350 | 390 |
| 22 | 176 | 183 | 190 | 200 | 211 | 222 | 236 | 251 | 268 | 286 | 302 | 316 | 333 | 352 | 377 |
| 23 | 152 | 162 | 175 | 189 | 204 | 223 | 242 | 265 | 290 | 316 | 342 | 365 | 392 | 421 | 457 |
| 24 | 36 | 42 | 51 | 61 | 74 | 88 | 107 | 130 | 158 | 190 | 226 | 263 | 307 | 356 | 413 |
| 25 | 86 | 93 | 102 | 111 | 124 | 137 | 152 | 170 | 190 | 211 | 232 | 253 | 278 | 306 | 339 |
| 26 | 273 | 287 | 304 | 322 | 342 | 363 | 388 | 415 | 442 | 470 | 497 | 519 | 545 | 572 | 605 |
| 27 | 169 | 184 | 202 | 221 | 242 | 268 | 295 | 325 | 359 | 394 | 427 | 457 | 492 | 528 | 569 |
| 28 | 93 | 103 | 116 | 129 | 144 | 162 | 183 | 207 | 232 | 262 | 292 | 319 | 352 | 387 | 430 |
| 29 | 111 | 124 | 139 | 157 | 177 | 200 | 226 | 257 | 288 | 325 | 361 | 395 | 433 | 474 | 521 |
| 30 | 83 | 91 | 97 | 107 | 116 | 129 | 142 | 158 | 175 | 194 | 213 | 230 | 251 | 274 | 305 |
| 31 | 82 | 91 | 101 | 112 | 126 | 142 | 160 | 181 | 204 | 230 | 257 | 282 | 311 | 345 | 385 |
| 32 | 82 | 88 | 95 | 102 | 111 | 121 | 133 | 147 | 162 | 177 | 195 | 209 | 228 | 249 | 276 |
| 33 | 39 | 46 | 55 | 65 | 78 | 93 | 111 | 134 | 162 | 194 | 228 | 264 | 306 | 353 | 408 |
| 34 | 283 | 299 | 316 | 335 | 356 | 378 | 402 | 430 | 457 | 486 | 513 | 535 | 562 | 589 | 621 |
| 35 | 218 | 228 | 242 | 256 | 272 | 288 | 308 | 330 | 353 | 378 | 401 | 420 | 444 | 469 | 501 |
| 36 | 54 | 63 | 73 | 84 | 100 | 116 | 138 | 163 | 191 | 225 | 260 | 295 | 336 | 381 | 434 |
| 37 | 356 | 372 | 390 | 412 | 435 | 458 | 485 | 513 | 541 | 570 | 596 | 617 | 642 | 668 | 697 |
| 38 | 140 | 149 | 162 | 174 | 189 | 204 | 223 | 245 | 268 | 292 | 316 | 337 | 363 | 390 | 425 |
| 39 | 77 | 86 | 97 | 110 | 125 | 142 | 162 | 186 | 213 | 242 | 273 | 302 | 337 | 375 | 421 |
| 40 | 37 | 43 | 52 | 61 | 73 | 87 | 105 | 125 | 151 | 181 | 213 | 246 | 286 | 330 | 384 |
| 41 | 209 | 223 | 239 | 257 | 277 | 299 | 323 | 351 | 379 | 409 | 437 | 462 | 490 | 521 | 557 |
| 42 | 103 | 116 | 132 | 149 | 170 | 193 | 220 | 251 | 286 | 323 | 361 | 396 | 437 | 480 | 529 |
| 43 | 56 | 63 | 73 | 83 | 97 | 111 | 130 | 151 | 176 | 204 | 232 | 262 | 297 | 336 | 382 |
| 44 | 175 | 186 | 202 | 218 | 237 | 257 | 279 | 306 | 334 | 363 | 390 | 416 | 445 | 476 | 514 |
| 45 | 117 | 130 | 148 | 166 | 188 | 212 | 240 | 272 | 306 | 343 | 380 | 415 | 454 | 496 | 544 |
| 46 | 83 | 92 | 103 | 116 | 133 | 151 | 172 | 195 | 223 | 253 | 283 | 313 | 347 | 385 | 430 |
| 47 | 345 | 362 | 382 | 404 | 427 | 452 | 479 | 509 | 538 | 567 | 595 | 617 | 643 | 669 | 700 |
| 48 | 167 | 180 | 195 | 213 | 232 | 253 | 277 | 304 | 332 | 362 | 392 | 418 | 448 | 481 | 519 |
| 49 | 193 | 204 | 218 | 232 | 249 | 268 | 288 | 311 | 336 | 363 | 387 | 409 | 434 | 462 | 496 |
| 50 | 185 | 200 | 218 | 237 | 260 | 283 | 311 | 342 | 374 | 408 | 441 | 470 | 503 | 538 | 578 |

TABLE 22 SATURATION RATE OF GAS RANGES (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 283 | 269 | 267 | 265 | 265 | 265 | 269 | 269 | 269 | 272 | 276 | 277 | 279 | 279 | 282 |
| 2 | 16 | 18 | 22 | 27 | 33 | 41 | 51 | 62 | 75 | 93 | 115 | 139 | 167 | 200 | 239 |
| 3 | 624 | 599 | 587 | 576 | 567 | 559 | 554 | 546 | 537 | 532 | 527 | 519 | 513 | 506 | 499 |
| 4 | 471 | 457 | 458 | 459 | 463 | 468 | 476 | 481 | 484 | 492 | 501 | 506 | 513 | 518 | 524 |
| 5 | 717 | 696 | 687 | 677 | 670 | 664 | 661 | 655 | 647 | 643 | 640 | 633 | 629 | 623 | 617 |
| 6 | 497 | 471 | 458 | 446 | 437 | 429 | 424 | 416 | 407 | 402 | 398 | 390 | 384 | 377 | 370 |
| 7 | 397 | 376 | 367 | 361 | 356 | 353 | 352 | 349 | 344 | 343 | 343 | 339 | 338 | 335 | 333 |
| 8 | 369 | 356 | 355 | 355 | 357 | 361 | 367 | 371 | 373 | 379 | 386 | 390 | 395 | 400 | 404 |
| 9 | 140 | 133 | 130 | 130 | 129 | 130 | 130 | 132 | 130 | 133 | 134 | 134 | 137 | 137 | 138 |
| 10 | 316 | 302 | 300 | 297 | 297 | 300 | 304 | 305 | 305 | 309 | 314 | 315 | 318 | 320 | 322 |
| 11 | 232 | 214 | 207 | 200 | 195 | 190 | 188 | 184 | 177 | 176 | 174 | 170 | 167 | 163 | 160 |
| 12 | 22 | 22 | 25 | 27 | 30 | 33 | 37 | 41 | 45 | 50 | 56 | 62 | 69 | 75 | 83 |
| 13 | 646 | 636 | 638 | 641 | 647 | 654 | 663 | 669 | 674 | 683 | 692 | 698 | 706 | 712 | 719 |
| 14 | 426 | 414 | 416 | 418 | 423 | 429 | 438 | 445 | 449 | 458 | 468 | 474 | 482 | 489 | 496 |
| 15 | 382 | 370 | 373 | 375 | 380 | 386 | 395 | 402 | 406 | 415 | 425 | 432 | 440 | 447 | 455 |
| 16 | 551 | 527 | 518 | 508 | 501 | 496 | 493 | 488 | 481 | 478 | 476 | 471 | 467 | 462 | 458 |
| 17 | 390 | 374 | 371 | 367 | 367 | 369 | 373 | 374 | 373 | 377 | 381 | 382 | 385 | 386 | 388 |
| 18 | 710 | 694 | 690 | 687 | 686 | 686 | 688 | 688 | 686 | 689 | 692 | 692 | 693 | 694 | 695 |
| 19 | 144 | 133 | 128 | 124 | 120 | 117 | 116 | 114 | 110 | 109 | 107 | 105 | 102 | 101 | 98 |
| 20 | 623 | 608 | 607 | 605 | 607 | 610 | 615 | 617 | 618 | 623 | 629 | 632 | 636 | 639 | 643 |
| 21 | 536 | 517 | 512 | 507 | 504 | 504 | 506 | 505 | 502 | 504 | 507 | 506 | 507 | 507 | 507 |
| 22 | 452 | 436 | 435 | 434 | 435 | 439 | 444 | 447 | 448 | 454 | 461 | 463 | 468 | 472 | 476 |
| 23 | 382 | 366 | 363 | 361 | 360 | 362 | 365 | 367 | 366 | 370 | 375 | 375 | 378 | 380 | 382 |
| 24 | 392 | 372 | 366 | 360 | 357 | 355 | 356 | 353 | 350 | 351 | 352 | 350 | 350 | 348 | 347 |
| 25 | 494 | 477 | 475 | 472 | 473 | 475 | 479 | 481 | 481 | 486 | 491 | 493 | 497 | 499 | 502 |
| 26 | 296 | 276 | 269 | 262 | 257 | 253 | 251 | 248 | 242 | 241 | 240 | 236 | 234 | 231 | 228 |
| 27 | 440 | 417 | 409 | 401 | 395 | 390 | 390 | 386 | 380 | 379 | 378 | 374 | 371 | 367 | 365 |
| 28 | 169 | 166 | 172 | 177 | 186 | 195 | 205 | 216 | 223 | 237 | 250 | 260 | 274 | 286 | 299 |
| 29 | 153 | 147 | 147 | 147 | 148 | 151 | 154 | 157 | 158 | 162 | 167 | 170 | 172 | 176 | 179 |
| 30 | 715 | 701 | 699 | 698 | 698 | 700 | 704 | 706 | 706 | 710 | 715 | 716 | 719 | 722 | 724 |
| 31 | 499 | 481 | 477 | 472 | 471 | 472 | 474 | 475 | 473 | 476 | 479 | 479 | 481 | 482 | 483 |
| 32 | 712 | 697 | 693 | 690 | 688 | 689 | 691 | 691 | 689 | 692 | 695 | 694 | 696 | 696 | 697 |
| 33 | 59 | 57 | 59 | 61 | 64 | 66 | 70 | 74 | 77 | 82 | 87 | 91 | 96 | 101 | 106 |
| 34 | 144 | 135 | 135 | 134 | 135 | 137 | 139 | 140 | 142 | 144 | 148 | 148 | 151 | 153 | 154 |
| 35 | 550 | 528 | 521 | 513 | 508 | 505 | 504 | 500 | 495 | 494 | 494 | 491 | 489 | 486 | 483 |
| 36 | 649 | 627 | 617 | 608 | 601 | 596 | 593 | 588 | 580 | 577 | 575 | 569 | 566 | 561 | 556 |
| 37 | 83 | 78 | 75 | 74 | 74 | 74 | 74 | 74 | 74 | 74 | 75 | 75 | 75 | 75 | 75 |
| 38 | 539 | 520 | 516 | 511 | 509 | 510 | 512 | 512 | 509 | 512 | 515 | 514 | 516 | 516 | 517 |
| 39 | 500 | 479 | 473 | 467 | 464 | 462 | 463 | 461 | 457 | 458 | 460 | 458 | 458 | 457 | 456 |
| 40 | 79 | 79 | 83 | 86 | 91 | 96 | 102 | 109 | 114 | 121 | 130 | 137 | 146 | 153 | 162 |
| 41 | 204 | 193 | 191 | 190 | 191 | 194 | 197 | 199 | 200 | 203 | 207 | 209 | 212 | 214 | 217 |
| 42 | 186 | 175 | 172 | 169 | 167 | 167 | 167 | 167 | 165 | 166 | 167 | 167 | 167 | 167 | 167 |
| 43 | 642 | 621 | 615 | 608 | 604 | 601 | 601 | 598 | 594 | 594 | 594 | 591 | 590 | 588 | 586 |
| 44 | 279 | 265 | 263 | 260 | 260 | 262 | 265 | 267 | 265 | 269 | 274 | 274 | 277 | 279 | 281 |
| 45 | 110 | 102 | 102 | 101 | 100 | 101 | 102 | 102 | 102 | 103 | 105 | 106 | 107 | 107 | 107 |
| 46 | 267 | 257 | 258 | 259 | 262 | 267 | 274 | 279 | 282 | 288 | 297 | 301 | 308 | 313 | 319 |
| 47 | 58 | 54 | 54 | 54 | 54 | 55 | 56 | 57 | 57 | 58 | 60 | 60 | 61 | 62 | 63 |
| 48 | 514 | 495 | 491 | 487 | 486 | 487 | 490 | 491 | 489 | 492 | 496 | 496 | 498 | 499 | 501 |
| 49 | 346 | 334 | 335 | 336 | 339 | 345 | 352 | 357 | 360 | 367 | 377 | 382 | 388 | 394 | 400 |
| 50 | 418 | 398 | 392 | 386 | 383 | 382 | 382 | 381 | 377 | 378 | 379 | 377 | 377 | 376 | 375 |

TABLE 23 SATURATION RATE OF GAS WATER HEATERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 325 | 324 | 336 | 348 | 350 | 358 | 363 | 367 | 369 | 376 | 379 | 379 | 384 | 386 | 389 |
| 2 | 3 | 4 | 6 | 11 | 18 | 29 | 44 | 66 | 98 | 147 | 209 | 288 | 387 | 493 | 601 |
| 3 | 708 | 706 | 716 | 725 | 726 | 731 | 734 | 737 | 737 | 741 | 742 | 741 | 744 | 744 | 746 |
| 4 | 443 | 449 | 470 | 490 | 500 | 515 | 528 | 541 | 549 | 563 | 573 | 581 | 592 | 601 | 611 |
| 5 | 828 | 826 | 832 | 838 | 837 | 840 | 842 | 843 | 842 | 845 | 845 | 843 | 844 | 844 | 844 |
| 6 | 689 | 694 | 710 | 725 | 732 | 743 | 752 | 760 | 765 | 775 | 781 | 785 | 792 | 797 | 803 |
| 7 | 279 | 276 | 283 | 290 | 288 | 292 | 294 | 295 | 292 | 294 | 293 | 290 | 291 | 288 | 288 |
| 8 | 319 | 323 | 341 | 358 | 366 | 380 | 390 | 403 | 410 | 422 | 431 | 438 | 449 | 457 | 467 |
| 9 | 112 | 111 | 116 | 121 | 123 | 125 | 128 | 130 | 130 | 133 | 134 | 134 | 135 | 135 | 137 |
| 10 | 344 | 346 | 361 | 376 | 381 | 392 | 400 | 408 | 412 | 422 | 427 | 431 | 438 | 443 | 450 |
| 11 | 228 | 220 | 222 | 222 | 216 | 214 | 211 | 207 | 200 | 197 | 191 | 185 | 181 | 176 | 171 |
| 12 | 41 | 45 | 51 | 58 | 64 | 72 | 79 | 88 | 95 | 106 | 116 | 125 | 138 | 148 | 162 |
| 13 | 555 | 567 | 593 | 617 | 631 | 651 | 667 | 683 | 695 | 712 | 724 | 735 | 748 | 759 | 771 |
| 14 | 446 | 451 | 469 | 487 | 495 | 508 | 519 | 530 | 536 | 548 | 556 | 562 | 571 | 578 | 587 |
| 15 | 423 | 430 | 452 | 474 | 485 | 502 | 516 | 530 | 540 | 555 | 566 | 575 | 588 | 598 | 610 |
| 16 | 708 | 710 | 723 | 735 | 739 | 748 | 754 | 760 | 763 | 770 | 773 | 776 | 781 | 784 | 788 |
| 17 | 413 | 414 | 430 | 444 | 449 | 460 | 468 | 475 | 479 | 488 | 493 | 496 | 503 | 507 | 513 |
| 18 | 625 | 630 | 648 | 665 | 672 | 685 | 695 | 704 | 710 | 721 | 728 | 733 | 741 | 747 | 755 |
| 19 | 64 | 61 | 60 | 60 | 58 | 56 | 55 | 53 | 50 | 49 | 47 | 45 | 43 | 41 | 39 |
| 20 | 502 | 504 | 522 | 538 | 544 | 555 | 564 | 573 | 577 | 588 | 594 | 598 | 605 | 610 | 617 |
| 21 | 316 | 316 | 330 | 344 | 348 | 358 | 365 | 372 | 375 | 384 | 389 | 390 | 398 | 402 | 407 |
| 22 | 566 | 568 | 585 | 600 | 606 | 616 | 625 | 633 | 637 | 647 | 652 | 656 | 663 | 667 | 674 |
| 23 | 431 | 432 | 448 | 464 | 469 | 480 | 488 | 496 | 500 | 509 | 515 | 518 | 525 | 530 | 536 |
| 24 | 358 | 355 | 366 | 375 | 376 | 381 | 385 | 388 | 387 | 390 | 392 | 390 | 392 | 392 | 393 |
| 25 | 538 | 541 | 559 | 575 | 581 | 593 | 603 | 612 | 617 | 627 | 634 | 638 | 646 | 651 | 659 |
| 26 | 541 | 539 | 552 | 564 | 566 | 574 | 579 | 584 | 584 | 591 | 593 | 593 | 597 | 598 | 601 |
| 27 | 569 | 571 | 587 | 602 | 607 | 617 | 625 | 633 | 636 | 645 | 650 | 653 | 660 | 663 | 669 |
| 28 | 204 | 211 | 227 | 242 | 251 | 265 | 278 | 290 | 299 | 313 | 324 | 333 | 346 | 356 | 369 |
| 29 | 101 | 102 | 107 | 115 | 116 | 121 | 126 | 130 | 133 | 138 | 140 | 143 | 147 | 149 | 153 |
| 30 | 409 | 414 | 434 | 452 | 461 | 476 | 488 | 499 | 507 | 520 | 529 | 536 | 547 | 555 | 565 |
| 31 | 596 | 600 | 617 | 632 | 639 | 650 | 659 | 668 | 672 | 682 | 688 | 692 | 700 | 704 | 711 |
| 32 | 279 | 287 | 305 | 324 | 334 | 350 | 363 | 376 | 386 | 401 | 412 | 422 | 435 | 445 | 458 |
| 33 | 53 | 56 | 61 | 66 | 70 | 75 | 80 | 87 | 91 | 97 | 102 | 107 | 114 | 119 | 125 |
| 34 | 204 | 209 | 222 | 235 | 241 | 251 | 260 | 269 | 274 | 286 | 293 | 299 | 308 | 314 | 323 |
| 35 | 670 | 669 | 681 | 691 | 693 | 699 | 704 | 707 | 708 | 713 | 715 | 715 | 718 | 719 | 722 |
| 36 | 690 | 687 | 697 | 706 | 706 | 711 | 714 | 717 | 716 | 719 | 720 | 719 | 721 | 720 | 722 |
| 37 | 82 | 82 | 87 | 92 | 93 | 97 | 100 | 102 | 103 | 107 | 109 | 110 | 112 | 114 | 116 |
| 38 | 504 | 501 | 513 | 523 | 524 | 530 | 534 | 537 | 536 | 541 | 541 | 540 | 542 | 542 | 544 |
| 39 | 228 | 231 | 245 | 257 | 263 | 273 | 281 | 288 | 294 | 302 | 309 | 314 | 322 | 327 | 335 |
| 40 | 68 | 70 | 77 | 84 | 88 | 95 | 101 | 107 | 111 | 120 | 125 | 130 | 139 | 144 | 152 |
| 41 | 257 | 258 | 271 | 283 | 287 | 296 | 302 | 310 | 313 | 321 | 325 | 329 | 335 | 339 | 344 |
| 42 | 195 | 191 | 198 | 204 | 203 | 205 | 207 | 209 | 207 | 209 | 208 | 205 | 207 | 205 | 205 |
| 43 | 676 | 677 | 689 | 701 | 704 | 711 | 717 | 722 | 723 | 730 | 733 | 734 | 738 | 740 | 744 |
| 44 | 620 | 628 | 649 | 668 | 679 | 694 | 706 | 718 | 727 | 739 | 748 | 756 | 766 | 774 | 783 |
| 45 | 82 | 79 | 80 | 83 | 80 | 82 | 80 | 80 | 79 | 79 | 77 | 74 | 74 | 73 | 72 |
| 46 | 241 | 242 | 256 | 269 | 274 | 283 | 291 | 299 | 302 | 311 | 316 | 321 | 329 | 333 | 339 |
| 47 | 46 | 48 | 54 | 60 | 64 | 69 | 75 | 82 | 87 | 95 | 101 | 107 | 115 | 121 | 130 |
| 48 | 614 | 598 | 596 | 593 | 580 | 572 | 562 | 552 | 537 | 528 | 515 | 500 | 488 | 474 | 462 |
| 49 | 568 | 536 | 518 | 498 | 469 | 445 | 420 | 394 | 365 | 342 | 316 | 290 | 268 | 245 | 225 |
| 50 | 735 | 717 | 710 | 702 | 685 | 672 | 658 | 642 | 622 | 608 | 589 | 568 | 550 | 530 | 511 |

TABLE 24 SATURATION RATE OF GAS DRYERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 6 | 6 | 8 | 9 | 10 | 11 | 13 | 16 | 18 | 21 | 24 | 26 | 29 | 32 | 35 |
| 2 | 9 | 10 | 11 | 13 | 16 | 19 | 22 | 26 | 30 | 35 | 40 | 45 | 50 | 55 | 61 |
| 3 | 13 | 15 | 18 | 21 | 25 | 30 | 36 | 43 | 50 | 59 | 69 | 78 | 88 | 97 | 110 |
| 4 | 18 | 21 | 25 | 29 | 34 | 41 | 48 | 56 | 65 | 77 | 88 | 98 | 110 | 123 | 135 |
| 5 | 51 | 57 | 65 | 73 | 82 | 92 | 103 | 116 | 130 | 146 | 160 | 172 | 185 | 197 | 209 |
| 6 | 21 | 24 | 27 | 30 | 33 | 38 | 43 | 48 | 54 | 60 | 65 | 72 | 75 | 82 | 87 |
| 7 | 13 | 13 | 16 | 18 | 21 | 24 | 27 | 31 | 35 | 40 | 45 | 49 | 53 | 58 | 62 |
| 8 | 22 | 24 | 28 | 31 | 35 | 40 | 45 | 51 | 58 | 65 | 72 | 79 | 84 | 91 | 97 |
| 9 | 4 | 4 | 4 | 6 | 6 | 8 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 22 | 26 |
| 10 | 9 | 10 | 11 | 13 | 16 | 19 | 22 | 26 | 30 | 35 | 40 | 45 | 51 | 56 | 62 |
| 11 | 4 | 4 | 6 | 6 | 6 | 8 | 9 | 10 | 11 | 13 | 13 | 15 | 17 | 18 | 19 |
| 12 | 4 | 4 | 6 | 6 | 6 | 8 | 9 | 10 | 11 | 13 | 13 | 15 | 16 | 17 | 18 |
| 13 | 121 | 130 | 142 | 152 | 162 | 176 | 190 | 204 | 218 | 232 | 246 | 256 | 263 | 271 | 278 |
| 14 | 92 | 97 | 103 | 110 | 116 | 125 | 133 | 142 | 149 | 158 | 166 | 170 | 172 | 176 | 179 |
| 15 | 95 | 102 | 111 | 119 | 129 | 139 | 152 | 163 | 176 | 189 | 200 | 209 | 216 | 223 | 230 |
| 16 | 65 | 69 | 75 | 82 | 88 | 97 | 106 | 114 | 124 | 133 | 142 | 148 | 153 | 158 | 163 |
| 17 | 25 | 28 | 31 | 34 | 37 | 42 | 46 | 51 | 57 | 63 | 68 | 73 | 77 | 80 | 84 |
| 18 | 60 | 68 | 75 | 84 | 96 | 107 | 121 | 135 | 151 | 167 | 184 | 198 | 211 | 223 | 237 |
| 19 | 10 | 11 | 11 | 13 | 13 | 15 | 17 | 19 | 21 | 22 | 24 | 25 | 27 | 28 | 29 |
| 20 | 31 | 35 | 40 | 45 | 50 | 57 | 65 | 74 | 83 | 93 | 103 | 112 | 121 | 130 | 139 |
| 21 | 21 | 25 | 29 | 34 | 40 | 47 | 55 | 64 | 74 | 87 | 98 | 111 | 123 | 135 | 149 |
| 22 | 137 | 146 | 158 | 169 | 180 | 194 | 208 | 223 | 237 | 251 | 265 | 274 | 282 | 288 | 296 |
| 23 | 101 | 109 | 117 | 126 | 137 | 148 | 162 | 174 | 188 | 200 | 213 | 222 | 228 | 237 | 244 |
| 24 | 6 | 8 | 9 | 10 | 11 | 13 | 13 | 16 | 18 | 20 | 22 | 24 | 26 | 27 | 29 |
| 25 | 62 | 68 | 74 | 82 | 89 | 100 | 111 | 121 | 133 | 146 | 157 | 167 | 175 | 183 | 191 |
| 26 | 19 | 19 | 21 | 22 | 22 | 24 | 26 | 28 | 29 | 31 | 32 | 33 | 33 | 34 | 34 |
| 27 | 64 | 68 | 73 | 78 | 83 | 88 | 96 | 102 | 109 | 116 | 121 | 125 | 129 | 132 | 134 |
| 28 | 6 | 6 | 8 | 9 | 10 | 11 | 13 | 16 | 19 | 22 | 25 | 28 | 31 | 34 | 38 |
| 29 | 8 | 9 | 10 | 11 | 13 | 16 | 18 | 21 | 24 | 28 | 32 | 36 | 39 | 43 | 47 |
| 30 | 61 | 68 | 77 | 84 | 95 | 107 | 121 | 134 | 149 | 166 | 181 | 195 | 207 | 220 | 232 |
| 31 | 19 | 22 | 25 | 29 | 34 | 40 | 46 | 53 | 62 | 70 | 80 | 89 | 97 | 107 | 119 |
| 32 | 31 | 34 | 39 | 43 | 48 | 55 | 62 | 69 | 77 | 86 | 95 | 102 | 109 | 116 | 124 |
| 33 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 6 | 8 | 9 | 11 | 13 | 15 | 17 | 20 |
| 34 | 24 | 26 | 28 | 30 | 33 | 36 | 39 | 42 | 45 | 49 | 52 | 55 | 56 | 58 | 60 |
| 35 | 98 | 102 | 109 | 114 | 119 | 125 | 133 | 139 | 146 | 153 | 158 | 160 | 161 | 162 | 162 |
| 36 | 40 | 44 | 49 | 55 | 60 | 66 | 74 | 83 | 92 | 101 | 110 | 116 | 123 | 130 | 137 |
| 37 | 4 | 6 | 6 | 6 | 8 | 8 | 9 | 10 | 11 | 13 | 13 | 15 | 15 | 16 | 17 |
| 38 | 78 | 83 | 88 | 96 | 102 | 111 | 120 | 128 | 137 | 147 | 154 | 161 | 165 | 170 | 174 |
| 39 | 10 | 11 | 13 | 18 | 22 | 27 | 33 | 41 | 50 | 60 | 72 | 84 | 97 | 114 | 130 |
| 40 | 1 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 6 | 8 | 9 | 11 | 11 | 13 | 16 |
| 41 | 46 | 48 | 51 | 54 | 56 | 60 | 64 | 68 | 70 | 74 | 78 | 79 | 80 | 82 | 82 |
| 42 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 6 | 6 | 8 | 9 | 10 | 10 | 11 | 11 |
| 43 | 25 | 28 | 32 | 37 | 42 | 48 | 55 | 62 | 69 | 79 | 88 | 97 | 105 | 114 | 123 |
| 44 | 27 | 31 | 37 | 43 | 49 | 57 | 66 | 78 | 89 | 102 | 116 | 130 | 143 | 157 | 171 |
| 45 | 11 | 11 | 13 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 24 | 25 | 25 | 26 | 27 |
| 46 | 6 | 8 | 9 | 10 | 11 | 13 | 16 | 18 | 21 | 24 | 28 | 31 | 34 | 37 | 41 |
| 47 | 4 | 4 | 4 | 6 | 6 | 6 | 8 | 9 | 10 | 11 | 11 | 13 | 13 | 15 | 16 |
| 48 | 41 | 44 | 47 | 50 | 54 | 58 | 63 | 68 | 73 | 78 | 82 | 86 | 88 | 89 | 92 |
| 49 | 74 | 79 | 88 | 97 | 106 | 116 | 128 | 139 | 152 | 166 | 177 | 186 | 195 | 204 | 213 |
| 50 | 33 | 35 | 38 | 41 | 45 | 49 | 53 | 58 | 62 | 66 | 70 | 74 | 77 | 79 | 82 |

TABLES 25 TO 30: ANNUAL ELECTRIC APPLIANCE GROSS INVESTMENT AND COVERAGE RATES

These series were derived from the EPRI data base [4], which in turn used Merchandising Week [10] as its principal raw data source.

Coverage rates and gross investment are defined by

$$COV = \frac{CUST}{ELCR}$$

$$G = \frac{S}{COV} = \left(\frac{ELCR}{CUST}\right) * S$$

where

ELCR = customers served by all utilities in the state [4]

CUST = customers served by utilities reporting sales of the appliance [4]

S = reported state sales of the appliance [4]

For all observations having coverage rates below 0.10, both the coverage rate and gross investment are set to zero. Coverage rates over 1.00 are presumably due to errors in the data.

See section C for further discussion.

TABLE 25 COVERAGE RATE FOR ELECTRIC RANGES (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 742 | 630 | 629 | 566 | 621 | 511 | 0 | 0 | 630 | 612 | 610 | 612 | 618 | 607 | 609 |
| 2 | 0 | 7520 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 362 | 376 | 416 | 380 | 221 | 274 |
| 3 | 5652 | 934 | 931 | 925 | 947 | 924 | 907 | 704 | 706 | 717 | 721 | 714 | 580 | 583 | 250 |
| 4 | 735 | 569 | 563 | 556 | 492 | 583 | 584 | 0 | 1166 | 558 | 0 | 0 | 0 | 0 | 0 |
| 5 | 956 | 956 | 941 | 825 | 872 | 877 | 935 | 538 | 611 | 938 | 942 | 945 | 938 | 765 | 696 |
| 6 | 811 | 756 | 768 | 705 | 709 | 693 | 613 | 615 | 0 | 0 | 0 | 202 | 0 | 0 | 636 |
| 7 | 2476 | 924 | 948 | 953 | 955 | 704 | 715 | 742 | 957 | 1087 | 1093 | 1088 | 1093 | 280 | 0 |
| 8 | 641 | 631 | 636 | 620 | 618 | 604 | 618 | 616 | 611 | 618 | 611 | 592 | 603 | 586 | 734 |
| 9 | 735 | 736 | 733 | 730 | 727 | 675 | 730 | 678 | 693 | 688 | 693 | 247 | 0 | 0 | 0 |
| 10 | 638 | 627 | 640 | 589 | 641 | 640 | 0 | 0 | 0 | 0 | 0 | 568 | 572 | 0 | 0 |
| 11 | 924 | 4856 | 926 | 948 | 814 | 1261 | 939 | 905 | 839 | 940 | 941 | 930 | 940 | 957 | 938 |
| 12 | 592 | 566 | 572 | 572 | 573 | 562 | 564 | 563 | 561 | 566 | 557 | 555 | 578 | 578 | 580 |
| 13 | 237 | 232 | 232 | 911 | 857 | 855 | 770 | 769 | 771 | 772 | 707 | 722 | 668 | 669 | 0 |
| 14 | 654 | 379 | 337 | 569 | 568 | 338 | 338 | 191 | 191 | 189 | 193 | 194 | 195 | 194 | 0 |
| 15 | 1480 | 465 | 472 | 458 | 360 | 461 | 350 | 347 | 342 | 330 | 324 | 321 | 221 | 219 | 214 |
| 16 | 601 | 562 | 559 | 554 | 576 | 580 | 584 | 585 | 607 | 612 | 599 | 596 | 604 | 613 | 606 |
| 17 | 387 | 348 | 573 | 243 | 545 | 542 | 655 | 653 | 650 | 327 | 821 | 756 | 551 | 459 | 455 |
| 18 | 382 | 629 | 377 | 422 | 451 | 357 | 619 | 353 | 622 | 621 | 347 | 343 | 199 | 199 | 199 |
| 19 | 691 | 683 | 690 | 757 | 762 | 768 | 743 | 1018 | 720 | 787 | 924 | 926 | 904 | 872 | 853 |
| 20 | 1125 | 1071 | 1076 | 958 | 968 | 965 | 966 | 956 | 968 | 466 | 956 | 961 | 968 | 956 | 507 |
| 21 | 933 | 894 | 879 | 883 | 868 | 919 | 771 | 886 | 886 | 840 | 821 | 827 | 820 | 734 | 736 |
| 22 | 880 | 871 | 879 | 868 | 867 | 866 | 876 | 875 | 875 | 875 | 863 | 858 | 853 | 849 | 840 |
| 23 | 839 | 844 | 866 | 847 | 869 | 764 | 837 | 709 | 712 | 717 | 703 | 707 | 718 | 0 | 0 |
| 24 | 456 | 1142 | 452 | 168 | 494 | 627 | 504 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 796 | 689 | 729 | 685 | 687 | 687 | 664 | 684 | 651 | 654 | 614 | 607 | 607 | 576 | 407 |
| 26 | 657 | 673 | 685 | 657 | 655 | 665 | 657 | 646 | 638 | 654 | 659 | 643 | 645 | 647 | 645 |
| 27 | 505 | 250 | 467 | 467 | 473 | 472 | 469 | 428 | 422 | 523 | 518 | 512 | 531 | 564 | 560 |
| 28 | 387 | 383 | 430 | 536 | 449 | 0 | 0 | 450 | 452 | 459 | 464 | 473 | 477 | 0 | 0 |
| 29 | 597 | 716 | 714 | 748 | 737 | 739 | 731 | 0 | 0 | 0 | 704 | 0 | 0 | 131 | 134 |
| 30 | 297 | 298 | 298 | 299 | 199 | 305 | 309 | 315 | 321 | 326 | 334 | 334 | 339 | 366 | 0 |
| 31 | 460 | 456 | 447 | 443 | 438 | 493 | 416 | 453 | 458 | 453 | 463 | 469 | 471 | 470 | 472 |
| 32 | 462 | 438 | 465 | 463 | 455 | 471 | 281 | 487 | 490 | 826 | 730 | 531 | 0 | 488 | 0 |
| 33 | 775 | 817 | 813 | 802 | 805 | 805 | 809 | 809 | 802 | 825 | 804 | 810 | 809 | 815 | 804 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 785 | 761 | 759 | 888 | 888 | 890 | 893 | 895 | 867 | 895 | 802 | 701 | 557 | 496 | 302 |
| 36 | 736 | 729 | 736 | 731 | 308 | 321 | 0 | 323 | 333 | 305 | 487 | 451 | 333 | 321 | 0 |
| 37 | 1041 | 1042 | 1026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 937 | 945 | 964 | 748 | 746 | 625 | 556 | 754 | 754 | 745 | 755 | 751 | 441 | 412 | 410 |
| 39 | 290 | 290 | 295 | 289 | 287 | 295 | 293 | 287 | 283 | 282 | 282 | 280 | 280 | 279 | 0 |
| 40 | 278 | 270 | 272 | 289 | 293 | 295 | 294 | 299 | 303 | 305 | 310 | 315 | 320 | 297 | 309 |
| 41 | 311 | 356 | 364 | 312 | 311 | 314 | 310 | 136 | 569 | 579 | 574 | 351 | 356 | 308 | 308 |
| 42 | 455 | 453 | 445 | 446 | 447 | 368 | 431 | 269 | 264 | 284 | 282 | 283 | 224 | 203 | 198 |
| 43 | 860 | 822 | 840 | 677 | 838 | 835 | 724 | 597 | 624 | 619 | 701 | 608 | 485 | 542 | 446 |
| 44 | 963 | 949 | 950 | 952 | 939 | 939 | 887 | 890 | 891 | 837 | 828 | 847 | 823 | 912 | 853 |
| 45 | 499 | 491 | 495 | 487 | 0 | 0 | 477 | 471 | 478 | 489 | 479 | 478 | 487 | 0 | 0 |
| 46 | 429 | 415 | 410 | 402 | 1056 | 388 | 384 | 378 | 375 | 374 | 376 | 374 | 373 | 373 | 373 |
| 47 | 607 | 617 | 698 | 692 | 837 | 808 | 764 | 762 | 726 | 397 | 435 | 240 | 193 | 235 | 200 |
| 48 | 475 | 441 | 445 | 442 | 442 | 447 | 387 | 448 | 445 | 446 | 446 | 441 | 0 | 0 | 0 |
| 49 | 790 | 698 | 696 | 691 | 690 | 552 | 552 | 558 | 318 | 691 | 693 | 693 | 695 | 328 | 324 |
| 50 | 273 | 249 | 161 | 174 | 209 | 191 | 196 | 289 | 155 | 186 | 180 | 175 | 154 | 157 | 0 |

TABLE 26 COVERAGE RATE FOR ELECTRIC WATER HEATERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 742 | 630 | 629 | 566 | 621 | 511 | 0 | 0 | 630 | 612 | 610 | 612 | 618 | 607 | 609 |
| 2 | 0 | 7520 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 362 | 376 | 416 | 380 | 221 | 274 |
| 3 | 5652 | 934 | 931 | 925 | 947 | 924 | 907 | 704 | 706 | 717 | 721 | 714 | 580 | 271 | 250 |
| 4 | 735 | 569 | 563 | 487 | 492 | 583 | 584 | 0 | 1166 | 558 | 0 | 0 | 0 | 0 | 0 |
| 5 | 956 | 956 | 911 | 263 | 872 | 877 | 601 | 538 | 541 | 540 | 877 | 873 | 746 | 363 | 364 |
| 6 | 811 | 688 | 768 | 705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 202 | 0 | 0 | 0 |
| 7 | 2476 | 924 | 948 | 691 | 955 | 704 | 715 | 742 | 957 | 1087 | 1093 | 1088 | 1093 | 280 | 0 |
| 8 | 641 | 631 | 636 | 620 | 618 | 604 | 618 | 616 | 611 | 618 | 611 | 592 | 603 | 586 | 734 |
| 9 | 735 | 736 | 733 | 676 | 673 | 675 | 677 | 678 | 693 | 688 | 693 | 247 | 0 | 0 | 0 |
| 10 | 638 | 627 | 640 | 584 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 568 | 572 | 0 | 0 |
| 11 | 924 | 4856 | 926 | 948 | 814 | 1261 | 939 | 905 | 839 | 940 | 941 | 930 | 940 | 957 | 938 |
| 12 | 592 | 566 | 572 | 572 | 573 | 562 | 564 | 563 | 561 | 566 | 557 | 555 | 578 | 578 | 580 |
| 13 | 237 | 232 | 232 | 175 | 857 | 855 | 770 | 769 | 771 | 772 | 707 | 722 | 668 | 669 | 0 |
| 14 | 399 | 379 | 337 | 379 | 568 | 338 | 338 | 191 | 191 | 189 | 193 | 194 | 195 | 194 | 0 |
| 15 | 1480 | 465 | 472 | 458 | 360 | 461 | 350 | 347 | 342 | 330 | 324 | 321 | 221 | 219 | 214 |
| 16 | 601 | 562 | 559 | 496 | 576 | 580 | 584 | 585 | 607 | 612 | 599 | 596 | 604 | 613 | 606 |
| 17 | 387 | 348 | 573 | 243 | 545 | 542 | 655 | 238 | 650 | 327 | 731 | 330 | 328 | 326 | 234 |
| 18 | 202 | 454 | 201 | 250 | 451 | 357 | 619 | 618 | 622 | 621 | 347 | 343 | 199 | 199 | 199 |
| 19 | 691 | 683 | 837 | 757 | 762 | 768 | 743 | 1018 | 720 | 787 | 924 | 926 | 904 | 872 | 853 |
| 20 | 1125 | 1071 | 1076 | 958 | 968 | 965 | 966 | 966 | 968 | 466 | 956 | 961 | 461 | 459 | 0 |
| 21 | 933 | 894 | 920 | 925 | 909 | 919 | 771 | 886 | 805 | 840 | 821 | 827 | 820 | 734 | 736 |
| 22 | 880 | 871 | 879 | 849 | 867 | 866 | 876 | 875 | 875 | 875 | 863 | 858 | 853 | 849 | 847 |
| 23 | 839 | 844 | 866 | 776 | 869 | 764 | 837 | 709 | 712 | 717 | 703 | 707 | 718 | 0 | 0 |
| 24 | 456 | 1142 | 452 | 168 | 494 | 627 | 504 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 796 | 689 | 729 | 685 | 687 | 687 | 664 | 684 | 651 | 654 | 586 | 607 | 579 | 576 | 407 |
| 26 | 0 | 673 | 665 | 657 | 655 | 665 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 505 | 250 | 467 | 467 | 473 | 472 | 469 | 428 | 422 | 523 | 518 | 512 | 531 | 564 | 560 |
| 28 | 387 | 383 | 430 | 536 | 449 | 0 | 0 | 450 | 452 | 459 | 464 | 473 | 477 | 0 | 0 |
| 29 | 597 | 716 | 714 | 709 | 737 | 739 | 731 | 0 | 0 | 0 | 704 | 0 | 0 | 131 | 134 |
| 30 | 297 | 298 | 298 | 196 | 199 | 305 | 309 | 315 | 321 | 326 | 334 | 334 | 339 | 366 | 0 |
| 31 | 460 | 456 | 447 | 443 | 438 | 493 | 416 | 453 | 458 | 453 | 463 | 469 | 471 | 470 | 472 |
| 32 | 462 | 325 | 350 | 347 | 455 | 953 | 281 | 487 | 490 | 358 | 268 | 0 | 0 | 0 | 0 |
| 33 | 775 | 817 | 813 | 802 | 805 | 805 | 809 | 809 | 802 | 825 | 804 | 810 | 809 | 815 | 804 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 597 | 580 | 698 | 682 | 888 | 890 | 893 | 834 | 806 | 834 | 741 | 640 | 496 | 637 | 443 |
| 36 | 736 | 729 | 736 | 731 | 308 | 321 | 0 | 0 | 333 | 305 | 487 | 451 | 333 | 321 | 0 |
| 37 | 1041 | 1042 | 1026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 937 | 945 | 964 | 946 | 746 | 625 | 556 | 754 | 555 | 547 | 555 | 751 | 441 | 412 | 410 |
| 39 | 290 | 290 | 295 | 289 | 287 | 295 | 293 | 287 | 283 | 282 | 282 | 280 | 280 | 279 | 0 |
| 40 | 278 | 270 | 272 | 289 | 293 | 295 | 294 | 299 | 303 | 305 | 310 | 315 | 320 | 297 | 309 |
| 41 | 311 | 356 | 364 | 142 | 311 | 314 | 310 | 136 | 569 | 579 | 574 | 351 | 356 | 308 | 308 |
| 42 | 455 | 453 | 445 | 446 | 447 | 368 | 431 | 269 | 252 | 284 | 282 | 283 | 224 | 221 | 198 |
| 43 | 826 | 822 | 840 | 677 | 838 | 835 | 724 | 530 | 366 | 519 | 701 | 608 | 485 | 542 | 446 |
| 44 | 963 | 949 | 950 | 948 | 939 | 939 | 887 | 890 | 891 | 837 | 828 | 847 | 823 | 912 | 853 |
| 45 | 499 | 491 | 495 | 487 | 0 | 0 | 477 | 471 | 478 | 489 | 479 | 478 | 487 | 0 | 0 |
| 46 | 429 | 415 | 410 | 402 | 1056 | 388 | 384 | 378 | 375 | 374 | 376 | 374 | 373 | 373 | 373 |
| 47 | 607 | 363 | 698 | 826 | 837 | 808 | 764 | 762 | 726 | 397 | 435 | 240 | 193 | 235 | 200 |
| 48 | 475 | 441 | 445 | 442 | 442 | 447 | 387 | 448 | 445 | 446 | 446 | 441 | 0 | 0 | 0 |
| 49 | 790 | 698 | 696 | 691 | 690 | 552 | 552 | 556 | 318 | 322 | 693 | 324 | 649 | 280 | 275 |
| 50 | 273 | 249 | 161 | 0 | 209 | 191 | 196 | 322 | 150 | 186 | 180 | 175 | 154 | 157 | 0 |

TABLE 27 COVERAGE RATE FOR ELECTRIC DRYERS (THOUSANDTHS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 742 | 630 | 629 | 566 | 621 | 511 | 0 | 0 | 630 | 612 | 610 | 612 | 618 | 607 | 609 |
| 2 | 0 | 7520 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 362 | 376 | 416 | 380 | 221 | 274 |
| 3 | 5652 | 934 | 931 | 925 | 947 | 924 | 907 | 704 | 706 | 717 | 721 | 714 | 580 | 583 | 250 |
| 4 | 735 | 569 | 563 | 556 | 492 | 583 | 584 | 0 | 1166 | 558 | 0 | 0 | 0 | 0 | 0 |
| 5 | 940 | 922 | 617 | 819 | 872 | 877 | 935 | 538 | 947 | 938 | 942 | 945 | 938 | 765 | 696 |
| 6 | 811 | 756 | 768 | 705 | 709 | 693 | 613 | 615 | 0 | 0 | 0 | 202 | 683 | 692 | 636 |
| 7 | 2476 | 924 | 948 | 953 | 955 | 704 | 715 | 742 | 957 | 1087 | 1093 | 1089 | 1093 | 280 | 0 |
| 8 | 641 | 631 | 636 | 620 | 618 | 604 | 618 | 616 | 611 | 618 | 611 | 592 | 603 | 586 | 734 |
| 9 | 735 | 736 | 733 | 730 | 727 | 675 | 575 | 678 | 693 | 688 | 693 | 247 | 0 | 0 | 0 |
| 10 | 638 | 627 | 640 | 589 | 641 | 640 | 0 | 0 | 0 | 0 | 0 | 568 | 572 | 0 | 0 |
| 11 | 924 | 4793 | 926 | 948 | 814 | 1261 | 939 | 905 | 839 | 940 | 941 | 930 | 940 | 957 | 938 |
| 12 | 592 | 566 | 572 | 572 | 573 | 562 | 564 | 563 | 561 | 566 | 557 | 555 | 578 | 578 | 580 |
| 13 | 237 | 232 | 232 | 911 | 857 | 855 | 770 | 894 | 771 | 772 | 707 | 722 | 668 | 669 | 0 |
| 14 | 399 | 379 | 337 | 569 | 568 | 338 | 338 | 191 | 191 | 189 | 193 | 194 | 195 | 194 | 0 |
| 15 | 1480 | 465 | 472 | 458 | 360 | 461 | 350 | 347 | 342 | 330 | 324 | 321 | 221 | 219 | 214 |
| 16 | 601 | 562 | 559 | 554 | 576 | 580 | 584 | 585 | 607 | 612 | 599 | 596 | 604 | 613 | 606 |
| 17 | 387 | 348 | 573 | 243 | 545 | 542 | 655 | 653 | 650 | 327 | 921 | 756 | 551 | 459 | 455 |
| 18 | 382 | 629 | 377 | 422 | 451 | 357 | 619 | 618 | 622 | 621 | 347 | 343 | 199 | 199 | 199 |
| 19 | 691 | 683 | 690 | 757 | 762 | 768 | 743 | 1018 | 720 | 787 | 924 | 926 | 904 | 872 | 853 |
| 20 | 1125 | 1071 | 1076 | 958 | 968 | 965 | 966 | 966 | 968 | 466 | 956 | 961 | 968 | 966 | 507 |
| 21 | 933 | 894 | 920 | 925 | 909 | 919 | 771 | 886 | 886 | 840 | 821 | 827 | 820 | 734 | 736 |
| 22 | 880 | 871 | 879 | 868 | 867 | 866 | 876 | 875 | 875 | 875 | 863 | 850 | 853 | 841 | 840 |
| 23 | 839 | 844 | 866 | 847 | 869 | 764 | 837 | 709 | 712 | 717 | 703 | 707 | 718 | 0 | 0 |
| 24 | 456 | 448 | 169 | 168 | 494 | 627 | 504 | 216 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 796 | 689 | 729 | 685 | 522 | 687 | 654 | 684 | 651 | 654 | 614 | 607 | 607 | 576 | 407 |
| 26 | 657 | 673 | 685 | 657 | 655 | 665 | 657 | 646 | 638 | 654 | 659 | 643 | 645 | 647 | 645 |
| 27 | 505 | 250 | 467 | 467 | 473 | 472 | 469 | 428 | 422 | 523 | 518 | 512 | 531 | 564 | 560 |
| 28 | 387 | 383 | 430 | 493 | 449 | 0 | 0 | 450 | 452 | 459 | 464 | 473 | 477 | 0 | 0 |
| 29 | 0 | 716 | 714 | 748 | 737 | 739 | 707 | 0 | 0 | 0 | 704 | 0 | 0 | 131 | 134 |
| 30 | 297 | 298 | 298 | 299 | 199 | 305 | 309 | 315 | 321 | 326 | 334 | 334 | 339 | 366 | 0 |
| 31 | 449 | 446 | 437 | 443 | 438 | 493 | 416 | 453 | 458 | 453 | 463 | 469 | 471 | 470 | 472 |
| 32 | 438 | 438 | 465 | 463 | 455 | 471 | 281 | 487 | 490 | 826 | 730 | 531 | 521 | 488 | 0 |
| 33 | 775 | 817 | 813 | 802 | 805 | 805 | 809 | 809 | 802 | 825 | 804 | 810 | 809 | 815 | 804 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 785 | 761 | 759 | 888 | 708 | 890 | 893 | 895 | 867 | 895 | 802 | 701 | 557 | 496 | 302 |
| 36 | 422 | 423 | 430 | 731 | 308 | 321 | 0 | 323 | 333 | 305 | 487 | 451 | 333 | 321 | 0 |
| 37 | 1041 | 1042 | 1026 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 650 | 945 | 964 | 616 | 746 | 625 | 556 | 754 | 754 | 745 | 755 | 751 | 441 | 412 | 410 |
| 39 | 290 | 290 | 295 | 289 | 287 | 295 | 293 | 287 | 283 | 282 | 282 | 280 | 280 | 279 | 0 |
| 40 | 278 | 270 | 272 | 289 | 293 | 295 | 294 | 299 | 303 | 305 | 310 | 315 | 320 | 297 | 309 |
| 41 | 311 | 356 | 364 | 312 | 311 | 314 | 310 | 136 | 569 | 579 | 574 | 351 | 356 | 308 | 308 |
| 42 | 442 | 165 | 318 | 426 | 447 | 368 | 431 | 259 | 264 | 284 | 282 | 283 | 224 | 203 | 198 |
| 43 | 860 | 727 | 499 | 647 | 838 | 835 | 724 | 659 | 624 | 619 | 701 | 608 | 485 | 542 | 446 |
| 44 | 963 | 949 | 950 | 952 | 939 | 939 | 887 | 890 | 891 | 837 | 928 | 847 | 823 | 912 | 853 |
| 45 | 499 | 491 | 495 | 487 | 0 | 0 | 477 | 471 | 478 | 489 | 479 | 478 | 487 | 0 | 0 |
| 46 | 0 | 415 | 410 | 402 | 1056 | 388 | 384 | 378 | 375 | 374 | 376 | 374 | 373 | 373 | 373 |
| 47 | 600 | 617 | 598 | 826 | 837 | 808 | 764 | 752 | 726 | 397 | 435 | 240 | 193 | 226 | 200 |
| 48 | 475 | 441 | 445 | 442 | 442 | 447 | 387 | 448 | 445 | 446 | 446 | 441 | 0 | 0 | 0 |
| 49 | 790 | 698 | 696 | 691 | 690 | 552 | 552 | 558 | 318 | 691 | 693 | 693 | 695 | 328 | 324 |
| 50 | 273 | 249 | 161 | 174 | 209 | 191 | 196 | 322 | 155 | 186 | 180 | 175 | 154 | 157 | 0 |

TABLE 28 GROSS INVESTMENT OF ELECTRIC RANGES (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 340 | 388 | 412 | 543 | 281 | 633 | 0 | 0 | 545 | 716 | 514 | 823 | 814 | 806 | 558 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 14 | 14 | 25 | 47 | 45 | 43 |
| 3 | 21 | 147 | 171 | 203 | 223 | 222 | 177 | 229 | 221 | 264 | 278 | 180 | 321 | 774 | 591 |
| 4 | 67 | 105 | 121 | 119 | 133 | 169 | 217 | 0 | 83 | 163 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1586 | 1655 | 1959 | 2377 | 2419 | 2007 | 1533 | 1578 | 1829 | 3002 | 1635 | 1916 | 2078 | 2089 | 2048 |
| 6 | 262 | 377 | 328 | 317 | 304 | 305 | 188 | 197 | 0 | 0 | 0 | 72 | 0 | 0 | 591 |
| 7 | 82 | 209 | 210 | 227 | 247 | 278 | 286 | 296 | 1035 | 350 | 346 | 324 | 355 | 263 | 0 |
| 8 | 30 | 221 | 19 | 20 | 24 | 21 | 24 | 21 | 32 | 56 | 65 | 54 | 66 | 61 | 42 |
| 9 | 966 | 841 | 877 | 933 | 1114 | 1191 | 1197 | 1204 | 1323 | 1328 | 1384 | 1582 | 0 | 0 | 0 |
| 10 | 343 | 323 | 522 | 857 | 872 | 878 | 0 | 0 | 0 | 0 | 0 | 1672 | 1658 | 0 | 0 |
| 11 | 78 | 14 | 72 | 77 | 91 | 75 | 111 | 121 | 122 | 132 | 151 | 158 | 181 | 173 | 192 |
| 12 | 135 | 144 | 146 | 146 | 138 | 115 | 120 | 95 | 93 | 93 | 86 | 107 | 104 | 107 | 109 |
| 13 | 520 | 515 | 481 | 469 | 507 | 503 | 537 | 461 | 67 | 487 | 383 | 462 | 523 | 537 | 0 |
| 14 | 641 | 816 | 496 | 497 | 439 | 783 | 926 | 1115 | 1183 | 1284 | 1259 | 1268 | 1158 | 1209 | 0 |
| 15 | 65 | 196 | 199 | 195 | 221 | 225 | 246 | 251 | 262 | 277 | 278 | 289 | 295 | 335 | 345 |
| 16 | 212 | 215 | 229 | 228 | 225 | 220 | 223 | 242 | 273 | 260 | 243 | 269 | 325 | 311 | 316 |
| 17 | 384 | 190 | 298 | 542 | 445 | 458 | 343 | 343 | 360 | 629 | 369 | 442 | 629 | 721 | 661 |
| 18 | 144 | 180 | 215 | 224 | 267 | 234 | 288 | 234 | 289 | 263 | 247 | 340 | 591 | 454 | 350 |
| 19 | 54 | 74 | 70 | 85 | 82 | 93 | 103 | 83 | 135 | 173 | 130 | 117 | 137 | 168 | 374 |
| 20 | 225 | 244 | 294 | 298 | 262 | 363 | 442 | 471 | 451 | 647 | 431 | 392 | 411 | 702 | 216 |
| 21 | 376 | 386 | 405 | 382 | 440 | 470 | 415 | 908 | 586 | 615 | 655 | 631 | 733 | 721 | 624 |
| 22 | 496 | 577 | 706 | 777 | 628 | 744 | 963 | 875 | 994 | 962 | 934 | 745 | 801 | 932 | 585 |
| 23 | 403 | 375 | 360 | 384 | 478 | 591 | 1138 | 536 | 656 | 689 | 561 | 624 | 774 | 0 | 0 |
| 24 | 112 | 46 | 176 | 208 | 103 | 202 | 232 | 201 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 274 | 262 | 255 | 303 | 342 | 399 | 369 | 444 | 506 | 547 | 516 | 590 | 622 | 655 | 570 |
| 26 | 76 | 75 | 93 | 123 | 85 | 84 | 93 | 72 | 81 | 71 | 85 | 91 | 113 | 123 | 123 |
| 27 | 167 | 328 | 170 | 275 | 237 | 229 | 236 | 260 | 260 | 226 | 217 | 220 | 276 | 270 | 244 |
| 28 | 56 | 44 | 171 | 72 | 55 | 0 | 0 | 29 | 14 | 14 | 13 | 16 | 16 | 0 | 0 |
| 29 | 51 | 40 | 41 | 44 | 60 | 81 | 91 | 0 | 0 | 0 | 46 | 0 | 0 | 12 | 11 |
| 30 | 473 | 381 | 408 | 433 | 430 | 492 | 475 | 554 | 522 | 643 | 544 | 562 | 523 | 493 | 0 |
| 31 | 247 | 108 | 114 | 141 | 118 | 143 | 75 | 70 | 71 | 66 | 68 | 73 | 81 | 91 | 94 |
| 32 | 1022 | 1091 | 1133 | 1251 | 1364 | 1409 | 1567 | 1461 | 1609 | 968 | 829 | 564 | 0 | 802 | 0 |
| 33 | 571 | 562 | 667 | 747 | 793 | 880 | 946 | 1050 | 1264 | 1096 | 1080 | 1129 | 1359 | 1415 | 1101 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 790 | 786 | 780 | 897 | 1044 | 1065 | 1052 | 1017 | 1126 | 1208 | 1203 | 1404 | 1346 | 1095 | 1718 |
| 36 | 173 | 182 | 208 | 222 | 240 | 214 | 0 | 202 | 143 | 254 | 242 | 246 | 242 | 280 | 0 |
| 37 | 335 | 277 | 310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 706 | 726 | 755 | 859 | 936 | 978 | 1111 | 1080 | 1115 | 1221 | 1056 | 1175 | 1212 | 1357 | 1160 |
| 39 | 78 | 83 | 76 | 44 | 47 | 51 | 58 | 57 | 77 | 84 | 85 | 94 | 109 | 116 | 0 |
| 40 | 376 | 406 | 421 | 352 | 510 | 456 | 390 | 436 | 433 | 424 | 438 | 447 | 495 | 582 | 592 |
| 41 | 68 | 70 | 54 | 59 | 49 | 64 | 87 | 43 | 25 | 27 | 23 | 35 | 52 | 48 | 46 |
| 42 | 541 | 493 | 491 | 499 | 573 | 562 | 605 | 726 | 786 | 798 | 737 | 766 | 871 | 922 | 816 |
| 43 | 837 | 803 | 881 | 1086 | 1043 | 947 | 875 | 991 | 991 | 1205 | 1486 | 1193 | 2005 | 1872 | 2067 |
| 44 | 139 | 147 | 165 | 167 | 177 | 179 | 169 | 157 | 157 | 178 | 217 | 247 | 194 | 162 | 138 |
| 45 | 56 | 60 | 60 | 69 | 0 | 0 | 73 | 84 | 38 | 42 | 26 | 27 | 21 | 0 | 0 |
| 46 | 604 | 690 | 425 | 449 | 326 | 667 | 674 | 685 | 802 | 747 | 825 | 832 | 1035 | 1204 | 1150 |
| 47 | 540 | 547 | 752 | 784 | 627 | 521 | 574 | 614 | 643 | 656 | 519 | 529 | 522 | 550 | 508 |
| 48 | 117 | 129 | 106 | 95 | 146 | 157 | 146 | 99 | 125 | 121 | 127 | 143 | 0 | 0 | 0 |
| 49 | 244 | 286 | 273 | 268 | 292 | 345 | 348 | 347 | 940 | 601 | 556 | 562 | 606 | 675 | 570 |
| 50 | 32 | 39 | 45 | 25 | 70 | 42 | 182 | 25 | 20 | 30 | 43 | 45 | 5 | 24 | 0 |

TABLE 29 GROSS INVESTMENT OF ELECTRIC WATER HEATERS (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 208 | 190 | 224 | 201 | 413 | 346 | 0 | 0 | 190 | 253 | 237 | 277 | 291 | 279 | 262 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 21 | 20 | 36 | 78 | 67 | 65 |
| 3 | 3 | 29 | 41 | 72 | 72 | 35 | 34 | 48 | 46 | 54 | 66 | 80 | 144 | 312 | 416 |
| 4 | 17 | 17 | 29 | 36 | 36 | 52 | 72 | 0 | 26 | 53 | 0 | 0 | 0 | 0 | 0 |
| 5 | 328 | 333 | 418 | 1234 | 670 | 457 | 377 | 296 | 318 | 1071 | 365 | 557 | 318 | 496 | 439 |
| 6 | 31 | 34 | 44 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 0 | 0 |
| 7 | 30 | 87 | 93 | 98 | 104 | 132 | 150 | 131 | 146 | 157 | 165 | 168 | 115 | 24 | 0 |
| 8 | 28 | 11 | 11 | 12 | 11 | 13 | 16 | 12 | 14 | 17 | 16 | 18 | 19 | 19 | 16 |
| 9 | 1188 | 1289 | 1139 | 1220 | 1357 | 1443 | 1456 | 1297 | 1451 | 1434 | 1594 | 1658 | 0 | 0 | 0 |
| 10 | 138 | 175 | 187 | 205 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 387 | 384 | 0 | 0 |
| 11 | 84 | 16 | 85 | 98 | 127 | 95 | 130 | 149 | 153 | 159 | 163 | 164 | 186 | 177 | 180 |
| 12 | 94 | 125 | 130 | 132 | 130 | 115 | 122 | 111 | 98 | 91 | 91 | 118 | 112 | 114 | 115 |
| 13 | 138 | 153 | 187 | 174 | 117 | 111 | 130 | 87 | 116 | 117 | 79 | 150 | 149 | 149 | 0 |
| 14 | 78 | 234 | 247 | 204 | 167 | 307 | 371 | 448 | 500 | 570 | 561 | 476 | 522 | 591 | 0 |
| 15 | 21 | 60 | 56 | 57 | 108 | 108 | 133 | 140 | 167 | 175 | 178 | 188 | 229 | 292 | 272 |
| 16 | 23 | 24 | 24 | 25 | 22 | 26 | 25 | 30 | 40 | 43 | 55 | 55 | 79 | 85 | 115 |
| 17 | 149 | 125 | 115 | 228 | 118 | 116 | 41 | 231 | 97 | 284 | 126 | 281 | 283 | 306 | 256 |
| 18 | 25 | 25 | 39 | 40 | 24 | 30 | 38 | 66 | 76 | 100 | 144 | 87 | 177 | 133 | 95 |
| 19 | 37 | 45 | 34 | 43 | 45 | 45 | 40 | 0 | 45 | 59 | 54 | 63 | 77 | 85 | 76 |
| 20 | 79 | 86 | 91 | 103 | 185 | 127 | 135 | 126 | 110 | 122 | 88 | 83 | 122 | 145 | 0 |
| 21 | 84 | 86 | 123 | 168 | 199 | 215 | 173 | 211 | 204 | 240 | 267 | 268 | 252 | 204 | 162 |
| 22 | 310 | 150 | 486 | 290 | 319 | 328 | 330 | 366 | 286 | 307 | 276 | 263 | 274 | 268 | 928 |
| 23 | 163 | 143 | 137 | 145 | 169 | 188 | 728 | 204 | 377 | 372 | 224 | 334 | 260 | 0 | 0 |
| 24 | 32 | 5 | 51 | 50 | 93 | 212 | 186 | 76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 34 | 67 | 300 | 59 | 73 | 82 | 82 | 70 | 91 | 92 | 101 | 67 | 76 | 84 | 129 |
| 26 | 0 | 4 | 3 | 5 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 45 | 91 | 34 | 41 | 37 | 39 | 42 | 39 | 55 | 47 | 42 | 49 | 98 | 99 | 91 |
| 28 | 36 | 18 | 139 | 18 | 66 | 0 | 0 | 20 | 10 | 12 | 12 | 73 | 86 | 0 | 0 |
| 29 | 26 | 32 | 27 | 32 | 37 | 39 | 46 | 0 | 0 | 0 | 70 | 0 | 0 | 14 | 14 |
| 30 | 319 | 261 | 281 | 254 | 270 | 284 | 331 | 386 | 313 | 416 | 314 | 319 | 373 | 292 | 0 |
| 31 | 10 | 8 | 9 | 10 | 7 | 9 | 7 | 7 | 9 | 9 | 10 | 10 | 9 | 11 | 10 |
| 32 | 264 | 300 | 415 | 484 | 376 | 134 | 252 | 300 | 274 | 369 | 265 | 0 | 0 | 0 | 0 |
| 33 | 557 | 495 | 627 | 612 | 697 | 831 | 913 | 1025 | 1220 | 1012 | 1068 | 1110 | 1203 | 1276 | 1064 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 206 | 175 | 151 | 172 | 198 | 216 | 219 | 173 | 138 | 276 | 284 | 324 | 244 | 370 | 398 |
| 36 | 27 | 34 | 43 | 61 | 84 | 82 | 0 | 0 | 100 | 129 | 206 | 701 | 170 | 210 | 0 |
| 37 | 250 | 252 | 276 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 346 | 336 | 409 | 363 | 334 | 361 | 328 | 394 | 339 | 337 | 357 | 713 | 265 | 460 | 470 |
| 39 | 20 | 25 | 24 | 20 | 22 | 26 | 19 | 21 | 22 | 26 | 21 | 23 | 24 | 27 | 0 |
| 40 | 430 | 479 | 512 | 524 | 333 | 334 | 342 | 370 | 366 | 359 | 402 | 414 | 427 | 521 | 536 |
| 41 | 46 | 38 | 23 | 20 | 19 | 41 | 54 | 73 | 22 | 17 | 17 | 25 | 29 | 31 | 28 |
| 42 | 361 | 344 | 368 | 380 | 394 | 373 | 435 | 613 | 695 | 657 | 649 | 647 | 687 | 752 | 732 |
| 43 | 124 | 131 | 184 | 152 | 150 | 175 | 169 | 199 | 312 | 336 | 260 | 367 | 297 | 417 | 358 |
| 44 | 39 | 43 | 45 | 48 | 56 | 55 | 56 | 56 | 56 | 55 | 66 | 70 | 72 | 55 | 56 |
| 45 | 36 | 40 | 30 | 49 | 0 | 0 | 20 | 59 | 8 | 6 | 47 | 48 | 2 | 0 | 0 |
| 46 | 348 | 351 | 228 | 228 | 196 | 295 | 349 | 363 | 383 | 432 | 494 | 486 | 619 | 936 | 98 |
| 47 | 411 | 493 | 461 | 469 | 491 | 524 | 552 | 551 | 667 | 546 | 578 | 529 | 445 | 497 | 317 |
| 48 | 52 | 54 | 52 | 47 | 51 | 53 | 59 | 78 | 78 | 80 | 62 | 56 | 0 | 0 | 0 |
| 49 | 116 | 111 | 121 | 99 | 112 | 121 | 124 | 98 | 208 | 214 | 192 | 273 | 370 | 285 | 264 |
| 50 | 5 | 3 | 0 | 0 | 4 | 2 | 2 | 2 | 1 | 3 | 5 | 5 | 0 | 2 | 0 |

TABLE 30 GROSS INVESTMENT OF ELECTRIC DRYERS (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 142 | 95 | 169 | 218 | 181 | 269 | 0 | 0 | 393 | 574 | 533 | 815 | 824 | 888 | 705 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 9 | 28 | 26 | 58 | 58 |
| 3 | 5 | 33 | 45 | 42 | 43 | 75 | 69 | 95 | 114 | 175 | 216 | 225 | 272 | 525 | 451 |
| 4 | 42 | 67 | 62 | 80 | 90 | 104 | 164 | 0 | 111 | 215 | 0 | 0 | 0 | 0 | 0 |
| 5 | 1031 | 1071 | 1877 | 1604 | 1702 | 1796 | 1463 | 2053 | 1719 | 2782 | 1723 | 1897 | 2022 | 2163 | 2032 |
| 6 | 113 | 123 | 129 | 149 | 183 | 235 | 196 | 209 | 0 | 0 | 0 | 64 | 585 | 517 | 497 |
| 7 | 85 | 162 | 183 | 220 | 238 | 241 | 272 | 321 | 402 | 376 | 394 | 373 | 365 | 303 | 0 |
| 8 | 46 | 31 | 39 | 45 | 48 | 49 | 48 | 47 | 49 | 80 | 73 | 82 | 82 | 92 | 77 |
| 9 | 180 | 174 | 196 | 227 | 330 | 352 | 447 | 548 | 669 | 922 | 1023 | 1323 | 0 | 0 | 0 |
| 10 | 217 | 170 | 214 | 281 | 404 | 568 | 0 | 0 | 0 | 0 | 0 | 1408 | 1397 | 0 | 0 |
| 11 | 21 | 2 | 10 | 16 | 37 | 40 | 55 | 75 | 84 | 95 | 101 | 110 | 95 | 98 | 163 |
| 12 | 93 | 70 | 85 | 87 | 81 | 80 | 109 | 79 | 85 | 98 | 87 | 126 | 122 | 131 | 132 |
| 13 | 654 | 722 | 667 | 384 | 476 | 505 | 501 | 460 | 541 | 425 | 353 | 481 | 0 | 612 | 0 |
| 14 | 743 | 772 | 426 | 414 | 351 | 664 | 802 | 1183 | 1303 | 1428 | 1420 | 1355 | 1330 | 1296 | 0 |
| 15 | 51 | 158 | 161 | 180 | 149 | 210 | 249 | 275 | 180 | 299 | 301 | 283 | 297 | 333 | 340 |
| 16 | 183 | 208 | 176 | 192 | 174 | 195 | 212 | 239 | 260 | 308 | 309 | 376 | 387 | 427 | 409 |
| 17 | 177 | 47 | 138 | 263 | 205 | 240 | 207 | 244 | 305 | 582 | 347 | 443 | 579 | 739 | 704 |
| 18 | 135 | 146 | 119 | 124 | 120 | 171 | 260 | 305 | 362 | 374 | 395 | 465 | 717 | 340 | 726 |
| 19 | 43 | 39 | 36 | 54 | 1 | 65 | 87 | 73 | 117 | 125 | 135 | 147 | 147 | 155 | 142 |
| 20 | 185 | 196 | 251 | 269 | 321 | 405 | 465 | 501 | 550 | 784 | 543 | 663 | 722 | 929 | 473 |
| 21 | 213 | 231 | 289 | 327 | 337 | 367 | 393 | 478 | 565 | 618 | 654 | 596 | 648 | 707 | 651 |
| 22 | 427 | 294 | 542 | 575 | 356 | 407 | 582 | 666 | 426 | 671 | 723 | 763 | 830 | 957 | 2131 |
| 23 | 277 | 249 | 257 | 265 | 217 | 367 | 743 | 448 | 475 | 502 | 269 | 322 | 371 | 0 | 0 |
| 24 | 56 | 68 | 41 | 118 | 58 | 141 | 136 | 143 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 136 | 147 | 138 | 198 | 170 | 205 | 268 | 356 | 465 | 513 | 484 | 562 | 584 | 603 | 424 |
| 26 | 84 | 52 | 56 | 74 | 83 | 96 | 120 | 126 | 133 | 126 | 138 | 133 | 186 | 185 | 164 |
| 27 | 102 | 263 | 149 | 223 | 248 | 262 | 289 | 313 | 314 | 259 | 321 | 230 | 252 | 266 | 268 |
| 28 | 3 | 7 | 23 | 30 | 20 | 0 | 0 | 66 | 56 | 71 | 63 | 77 | 76 | 0 | 0 |
| 29 | 0 | 13 | 18 | 17 | 19 | 48 | 56 | 0 | 0 | 0 | 56 | 0 | 0 | 7 | 5 |
| 30 | 356 | 361 | 371 | 373 | 475 | 435 | 578 | 634 | 655 | 750 | 757 | 781 | 779 | 744 | 0 |
| 31 | 45 | 41 | 50 | 58 | 71 | 89 | 76 | 96 | 118 | 128 | 127 | 164 | 171 | 189 | 169 |
| 32 | 1037 | 1150 | 1173 | 1483 | 1734 | 1527 | 1572 | 1568 | 1589 | 1059 | 950 | 775 | 973 | 1260 | 0 |
| 33 | 70 | 97 | 135 | 155 | 170 | 223 | 234 | 271 | 339 | 363 | 464 | 489 | 929 | 989 | 950 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 749 | 715 | 693 | 760 | 899 | 983 | 1171 | 1295 | 1480 | 1525 | 1437 | 1558 | 1519 | 1528 | 1624 |
| 36 | 72 | 47 | 128 | 158 | 178 | 188 | 0 | 244 | 216 | 290 | 278 | 313 | 217 | 172 | 0 |
| 37 | 331 | 297 | 333 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 973 | 709 | 759 | 857 | 828 | 894 | 1188 | 1204 | 1440 | 1432 | 1310 | 1509 | 1430 | 1682 | 1421 |
| 39 | 32 | 29 | 29 | 12 | 19 | 20 | 30 | 74 | 88 | 115 | 110 | 99 | 103 | 128 | 0 |
| 40 | 197 | 221 | 256 | 43 | 73 | 76 | 78 | 96 | 95 | 111 | 143 | 155 | 162 | 222 | 234 |
| 41 | 48 | 54 | 39 | 52 | 48 | 50 | 58 | 58 | 16 | 17 | 14 | 34 | 39 | 38 | 39 |
| 42 | 346 | 530 | 427 | 325 | 370 | 419 | 514 | 678 | 786 | 723 | 768 | 809 | 819 | 930 | 854 |
| 43 | 568 | 611 | 1013 | 640 | 676 | 751 | 914 | 1129 | 1273 | 1421 | 1514 | 1745 | 2200 | 2432 | 2573 |
| 44 | 92 | 98 | 109 | 108 | 122 | 134 | 146 | 145 | 190 | 222 | 229 | 247 | 230 | 202 | 220 |
| 45 | 20 | 20 | 12 | 24 | 0 | 0 | 41 | 55 | 8 | 36 | 25 | 25 | 18 | 0 | 0 |
| 46 | 0 | 401 | 255 | 272 | 238 | 414 | 431 | 512 | 558 | 657 | 753 | 738 | 923 | 963 | 909 |
| 47 | 360 | 364 | 454 | 385 | 396 | 399 | 430 | 457 | 447 | 460 | 501 | 782 | 531 | 560 | 525 |
| 48 | 164 | 158 | 136 | 124 | 172 | 184 | 188 | 180 | 208 | 238 | 138 | 219 | 0 | 0 | 0 |
| 49 | 245 | 251 | 249 | 241 | 273 | 291 | 352 | 399 | 495 | 464 | 446 | 482 | 553 | 572 | 483 |
| 50 | 39 | 41 | 38 | 38 | 55 | 21 | 77 | 13 | 20 | 23 | 33 | 35 | 2 | 11 | 0 |

## TABLES 31 TO 34: ANNUAL GAS APPLIANCE AND ALTERNATE ELECTRIC DRYER GROSS INVESTMENT

Annual state shipments come from GAMA [7] for gas ranges and water heaters, and from AHAM [1] for gas and electric dryers. Annual national shipments come from Merchandising Week [10].

The sum of reported state shipments was divided by national shipments to obtain a national coverage rate for each year. Reported state shipments were then divided by national coverage rates to generate the gross investment data.

See section C for further discussion.

TABLE 31 GROSS INVESTMENT OF GAS RANGES (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 189 | 170 | 270 | 286 | 297 | 357 | 423 | 427 | 383 | 448 | 409 | 437 | 226 | 273 | 181 |
| 2 | 2 | 1 | 1 | 2 | 5 | 9 | 7 | 6 | 12 | 15 | 16 | 17 | 16 | 12 | 14 |
| 3 | 110 | 92 | 109 | 110 | 128 | 106 | 97 | 101 | 125 | 163 | 171 | 231 | 311 | 238 | 195 |
| 4 | 238 | 248 | 310 | 301 | 315 | 336 | 347 | 351 | 375 | 416 | 396 | 345 | 342 | 435 | 296 |
| 5 | 2825 | 2656 | 3069 | 3269 | 3459 | 2928 | 2423 | 2025 | 2575 | 3163 | 3250 | 3406 | 3773 | 3388 | 2504 |
| 6 | 88 | 90 | 104 | 108 | 112 | 99 | 93 | 87 | 105 | 112 | 105 | 141 | 172 | 166 | 110 |
| 7 | 195 | 198 | 180 | 196 | 203 | 242 | 237 | 257 | 255 | 235 | 211 | 209 | 229 | 301 | 264 |
| 8 | 40 | 35 | 31 | 41 | 41 | 50 | 59 | 52 | 52 | 39 | 43 | 48 | 72 | 63 | 48 |
| 9 | 387 | 380 | 350 | 356 | 400 | 400 | 379 | 406 | 561 | 635 | 609 | 687 | 516 | 532 | 403 |
| 10 | 342 | 310 | 390 | 448 | 525 | 538 | 584 | 594 | 681 | 778 | 708 | 738 | 561 | 916 | 466 |
| 11 | 16 | 27 | 25 | 21 | 16 | 42 | 23 | 27 | 42 | 53 | 58 | 63 | 45 | 12 | 49 |
| 12 | 14 | 17 | 14 | 27 | 20 | 34 | 38 | 8 | 24 | 39 | 38 | 66 | 97 | 48 | 21 |
| 13 | 1587 | 1492 | 1525 | 1494 | 1624 | 1812 | 1763 | 1761 | 2013 | 1943 | 1988 | 2343 | 2092 | 2618 | 1489 |
| 14 | 493 | 551 | 728 | 845 | 934 | 1043 | 989 | 916 | 688 | 747 | 793 | 593 | 779 | 658 | 453 |
| 15 | 248 | 238 | 264 | 283 | 278 | 327 | 290 | 308 | 291 | 280 | 248 | 279 | 755 | 201 | 182 |
| 16 | 85 | 144 | 109 | 87 | 100 | 107 | 149 | 200 | 273 | 318 | 270 | 285 | 422 | 165 | 116 |
| 17 | 223 | 177 | 222 | 251 | 240 | 214 | 250 | 278 | 295 | 307 | 292 | 229 | 337 | 271 | 194 |
| 18 | 497 | 468 | 641 | 522 | 577 | 704 | 747 | 653 | 712 | 742 | 711 | 734 | 637 | 557 | 486 |
| 19 | 52 | 40 | 32 | 40 | 50 | 46 | 49 | 44 | 39 | 51 | 37 | 42 | 77 | 63 | 45 |
| 20 | 463 | 517 | 659 | 659 | 777 | 919 | 816 | 736 | 644 | 690 | 758 | 900 | 880 | 828 | 685 |
| 21 | 541 | 566 | 455 | 448 | 543 | 612 | 516 | 443 | 489 | 464 | 434 | 431 | 428 | 438 | 474 |
| 22 | 671 | 655 | 756 | 779 | 905 | 959 | 1002 | 950 | 1160 | 1217 | 962 | 1038 | 1120 | 1050 | 840 |
| 23 | 307 | 309 | 312 | 334 | 316 | 315 | 287 | 295 | 308 | 372 | 393 | 422 | 450 | 406 | 284 |
| 24 | 180 | 168 | 211 | 205 | 196 | 185 | 211 | 242 | 236 | 290 | 279 | 262 | 303 | 283 | 219 |
| 25 | 585 | 587 | 653 | 693 | 683 | 834 | 763 | 749 | 850 | 844 | 792 | 848 | 744 | 640 | 549 |
| 26 | 20 | 16 | 19 | 19 | 30 | 17 | 12 | 9 | 11 | 11 | 11 | 8 | 6 | 11 | 24 |
| 27 | 119 | 124 | 142 | 147 | 134 | 127 | 118 | 121 | 128 | 148 | 122 | 130 | 93 | 72 | 89 |
| 28 | 14 | 14 | 20 | 52 | 37 | 27 | 9 | 12 | 24 | 27 | 47 | 78 | 65 | 45 | 27 |
| 29 | 21 | 23 | 17 | 17 | 21 | 23 | 20 | 22 | 16 | 24 | 16 | 18 | 33 | 48 | 32 |
| 30 | 644 | 765 | 857 | 935 | 922 | 905 | 845 | 934 | 895 | 933 | 381 | 144 | 1037 | 1090 | 1073 |
| 31 | 67 | 45 | 58 | 62 | 75 | 70 | 63 | 68 | 73 | 82 | 99 | 127 | 168 | 160 | 119 |
| 32 | 2041 | 2362 | 1759 | 2103 | 1950 | 1858 | 1742 | 1875 | 1633 | 1760 | 2037 | 2518 | 2066 | 1993 | 2081 |
| 33 | 152 | 181 | 202 | 254 | 240 | 287 | 280 | 267 | 352 | 352 | 346 | 340 | 300 | 246 | 199 |
| 34 | 13 | 9 | 12 | 19 | 22 | 13 | 19 | 27 | 33 | 39 | 33 | 31 | 14 | 8 | 6 |
| 35 | 996 | 920 | 1021 | 1031 | 1068 | 1199 | 1152 | 1133 | 1161 | 1254 | 1041 | 1298 | 1276 | 1189 | 835 |
| 36 | 248 | 221 | 293 | 271 | 234 | 304 | 290 | 265 | 319 | 295 | 292 | 288 | 455 | 295 | 304 |
| 37 | 14 | 9 | 18 | 18 | 26 | 34 | 36 | 38 | 45 | 73 | 62 | 64 | 42 | 25 | 22 |
| 38 | 1042 | 1071 | 1183 | 1165 | 1226 | 1482 | 1424 | 1530 | 1530 | 1640 | 1673 | 1868 | 1782 | 1498 | 1296 |
| 39 | 95 | 102 | 77 | 94 | 126 | 122 | 138 | 132 | 159 | 188 | 160 | 170 | 69 | 81 | 95 |
| 40 | 75 | 83 | 100 | 118 | 120 | 177 | 178 | 169 | 188 | 199 | 188 | 137 | 138 | 196 | 104 |
| 41 | 18 | 29 | 34 | 45 | 30 | 32 | 22 | 20 | 27 | 34 | 37 | 61 | 40 | 44 | 50 |
| 42 | 198 | 153 | 204 | 217 | 198 | 203 | 216 | 224 | 268 | 328 | 261 | 206 | 221 | 235 | 162 |
| 43 | 1319 | 1397 | 1614 | 1552 | 1630 | 1597 | 1541 | 1546 | 1814 | 1890 | 1809 | 2067 | 2113 | 1856 | 1394 |
| 44 | 19 | 30 | 29 | 32 | 29 | 39 | 36 | 31 | 37 | 76 | 108 | 112 | 108 | 110 | 120 |
| 45 | 11 | 8 | 6 | 8 | 10 | 11 | 13 | 14 | 13 | 10 | 8 | 9 | 11 | 11 | 6 |
| 46 | 160 | 149 | 194 | 193 | 201 | 245 | 224 | 191 | 211 | 264 | 252 | 286 | 448 | 344 | 279 |
| 47 | 23 | 22 | 37 | 35 | 65 | 42 | 52 | 63 | 76 | 73 | 64 | 47 | 54 | 61 | 38 |
| 48 | 120 | 112 | 147 | 167 | 163 | 175 | 185 | 184 | 183 | 195 | 171 | 197 | 227 | 226 | 188 |
| 49 | 300 | 282 | 317 | 328 | 370 | 420 | 432 | 409 | 438 | 424 | 401 | 459 | 426 | 369 | 359 |
| 50 | 9 | 7 | 7 | 6 | 7 | 6 | 7 | 5 | 6 | 8 | 7 | 7 | 11 | 11 | 8 |

TABLE 32 GROSS INVESTMENT OF GAS WATER HEATERS (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 378 | 316 | 335 | 231 | 203 | 241 | 337 | 345 | 375 | 421 | 451 | 370 | 350 | 821 | 340 |
| 2 | 5 | 5 | 4 | 7 | 12 | 20 | 15 | 13 | 24 | 19 | 26 | 28 | 25 | 23 | 28 |
| 3 | 294 | 300 | 391 | 433 | 416 | 358 | 226 | 264 | 316 | 408 | 468 | 679 | 730 | 413 | 388 |
| 4 | 307 | 367 | 389 | 278 | 302 | 253 | 260 | 225 | 244 | 289 | 311 | 384 | 357 | 323 | 215 |
| 5 | 3982 | 4508 | 3833 | 3846 | 5035 | 4628 | 4444 | 4320 | 4126 | 3788 | 3645 | 4362 | 4531 | 1010 | 3558 |
| 6 | 342 | 429 | 458 | 492 | 517 | 464 | 454 | 486 | 499 | 491 | 515 | 613 | 783 | 135 | 520 |
| 7 | 327 | 260 | 254 | 210 | 233 | 249 | 248 | 224 | 235 | 291 | 279 | 271 | 257 | 336 | 249 |
| 8 | 81 | 96 | 75 | 60 | 65 | 56 | 53 | 45 | 39 | 51 | 47 | 31 | 29 | 106 | 59 |
| 9 | 440 | 398 | 517 | 356 | 376 | 481 | 496 | 407 | 483 | 418 | 395 | 390 | 402 | 4303 | 461 |
| 10 | 519 | 447 | 467 | 409 | 511 | 606 | 637 | 598 | 656 | 576 | 680 | 782 | 728 | 1583 | 623 |
| 11 | 16 | 28 | 24 | 22 | 14 | 37 | 21 | 23 | 35 | 28 | 38 | 41 | 28 | 9 | 23 |
| 12 | 25 | 22 | 39 | 36 | 24 | 31 | 29 | 38 | 43 | 39 | 76 | 113 | 147 | 353 | 73 |
| 13 | 1652 | 1666 | 2203 | 1583 | 1686 | 1556 | 2070 | 1816 | 1979 | 1732 | 1670 | 1977 | 2037 | 732 | 1776 |
| 14 | 709 | 745 | 682 | 595 | 702 | 531 | 652 | 623 | 766 | 762 | 834 | 1048 | 1016 | 876 | 650 |
| 15 | 467 | 463 | 587 | 428 | 447 | 465 | 542 | 470 | 527 | 480 | 377 | 448 | 449 | 297 | 356 |
| 16 | 297 | 300 | 321 | 269 | 278 | 277 | 330 | 285 | 389 | 424 | 470 | 576 | 565 | 142 | 312 |
| 17 | 217 | 300 | 264 | 232 | 277 | 243 | 250 | 228 | 237 | 228 | 304 | 247 | 231 | 370 | 294 |
| 18 | 610 | 627 | 738 | 502 | 594 | 756 | 686 | 644 | 751 | 714 | 702 | 759 | 797 | 478 | 468 |
| 19 | 64 | 50 | 61 | 45 | 53 | 40 | 36 | 30 | 40 | 44 | 43 | 41 | 24 | 175 | 40 |
| 20 | 955 | 875 | 919 | 763 | 692 | 591 | 672 | 549 | 533 | 561 | 554 | 639 | 641 | 734 | 454 |
| 21 | 688 | 602 | 695 | 669 | 697 | 713 | 748 | 706 | 757 | 757 | 690 | 820 | 795 | 475 | 676 |
| 22 | 816 | 818 | 1270 | 991 | 1038 | 978 | 1243 | 1125 | 1128 | 1080 | 1205 | 1112 | 1183 | 714 | 1103 |
| 23 | 337 | 394 | 395 | 356 | 417 | 407 | 544 | 450 | 493 | 507 | 540 | 549 | 632 | 490 | 512 |
| 24 | 316 | 376 | 292 | 150 | 222 | 221 | 259 | 228 | 225 | 249 | 286 | 293 | 307 | 402 | 279 |
| 25 | 1035 | 959 | 1040 | 840 | 1095 | 1011 | 1065 | 914 | 1033 | 937 | 1008 | 1227 | 1161 | 624 | 901 |
| 26 | 92 | 67 | 147 | 121 | 184 | 152 | 111 | 92 | 106 | 105 | 98 | 175 | 143 | 67 | 81 |
| 27 | 316 | 340 | 283 | 269 | 285 | 275 | 333 | 294 | 355 | 330 | 342 | 428 | 435 | 140 | 266 |
| 28 | 46 | 37 | 65 | 48 | 115 | 76 | 39 | 31 | 49 | 52 | 61 | 90 | 113 | 211 | 69 |
| 29 | 47 | 42 | 32 | 47 | 51 | 44 | 43 | 23 | 30 | 36 | 36 | 31 | 25 | 102 | 38 |
| 30 | 1315 | 1296 | 382 | 921 | 941 | 768 | 801 | 840 | 874 | 477 | 850 | 929 | 756 | 614 | 1025 |
| 31 | 163 | 149 | 237 | 210 | 296 | 274 | 169 | 139 | 140 | 124 | 135 | 154 | 168 | 47 | 125 |
| 32 | 1634 | 1495 | 2544 | 1336 | 1453 | 1452 | 1948 | 1463 | 1581 | 1838 | 1472 | 1637 | 1676 | 1055 | 1476 |
| 33 | 158 | 146 | 309 | 187 | 211 | 226 | 157 | 142 | 181 | 203 | 297 | 152 | 174 | 1680 | 311 |
| 34 | 45 | 34 | 33 | 36 | 41 | 42 | 51 | 30 | 43 | 46 | 42 | 53 | 49 | 85 | 71 |
| 35 | 1569 | 1316 | 1560 | 1554 | 1405 | 1397 | 1726 | 1434 | 1576 | 1446 | 1518 | 1724 | 1706 | 1244 | 1262 |
| 36 | 449 | 471 | 618 | 465 | 608 | 518 | 485 | 391 | 406 | 405 | 513 | 481 | 552 | 457 | 512 |
| 37 | 36 | 44 | 120 | 179 | 136 | 114 | 48 | 67 | 89 | 133 | 117 | 125 | 155 | 777 | 59 |
| 38 | 1675 | 1647 | 1469 | 1144 | 1222 | 1154 | 1416 | 1241 | 1247 | 1383 | 1629 | 1306 | 1342 | 1707 | 1524 |
| 39 | 122 | 101 | 76 | 60 | 93 | 90 | 102 | 78 | 100 | 81 | 87 | 128 | 110 | 68 | 85 |
| 40 | 79 | 70 | 73 | 67 | 88 | 136 | 102 | 85 | 114 | 77 | 120 | 125 | 86 | 637 | 189 |
| 41 | 54 | 60 | 79 | 59 | 50 | 68 | 58 | 52 | 67 | 68 | 71 | 101 | 121 | 85 | 81 |
| 42 | 276 | 254 | 287 | 248 | 342 | 358 | 316 | 302 | 357 | 377 | 570 | 423 | 418 | 1431 | 373 |
| 43 | 2434 | 2530 | 2514 | 1929 | 2254 | 2297 | 679 | 2402 | 2853 | 2843 | 2801 | 3168 | 3542 | 1729 | 2290 |
| 44 | 162 | 190 | 270 | 292 | 289 | 283 | 205 | 208 | 192 | 205 | 208 | 247 | 229 | 99 | 174 |
| 45 | 27 | 17 | 21 | 45 | 39 | 17 | 22 | 16 | 14 | 18 | 19 | 16 | 21 | 51 | 14 |
| 46 | 249 | 226 | 290 | 261 | 353 | 346 | 283 | 253 | 280 | 311 | 385 | 394 | 391 | 951 | 336 |
| 47 | 75 | 81 | 66 | 58 | 97 | 120 | 127 | 142 | 155 | 189 | 113 | 171 | 151 | 894 | 98 |
| 48 | 133 | 145 | 180 | 142 | 128 | 120 | 154 | 123 | 127 | 142 | 135 | 183 | 172 | 169 | 165 |
| 49 | 554 | 523 | 537 | 482 | 529 | 486 | 589 | 570 | 613 | 530 | 560 | 786 | 829 | 541 | 657 |
| 50 | 45 | 51 | 92 | 42 | 100 | 89 | 53 | 42 | 52 | 683 | 32 | 37 | 35 | 11 | 30 |

TABLE 33 GROSS INVESTMENT OF GAS DRYERS (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 17 | 12 | 13 | 16 | 23 | 23 | 26 | 33 | 31 | 34 | 31 | 27 | 32 | 30 | 21 |
| 2 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 4 | 4 | 5 | 3 | 6 | 6 | 7 | 5 |
| 3 | 8 | 15 | 13 | 14 | 21 | 27 | 33 | 42 | 55 | 77 | 80 | 88 | 113 | 95 | 60 |
| 4 | 53 | 38 | 30 | 49 | 48 | 55 | 61 | 89 | 62 | 86 | 70 | 58 | 77 | 49 | 59 |
| 5 | 439 | 479 | 450 | 796 | 952 | 1015 | 1058 | 191 | 1323 | 1462 | 1334 | 1367 | 534 | 1707 | 1468 |
| 6 | 20 | 19 | 21 | 24 | 31 | 37 | 35 | 49 | 52 | 54 | 53 | 59 | 76 | 67 | 46 |
| 7 | 19 | 20 | 19 | 26 | 31 | 34 | 39 | 59 | 54 | 51 | 47 | 39 | 50 | 46 | 36 |
| 8 | 5 | 5 | 5 | 6 | 8 | 9 | 11 | 13 | 11 | 13 | 12 | 12 | 10 | 11 | 8 |
| 9 | 13 | 8 | 7 | 32 | 35 | 38 | 35 | 37 | 35 | 38 | 36 | 36 | 46 | 53 | 41 |
| 10 | 16 | 12 | 23 | 31 | 45 | 66 | 76 | 85 | 109 | 124 | 89 | 85 | 96 | 85 | 57 |
| 11 | 1 | 0 | 1 | 4 | 8 | 3 | 1 | 2 | 3 | 3 | 4 | 12 | 9 | 9 | 9 |
| 12 | 3 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 4 | 4 | 3 |
| 13 | 499 | 554 | 583 | 642 | 715 | 835 | 853 | 1090 | 964 | 934 | 896 | 907 | 1216 | 1103 | 888 |
| 14 | 147 | 140 | 170 | 201 | 206 | 245 | 258 | 291 | 275 | 272 | 235 | 219 | 291 | 241 | 206 |
| 15 | 98 | 94 | 111 | 112 | 145 | 169 | 176 | 214 | 189 | 191 | 175 | 161 | 191 | 162 | 127 |
| 16 | 46 | 46 | 45 | 48 | 54 | 62 | 69 | 82 | 84 | 82 | 80 | 81 | 102 | 92 | 69 |
| 17 | 41 | 35 | 35 | 42 | 49 | 56 | 61 | 87 | 85 | 85 | 89 | 90 | 104 | 79 | 56 |
| 18 | 137 | 148 | 128 | 170 | 211 | 271 | 289 | 311 | 278 | 260 | 257 | 272 | 320 | 310 | 223 |
| 19 | 7 | 4 | 4 | 5 | 5 | 9 | 6 | 8 | 6 | 6 | 7 | 8 | 7 | 6 | 5 |
| 20 | 88 | 93 | 106 | 116 | 136 | 153 | 159 | 209 | 178 | 178 | 184 | 195 | 238 | 198 | 141 |
| 21 | 84 | 115 | 124 | 135 | 153 | 160 | 184 | 254 | 247 | 259 | 234 | 221 | 276 | 236 | 161 |
| 22 | 417 | 374 | 425 | 467 | 566 | 658 | 674 | 801 | 732 | 795 | 750 | 743 | 935 | 849 | 681 |
| 23 | 129 | 119 | 153 | 153 | 182 | 197 | 201 | 252 | 227 | 217 | 211 | 229 | 271 | 242 | 195 |
| 24 | 5 | 12 | 5 | 6 | 14 | 21 | 23 | 28 | 25 | 27 | 27 | 22 | 24 | 12 | 11 |
| 25 | 163 | 172 | 205 | 207 | 227 | 261 | 270 | 338 | 296 | 285 | 274 | 276 | 319 | 271 | 206 |
| 26 | 3 | 2 | 4 | 4 | 6 | 9 | 8 | 9 | 10 | 9 | 9 | 8 | 10 | 6 | 5 |
| 27 | 48 | 34 | 38 | 39 | 48 | 52 | 54 | 68 | 66 | 65 | 63 | 59 | 70 | 49 | 36 |
| 28 | 1 | 1 | 1 | 2 | 12 | 8 | 7 | 6 | 6 | 6 | 9 | 14 | 24 | 18 | 16 |
| 29 | 3 | 2 | 3 | 6 | 4 | 5 | 6 | 10 | 7 | 8 | 8 | 8 | 11 | 7 | 6 |
| 30 | 253 | 279 | 296 | 291 | 329 | 366 | 398 | 530 | 486 | 521 | 457 | 464 | 530 | 459 | 330 |
| 31 | 9 | 14 | 11 | 14 | 37 | 26 | 23 | 36 | 29 | 33 | 32 | 32 | 43 | 39 | 30 |
| 32 | 347 | 425 | 412 | 450 | 511 | 554 | 578 | 788 | 708 | 710 | 673 | 627 | 816 | 687 | 539 |
| 33 | 4 | 2 | 3 | 5 | 11 | 14 | 28 | 32 | 34 | 40 | 37 | 46 | 51 | 34 | 20 |
| 34 | 4 | 3 | 5 | 5 | 11 | 12 | 12 | 16 | 13 | 13 | 14 | 13 | 17 | 9 | 8 |
| 35 | 349 | 330 | 340 | 361 | 405 | 417 | 428 | 500 | 463 | 451 | 407 | 402 | 452 | 400 | 331 |
| 36 | 54 | 78 | 70 | 79 | 84 | 86 | 94 | 113 | 117 | 110 | 115 | 119 | 145 | 116 | 88 |
| 37 | 9 | 1 | 2 | 3 | 3 | 6 | 8 | 8 | 8 | 12 | 13 | 12 | 12 | 11 | 7 |
| 38 | 375 | 391 | 375 | 354 | 412 | 466 | 501 | 661 | 580 | 625 | 627 | 587 | 764 | 586 | 480 |
| 39 | 7 | 8 | 12 | 11 | 15 | 18 | 23 | 37 | 41 | 36 | 37 | 31 | 40 | 29 | 21 |
| 40 | 1 | 1 | 1 | 1 | 2 | 4 | 5 | 8 | 8 | 9 | 9 | 11 | 12 | 8 | 5 |
| 41 | 9 | 8 | 10 | 10 | 11 | 14 | 14 | 17 | 16 | 16 | 17 | 16 | 21 | 13 | 10 |
| 42 | 6 | 3 | 3 | 3 | 6 | 10 | 14 | 15 | 12 | 14 | 12 | 13 | 13 | 12 | 8 |
| 43 | 190 | 187 | 172 | 207 | 261 | 286 | 337 | 414 | 445 | 430 | 422 | 422 | 492 | 425 | 357 |
| 44 | 15 | 16 | 17 | 25 | 36 | 43 | 42 | 55 | 51 | 51 | 48 | 58 | 61 | 46 | 33 |
| 45 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 4 | 5 | 5 | 3 | 3 | 4 | 2 | 1 |
| 46 | 12 | 11 | 14 | 16 | 17 | 23 | 28 | 32 | 29 | 36 | 38 | 44 | 50 | 29 | 20 |
| 47 | 17 | 3 | 4 | 6 | 6 | 8 | 11 | 15 | 15 | 16 | 15 | 13 | 17 | 15 | 14 |
| 48 | 27 | 22 | 22 | 25 | 27 | 35 | 40 | 51 | 45 | 45 | 50 | 51 | 64 | 46 | 37 |
| 49 | 194 | 128 | 132 | 140 | 170 | 201 | 219 | 253 | 212 | 220 | 196 | 202 | 263 | 222 | 176 |
| 50 | 2 | 1 | 1 | 1 | 2 | 3 | 4 | 4 | 4 | 5 | 4 | 6 | 5 | 4 | 3 |

TABLE 34 GROSS INVESTMENT OF ELECTRIC DRYERS (HUNDREDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 109 | 110 | 141 | 180 | 211 | 258 | 311 | 371 | 402 | 436 | 494 | 601 | 690 | 743 | 570 |
| 2 | 23 | 24 | 31 | 40 | 13 | 16 | 15 | 25 | 22 | 22 | 23 | 32 | 31 | 46 | 51 |
| 3 | 37 | 42 | 48 | 66 | 50 | 62 | 81 | 93 | 128 | 164 | 176 | 230 | 305 | 375 | 296 |
| 4 | 669 | 701 | 956 | 1141 | 71 | 107 | 144 | 182 | 202 | 215 | 245 | 313 | 370 | 401 | 322 |
| 5 | 107 | 107 | 130 | 155 | 1191 | 1237 | 1277 | 1396 | 1493 | 1564 | 1431 | 1709 | 1923 | 2194 | 1954 |
| 6 | 148 | 183 | 190 | 207 | 181 | 202 | 229 | 248 | 294 | 310 | 325 | 408 | 544 | 580 | 479 |
| 7 | 26 | 28 | 31 | 39 | 213 | 271 | 296 | 370 | 380 | 400 | 350 | 381 | 398 | 450 | 382 |
| 8 | 200 | 169 | 213 | 274 | 44 | 52 | 66 | 77 | 72 | 75 | 70 | 80 | 82 | 97 | 90 |
| 9 | 120 | 128 | 167 | 205 | 330 | 375 | 489 | 541 | 724 | 812 | 907 | 1146 | 1477 | 1922 | 1529 |
| 10 | 63 | 54 | 67 | 70 | 291 | 356 | 482 | 520 | 613 | 683 | 692 | 884 | 1043 | 1154 | 889 |
| 11 | 321 | 291 | 370 | 399 | 64 | 68 | 56 | 71 | 70 | 83 | 94 | 106 | 92 | 94 | 130 |
| 12 | 280 | 245 | 298 | 348 | 79 | 101 | 105 | 109 | 117 | 127 | 129 | 169 | 204 | 221 | 203 |
| 13 | 154 | 136 | 177 | 184 | 422 | 450 | 523 | 538 | 571 | 574 | 569 | 664 | 817 | 972 | 933 |
| 14 | 117 | 116 | 134 | 140 | 374 | 452 | 515 | 541 | 586 | 625 | 602 | 705 | 814 | 957 | 875 |
| 15 | 111 | 99 | 117 | 145 | 190 | 234 | 257 | 283 | 279 | 303 | 287 | 302 | 356 | 430 | 414 |
| 16 | 89 | 94 | 105 | 119 | 142 | 165 | 194 | 227 | 266 | 302 | 291 | 356 | 414 | 451 | 383 |
| 17 | 45 | 40 | 48 | 52 | 171 | 223 | 272 | 324 | 348 | 364 | 391 | 457 | 535 | 588 | 511 |
| 18 | 170 | 177 | 217 | 230 | 138 | 179 | 226 | 248 | 283 | 295 | 317 | 406 | 469 | 529 | 464 |
| 19 | 189 | 220 | 274 | 301 | 57 | 74 | 86 | 109 | 117 | 133 | 135 | 155 | 175 | 189 | 156 |
| 20 | 381 | 281 | 336 | 356 | 265 | 293 | 340 | 399 | 425 | 458 | 469 | 568 | 662 | 731 | 672 |
| 21 | 156 | 144 | 176 | 201 | 335 | 364 | 428 | 507 | 505 | 561 | 541 | 572 | 661 | 694 | 538 |
| 22 | 40 | 42 | 50 | 65 | 438 | 535 | 566 | 660 | 653 | 655 | 631 | 764 | 901 | 995 | 895 |
| 23 | 163 | 153 | 170 | 193 | 228 | 283 | 317 | 341 | 344 | 343 | 340 | 384 | 441 | 500 | 494 |
| 24 | 62 | 48 | 58 | 65 | 86 | 132 | 171 | 210 | 241 | 251 | 294 | 339 | 402 | 419 | 309 |
| 25 | 127 | 117 | 138 | 153 | 232 | 277 | 335 | 396 | 451 | 483 | 526 | 629 | 721 | 847 | 736 |
| 26 | 17 | 17 | 27 | 48 | 80 | 92 | 105 | 103 | 114 | 112 | 112 | 131 | 161 | 156 | 139 |
| 27 | 27 | 29 | 39 | 40 | 173 | 182 | 204 | 227 | 227 | 244 | 234 | 271 | 324 | 329 | 291 |
| 28 | 216 | 218 | 225 | 255 | 39 | 45 | 44 | 41 | 50 | 64 | 66 | 87 | 108 | 126 | 115 |
| 29 | 42 | 50 | 50 | 52 | 42 | 60 | 70 | 87 | 92 | 108 | 109 | 118 | 137 | 143 | 126 |
| 30 | 563 | 558 | 624 | 706 | 266 | 304 | 356 | 394 | 422 | 472 | 437 | 508 | 676 | 714 | 642 |
| 31 | 95 | 92 | 122 | 149 | 54 | 57 | 62 | 75 | 86 | 89 | 91 | 124 | 145 | 155 | 142 |
| 32 | 52 | 35 | 52 | 52 | 756 | 864 | 899 | 1059 | 1101 | 1156 | 1097 | 1269 | 1605 | 1699 | 1431 |
| 33 | 670 | 608 | 665 | 764 | 198 | 283 | 374 | 490 | 597 | 694 | 857 | 1021 | 1172 | 1302 | 992 |
| 34 | 84 | 100 | 132 | 140 | 69 | 77 | 89 | 90 | 94 | 94 | 98 | 112 | 136 | 134 | 137 |
| 35 | 209 | 201 | 243 | 280 | 863 | 1010 | 1166 | 1239 | 1332 | 1425 | 1306 | 1460 | 1724 | 1997 | 1679 |
| 36 | 652 | 581 | 609 | 647 | 166 | 176 | 221 | 248 | 290 | 317 | 338 | 418 | 480 | 544 | 457 |
| 37 | 35 | 39 | 53 | 55 | 314 | 356 | 364 | 375 | 394 | 422 | 380 | 469 | 513 | 570 | 542 |
| 38 | 31 | 29 | 41 | 57 | 717 | 848 | 966 | 1096 | 1118 | 1227 | 1225 | 1401 | 1760 | 1806 | 1516 |
| 39 | 50 | 44 | 56 | 60 | 67 | 71 | 86 | 106 | 109 | 113 | 106 | 105 | 117 | 112 | 88 |
| 40 | 196 | 189 | 223 | 275 | 79 | 121 | 164 | 222 | 287 | 334 | 358 | 431 | 512 | 544 | 410 |
| 41 | 301 | 361 | 399 | 440 | 58 | 69 | 77 | 84 | 90 | 93 | 90 | 99 | 129 | 127 | 120 |
| 42 | 63 | 58 | 72 | 86 | 320 | 395 | 495 | 558 | 633 | 615 | 646 | 791 | 924 | 1053 | 836 |
| 43 | 21 | 19 | 25 | 27 | 527 | 599 | 788 | 938 | 1153 | 1198 | 1297 | 1621 | 1934 | 2196 | 1906 |
| 44 | 141 | 138 | 195 | 210 | 88 | 91 | 110 | 134 | 155 | 155 | 147 | 187 | 214 | 232 | 193 |
| 45 | 321 | 319 | 376 | 406 | 31 | 41 | 49 | 60 | 64 | 69 | 65 | 70 | 74 | 71 | 54 |
| 46 | 135 | 124 | 137 | 153 | 248 | 300 | 374 | 432 | 501 | 555 | 611 | 771 | 874 | 948 | 757 |
| 47 | 272 | 237 | 256 | 271 | 428 | 459 | 549 | 603 | 604 | 581 | 507 | 560 | 625 | 724 | 693 |
| 48 | 23 | 20 | 24 | 23 | 158 | 186 | 208 | 227 | 230 | 267 | 282 | 332 | 383 | 369 | 301 |
| 49 | 11 | 10 | 9 | 10 | 331 | 374 | 432 | 457 | 471 | 464 | 436 | 485 | 554 | 587 | 530 |
| 50 | 20 | 20 | 28 | 38 | 30 | 29 | 31 | 32 | 37 | 38 | 40 | 46 | 59 | 60 | 54 |

TABLES 35 TO 37: ORIGINAL ANNUAL GAS APPLIANCE STOCK DATA

These series were derived from the gross investment data in Tables 31 to 33 and the U.S. Census of Housing [12].

See section C for further discussion.

TABLE 35 STOCK OF GAS RANGES (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 260 | 260 | 260 | 263 | 267 | 270 | 274 | 274 | 281 | 290 | 296 | 298 | 302 | 299 | 297 |
| 2 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 7 | 9 | 12 | 15 | 19 | 22 |
| 3 | 241 | 247 | 251 | 257 | 263 | 269 | 274 | 277 | 282 | 291 | 298 | 306 | 316 | 328 | 338 |
| 4 | 254 | 259 | 264 | 272 | 278 | 285 | 291 | 292 | 300 | 312 | 320 | 325 | 329 | 332 | 338 |
| 5 | 3757 | 3826 | 3886 | 3968 | 4052 | 4135 | 4187 | 4184 | 4212 | 4291 | 4350 | 4398 | 4453 | 4510 | 4560 |
| 6 | 274 | 275 | 275 | 277 | 278 | 280 | 280 | 279 | 280 | 282 | 283 | 284 | 285 | 287 | 290 |
| 7 | 307 | 309 | 311 | 312 | 314 | 315 | 317 | 316 | 319 | 325 | 327 | 326 | 326 | 326 | 328 |
| 8 | 49 | 51 | 52 | 53 | 55 | 56 | 58 | 59 | 61 | 64 | 65 | 66 | 68 | 70 | 72 |
| 9 | 234 | 244 | 253 | 261 | 269 | 277 | 284 | 284 | 292 | 310 | 323 | 332 | 343 | 348 | 354 |
| 10 | 351 | 356 | 360 | 367 | 376 | 387 | 395 | 397 | 409 | 431 | 445 | 455 | 465 | 468 | 481 |
| 11 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 37 | 37 | 36 |
| 12 | 4 | 4 | 5 | 6 | 7 | 7 | 9 | 9 | 10 | 11 | 12 | 13 | 15 | 18 | 20 |
| 13 | 2056 | 2101 | 2141 | 2186 | 2227 | 2269 | 2312 | 2326 | 2376 | 2459 | 2506 | 2547 | 2600 | 2640 | 2700 |
| 14 | 609 | 618 | 629 | 648 | 671 | 694 | 718 | 724 | 747 | 767 | 778 | 788 | 792 | 799 | 804 |
| 15 | 328 | 334 | 340 | 347 | 354 | 361 | 368 | 369 | 377 | 387 | 392 | 396 | 400 | 418 | 419 |
| 16 | 383 | 378 | 375 | 370 | 365 | 361 | 356 | 351 | 350 | 355 | 357 | 357 | 357 | 360 | 356 |
| 17 | 343 | 348 | 350 | 355 | 360 | 365 | 367 | 367 | 373 | 383 | 389 | 393 | 395 | 399 | 402 |
| 18 | 660 | 668 | 674 | 689 | 697 | 706 | 717 | 719 | 730 | 752 | 763 | 770 | 778 | 781 | 783 |
| 19 | 42 | 41 | 40 | 39 | 38 | 38 | 37 | 35 | 35 | 34 | 33 | 32 | 31 | 30 | 30 |
| 20 | 718 | 732 | 748 | 771 | 794 | 819 | 847 | 859 | 884 | 912 | 932 | 951 | 975 | 997 | 1018 |
| 21 | 847 | 857 | 868 | 875 | 880 | 888 | 897 | 895 | 899 | 911 | 914 | 914 | 915 | 914 | 914 |
| 22 | 1052 | 1066 | 1079 | 1098 | 1116 | 1137 | 1156 | 1162 | 1185 | 1230 | 1258 | 1272 | 1289 | 1307 | 1323 |
| 23 | 388 | 394 | 401 | 407 | 414 | 420 | 424 | 423 | 428 | 436 | 442 | 447 | 453 | 458 | 463 |
| 24 | 228 | 228 | 228 | 230 | 230 | 230 | 229 | 226 | 228 | 231 | 233 | 233 | 233 | 233 | 232 |
| 25 | 696 | 703 | 709 | 719 | 728 | 736 | 745 | 742 | 751 | 772 | 780 | 783 | 788 | 788 | 786 |
| 26 | 60 | 59 | 59 | 58 | 58 | 58 | 57 | 56 | 55 | 55 | 54 | 53 | 52 | 51 | 51 |
| 27 | 196 | 195 | 194 | 194 | 194 | 193 | 191 | 187 | 186 | 186 | 185 | 183 | 181 | 178 | 174 |
| 28 | 16 | 17 | 19 | 20 | 24 | 27 | 30 | 32 | 34 | 37 | 41 | 46 | 53 | 60 | 66 |
| 29 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 44 |
| 30 | 1322 | 1343 | 1369 | 1401 | 1435 | 1466 | 1494 | 1506 | 1540 | 1583 | 1613 | 1619 | 1617 | 1646 | 1677 |
| 31 | 131 | 132 | 133 | 134 | 136 | 138 | 139 | 139 | 141 | 144 | 146 | 148 | 151 | 155 | 159 |
| 32 | 3826 | 3873 | 3932 | 3969 | 4018 | 4055 | 4082 | 4079 | 4116 | 4162 | 4186 | 4212 | 4255 | 4278 | 4301 |
| 33 | 72 | 77 | 82 | 87 | 95 | 101 | 107 | 109 | 116 | 128 | 135 | 141 | 146 | 149 | 151 |
| 34 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 26 | 27 | 27 | 28 | 28 | 28 | 27 |
| 35 | 1620 | 1626 | 1628 | 1636 | 1642 | 1646 | 1651 | 1638 | 1645 | 1665 | 1670 | 1664 | 1666 | 1665 | 1662 |
| 36 | 498 | 499 | 500 | 503 | 506 | 506 | 508 | 505 | 507 | 514 | 515 | 515 | 515 | 519 | 519 |
| 37 | 48 | 48 | 48 | 48 | 48 | 48 | 49 | 49 | 50 | 52 | 54 | 55 | 57 | 57 | 57 |
| 38 | 1854 | 1858 | 1862 | 1872 | 1879 | 1886 | 1896 | 1884 | 1902 | 1936 | 1949 | 1957 | 1971 | 1978 | 1979 |
| 39 | 133 | 133 | 133 | 133 | 132 | 133 | 133 | 132 | 133 | 136 | 138 | 138 | 139 | 136 | 135 |
| 40 | 50 | 53 | 56 | 59 | 64 | 68 | 74 | 77 | 83 | 93 | 99 | 105 | 108 | 112 | 117 |
| 41 | 40 | 40 | 40 | 41 | 42 | 42 | 42 | 42 | 42 | 42 | 43 | 43 | 44 | 44 | 44 |
| 42 | 192 | 195 | 195 | 197 | 200 | 201 | 201 | 199 | 201 | 207 | 210 | 211 | 210 | 209 | 208 |
| 43 | 1885 | 1903 | 1932 | 1968 | 1998 | 2026 | 2047 | 2044 | 2069 | 2124 | 2154 | 2172 | 2200 | 2223 | 2241 |
| 44 | 69 | 70 | 71 | 72 | 74 | 75 | 76 | 77 | 78 | 80 | 83 | 87 | 91 | 94 | 98 |
| 45 | 12 | 12 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 14 | 14 | 14 |
| 46 | 296 | 306 | 316 | 328 | 341 | 353 | 367 | 377 | 390 | 408 | 424 | 440 | 457 | 480 | 501 |
| 47 | 54 | 54 | 55 | 56 | 57 | 59 | 60 | 61 | 63 | 67 | 69 | 70 | 71 | 72 | 74 |
| 48 | 277 | 276 | 275 | 276 | 276 | 277 | 277 | 275 | 276 | 279 | 280 | 279 | 279 | 279 | 280 |
| 49 | 406 | 415 | 423 | 432 | 442 | 452 | 464 | 458 | 481 | 500 | 511 | 519 | 530 | 538 | 545 |
| 50 | 43 | 43 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 41 | 41 | 40 | 40 | 40 | 40 |

TABLE 36 STOCK OF GAS WATER HEATERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 298 | 316 | 331 | 343 | 350 | 356 | 363 | 373 | 379 | 392 | 406 | 425 | 439 | 450 | 481 |
| 2 | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 6 | 8 | 12 | 17 | 24 | 34 | 43 | 56 |
| 3 | 274 | 290 | 307 | 324 | 339 | 357 | 370 | 380 | 387 | 402 | 420 | 444 | 478 | 507 | 527 |
| 4 | 239 | 256 | 276 | 292 | 302 | 315 | 325 | 335 | 341 | 353 | 366 | 382 | 402 | 416 | 432 |
| 5 | 4338 | 4527 | 4743 | 4874 | 4982 | 5152 | 5279 | 5408 | 5477 | 5616 | 5740 | 5880 | 6049 | 6181 | 6203 |
| 6 | 380 | 398 | 420 | 439 | 455 | 475 | 490 | 506 | 517 | 537 | 556 | 580 | 609 | 637 | 643 |
| 7 | 216 | 230 | 241 | 247 | 251 | 256 | 261 | 266 | 267 | 272 | 279 | 287 | 294 | 298 | 307 |
| 8 | 42 | 47 | 52 | 56 | 58 | 61 | 64 | 66 | 68 | 70 | 73 | 76 | 78 | 80 | 85 |
| 9 | 186 | 207 | 225 | 242 | 251 | 263 | 275 | 288 | 293 | 308 | 320 | 334 | 347 | 356 | 507 |
| 10 | 381 | 409 | 433 | 460 | 475 | 496 | 517 | 541 | 555 | 583 | 607 | 640 | 678 | 707 | 776 |
| 11 | 35 | 36 | 37 | 37 | 38 | 38 | 38 | 38 | 38 | 39 | 40 | 41 | 42 | 42 | 42 |
| 12 | 8 | 9 | 11 | 13 | 14 | 16 | 17 | 19 | 20 | 23 | 26 | 31 | 38 | 46 | 68 |
| 13 | 1766 | 1864 | 1965 | 2066 | 2134 | 2216 | 2284 | 2374 | 2431 | 2532 | 2623 | 2724 | 2841 | 2940 | 2996 |
| 14 | 638 | 676 | 717 | 746 | 768 | 797 | 817 | 842 | 858 | 891 | 924 | 966 | 1018 | 1058 | 1099 |
| 15 | 364 | 386 | 408 | 428 | 440 | 454 | 467 | 482 | 489 | 507 | 523 | 536 | 553 | 566 | 575 |
| 16 | 492 | 505 | 517 | 527 | 532 | 540 | 546 | 553 | 556 | 568 | 580 | 597 | 618 | 633 | 635 |
| 17 | 362 | 377 | 397 | 411 | 423 | 438 | 451 | 464 | 474 | 489 | 503 | 523 | 541 | 556 | 578 |
| 18 | 580 | 610 | 640 | 666 | 680 | 700 | 721 | 741 | 752 | 778 | 802 | 830 | 860 | 884 | 901 |
| 19 | 18 | 19 | 20 | 20 | 19 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 12 | 13 |
| 20 | 578 | 629 | 676 | 713 | 740 | 769 | 790 | 816 | 830 | 854 | 879 | 907 | 940 | 966 | 1000 |
| 21 | 498 | 529 | 555 | 577 | 593 | 614 | 630 | 649 | 657 | 679 | 701 | 723 | 751 | 770 | 781 |
| 22 | 1318 | 1366 | 1414 | 1470 | 1510 | 1556 | 1595 | 1645 | 1676 | 1730 | 1781 | 1846 | 1907 | 1959 | 1999 |
| 23 | 437 | 455 | 476 | 493 | 505 | 522 | 536 | 556 | 566 | 587 | 608 | 633 | 660 | 683 | 705 |
| 24 | 208 | 220 | 235 | 242 | 243 | 246 | 248 | 252 | 252 | 255 | 259 | 265 | 271 | 275 | 283 |
| 25 | 758 | 801 | 840 | 869 | 885 | 913 | 932 | 954 | 960 | 985 | 1006 | 1034 | 1070 | 1092 | 1101 |
| 26 | 109 | 112 | 114 | 118 | 121 | 126 | 128 | 130 | 130 | 132 | 134 | 136 | 141 | 143 | 144 |
| 27 | 254 | 266 | 279 | 285 | 289 | 295 | 298 | 304 | 305 | 312 | 319 | 327 | 338 | 346 | 345 |
| 28 | 19 | 22 | 25 | 28 | 31 | 37 | 41 | 43 | 45 | 49 | 53 | 59 | 66 | 73 | 88 |
| 29 | 18 | 21 | 23 | 24 | 25 | 27 | 28 | 30 | 30 | 31 | 32 | 34 | 35 | 36 | 39 |
| 30 | 756 | 830 | 905 | 929 | 968 | 1014 | 1049 | 1087 | 1116 | 1163 | 1194 | 1247 | 1305 | 1346 | 1387 |
| 31 | 156 | 163 | 169 | 177 | 182 | 191 | 198 | 202 | 203 | 207 | 209 | 213 | 218 | 222 | 222 |
| 32 | 1503 | 1611 | 1715 | 1844 | 1918 | 2007 | 2088 | 2193 | 2260 | 2366 | 2485 | 2601 | 2729 | 2843 | 2940 |
| 33 | 66 | 75 | 84 | 98 | 105 | 116 | 125 | 133 | 138 | 148 | 159 | 177 | 188 | 198 | 285 |
| 34 | 36 | 39 | 41 | 42 | 44 | 46 | 47 | 49 | 50 | 52 | 55 | 57 | 60 | 62 | 66 |
| 35 | 1974 | 2044 | 2101 | 2151 | 2190 | 2231 | 2264 | 2309 | 2326 | 2374 | 2416 | 2469 | 2530 | 2573 | 2609 |
| 36 | 529 | 546 | 565 | 583 | 592 | 608 | 617 | 627 | 628 | 637 | 645 | 659 | 672 | 683 | 692 |
| 37 | 47 | 49 | 51 | 55 | 60 | 65 | 68 | 69 | 70 | 73 | 78 | 82 | 87 | 91 | 120 |
| 38 | 1733 | 1801 | 1867 | 1904 | 1922 | 1948 | 1964 | 1989 | 1994 | 2020 | 2049 | 2095 | 2127 | 2149 | 2189 |
| 39 | 61 | 67 | 72 | 74 | 76 | 79 | 82 | 85 | 86 | 90 | 93 | 96 | 101 | 105 | 107 |
| 40 | 42 | 47 | 52 | 57 | 61 | 66 | 72 | 78 | 82 | 90 | 96 | 105 | 115 | 122 | 162 |
| 41 | 51 | 53 | 56 | 58 | 59 | 61 | 62 | 63 | 64 | 66 | 67 | 69 | 73 | 76 | 78 |
| 42 | 201 | 211 | 220 | 226 | 229 | 236 | 242 | 247 | 247 | 254 | 261 | 277 | 287 | 292 | 331 |
| 43 | 1988 | 2097 | 2210 | 2289 | 2334 | 2399 | 2452 | 2457 | 2485 | 2572 | 2656 | 2753 | 2863 | 2955 | 2998 |
| 44 | 155 | 163 | 172 | 181 | 189 | 199 | 206 | 212 | 215 | 221 | 228 | 235 | 244 | 251 | 253 |
| 45 | 9 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 46 | 268 | 286 | 304 | 322 | 337 | 359 | 378 | 396 | 410 | 431 | 454 | 484 | 516 | 544 | 605 |
| 47 | 43 | 48 | 54 | 59 | 63 | 70 | 77 | 85 | 92 | 103 | 117 | 128 | 144 | 157 | 221 |
| 48 | 332 | 329 | 327 | 324 | 320 | 315 | 310 | 305 | 299 | 294 | 290 | 287 | 285 | 281 | 278 |
| 49 | 668 | 648 | 628 | 601 | 572 | 547 | 520 | 496 | 469 | 450 | 429 | 411 | 398 | 382 | 364 |
| 50 | 75 | 73 | 70 | 69 | 66 | 64 | 62 | 59 | 56 | 53 | 64 | 60 | 57 | 54 | 51 |

TABLE 37 STOCK OF GAS DRYERS (THOUSANDS)

| STATE | YEAR | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 |
| 1 | 5 | 6 | 7 | 9 | 10 | 12 | 14 | 17 | 19 | 22 | 25 | 28 | 31 | 34 | 37 |
| 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 5 | 6 |
| 3 | 5 | 5 | 7 | 8 | 10 | 13 | 16 | 20 | 24 | 30 | 38 | 48 | 59 | 73 | 86 |
| 4 | 9 | 14 | 17 | 20 | 24 | 28 | 33 | 38 | 44 | 49 | 56 | 62 | 67 | 74 | 78 |
| 5 | 267 | 308 | 355 | 417 | 497 | 586 | 685 | 790 | 824 | 952 | 1089 | 1224 | 1361 | 1444 | 1605 |
| 6 | 11 | 13 | 15 | 17 | 20 | 23 | 27 | 31 | 35 | 41 | 47 | 53 | 59 | 68 | 76 |
| 7 | 9 | 11 | 13 | 15 | 18 | 21 | 24 | 28 | 32 | 37 | 42 | 47 | 51 | 57 | 62 |
| 8 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 13 | 15 | 16 | 18 |
| 9 | 6 | 7 | 8 | 9 | 13 | 17 | 21 | 26 | 30 | 35 | 40 | 46 | 52 | 59 | 67 |
| 10 | 9 | 11 | 12 | 14 | 17 | 21 | 26 | 33 | 38 | 47 | 57 | 65 | 72 | 81 | 88 |
| 11 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 5 |
| 12 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| 13 | 389 | 426 | 467 | 511 | 561 | 610 | 668 | 725 | 777 | 838 | 891 | 944 | 994 | 1064 | 1118 |
| 14 | 131 | 142 | 153 | 165 | 181 | 195 | 212 | 229 | 243 | 260 | 275 | 289 | 301 | 317 | 329 |
| 15 | 81 | 89 | 96 | 105 | 114 | 124 | 137 | 149 | 160 | 173 | 185 | 196 | 206 | 218 | 227 |
| 16 | 45 | 49 | 54 | 59 | 64 | 70 | 76 | 83 | 90 | 98 | 106 | 114 | 122 | 133 | 142 |
| 17 | 22 | 25 | 28 | 31 | 35 | 40 | 45 | 50 | 55 | 62 | 69 | 76 | 83 | 92 | 98 |
| 18 | 56 | 66 | 77 | 87 | 100 | 115 | 134 | 154 | 169 | 187 | 202 | 218 | 233 | 252 | 268 |
| 19 | 2 | 3 | 3 | 4 | 4 | 4 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 |
| 20 | 35 | 42 | 50 | 60 | 71 | 82 | 95 | 109 | 123 | 138 | 153 | 169 | 185 | 206 | 222 |
| 21 | 33 | 40 | 50 | 61 | 74 | 87 | 101 | 118 | 135 | 157 | 178 | 199 | 219 | 245 | 266 |
| 22 | 320 | 351 | 381 | 414 | 451 | 492 | 539 | 587 | 627 | 676 | 724 | 771 | 815 | 873 | 918 |
| 23 | 102 | 113 | 124 | 137 | 151 | 167 | 183 | 200 | 216 | 234 | 251 | 268 | 286 | 308 | 326 |
| 24 | 4 | 4 | 5 | 5 | 6 | 7 | 8 | 10 | 11 | 13 | 14 | 16 | 17 | 18 | 19 |
| 25 | 87 | 99 | 112 | 128 | 144 | 160 | 178 | 197 | 213 | 232 | 249 | 266 | 281 | 301 | 314 |
| 26 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 8 |
| 27 | 28 | 32 | 34 | 37 | 40 | 43 | 46 | 49 | 52 | 56 | 60 | 63 | 66 | 69 | 71 |
| 28 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 7 |
| 29 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 30 | 112 | 133 | 156 | 181 | 208 | 235 | 265 | 298 | 331 | 369 | 409 | 445 | 481 | 525 | 559 |
| 31 | 4 | 5 | 7 | 8 | 9 | 12 | 14 | 16 | 19 | 21 | 24 | 27 | 30 | 33 | 37 |
| 32 | 165 | 192 | 226 | 260 | 299 | 338 | 381 | 426 | 470 | 523 | 572 | 620 | 664 | 723 | 768 |
| 33 | 2 | 2 | 2 | 3 | 3 | 4 | 6 | 8 | 10 | 13 | 17 | 21 | 25 | 30 | 34 |
| 34 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 9 | 10 | 11 | 11 | 12 |
| 35 | 290 | 314 | 338 | 361 | 387 | 412 | 438 | 464 | 485 | 511 | 533 | 553 | 571 | 594 | 609 |
| 36 | 30 | 35 | 41 | 47 | 54 | 60 | 67 | 75 | 81 | 90 | 98 | 106 | 114 | 125 | 133 |
| 37 | 2 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 8 | 9 | 11 | 12 | 14 | 15 |
| 38 | 266 | 294 | 324 | 353 | 381 | 410 | 444 | 479 | 511 | 549 | 587 | 625 | 659 | 705 | 735 |
| 39 | 2 | 3 | 3 | 5 | 6 | 7 | 9 | 11 | 14 | 18 | 21 | 25 | 28 | 33 | 36 |
| 40 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 |
| 41 | 9 | 9 | 10 | 10 | 11 | 12 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 19 |
| 42 | 2 | 3 | 3 | 3 | 4 | 5 | 5 | 7 | 8 | 9 | 10 | 12 | 13 | 14 | 16 |
| 43 | 73 | 88 | 105 | 121 | 141 | 163 | 189 | 219 | 247 | 286 | 322 | 360 | 397 | 442 | 479 |
| 44 | 6 | 8 | 9 | 11 | 13 | 16 | 20 | 23 | 27 | 31 | 35 | 39 | 44 | 49 | 53 |
| 45 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| 46 | 7 | 8 | 10 | 12 | 14 | 17 | 20 | 24 | 28 | 33 | 39 | 46 | 54 | 64 | 71 |
| 47 | 3 | 5 | 5 | 6 | 6 | 7 | 8 | 9 | 10 | 12 | 13 | 15 | 16 | 18 | 20 |
| 48 | 22 | 24 | 26 | 27 | 30 | 32 | 34 | 37 | 40 | 43 | 46 | 49 | 53 | 57 | 60 |
| 49 | 86 | 102 | 113 | 125 | 139 | 153 | 170 | 189 | 205 | 223 | 241 | 258 | 274 | 297 | 314 |
| 50 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 10 | 10 |