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The ORNL State-Level Electricity Demand Forecasting Model

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ABSTRACT

This report presents further results of validating Version I of the ORNL-SLED Model, an investigation of structural changes in electricity demand, an update of the Version I model as Version II the electricity cost forecasting model, and the forecasts of electricity demand and prices by sector and by state for 1977-2000.

Further validation of the Version I model was conducted through *ex post* forecasting in the post-sample years of 1975 and 1976. The *ex post* forecasting results reveal no evidence of any significant non-price induced conservation in 1975 and 1976. The results obtained from investigating structural change show that changes in either the general structure of the demand equations or the estimated own-price elasticities between Version I and Version II are generally not statistically significant.

A new set of the assumptions of exogenous variables was developed and used to forecast electricity demand and prices. The forecast rates of growth in total electricity demand vary considerably from state to state: Arizona has the highest rate (8.2%) and Massachusetts and Illinois have the lowest rate (2.9%) for the 1976-90 period. For the United States as a whole, the forecast annual growth rates of total electricity demand are 4.5%, 4.1% and 5.5% for the base, high-price, and low-price cases, respectively, for the same period.

1. INTRODUCTION

Since the early 1970s, historical trends of decreasing real fuel and electricity prices have been reversed and, as a result, the forecasting of electricity demand takes place under quite different conditions. Recent growth rates of electricity consumption have significantly departed from the past trend of 7-8% average annual growth. Not surprisingly, electricity demand forecasting has become considerably more uncertain.

These increased uncertainties of electricity demand forecasting are associated with the extent to which important variables such as fuel prices, income, and population affect electricity demand growth, as well as with the future values of these variables. The uncertainties involved are, moreover, inherently related to important policy issues concerning the need for new nuclear power plants; one obvious issue is whether more electrical power is needed. The issue is very simple--expanded generating capacity, except those for replacement, cannot be justified unless electricity demand is expected to increase. However, due to the uncertainties in forecasting electricity demand, there has been growing controversy over the validity of forecasts made by utilities in their applications for new generating capacity.

This report presents the recent results of electricity demand modeling and forecasting since the publication of Version I of the Oak Ridge National Laboratory State-Level Electricity Demand (ORNL-SLED) model. Version I of the model was developed using the data for the period of 1955-74, and the details of the model structure were presented in an earlier report by Chern et al.[1] The specific topics covered in this report include: (1) validation of the Version I model for the beyond-sample period years of 1975 and 1976, (2) an investigation of structural changes, (3) Version II of the ORNL-SLED model which is an update of Version I with additional data for 1975-76, (4) a methodology for projecting electricity costs, and (5) forecasted results of electricity demanded and price by sector and by state using the Version II model. The work reported here is sponsored by the Nuclear Regulatory Commission (NRC). The purpose of this research program is to develop

credible computer models to be used by the NRC and other public agencies for assessing the need for electric power.

The ORNL-SLED model specifically forecasts both annual Kwh consumption and average electricity prices by sector and by state. The model a nonlinear simultaneous-equations model, which contains submodels for residential, commercial, and industrial sectors. One important feature is the specification of the price equation which takes into account the cost-justified price increase mechanism imposed on utilities by utility regulatory commissions. This structure is important, particularly from a forecasting point of view, in obtaining forecasts of sectoral prices consistent with the average total electricity costs which are exogenous inputs to the model. Specifically, the econometric model consists of six structural equations--one demand and one price equation for each of the three major consuming sectors. All demand equations are dynamically specified to have a logarithmic Koyck form while all price equations have a linear form with quadratic terms. The overall system, thus, consists of six nonlinearly related equations for each region.

Figure 1.1 list all variables and their definitions used in the ORNL-SLED model. As one can see, the model is sensitive to economic, demographic, and climatic variables. In order to capture the effect of interfuel substitution, all cross-price variables were examined. The model also explicitly takes into account the impacts of the availability of natural gas through the use of numbers of natural gas customers as explanatory variables since at various times hook-ups to gas distribution lines have been limited.

ELECTRICITY DEMAND
RESIDENTIAL (ERS)
COMMERCIAL (ECS)
INDUSTRIAL (EIS)

ELECTRICITY PRICE
RESIDENTIAL (PER)
COMMERCIAL (PEC)
INDUSTRIAL (PEI)

EXOGENOUS FACTORS

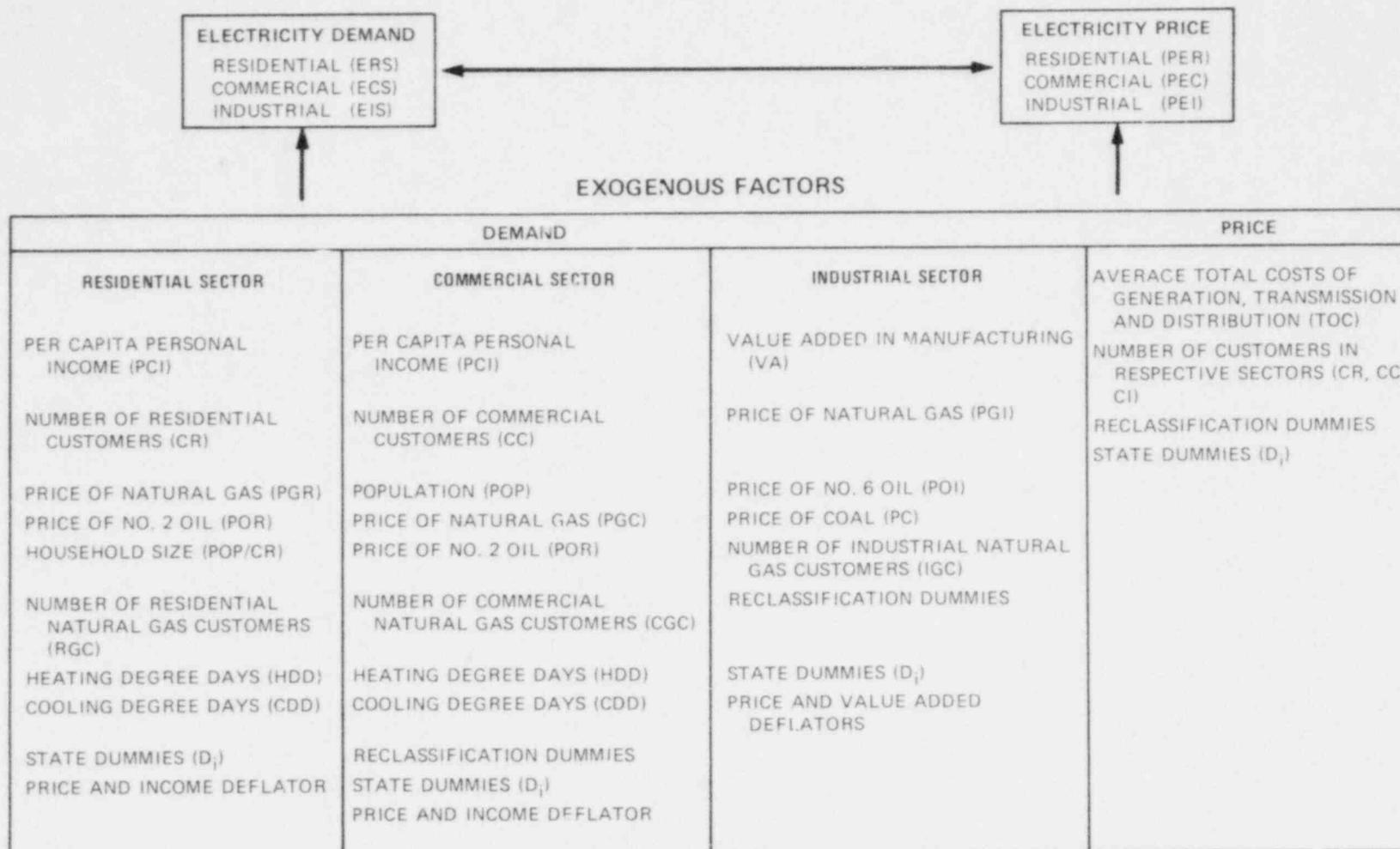| DEMAND			PRICE
RESIDENTIAL SECTOR	**COMMERCIAL SECTOR**	**INDUSTRIAL SECTOR**	AVERAGE TOTAL COSTS OF GENERATION, TRANSMISSION AND DISTRIBUTION (TOC)
PER CAPITA PERSONAL INCOME (PCI)	PER CAPITA PERSONAL INCOME (PCI)	VALUE ADDED IN MANUFACTURING (VA)	NUMBER OF CUSTOMERS IN RESPECTIVE SECTORS (CR, CC, CI)
NUMBER OF RESIDENTIAL CUSTOMERS (CR)	NUMBER OF COMMERCIAL CUSTOMERS (CC)	PRICE OF NATURAL GAS (PGI)	RECLASSIFICATION DUMMIES
			STATE DUMMIES (D_i)
PRICE OF NATURAL GAS (PGR)	POPULATION (POP)	PRICE OF NO. 6 OIL (POI)	
PRICE OF NO. 2 OIL (POR)	PRICE OF NATURAL GAS (PGC)	PRICE OF COAL (PC)	
HOUSEHOLD SIZE (POP/CR)	PRICE OF NO. 2 OIL (POR)	NUMBER OF INDUSTRIAL NATURAL GAS CUSTOMERS (IGC)	
NUMBER OF RESIDENTIAL NATURAL GAS CUSTOMERS (RGC)	NUMBER OF COMMERCIAL NATURAL GAS CUSTOMERS (CGC)	RECLASSIFICATION DUMMIES	
HEATING DEGREE DAYS (HDD)	HEATING DEGREE DAYS (HDD)	STATE DUMMIES (D_i)	
COOLING DEGREE DAYS (CDD)	COOLING DEGREE DAYS (CDD)	PRICE AND VALUE ADDED DEFLATORS	
STATE DUMMIES (D_i)	RECLASSIFICATION DUMMIES		
PRICE AND INCOME DEFLATOR	STATE DUMMIES (D_i)		
	PRICE AND INCOME DEFLATOR		

Fig. 1.1. Structure of the model.

2. *EX POST* FORECASTING WITH THE VERSION I MODEL

This section presents the results of *ex post* forecasting, using the Version I of the ORNL-SLED model. The Version I model, as detailed in Chern et al.,[2] and Chern and Just,[3] was estimated by three-stage least squares with the pooled time-series (1955-1974) and cross-state data for each of the nine census regions. The simulation errors as computed for the sample period were also presented there. While the model performs well within the sample period, the question often arises as to how well it works beyond the period of estimation. Unfortunately, there is no simple way to calculate analytical confidence intervals for the forecast from a simultaneous-equation model such as the one developed in this study. This is due to the fact that forecast errors can be compounded in a complex way by the feedback structure of the model. Under this situation, as suggested by Pindyck and Rubinfeld,[4] *ex post* forecast errors are often used as criteria for forecast performance. Thus, for the purpose of evaluating the performance of the ORNL-SLED model, *ex post* forecasting is conducted for 1975 and 1976 (complete data are not available beyond 1976). For comparison, one-period simulations similar to the one suggested by Klein,[5] are performed for these two years. That is, instead of using computed lags for subsequent periods, observed values of lags (together with observed values of independent variables) over the *ex post* forecasting period are used. Since there are only two years for *ex post* forecasting, mean absolute percentage error or mean squared percentage error was not computed as for the within-sample period simulations performed previously in Chern et al. Rather, the following simple percentage errors (SPE) are computed for both 1975 and 1976:

$$SPE_t = \frac{\hat{y}_t - y_t}{y_t} \times 100$$

where SPE_t = *ex post* forecasting error in percent

$\hat{y}_t$ = *ex post* forecasted values of the endogenous variable

y_t = actual value of the endogenous variable

The SPE is directly comparable with the mean absolute percentage error (MAPE) which is computed by

$$MAPE = \frac{1}{T} \sum_{t=1}^{T} \frac{|\hat{y}_t - y_t|}{y_t}$$

where T = number of forecasting periods.

Appendix A presents the *ex post* forecasting errors by sector for all 48 states. Actual electricity demand and price for 1974-76 are also presented for reference. The forecasted values for 1975 and 1976 can, of course, be computed based on the actual values and the forecasted errors. The following interesting results are observed:

1. Generally, the *ex post* forecasting errors are smaller for residential demand than for commercial and industrial demands. One reason for higher errors for commercial and industrial demand forecasts is due to the reclassification of customers between these two sectors. For example, in Arkansas, actual industrial demand for electricity shows a drastic reduction of 26% while actual commercial demand registered an increase of 13% for 1974 to 1975. As a result, the error in forecasting industrial demand for this state for 1975 is 41.8%, the largest among all errors computed. Due to the effects of changes in definitions of customers among classes, the *ex post* forecasting errors for sectoral demands are generally higher than the forecasted total demand. Note that total electricity demand presented in Table A of Appendix A is simply the sum of the three major consuming classes, and thus, it does not include other miscellaneous categories.

2. Comparing the results for 1975 and 1976, there appears to be no significant increasing trend of forecasting error. In fact, the forecasting errors are higher in 1975 than in 1976 for many states. Also, the errors often have the opposite signs between 1975 and 1976 indicating that the estimated error pattern is consistent with the theoretical assumption that the error term is randomly distributed with zero mean.

3. There are 16 of 48 states for which the model consistently underestimates both electricity demand and price. On the other hand, there are only three states for which the model consistently overestimates

both electricity demand and price. The pattern of these forecasts is, of course, not consistent with the expected behavior of the model. Since the model simultaneously determines demand and price at the equilibrium situation, one would normally expect that if the model underestimates demand, it should overestimate price. For the case of underestimating both demand and price, the disequilibrium conditions may be due to one or both of the following reasons. First, the model may not capture entirely the substitution effects; and particularly, the effects of the unavailability of natural gas. The decrease in growth of natural gas supply would tend to increase the demand for electricity in recent years. Second, with respect to forecasts of average electricity prices, it appears that the model underestimates either the profit margin or interest expenses for utilities. This is because the difference between the overall average price and the average total costs is the sum of profit margin and interest costs. Since interest expenses have recently been soaring in utility industries as a result of rapid increases in interest rates and capital investments, the effect of this portion of costs on electricity price may have been greater than it has been in the historical years covered in the sample.

For the case of overestimating both demand and price (which occurs in Oklahoma, Texas and Wyoming), plausible explanations may be the following. First, the estimated price elasticity may not capture all the conservation effects. In other words, there may be significant non-price induced conservation of electricity. However, it is doubtful that the non-price induced conservation in these states has been more significant than most others. Second, a sudden rise in electricity costs may cause the utility to reduce the profit margin as a result of regulatory lag. Consequently, the rise in electricity price may be lagged behind the rise in electricity costs.

In view of the facts that (1) there are many more states for which the model underestimates both demand and price than those for which the model overestimates demand and price, and, furthermore, that (2) the model tends to underestimate average electricity prices, one may conclude that (1) the effects of interfuel substitution resulting from a short supply of substitute fuels, particularly natural gas, tends to offset

the effects of non-price induced conservation, and (2) interest expenses and/or the profit margin of the electric utilities may have recently increased by a significantly larger proportion than in the past.

To investigate further the model's performance in *ex post* demand forecasting, Table 2.1 was compiled to investigate the numbers of states in various ranges of forecasting errors in absolute value. The results show that a majority of states have *ex post* forecasting errors of electricity demand less than 6%. Furthermore, residential demand forecasts generally register fewer errors than commercial and industrial demand. Specifically, in the residential sector, the *ex post* forecasting errors are less than 3% for 25 states in 1975 and 20 states in 1976. Moreover, the *ex post* forecasting errors for aggregate demands are usually smaller than for sectoral demands. Specifically, there are only 3 states in 1975 and 6 states in 1976 with an error greater than 9% for aggregate demand forecasts, while there are 15 states with an error greater than 9% for commercial demand forecasts in 1976. Overall, the results show that the model performs reasonably well beyond the sample period.

One final analysis of *ex post* forecasting error deals with the comparison of these errors with the sample-period simulation errors. Table 2.2 compares the simple percentage errors (SPE) with the mean absolute percentage error (MAPE) for ten selected states. Although one would expect the beyond-sample forecasting errors to be greater than the within-sample-period simulation errors, as shown in Table 2.2, this is not the case for many states. In particular, for industrial demand forecasts, the SPEs are smaller than the MAPE for many states.

Table 2.1. Summary of *ex post* forecasting performance
of electricity demand

Range of forecasting errors[a]	1975				1976			
	Res.	Com.	Ind.	Total	Res.	Com.	Ind.	Total
	Number of States							
0 - 2.99%	25	15	16	26	20	13	7	17
3 - 5.99%	16	10	10	13	18	11	16	14
6 - 8.99%	3	10	12	5	5	8	12	10
9 - 11.99%	3	7	4	1	4	10	3	2
12 - 14.99%	0	4	0	1	0	3	2	4
15% and above	0	1	5	1	0	2	7	0

[a] In absolute value.

Table 2.2. Comparison of the sample-period simulation errors and *ex post* forecasting errors of electricity demand by sector of selected states

State	Residential demand			Commercial demand			Industrial demand		
	MAPE	SPE		MAPE	SPE		MAPE	SPE	
	1955-74	1975	1976	1955-74	1975	1976	1955-74	1975	1976
				(In percent)					
Massachusetts	6.87	1.55	-3.32	6.82	-11.84	-9.50	2.66	0.75	-3.53
New York	0.76	-4.23	-4.30	6.61	-0.66	-6.91	3.81	-2.00	-10.35
Ohio	5.47	-2.65	-1.61	11.7	-3.19	-0.16	6.94	0.67	-7.36
Missouri	3.42	-5.65	-0.59	7.0	0.20	4.37	4.99	1.78	-1.48
Florida	2.08	-2.99	-0.81	5.68	-6.61	-4.20	9.10	2.49	1.14
Tennessee	2.43	-4.39	-7.85	3.78	-5.20	-0.68	10.30	5.87	-4.12
Texas	2.93	2.58	11.15	3.46	2.52	5.58	4.99	5.76	-3.78
Arizona	5.47	-2.56	-4.41	5.36	-8.09	-4.99	10.90	9.89	6.49
California	2.63	1.86	-4.49	4.41	-7.71	-8.22	6.55	-0.94	-6.11

3. UPDATING THE SLED MODEL

3.1 Investigation of Structural Changes

The preliminary results of updating the Version I model with additional data for 1975 and 1976 show some notable differences in the estimated structural parameters. Since electricity prices have increased rapidly in recent years, one would wonder whether or not these changes in prices, along with an increasing public awareness of the energy situation, have made the consumers respond to price changes differently. In order to examine this potential structural change, comparisons are made of the estimated adjustment coefficients and own-price elasticities for the residential, commercial, and industrial sectors. These comparisons reveal the following:

1. In the residential sector, both the estimates of short-run and long-run elasticities are consistently lower in the updated version than in Version I for all regions. This tendency toward reduction in magnitude of the elasticity estimates holds in the commercial sector for all regions except the West North Central where the estimates are very similar. The results in the industrial sector are not uniform; some regions exhibit larger estimated elasticities and others lower estimates.

2. The estimated adjustment coefficients are uniformly higher in the updated version than in Version I in both residential and commercial sectors for all regions. These results imply that the estimated speed of adjustment decreases when we include 1975 and 1976 in the sample period. For the industrial sector, the results are mixed. The estimated adjustment coefficients for some regions are higher and for others lower in the updated version when compared with Version I.

The above findings with respect to adjustment coefficients and short-run elasticities are similar to the earlier findings obtained by Gill and Maddala.[6] In a study of the structural change of residential elasticity demand in the TVA area, Gill and Maddala found that the short-run elasticity is lower and the adjustment is slower in an increasing real price period (1968-72) than in a declining real price period (1962-67). They argued that, as suggested by Allais,[7] people respond faster when things are changing faster than when things are changing slowly. During the declining price period, the rate of change

of real prices was greater (in absolute terms) than during the increasing price period. While the same argument may be given here to explain the differences between Version I and the updated version, it remains to be shown whether or not these differences are statistically significant.

In order to examine possibilities of structural change between the Version I and the updated model, consider a test of the following hypotheses:

H_0 = no general structural change from Version I to the updated version

H_1 = a general structural change from Version I to the updated version

H_2 = only short-run own-price elasticities change from Version I to the updated version

It should be noted that even though the period of 1975-76 represents a post-oil-embargo period and, thus, may be most appropriate for investigating potential structural change, the data base is not sufficient for conducting a more rigorous investigation by separating the sample period. For this reason, the above alternative hypotheses are proposed.

In order to test the null hypothesis H_0 against the alternative H_1, the residual sum of squares from the Version I model, RSS_1, and the updated version, RSS, were computed. Then, the F-statistic,

$$F = \frac{(RSS - RSS_1)/2k}{RSS_1/(N-r)}$$

was computed where

k = number of states in the region

N = number of observations for the 1955-74 period

r = number of right-hand side variables

with degrees of freedom, 2k, N-r. It should be noted that this asymptotic F-statistic has the chi square (χ^2) distribution when the denominator degrees of freedom (or N-r) tends to infinity. The asymptotic F-statistics were generated from the two-stage least squares results for all the demand equations estimated by region (the residual sum of squares from three-stage least squares are not readily available

from the SAS program used for this analysis). The results as presented in Table 3.1 show that the null hypothesis, H_0, is rejected at the 5% level for the residential demand equation in two regions and for the industrial demand equation in only one region. In the commercial sector, the resulting tests suggest nonrejection of H_0 at the 5% level for all regions. These results seem to suggest that there exists no over-whelming evidence of a structural change when we expand the data base from 1955-74 to 1955-76.

While the above χ^2-test is used to make inference about changes in the general structure of the demand equations, it does not tell which structural parameters might have changed. Since it is not practical to examine every coefficient individually and, furthermore, since the price coefficient appears to be the most important and also most likely coeffi-cient to change in view of the recent rapid increases in energy prices, only structural change associated with the own-price elasticity is further investigated. Therefore, we next test the null hypothesis, H_0, against the alternative H_2. To do so, we can simply introduce a dummy variable having the value of one for 1975-76 and zero otherwise, and include a cross-product term of this dummy and the electricity price variable in the demand equation. The usual asymptotic t-statistic asso-ciated with the coefficient estimate has the standard normal distribution when the degrees of freedom approaches unfinity. (In fact, for the degrees of freedom greater than 30, the t-distribution does not differ appreciably from the normal distribution).

The asymptotic t-statistics estimated by three-stage least squares are presented in Table 3.1. The results show that the estimated own-price elasticity in the residential demand equation changed significantly from 1955-74 to 1975-76 in four regions. These changes involve a reduc-tion of the own-price elasticity in absolute value. In the commercial sector, there are four regions where the null hypothesis H_0 is rejected; the estimated coefficient of the own-price elasticity in absolute value is smaller in three regions and is larger in one region for the 1975-76 period as compared with the 1955-74 period. In the industrial sector, there are two regions--the Middle Atlantic and the East North Central

Table 3.1. Significance of structural change

Region	Asymptotic F-statistics			Asymptotic t-statistics		
	Res. demand	Com. demand	Ind. demand	Res. demand	Com. demand	Ind. demand
New England	4.09	1.44	0.53	1.22	1.80	-0.76
Middle Atlantic	6.78^a	1.37	0.59	8.17^a	0.94	3.50^a
East North Central	1.29	1.08	2.55	2.84^a	2.35^a	3.48^a
West North Central	0.84	0.26	0.36	0.04	0.48	0.16
South Atlantic	2.90	1.35	1.23	5.17^a	3.30^a	-0.55
East South Central	2.51^a	1.48	1.04	2.98^a	2.44^a	1.51
West South Central	2.03	0.35	6.82^a	-0.39	0.70	-1.92
Mountain	0.72	1.44	0.70	0.05	-2.53^a	0.22
Pacific	0.63	0.90	0.52	0.29	1.34	0.72

^{a}Statistically significant at the 5% level.

regions, where H_0 is rejected at the 5% level. It is further observed that even though the estimated asymptotic t-statistics imply a significance of the estimated coefficient of the cross-product term for the above mentioned regions, the numerical values of these coefficients are uniformly small. The specific estimates of these coefficients, if significant, are presented in the next section.

The results of this investigation of structural change are used in two ways. First, they are used to make inference about whether or not the estimated Version II model presented in the following section is significantly different from the Version I model. Second, the results obtained from the t-test are used in judging whether the cross-product term should be included to take care of the changes in the own-price coefficient in the Version II model.

3.2 The Version II Model

This section reports the results of updating the Version I model with additional data for 1975 and 1976. As in the Version I model, the model consists of three sectoral models with each sector having the following two equations:

$$\ln Q = \alpha_0 + \alpha_1 \ln \left(\frac{P}{I}\right) + \alpha_2 \ln Q_{t-1} + \sum_{j=3}^{n} \alpha_j \ln X_j$$

(demand equation)

and

$$P - K = \beta_0 + \beta_1 (Q/C) + \beta_2 (Q/C)^2 + \sum_{k=3}^{m} \beta_k Z_k \quad \text{(price equation)}$$

where

Q = electricity demand

Q_{t-1} = electricity demand lagged one year

P = electricity price

I = price deflator

C = number of customers

K = overall average cost of electricity

X_j, Z_k = explanatory variables.

The six structural equations (two for each sector) are estimated jointly by three-stage least squares. Detailed regression results are presented in Appendix B. Definitions of variables can be found in Figure 1.1 (presented earlier). Note that the dummy coefficients (both state and reclassification dummies), except those appearing in the cross-product terms, are not presented in Appendix B.

During the course of updating the model, several different sets of variables were examined in an attempt to include more variables (especially the cross-price variables) in the demand equations. However, no significant improvement was made. Thus, in most cases, the same specification used in the Version I model is retained. The important modifications in the Version II model include the following:

1. Based on the results regarding structural changes discussed in the preceeding section, the following structural shift dummy for the post oil embargo period is introduced:

$$D = \begin{cases} 1 \text{ for } 1975\text{-}76 \\ 0 \text{ otherwise} \end{cases}$$

Then, a cross-product term of D and the own-price variable is included in the demand equations to account for the change in own-price elasticity in the post oil embargo period. For example, the variable $D \cdot \ln (PER/CLI)$ is included in the residential demand equation in several regions.

2. For reducing the impact of the reclassification of electricity customers on coefficient estimates, we include the number of industrial customers ($\ln CI$) in the industrial demand equation in the East North Central and Pacific regions. Also, the number of commercial customers ($\ln CC$) instead of population ($\ln POP$) is used in the commercial demand equation for the West South Central region.

3. The price of natural gas, $\ln (PGR/CLI)$ replaces the price of fuel oil, $\ln (POR/CLI)$ as the significant cross-price variable in the residential demand equation estimated for the New England region.

4. In the South Atlantic region, North and South Carolina are separated in the Version II model. These two states were combined in the Version I model.

Even though Version II has very much the same specification as Version I, some of the estimated coefficients have notable differences. One interesting observation is that in Version II, the significance level of the cross-price coefficients (mostly of the natural gas price variable) generally increases over that in Version I while the significance level of the natural gas customer variables decreases. These results seem to reflect the real situation of natural gas shortages which have not been as severe in recent years as in the early seventies. The data show that total numbers of natural gas customers have increased from 1974 to 1976 in almost all regions of the nation.

Tables 3.2, 3.3, and 3.4 present the comparisons of the estimated adjustment coefficients and own-price elasticities between the Version I and Version II models. It is noted that when the cross-product term of the structural shift dummy (which has the value of one for 1975-76 and zero otherwise) and the own-price are included, there are two estimates of price elasticities. One is relevant for 1955-74 and the other applies to 1975-76. Both estimates are presented and those for 1955-74 are shown in parentheses. The interesting observations from these comparisons are summarized below.

1. The estimated adjustment coefficients in the residential and commercial sectors are consistently higher in the Version II model than in the Version I model even though the numerical differences are generally small. These results imply the speed of adjustment in demand response tends to be slower in recent years than in earlier years. These differences suggest that the cross-product of the structural shift dummy and the lag variable, perhaps, should be included. However, the inclusion of such a variable did not produce plausible results. Thus, these differences are likely to be insignificant. In the industrial sectors, the estimated adjustment coefficients are higher in Version II for some regions and lower for other regions. But the numerical differences are again generally small.

2. The estimated own-price elasticities in absolute value of both short-run and long-run are generally smaller in Version II than Version I. This reduction in the magnitude of elasticities occurs in almost all regions in the residential and commercial sectors. However, the magni-

Table 3.2. Comparison of estimated adjustment coefficients
and own-price elasticities, residential sector

Region	Version I model (1955-74)			Version II model (1955-76)		
	Adjustment coefficient[a]	Own-price elasticities		Adjustment coefficient	Own-price elasticities	
		Short-run	Long-run		Short-run	Long-run
New England	0.78	-0.33	-1.50	0.82	-0.21	-1.15
Middle Atlantic	0.63	-0.22	-0.60	0.65	-0.20 (-0.22)[b]	-0.57 (-0.62)
East North Central	0.71	-0.35	-1.22	0.68	-0.34 (-0.35)	-1.06 (-1.09)
West North Central	0.63	-0.27	-0.73	0.64	-0.25	-0.69
South Atlantic	0.72	-0.31	-1.12	0.72	-0.28 (-0.30)	-1.00 (-1.07)
East South Central	0.50	-0.47	-0.95	0.57	-0.34 (-0.35)	-0.79 (-0.81)
West South Central	0.46	-0.57	-1.07	0.57	-0.39	-0.91
Mountain	0.57	-0.19	-0.43	0.63	-0.14	-0.38
Pacific	0.77	-0.084	-0.37	0.81	-0.076	-0.40

[a]The estimated coefficient of the lagged dependent variable.

[b]When the cross-product term of the structural shift dummy and the own-price is included, there are two estimates of price elasticity. One is relevant for 1955-74 (shown in parentheses) and the other applies to 1975-76.

Table 3.3. Comparison of estimated adjustment coefficients
and own-price elasticities, commercial sector

	Version I model (1955-74)			Version II model (1955-76)		
	Adjustment	Own-price elasticities		Adjustment	Own-price elasticities	
Region	coefficient[a]	Short-run	Long-run	coefficient	Short-run	Long-run
New England	0.64	-0.47	-1.31	0.80	-0.29	-1.49
Middle Atlantic	0.35	-0.33	-0.51	0.40	-0.21	-0.35
East North Central	0.73	-0.43	-1.60	0.79	-0.28 (-0.29)[b]	-1.35 (-1.41)
West North Central	0.91	-0.09	-1.02	0.91	-0.17	-1.13
South Atlantic	0.70	-0.39	-1.27	0.70	-0.33 (-0.36)	-1.10 (-1.20)
East South Central	0.49	-0.66	-1.29	0.51	-0.56 (-0.59)	-1.15 (-1.20)
West South Central	0.84	-0.25	-1.60	0.88	-0.17	-1.42
Mountain	0.47	-0.48	-0.90	0.50	-0.45 (-0.43)	-0.90 (-0.86)
Pacific	0.40	-0.40	-0.66	0.44	-0.20	-0.36

[a]The estimated coefficient of the lagged dependent variable.

[b]When the cross-product term of the structural shift dummy and the own-price is included, there
are two estimates of price elasticity. One is relevant for 1955-74 (shown in parentheses), and the
other applies to 1975-76.

Table 3.4. Comparison of estimated adjustment coefficients
and own-price elasticities, industrial sector

Region	Version I model (1955-74)			Version II model (1955-76)		
	Adjustment coefficient[a]	Own-price elasticities		Adjustment coefficient	Own-price elasticities	
		Short-run	Long-run		Short-run	Long-run
New England	0.65	-0.06	-0.16	0.67	-0.04	-0.12
Middle Atlantic	0.35	-0.02	-0.04	0.29	-0.04 (-0.08)[b]	-0.06 (-0.11)
East North Central	0.42	-0.32	-0.54	0.34	-0.36 (-0.39)	-0.55 (-0.59)
West North Central	0.70	-0.26	-0.87	0.75	-0.17	-0.59
South Atlantic	0.79	-0.15	-0.71	0.8.	-0.08	-0.44
East South Central	0.50	-0.28	-0.55	0.45	-0.30	-0.55
West South Central	0.84	-0.10	-0.62	0.77	-0.11	-0.48
Mountain	0.52	-0.19	-0.39	0.52	-0.20	-0.42
Pacific	0.64	-0.03	-0.09	0.61	-0.04	-0.10

[a]The estimated coefficient of the lagged dependent variable.

[b]When the cross-product term of the structural shift dummy and the own-price is included, there are two estimates of price elasticity. One is relevant for 1955-74 (shown in parentheses), and the other applies to 1975-76.

tude of changes is usually small. These changes in estimated price elasticities may be viewed as a result of smaller bias due to the use of average price when more data were added from recent years when real average electricity prices were increasing rather than decreasing as in the 1950s and 1960s.

3. Even though the cross-product terms of the structural shift dummy and the own-price, whenever included, have a significant coefficient estimate, their magnitude is generally small. Thus, the differences between two sets of estimated price elasticities for the Version II model are usually small. For example, in the Middle Atlantic region, the estimated short-run price elasticities are -0.22 for 1955-74 and -0.20 for 1975-76 in the Version II model (Table 3.2).

4. FORECASTING ELECTRICITY COSTS

In the ORNL-SLED model discussed in the preceeding sections, average total electricity cost (TOC) is an exogenous variable in the sectoral price equations. Thus electricity costs have to be estimated before forecasts of sectoral electricity demand and prices can be made. This section describes the approach used to forecast average electricity costs by state.

4.1 Methodology

The average total electricity cost per kWh (TOC) for any specific state for any given time period depends on fuel (nuclear and conventional) costs and non-fuel costs:

$$TOC = S_s C_{f,s} + S_n C_{f,n} + C_o , \qquad (1)$$

where

S_s = the share of power generated by conventional fuel plants (excludes hydro),

S_n = the share of power generated by nuclear plants,

$C_{f,s}$ = the cost of fuel per kWh for conventional plants,

$C_{f,n}$ = the cost of fuel per kWh for nuclear plants, and

C_o = non-fuel costs per kWh of all plant types (includes all hydro costs).

In this calculation, no differentiation is made among the types of nuclear plants. In addition, the costs of uranium, enrichment, fabrication, and related nuclear fuel costs are assumed to account for the same fraction of generation cost for all nuclear plants operating in the period 1976-2000. This fraction was approximately 52% for privately-owned nuclear plants in 1976.[8] Nuclear fuel costs depend on the price of uranium enrichment and fabrication costs, and are weighted by the share of power generated by nuclear plants.

Non-fuel costs per kWh (C_o) include all the costs of generating, transmitting and distributing electricity other than the fuel costs of

generation. The non-fuel costs include costs associated with owning, operating, and financing the utility system. Besides non-fuel costs associated with generation, costs associated with transmission and distribution are included in this component.

Fuel costs for conventional plants $(C_{f,s})$ can be calculated as

$$C_{f,s} = C_{Btu}\, B_{kWh} \tag{2}$$

where

C_{Btu} = cost of fuel yielding one Btu, and

B_{kWh} = number of Btu's needed to generate one kWh.

Since coal, oil, and natural gas are the three major fuels in conventional power plants, C_{Btu} can be approximated as a weighted average of costs of these three fuels per Btu of heat. The weighting factors are the shares of conventional power (excluding hydro) generated from each of the three fuels.

$$C_{Btu} = S_o\, P_o/Y_o + S_c\, P_c/Y_c + S_g\, P_g/Y_g = \sum_i S_i\, P_i/Y_i \tag{3}$$

where

i = fuel: i = o for oil, i = c for coal, i = g for gas,

S_i = the share of power generated by fuel i. $S_o + S_c + S_g = 1$,

P_i = the unit price of the fuel i, and

Y_i = heat content in Btu per unit of fuel i.

The shares S, fuel prices P, heat contents Y, and number of Btu's per kWh B_{kWh}, differ between states and over time since the structure of power generation and the quality of fuel used in each state are different.

Combining Eqs. (2) and (3), the fuel cost per kWh generated by conventional power plants (for a specific state and time) is:

$$C_{f,s} = B_{kWh} \sum_i (S_i P_i/Y_i) \tag{4}$$

In computing costs for conventional fuel plants, actual 1976 state data are used for the B and Y values; they are assumed to be unchanged in the future. Future S and P values are estimated exogenously for each state. The input assumptions will be described in further detail

in the next section. Thus, given the base year values for price (P_i), fuel content per unit of fuel (Y_i), number of Btu's per kWh (B_{kWh}), the future mix (S_i), and the annual growth rates of fuel prices (r_i), fuel cost per kWh generated by conventional fuel plants for a specific time and state is approximated as:

$$C_{f,s}^t = B_{kWh}^* \sum S_i^t P_i^* (1 + r_i)^t / Y_i^* \tag{5}$$

where the superscript t denotes time period t, and * denotes the base year value.

The complete nuclear fuel cycle for a typical nuclear power plant includes the stages from purchasing uranium in yellow cake form (U_3O_8) to spent fuel disposal. Table 4.1 shows the breakdown of the costs in various stages estimated by Phung.[9]

For computational purposes, the nuclear fuel cycle costs projected for 1985 are divided into two components: uranium costs (roughly 42% of total costs) and non-uranium costs (58%). The first cost component is directly related to uranium price while the second is related more directly to the costs of labor and other materials. Thus, given the cost of nuclear fuel for a specific state and for a specific base year $(C_{f,n}^*)$, nuclear fuel costs in that state for any subsequent year $(C_{f,n}^t)$ is approximately:

$$C_{f,n}^t = C_{f,n}^* (1 + r)^t , \tag{6}$$

where $r = .42r_u + .58r_n$, $\tag{7}$

and r = overall annual growth rate of nuclear fuel cost,

   r_u = annual growth rate of uranium price, and

   r_n = annual growth rate of non-uranium costs (fuel associated costs other than uranium cost).

Other costs (C_o) refer to all electricity costs exclusive of fuel costs for conventional and nuclear steam plants. This includes the costs of generating hydroelectric power. Thus, given other costs in a

Table 4.1. Estimates of nuclear fuel cycle costs in 1985

Cost components	1985 costs (mills/kWl)	% of total costs
Yellow cake, U_3O_8	4.0	42
Conversion of U_3O_8 to UF_6	.3	3
Isotopic enrichment	1.6	17
UO_2 production and fuel fabrication	.9	9
Recovery, storage and disposal	1.2	13
Other costs	1.5	16
Total	9.5	100

Source: D. L. Phung, *Cost Competitiveness Between Base Load Coal-Fired and Nuclear Plants in the Mid-Term Future (1985-2015)*, Institute for Energy Analysis, Oak Ridge Associated Universities, unpublished report, May 1976, p. 54.

base year (C_o^*) for a specific state, the other costs in that state for any subsequent year (C_o^t) is approximately:

$$C_o^t = C_o^* (1 + r_c)^t \tag{8}$$

where r_c = annual growth rate of other costs.

Equations (1), (5), (6), (7), and (8) are used to compute TOC for each individual state and each time period. Figure 4.1 shows the scheme of these computations. The procedure starts with the calculation c⁻ 1976 fuel costs per kWhr from conventional steam and nuclear power plants, and non-fuel costs for each state. Next, the major variables affecting the differences in electricity costs between states (such as mixes of power plants, and future fuel prices) are used to estimate future fuel costs for nuclear and conventional steam power plants, and other non-fuel costs, and ultimately, the average total electricity costs.

Note that the mixes of power plants for future yea.s are considered as exogenous in the present model, and are based on the estimates from secondary sources. It would be more appropriate if the mi es of power plants were made more consistent with the forecast of electricity demand. That is, if a feedback system was incorporated as shown in the dotted lines in Figure 4.1, the forecast of electricity costs may be more accurate. Such an extension should be pursued in the future.

The data for the base year 1976 are obtained from the following sources. For the prices of fossil fuels, and the shares of power generated by each type of plant (both the shares among conventional steam, nuclear, and hydro and those among different conventional steam plants), data are obtained from the Edison Electric Institute.[10] Data on the components of electricity costs (fuel versus non-fuel) are taken from the Federal Power Commission.[11,12]

4.2 Assumptions and Forecasting Results

The inputs needed to forecast TOC by state are the right-hand side variables in Eqs. (1), (5), (6), (7), and (8). These input assumptions
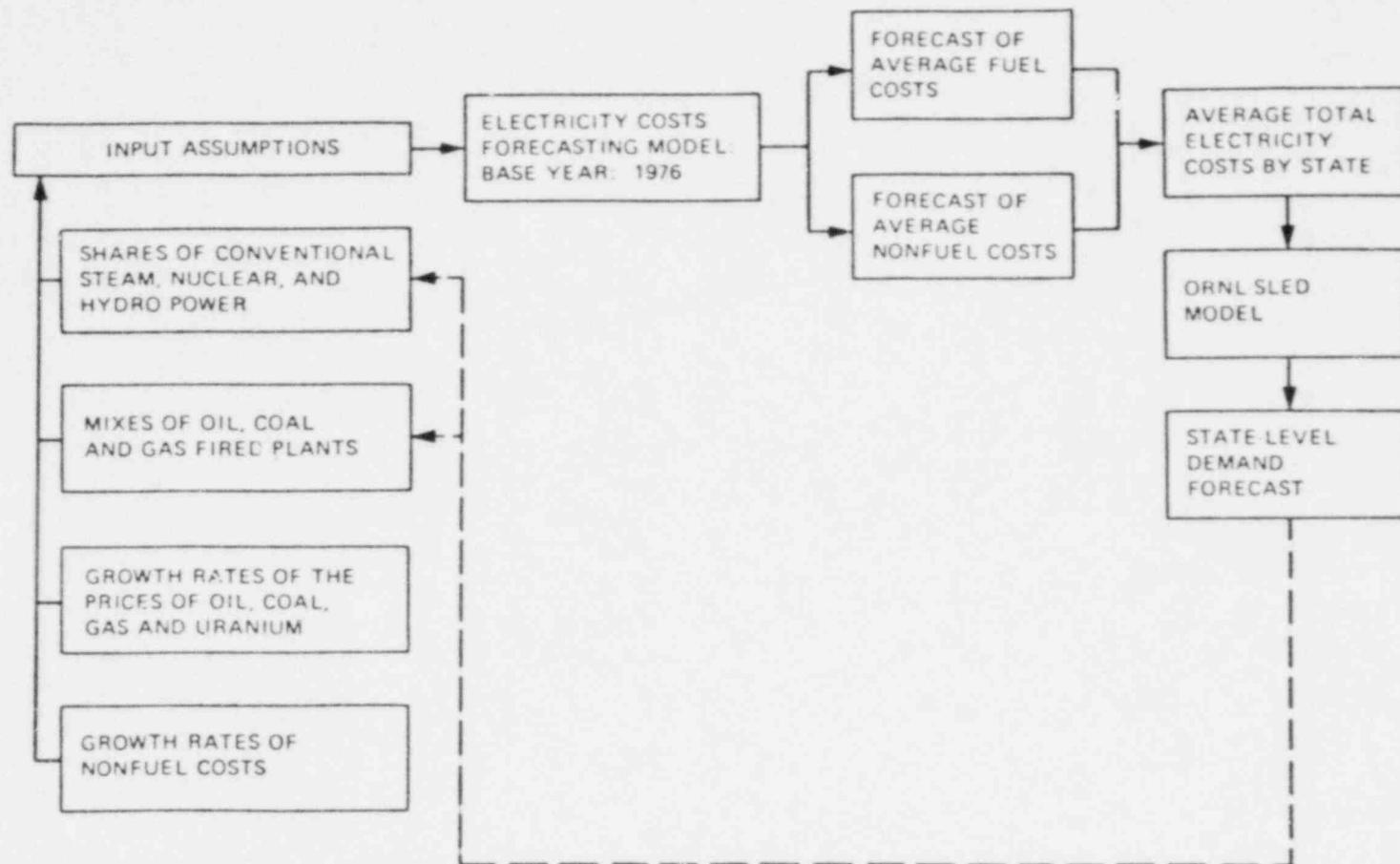
Fig. 4.1.   Flowchart of the electricity cost forecasting model.

can be divided into three groups: (1) future mixes of generating power plants, (2) annual growth rates of fuel prices and non-fuel costs, and (3) other inputs.

Future mixes of power plants for each state are estimated from the data provided by the Federal Power Commission.[13] These data give the proposed net dependable generating capacity addition for 1980, 1985, and 1990 by state and by type of power plant. By assuming the capacity factors for 1980, 1985, and 1990 are the same as in 1976, we can estimate the power generated and the shares of each type of power plant in each state. Appendix Tables C.1 and C.2 present the estimated shares of power generated by steam, nuclear, and hydro plants; and the shares of power generated by oil, coal, and gas, respectively.

Future annual growth rates of fossil fuel and uranium prices are derived from a recent projection by the Department of Energy.[14] Since the DOE projection covers only the ten DOE regio.s, the fossil fuel prices of the states within a DOE region are assumed to grow at the same regional rate. These projections of fossil fuel prices are presented in Appendix Table C.3. The uranium cost is assumed to be uniform throughout the U.S. Specifically, DOE projects uranium fuel costs in current dollars to increase at the rates of 16.6% and 9.9% annually for the periods 1978-85 and 1985-90, respectively.

Other non-fuel costs are assumed to increase 1% higher than the general inflation measured by the wholesale price index. This is because non-fuel costs consist of costs of labor, materials, capital, etc. Due to the regulations of environmental and safety impacts, the capital costs of power generating plants have increased rapidly in recent years. It is believed that these non-fuel costs may increase at a higher rate than the costs for producing goods and services in general. Specifically, the non-fuel costs component is assumed to increase at the rates of 8.0% for 1976-80, 7.0% for 1980-85, 6.0% for 1985-90.

The number of Btu's required to generate one kWh (B_{kWh}) and the heat content (Y) per unit of fuel are assumed to be unchanged from their 1976 values (Appendix Table C.4).

The 1974 state fuel costs for nuclear plants are used as the base values (Appendix Table C.4). These 1974 costs are converted to 1976

prices using wholesale price indexes. (The WPI for 1974 and 1976 are 160.1 and 187.1, respectively.)

Based on the assumptions detailed above, the forecasts of various cost components are made through a computer program. Appendix Table C.5 shows the actual 1976 and projected fuel costs per kWh generated for 1980, 1985, and 1990 for 48 states. Forecasts of fuel costs for conventional steam plants vary greatly from state to state. The four states with highest projected fuel costs in 1990 are Vermont (121 mills/kWh), Idaho (98), Rhode Island (88), and California (81). The four states with lowest projected fuel costs in 1990 are Wyoming (8 mills/kWh), Montana (9), Washington (17), and Utah (20). The projected 1990 average fuel costs for conventional steam plants in the United States is 45 mills/kWh.

The highest projected fuel cost for conventional steam plants in the above states can be explained by the high prices of oil (Vermont, California, Idaho), low heat content of oil (Vermont), inefficiency of power plants (Vermont, Idaho, and Rhode Island), and dependence on natural gas (California, Idaho). In contrast, the low projected fuel costs can be explained by low coal prices coupled with a large share of coal-fired power plants in those states.

Projected average annual fuel costs per kWh for nuclear power plants vary much less than the fuel costs for steam plants. Variations in nuclear fuel costs are mainly due to different transportation costs and accounting systems rather than uranium prices. The average cost in 1990 is projected to be 11 mills/kWh.

Actual 1976 and projected fuel cost, non-fuel cost, and TOC for 1980, 1985, and 1990 are shown in Appendix Table C.6. The projected TOC is higher for the states in the North East, North Central, and Atlantic regions and lower for the states in the South, Mountain, and Pacific regions. Appendix Table C.7 details the projected annual growth rates of fuel, non-fuel, and total electricity cost (TOC). The results of TOC are used for forecasting electricity demand growth by state discussed later. Note that the current model is developed for forecasting TOC for the period 1976-90. For forecasting TOC beyond 1990 as it is required for the Version II model, the input assumptions for the latest period available in the present model are simply extended to the year 2000.

5. INPUT ASSUMPTIONS FOR FORECASTING

This section describes the input assumptions used for forecasting electricity demand and prices at the state level. As done previously in Chern et al.,[15] our sensitivity analysis focuses on the impacts of fuel prices. There appears to be a greater uncertainty associated with fuel prices than perhaps any other exogenous variables in the model due to their dependence on current and future energy policies. Thus, focusing our sensitivity analyses on alternative scenarios for fuel prices may provide a useful criterion for evaluating alternative energy policies. Nevertheless, the model developed here is also capable for evaluating alternative scenarios involving the growth of such variables as the number of households, population, and industrial activities.

The input assumptions used for several variables, particularly the fuel prices, are notably different from those used by Chern et al.[16] for the Version I model. These differences, in most cases, have resulted from the more recent available sources of projections of exogenous variables as will be apparent when we detail these sources later. Furthermore, the forecasting period is extended to the year 2000. For most variables, the estimated values are not available beyond 1995. In this case, we simply extend the forecasted growth rates for the latest available period to 2000. For the non-price variables, we selected only one set of estimates even though there may be more than one source of projections available. For the fuel price variables, we have developed three alternative scenarios. All input assumptions were expressed in terms of annual growth rates. These assumptions are detailed below.

1. Population (POP) and real per capita personal income (PCI/CPI). The Bureau of Economic Analysis (BEA) revised the OBERS Economic projections for the Environmental Protection Agency (EPA) in 1977.[16] This set of projections includes those for population (based on the Census Bureau's Series "E" national projection) and per capita income which are generally referred to as the BEA/EPA projections and are made by state through the year of 2000. The BEA projections are used in this study with one exception. For computing the annual growth rates of per capita

personal income for 1976-80, we used the actual state-level income data for 1976-78 published by the Bureau of Economic Analysis[17] and the national per capita income growth for 1979-80 projected by Data Resources, Inc.[18] Specifically, DRI forecast total real disposable income in the U.S. to increase 2.1% in 1979 and only 0.4% in 1980 as a result of recession (During recent years, the general trend of real income growth has been about 4.5% per year). These figures mean that on a per capita basis, personal income would increase only 1.1% in 1979 and decrease by 0.6% in 1980. We assume the same level of recession for every state during 1979-80. The BEA projections are different from those projected by the National Planning Association used by Chern et al. for the Version I model. The annual growth rates of the projected population and real per capita personal income are presented in Appendix Table D.1.

2. Value added in manufacturing (VA/WPM). The value added projections by state are obtained from the Division of Regional and Socioeconomic Impacts of the Energy Information Administration.[19] Even though these forecasts are consistent with the EIA regional forecasts used for the 1978 Annual Report to Congress, Series C forecasts, the numbers are not released at the state level as EIA forecasts and thus are subject to further validation. With this qualification, however, we consider this set of estimates is the best source available at the state level. Also, these estimates are the updated projections from those used in the Version I model.

In order to approximately reflect the impacts of the projected current recession, the growth rates for 1976-80 as projected by EIA are adjusted downward based on the growth of national industrial production for 1979-80 projected by DRI.[20] Specifically, according to DRI, the average annual growth rate of national industrial production would be 47% lower than normal for the period of 1976-80 as a result of the recession during 1979 and 1980. Thus, we adjusted the value added growth by the same percentage reduction of 47% for every state. The annual growth rates of value added in manufacturing are presented in Appendix Table D.2.

3. Number of residential electricity customers (CR). Due to the lack of more recent projections of the number of households (which approximates the number of residential customers), we used the same

growth rates for this variable as in the Version I model. These projections were obtained from National Planning Association.[21]

4. Numbers of commercial and industrial electricity customers (CC and CI). As no forecasts of the numbers of commercial and industrial electricity customers exist, it was decided to use the same projections as in our earlier version of the model for most states. These estimates were obtained from examining the historical growth of customers in the commercial and industrial sectors by state for several selected periods from 1955 and 1974. For most states, the computed historical growth rates were extrapolated to future years. In some states where the historical trends were distorted by the reclassification of customers, the projections of population and industrial activity (value added) were used as a basis for making the estimates of commercial and industrial customers. The projected annual growth rates of residential, commercial, and industrial customers are presented in Appendix Table D.3.

5. Numbers of natural gas customers (RGC, CGC, IGC). We used the projections of the American Gas Association (AGA).[22] The AGA projections are based on the assumption that the total gas supply available to the gas utility industry, from both conventional and supplemental sources (with deregulation), will continue at the current level of about 15 quadrillion Btu through 1990. Because their projections are available only by region, we apply the same projected growth rate for the states within each region. The projected annual growth rates for residential, commercial, and industrial customers are detailed in Appendix Table D.4.

6. Heating degree-days (HDD) and cooling degree-days (CDD). Normal weather conditions are assumed throughout the projected period. The average of 1931 to 1976 is used for both CDD and HDD.

7. Price and income deflators (CPI and WPI). The assumptions for the consumer price index (CPI) and the wholesale price index (WPI) are based on the long-range projections made by DRI and used by EIA.[23] In order to reflect the current economic conditions, the growth rates used by EIA are adjusted upward for 1976-80. Specifically, it is assumed that both CPI and WPI would increase at an annual rate of 7.0% for 1976-80, 6.0% for 1980-85, 5.0% for 1985-90, and 4.0% for 1990-2000.

8. Fuel prices and costs of generation, transmission and distribution. Three scenario re employed to investigate the impacts of changes in the prices of substitute fuels (natural gas, oil and coal) used by electricity customers and in the cost variables related to the production of electric i future electricity demand and prices.

For the *base case*, we used the DOE projections of the sectoral prices of natural gas, refined petroleum products (residual and distillate), and coal in real terms. Specifically, the projections from the Series C (high supply and demand) with an oil import price of $23.5 are taken as the base case. The high oil import prices supposedly reflect the recent rapid increase in the OPEC oil prices. Even though we used the results of the computer run produced in April 1979, the forecasts of the fuel prices for this particular series do not differ much from the results published in the *1978 Annual Report to Congress*.[24] The DOE projections of fuel prices are the most recent projections available with regional detail. However, it should be noted that we made no attempt either to evaluate the reliability of the DOE forecasts or explain the regional differences of the projected fuel prices. The DOE forecasts are available for the ten regions. We applied the same growth rates for all states within each reg on.

The derivation of the overall average of the costs of generation, transmission, and distribution (TOC) based on the assumed prices of fuels used for generation was detailed previously in Sect. 5. The electricity cost model developed there requires inputs of projected fuel prices to be expressed in current dollars. The growth rates of fuel prices in current dollars are easily obtained by adding the growth rates of WPI to the growth rates of fuel prices in real terms.

In the *low-price case*, all fuel prices in the residential and commercial sectors are assumed to grow at the same rate as the consumer price index. The fuel prices in the industrial sector are assumed to grow at the same rate as the wholesale price index. Additionally, TOC is assumed to increase at the same rate as the wholesale price index. In sum, it is assumed that the real prices of fuels and the real costs of electricity generation, transmission, and distribution will remain at the 1976 level in the low-price case.

The assumption of the *high-price case* is that the growth rates of all price and cost components in real terms ill be double those in the base case.

The projected growth rates of fuel prices in real terms for the base and high-price cases are presented in Tables D.5 and D.6. The growth rates of the total average electricity costs for the base and high-price cases are shown in current dollars in Table D.7.

6. FORECASTS OF ELECTRICITY DEMAND AND PRICE: 1977-2000

This section presents the forecasted results of electricity demand and prices based on the assumptions detailed in the preceeding section. The computer program of the Version II model forecasts annually both demand and price by sector and by state for the period of 1977-2000, using 1976 as the base year. The computer algorithm for solving the nonlinear simultaneous equations is the same as used previously in Chern et al.[25]

Appendix E presents the detailed results by sector and state for 1980, 1985, 1990, 1995 and 2000. The actual figures for 1976 are also presented for comparison. The three alternative scenarios refer to base, low-price, and high-price cases based on the assumptions detailed in the previous section. In Appendix E, the detailed forecasting results are provided by region. Specifically, for each region, the results for the three scenarios are presented, and in each scenario, the forecasts of both electricity demand and price by state and region are shown. Also presented in Appendix E are the forecast annual growth rates for 1976-90. The forecast growth rates for other periods between 1976 and 2000 are also available from the computer program although they are not presented here.

The projections of electricity demand for Ohio, Kentucky, and Tennessee shown in Appendix E do not include the estimated demand of DOE's three uranium enrichment plants in these states. These estimates are available in Chern et al.[26]

To facilitate various comparisons, the results of the projected growth rates for the three scenarios are grouped together by region, and are presented in Tables 6.1 through 6.9. Note that the results of the Version II model as presented here cannot be easily compared with the results of the Version I model presented in Chern et al. The differences in the forecasted annual growth rates do not merely result from the differences in estimated structural parameters. In fact, they primarily result from differing assumptions used and the different base years from which annual growth rates were computed. Specifically, the growth rates of per capita income forecasted by the BEA and used in the Version II

6-1

Table 6.1. Forecasts of annual growth rates (%) of electricity demand
by sector and state for the New England region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Maine	B	5.9	7.8	3.7	5.7
	L	7.3	10.6	3.9	7.2
	H	4.8	6.3	3.5	4.7
New Hampshire	B	5.7	9.1	4.9	6.1
	L	7.0	12.6	5.0	7.7
	H	5.3	8.8	4.8	5.8
Vermont	B	5.1	7.8	4.2	5.4
	L	6.2	10.5	4.4	6.8
	H	4.4	6.6	4.0	4.8
Massachusetts	B	2.2	3.1	3.7	2.9
	L	4.5	5.6	3.9	4.8
	H	1.0	2.1	3.5	2.1
Rhode Island	B	2.1	2.9	4.2	3.0
	L	4.1	5.8	4.3	4.7
	H	0.5	1.1	3.9	1.8
Connecticut	B	3.3	3.6	4.8	3.8
	L	5.1	5.5	5.0	5.2
	H	2.1	2.7	4.6	3.0
Regional average	B	3.4	4.2	4.2	3.9
	L	5.3	6.7	4.4	5.5
	H	2.4	3.1	4.0	3.1

[a]B, base case; L, low-price case; H, high-price case.

Table 6.2. Forecasts of annual growth rates (%) of electricity demand by sector and state for the Middle Atlantic region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
New York	B	3.0	4.8	3.7	3.9
	L	3.9	5.9	3.8	4.6
	H	2.3	4.9	3.6	3.7
New Jersey	B	4.3	6.5	5.7	5.5
	L	5.0	7.5	5.8	6.2
	H	3.5	6.6	5.6	5.3
Pennsylvania	B	3.9	5.9	4.2	4.5
	L	4.5	7.0	4.3	5.0
	H	3.5	6.2	4.2	4.4
Regional average	B	3.7	5.5	4.3	4.5
	L	4.4	6.6	4.5	5.1
	H	3.1	5.7	4.3	4.3

[a]B, base case; L, low-price case; H, high-price case.

Table 6.3. Forecasts of annual growth rates (%) of
electricity demand by sector and state for the
East North Central region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Ohio	B	3.7	3.9	4.2	4.0
	L	4.3	4.6	5.4	4.9
	H	3.3	3.9	4.0	3.8
Indiana	B	3.7	4.1	4.9	4.4
	L	4.3	4.8	6.1	5.3
	H	3.4	4.1	4.8	4.2
Illinois	B	2.8	2.8	3.1	2.9
	L	4.0	3.9	4.6	4.2
	H	1.9	2.5	2.6	2.4
Michigan	B	2.9	3.5	3.0	3.1
	L	4.3	4.9	4.6	4.6
	H	1.9	2.9	2.5	2.4
Wisconsin	B	3.2	3.6	3.4	3.4
	L	4.4	5.0	4.9	4.7
	H	2.3	3.1	2.9	2.7
Regional average	B	3.3	3.5	3.8	3.6
	L	4.2	4.5	5.1	4.7
	H	2.6	3.5	3.5	3.1

[a]B, base case; L, low-price case; H, high-price case.

Table 6.4. Forecasts of annual growth rates (%) of
electricity demand by sector and state for the
West North Central region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Minnesota	B	4.3	5.8	6.7	5.7
	L	5.2	6.7	6.5	6.1
	H	3.9	5.9	7.8	6.2
Iowa	B	2.4	5.1	5.1	4.1
	L	3.3	6.2	5.1	4.7
	H	1.9	6.3	7.7	5.4
Missouri	B	3.5	6.4	4.9	4.8
	L	4.2	7.1	4.6	5.1
	H	3.3	7.7	7.5	6.1
North Dakota	B	2.1	5.0	8.3	4.4
	L	3.0	5.6	8.3	5.0
	H	1.6	6.4	10.5	5.3
South Dakota	B	1.9	5.2	5.3	3.5
	L	2.4	5.2	4.9	3.7
	H	2.1	7.6	8.1	5.0
Nebraska	B	3.3	6.2	5.5	4.9
	L	4.4	7.2	5.8	5.8
	H	2.2	6.5	7.2	5.2
Kansas	B	2.1	5.5	5.1	4.3
	L	3.3	6.4	5.4	5.1
	H	0.6	5.7	6.5	4.5
Regional average	B	3.2	5.8	5.6	4.8
	L	4.1	6.6	5.6	5.3
	H	2.7	6.6	7.5	5.6

[a]B, base case; L, low-price case H, high-price case.

Table 6.5. Forecasts of annual growth rates (%) of electricity demand
  by sector and state for the South Atlantic region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Delaware	B	5.4	4.5	4.4	4.7
	L	7.0	6.1	5.2	6.0
	H	4.1	3.2	3.8	3.7
Maryland[b]	B	4.1	3.0	6.7	4.9
	L	5.8	4.4	7.7	6.2
	H	3.1	2.0	6.2	4.2
Virginia	B	4.5	4.4	3.3	4.2
	L	5.8	5.8	4.1	5.4
	H	3.3	3.1	2.5	3.0
West Virginia	B	5.0	4.9	4.7	4.8
	L	6.0	6.0	5.1	5.6
	H	4.7	4.5	4.4	4.5
North Carolina	B	4.7	4.9	3.7	4.4
	L	5.7	6.4	4.3	5.3
	H	4.5	4.4	3.5	4.1
South Carolina	B	4.8	4.7	3.6	4.3
	L	5.7	6.0	4.3	5.3
	H	4.5	4.3	3.4	3.9
Georgia	B	4.2	5.2	3.6	4.3
	L	5.5	6.4	4.2	5.3
	H	3.7	4.7	3.2	3.8
Florida	B	5.7	6.5	3.2	5.5
	L	7.5	8.4	4.2	7.2
	H	4.2	4.9	2.6	4.1
Regional average	B	4.9	5.1	4.2	4.7
	L	6.3	6.6	4.9	6.0
	H	4.0	4.1	3.7	3.9

[a]B, base case; L, low-price case; H, high-price case.

[b]Includes the District of Columbia.

Table 6.6. Forecasts of annual growth rates (%) of
electricity demand by sector and state for the
East South Central region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Kentucky	B	6.3	4.5	5.9	5.6
	L	7.0	5.6	7.6	6.9
	H	5.7	4.6	6.5	5.8
Tennessee	B	4.3	8.0	5.2	5.1
	L	5.2	11.1	7.3	6.8
	H	3.7	7.9	5.7	5.2
Alabama	B	4.5	7.8	4.9	5.3
	L	5.7	10.4	7.5	7.5
	H	4.1	8.2	5.6	5.6
Mississippi	B	4.1	6.1	4.8	4.9
	L	5.9	9.5	7.2	7.3
	H	2.5	4.7	4.6	3.8
Regional average	B	4.7	6.3	5.2	5.2
	L	5.8	8.7	7.4	7.1
	H	4.1	6.2	5.8	5.3

[a] B, base case; L, low-price case; H, high-price case.

Table 6.7. Forecasts of annual growth rates (%) of
electricity demand by sector and state for the
West South Central region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Arkansas	B	4.4	3.5	5.5	4.6
	L	5.8	5.3	6.2	5.9
	H	2.5	2.5	5.6	3.8
Louisiana	B	3.5	3.9	3.0	3.3
	L	5.0	5.5	4.5	4.9
	H	0.7	2.0	2.2	1.7
Oklahoma	B	3.5	3.6	4.8	3.9
	L	5.5	5.9	6.0	5.8
	H	0.1	1.1	4.0	1.8
Texas	B	4.7	4.3	4.7	4.6
	L	6.0	6.2	5.6	5.9
	H	2.0	2.3	4.2	3.1
Regional average	B	4.3	4.1	4.4	4.3
	L	5.8	6.0	5.5	5.7
	H	1.6	2.1	3.9	2.8

[a]B, base case; L, low-price case; H, high-price case.

Table 6.8. Forecasts of annual growth rates (%) of electricity demand
by sector and state for the Mountain region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Montana	B	5.3	7.1	3.2	4.5
	L	5.4	7.6	3.3	4.7
	H	6.4	7.1	4.1	5.2
Idaho	B	7.1	5.8	4.2	5.6
	L	7.4	6.0	4.4	5.9
	H	7.7	5.8	5.0	6.2
Wyoming	B	8.2	5.5	3.7	5.5
	L	8.3	6.1	3.8	5.7
	H	9.2	5.5	4.6	6.1
Colorado	B	9.0	6.2	4.8	7.0
	L	9.3	7.1	5.1	7.5
	H	9.6	5.1	5.2	7.0
New Mexico	B	5.9	5.3	3.8	5.1
	L	6.7	6.7	4.4	6.1
	H	5.9	3.5	3.8	4.4
Arizona	B	10.7	7.8	4.4	8.2
	L	10.9	8.4	4.9	8.6
	H	11.4	7.3	4.9	8.5
Utah	B	8.2	5.6	3.9	6.2
	L	8.3	6.1	4.0	6.4
	H	9.1	5.3	4.7	6.7
Nevada	B	9.6	7.9	2.7	7.5
	L	10.0	8.7	3.4	8.1
	H	10.1	7.0	2.7	7.4
Regional average	B	8.8	6.6	4.0	6.6
	L	9.1	7.3	4.3	7.1
	H	9.4	6.0	4.6	6.9

[a]B, base case; L, low-price case; H, high-price case.

Table 6.9. Forecasts of annual growth rates (%) of electricity demand
by sector and state for the Pacific region from 1976 to 1990

State	Case[a]	Residential	Commercial	Industrial	Total
Washington	B	3.7	5.4	2.4	3.5
	L	3.9	5.5	2.5	3.6
	H	3.7	5.3	2.4	3.4
Oregon	B	3.4	10.1	4.1	5.7
	L	3.6	10.2	4.2	5.8
	H	3.3	10.0	4.0	5.6
California	B	3.1	6.0	3.0	4.2
	L	3.7	6.7	3.2	4.8
	H	2.3	5.3	2.7	3.6
Regional average	B	3.3	6.5	3.0	4.3
	L	3.8	7.0	3.2	4.7
	H	2.9	6.0	2.8	3.9

[a]B, base case; L, low-price case; H, high-price case.

model are generally higher than those forecasted by NPA and used previously in the Version I model. For example, the average annual growth rates of real per capita income for 1980-85 forecasted by BEA are 4.87% for New Hampshire, and 5.71% for Florida while the comparable estimates by NPA were 3.1% and 2.2%, respectively. Furthermore, the assumptions on fuel prices are markedly different. In general, much higher fuel prices are used in the Version II model, as compared with Version I. However, fuel prices affect only part of electricity costs. As a result, differences in the assumptions of electricity costs between Version I and Version II are smaller in magnitude than the differences in the prices of substitute fuels. For example, the assumed growth rate of the real price of residential natural gas in Ohio is 5.04% for 1980-85 in the base case, which is almost five times the growth rate of 1.09% used in Version I. However, the corresponding nominal growth rate of average total electricity cost is 7.03% for 1980-85 which is only slightly higher than 5.37% assumed for the previous forecasts obtained in Chern et al. A much higher rate of increase in the prices of substitute fuels than that used in Version I would, of course, result in a higher demand for electricity if the estimated cross-price effect is significant.

The validity of the forecasting results presented here are thus subject to the validity of the assumptions used. Interpretation of these results should consider these assumptions when forecasts are compared with the earlier results produced by Chern et al. It should be pointed out that the intent here , merely to develop some uniform and comparable scenarios for every state and to show what the model can produce. In actual case-related work, we generally focus on one state at a time. The assumptions of exogenous variables are each carefully examined based on different sources of projections. Thus, the sensitivity analysis is usually broader than is done here. The users of the model can alter the assumptions as they desire.

The important findings based on these state-level results (Tables 6.1 through 6.9) are summarized below:

1. As evidenced by the results, the forecast demand growth varies considerably among states for the 1976-90 period. In the residential

sector, the forecast annual growth rates in the base case range from 1.9%
in South Dakota to 10.7% in Arizona. The forecast annual growth rates
of commercial demand for the same period vary from 2.8% in Illinois to
10.1% in Oregon. The base case results for industrial demand range from
2.4% in Washington to 8.3% in North Dakota. As previously noted, these
results are crucially dependent on the assumptions used. Additionally,
when comparing forecasts by state, relating the growth rate to just one
or two explanatory variables is difficult in some cases because of the
large number of these variables. However, in other cases, major reasons
for these regional differences can be identified. For example, the
extremely low growth of electricity demand in the residential and commer-
cial sectors predicted for South Dakota and Illinois is mainly due to a
fairly low population growth projected for these states. The high
growth predicted for electricity demand in Arizona is primarily attri-
butable to high projected growth of both population and number of
households. In evaluating the relatively low growth of industrial
demand projected for Washington, we observed that the historical trend
of industrial demand in this state registered some peculiar year-to-year
fluctuations (e.g., it had a decrease of 15% from 1957 to 1958, a 16%
increase from 1959 to 1960, and a 14% increase from 1968 to 1969). This
peculiar historical pattern makes it extremely difficult to predict its
future demand with much statistical certainty. Fortunately, this type
of uncertainty occurs only in a few states. Generally, we found the
forecasting results reasonable and explainable in terms of the assump-
tions used and demand elasticities estimated in the econometric model.

   2. In considering the three alternative price scenarios, we expect
the low-price case to result in a higher demand and the high-price case
to yield a lower demand than the base case. We found that this phenom-
enon generally holds for most states in all sectors because the sum of
cross-price elasticities is smaller than the own-price elasticity.
However, it may happen that the prices of substitute fuels increase at a
rate higher than electricity costs and that cross-price elasticities are
large; in that situation, the high-price case may yield a demand for
electricity which is higher than the base case demand rather than lower
as one would expect. This occurs in several states.

For example, in Colorado, there exists a strong interfuel substitution in both the residential and industrial sectors which yields a higher rate of demand growth in the high-price case than is predicted in the base case. However, the projected growth rates of commercial demand follow the usual pattern among the three scenarios. As a result, the projected annual growth rates of total demand are the same for the high-price and base cases. The same proclivity for interfuel substitution exists in the industrial sector of the West North Central region. We find that the high-price case yields the highest rate of demand for every state in that region. Similarly, several states, in the commercial sector, display the substitution effect. However, the residential sector manifests the usual pattern of demand among the alternative price scenarios. The result is a majority of the states having a higher rate of total demand in the high-price case in this region. For most sectors and states, a comparison of alternative scenarios clearly shows that the model is sensitive to underlying assumptions.

3. Comparing the projected annual growth rates for the three sectors, we found that, in the more industrialized states such as those in the New England region and Ohio in the East North Central region, industrial demand tends to grow at a higher rate than residential and commercial demands. For most other states, commercial demand for electricity exhibits a higher growth rate than either residential or industrial demand during the 1976-90 period. The higher growth rate in the commercial sector is partially due to the stronger interfuel substitution in this sector (the cross-price elasticity is generally more significant and has a larger magnitude than that estimated for the other two sectors).

Tables 6.10 through 6.13 provide a summary of forecast demands by region and for the United States for the three alternative scenarios respectively. For the United States as a whole, total electricity demand in the base case is projected to increase from 1804×10^9 kWhr in 1976 to 3333×10^9 kWhr in 1990. In comparison, higher fuel prices as assumed in the high-price case would reduce the projected electricity demand to 3169×10^9 kWhr, and lower fuel prices in the low-price case would increase electricity demand to 3831×10^9 kWhr in 1990.

Table 6.10. Forecast electricity demand by sector and by region for the base case

(10^9kWhr)

Region	1976 actual				1985				1990			
	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]
New England	28.0	21.1	19.9	70.8	37.3	29.7	27.4	96.8	44.9	37.5	35.4	120.8
Middle Atlantic	73.3	63.0	88.7	236.8	101.8	99.3	125.4	342.9	121.3	133.5	160.5	435.9
East North Central[b]	105.6	73.0	149.9	341.0	145.4	102.5	205.2	469.9	165.5	118.4	252.2	555.9
West North Central	48.4	29.9	40.5	122.9	65.8	51.4	65.7	189.2	75.1	66.0	87.4	236.3
South Atlantic	119.6	77.4	99.7	306.6	183.2	118.6	143.1	459.5	233.5	155.6	176.7	584.3
East South Central[c]	57.4	25.3	79.2	164.5	87.1	44.9	123.9	260.2	108.5	58.8	160.1	332.9
West South Central	70.9	52.5	90.5	223.0	103.1	79.9	131.9	328.0	128.0	92.2	165.5	401.5
Mountain	27.4	28.0	30.1	89.6	58.1	49.9	43.2	158.4	88.8	68.7	52.0	219.7
Pacific	79.8	68.2	88.4	248.5	108.0	119.6	111.0	356.0	125.9	165.1	133.4	446.1
United States[d]	610.4	438.4	686.9	1803.7	889.8	695.8	976.8	2660.9	1091.5	895.8	1223.2	3333.4

[a]Includes miscellaneous categories.

[b]Includes estimated electricity demand of the DOE uranium enrichment plant in Portsmouth, Ohio.

[c]Does not include estimated electricity demand of DOE uranium enrichment plants in Paducah, Kentucky, and in Oak Ridge, Tennessee.

[d]Does not include Alaska and Hawaii.

Table 6.11. Forecast electricity demand by sector and by region for the low-price case

(10^9kWhr)

Region	1976 actual				1985				1990			
	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]
New England	28.0	21.1	19.9	70.8	43.9	37.9	28.0	112.6	57.5	52.1	36.5	149.7
Middle Atlantic	73.3	63.0	88.7	236.8	109.2	111.9	127.0	365.7	133.5	154.8	163.4	474.4
East North Central[b]	105.6	73.0	149.9	341.0	157.8	111.1	232.8	520.4	188.8	135.5	302.1	649.6
West North Central	48.4	29.9	40.5	122.9	71.0	54.6	64.1	196.1	84.5	73.7	86.4	252.9
South Atlantic	119.6	77.4	99.7	306.6	209.2	137.7	151.6	515.0	281.5	190.7	194.7	688.7
East South Central[c]	57.4	25.3	79.2	164.5	96.9	56.4	148.7	307.0	125.7	81.6	215.2	429.4
West South Central	70.9	52.5	90.5	223.0	121.2	92.6	143.6	372.2	155.2	118.5	190.7	483.7
Mountain	27.4	28.0	30.1	89.6	58.4	53.6	43.5	163.1	92.2	75.5	54.0	232.6
Pacific	79.8	68.2	88.4	248.5	112.1	126.6	113.0	369.9	134.0	176.2	136.8	470.0
United States[d]	610.4	438.4	686.9	1803.7	979.7	782.4	1052.3	2922.0	1252.9	1058.6	1379.8	3831.0

[a] Includes miscellaneous categories.

[b] Includes estimated electricity demand of the DOE uranium enrichment plant in Portsmouth, Ohio.

[c] Does not include estimated electricity demand of DOE uranium enrichment plants in Paducah, Kentucky, and in Oak Ridge, Tennessee.

[d] Does not include Alaska and Hawaii.

Table 6.12. Forecast electricity demand by sector and by region for the high-price case

(10^9kWhr)

Region	1976 actual				1985				1990			
	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]
New England	28.0	21.1	19.9	70.8	34.4	27.2	26.9	90.7	38.8	32.6	34.4	108.5
Middle Atlantic	73.3	63.0	88.7	236.8	96.3	100.0	125.0	337.5	111.7	136.6	159.7	428.2
East North Central[b]	105.6	73.0	149.9	341.0	138.5	101.5	200.0	456.2	151.2	114.4	242.0	526.2
West North Central	48.4	29.9	40.5	122.9	63.2	55.7	77.2	202.8	69.8	73.4	112.0	264.0
South Atlantic	119.6	77.4	99.7	306.6	170.3	108.8	138.4	431.0	207.5	136.2	166.9	526.8
East South Central[c]	57.4	25.3	79.2	164.5	82.8	45.4	132.1	264.6	100.6	59.0	173.3	338.4
West South Central	70.9	52.5	90.5	223.0	78.8	69.8	126.8	286.7	88.7	70.5	154.8	326.8
Mountain	27.4	28.0	30.1	89.6	62.6	46.7	46.3	162.9	96.8	63.1	56.4	226.7
Pacific	79.8	68.2	88.4	248.5	104.2	112.4	109.3	342.4	118.6	153.6	130.7	423.0
United States[d]	610.4	438.4	686.9	1803.7	831.1	667.5	982.0	2574.8	983.7	839.4	1230.2	3168.6

[a] Includes miscellaneous categories.

[b] Includes estimated electricity demand of the DOE uranium enrichment plant in Portsmouth, Ohio.

[c] Does not include estimated electricity demand of DOE uranium enrichment plants in Paducah, Kentucky, and in Oak Ridge, Tennessee.

[d] Does not include Alaska and Hawaii.

Table 6.13. Forecast annual growth rates (%) of electricity demand by region, alternative cases, 1976-1990

Region	Base case				High-price case				Low-price case			
	Res.	Comm.	Ind.	Total[c]	Res.	Comm.	Ind.	Total[a]	Res.	Comm.	Ind.	Total[a]
New England	3.4	4.2	4.2	3.9	2.4	3.1	4.0	3.1	5.3	6.7	4.4	5.5
Middle Atlantic	3.7	5.5	4.3	4.5	3.1	5.7	4.3	4.3	4.4	6.6	4.5	5.1
East North Central[b]	3.3	3.5	3.8	3.6	2.6	3.3	3.5	3.1	4.2	4.5	5.1	4.7
West North Central	3.2	5.8	5.6	4.8	2.7	6.6	7.5	5.6	4.1	6.6	5.6	5.3
South Atlantic	4.9	5.1	4.2	4.7	4.0	4.1	3.7	3.9	6.3	6.6	4.9	6.0
East South Central[c]	4.7	6.3	5.2	5.2	4.1	6.2	5.8	5.3	5.8	8.7	7.4	7.1
West South Central	4.3	4.1	4.4	4.3	1.6	2.1	3.9	2.8	5.8	6.0	5.5	5.7
Mountain	8.8	6.6	4.0	6.6	9.4	6.0	4.6	6.9	9.1	7.3	4.3	7.1
Pacific	3.3	6.5	3.0	4.3	2.9	6.3	2.8	3.9	3.8	7.0	3.2	4.7
United States[d]	4.2	5.2	4.2	4.5	3.5	4.7	4.3	4.1	5.3	6.5	.1	5.5

[a] Includes miscellaneous categories.

[b] Includes estimated electricity demand of the DOE uranium enrichment plant in Portsmouth, Ohio.

[c] Does not include estimated electricity demand of DOE uranium enrichment plants in Paducah, Kentucky, and in Oak Ridge, Tennessee.

[d] Does not include Alaska and Hawaii.

Table 6.13 shows the forecast annual growth rates of electricity demand by region and for the United States for the three scenarios. There are also considerable variations of projected annual growth rates of electricity demand among regions. However, the regional variation is much smaller than the state-level variation discussed previously, especially for the total demand. The base-case projection shows that annual growth rates of total electricity demand range from 3.6% in the East North Central region to 6.6% in the Mountain region. For the United States as a whole, we forecast the annual growth rates of total electricity demand to range from 4.1% in the high-price case to 5.5% in the low-price case. The base-case projection is 4.5% for the 1976-90 period. The forecasts of total electricity demand in the United States for the three cases are also shown in Figure 6.1.
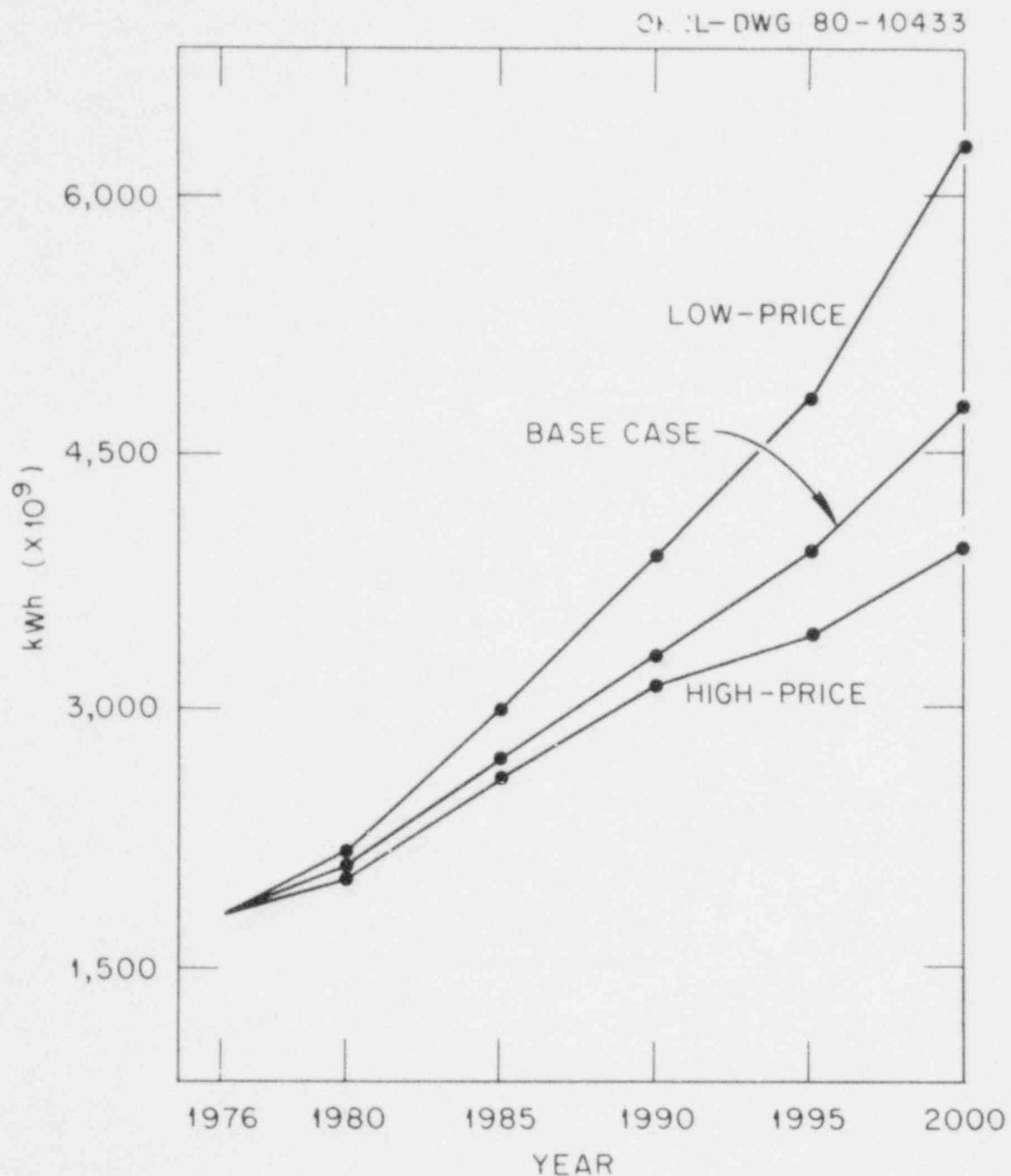
Fig. 6.1. Forecasts of U.S. electricity demand, 1976-2000.

7. CONCLUSIONS

This report presents further results of validating the Version I model, an investigation of structural change, an update of the Version I model as Version II, the electricity cost forecasting model, and the forecasts of electricity demand and prices by sector and by state for 1977-2000.

Further validation of the Version I model was conducted through *ex post* forecasting in the post-sample years of 1975 and 1976. Generally, the *ex post* forecasting errors are smaller for residential demand than for commercial and industrial demands. One reason for higher errors for commercial and industrial demand forecasts is due to the reclassification of customers between these two sectors. Furthermore, the *ex post* forecasting results reveal no evidence of any significant non-price induced conservation in 1975 and 1976. The estimated price elasticities appear to capture reasonably well the consumers' responses to changes in electricity prices during recent years.

An update of the Version I model was made to incorporate additional data for 1975 and 1976. This updated model was referred to as the Version II model. In the course of updating the SLED model, potential structural changes were investigated. The statistical results, however, show that changes in either the general structure of the demand equations or the estimated own-price elasticities between Version I and Version II of the SLED model are generally not statistically significant. Even though, in most cases, the same specification used in the Version I model is retained in Version II, the use of more data during the post oil embargo period would enhance the credibility of the SLED model.

A new set of the assumptions of exogenous variables was developed and used to forecast electricity demand and price by sector and by state for 1977-2000. It should be stressed that forecasts made with econometric models are only probabilistic and contingent on the validity of the assumptions used. A broader sensitivity analysis than the three fuel-price scenarios presented in the report can be conducted with the SLED model developed in this study.

The forecast rates of growth in total electricity demand vary considerably from state to state: Arizona has the highest rate (8.2%), and Massachusetts and Illinois have the lowest rate (2.9%). Furthermore, electricity demand is found to be sensitive to changes in the prices of fuels and costs of generating, transmitting, and distributing electricity. For example, in the New England region, doubling the rates of growth for all fuel prices and electricity costs in real terms would reduce total electricity demand by 10.2% in 1990, and by 18.8% in 2000. In some regions, however, the impacts of increasing the prices of substitute fuels, especially natural gas, offset that of increasing electricity costs. As a result, the net effect on electricity demand resulting from increases in prices of fuels (high-price scenarios) is positive rather than negative.

In our continuing efforts to refine the SLED model, we are currently involved in developing what will be called Version III of the SLED model. In this version, the model is split into two separate but related components. The first determines short-run utilization rates conditioned upon the saturation of electric appliances, and the second estimates the saturation of appliances. Several recent studies have focused on the importance of modeling short-run durable use decisions and longer-run durable choice decisions at the micro level. Our work focuses on aggregation in such models and further considers issues in specification which enhance possibilities for greater breadth of application. Preliminary regression results for the short-run usage equation in the residential sector show that the saturation of important electric appliances affects both the aggregate own-price elasticity and the aggregate demand for electricity.

FOOTNOTES AND REFERENCES

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24. Ref. 23.

25. Ref. 1.

26. Ref. 1.

Appendix A

EX POST FORECASTING ERRORS, 1975 AND 1976

Table A. *Ex post* forecasting errors by sector and by state, 1975 and 1976

MAINE

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL										
COMMERCIAL										
INDUSTRIAL										
TOTAL										

NEW HAMPSHIRE

VERMONT

MASSACHUSETTS

RHODE ISLAND

CONNECTICUT

NEW YORK

Table A. (continued)

NEW JERSEY

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	14248.	14576.	15090.	-2.14	-1.94	44.17	49.25	52.71	-6.97	-9.54
COMMERCIAL	12904.	13510.	14289.	-14.83	-9.05	42.01	46.02	48.26	-7.09	-6.74
INDUSTRIAL	16391.	14928.	15759.	0.29	-4.84	28.19	31.79	33.15	-0.26	0.96
TOTAL	43543.	43014.	45138.	-5.28	-5.20	37.52	42.17	44.47	-5.71	-5.81

PENNSYLVANIA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	26673.	27724.	28790.	0.22	0.65	35.28	39.96	41.20	-12.57	-12.84
COMMERCIAL	16338.	17159.	17892.	4.74	11.13	31.86	36.34	37.98	-12.82	-14.18
INDUSTRIAL	44786.	41317.	43366.	-0.77	-7.44	21.04	25.33	25.72	-18.66	-17.70
TOTAL	87797.	86200.	90048.	0.65	-1.17	27.38	32.23	33.11	-14.70	-13.85

OHIO

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	26717.	28020.	28952.	-2.65	-1.61	29.06	34.12	35.64	-5.33	-9.22
COMMERCIAL	18178.	18879.	19595.	-3.19	-0.16	27.69	32.54	33.75	-4.20	-6.61
INDUSTRIAL	49648.	45524.	52158.	0.67	-7.36	15.78	19.52	19.37	-0.82	1.10
TOTAL	94543.	92423.	100705.	-1.13	-4.30	21.82	26.60	26.84	-3.83	-3.97

INDIANA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	14661.	15991.	16594.	1.42	3.49	24.31	26.69	30.20	-6.42	-12.26
COMMERCIAL	7972.	8955.	9283.	-1.88	5.05	24.24	26.56	29.40	-6.16	-9.50
INDUSTRIAL	23642.	21980.	24657.	-0.01	-3.53	14.26	17.95	19.91	-15.64	-15.45
TOTAL	46275.	46926.	50534.	0.12	0.30	19.16	22.57	25.03	-9.77	-12.16

ILLINOIS

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	24055.	26192.	26325.	-4.12	1.13	32.46	35.63	38.58	-1.60	-4.77
COMMERCIAL	20567.	21457.	22443.	1.56	2.32	30.15	34.92	37.64	-5.15	-6.31
INDUSTRIAL	32289.	31389.	33341.	-8.52	-10.37	16.35	20.37	22.49	0.21	-1.02
TOTAL	76911.	79038.	82109.	-4.32	-3.21	25.08	29.38	31.79	-1.49	-2.90

MICHIGAN

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	20218.	20807.	21345.	-0.43	-1.34	29.66	35.35	38.88	-3.34	-6.13
COMMERCIAL	12648.	12949.	13465.	1.17	0.90	30.01	36.27	40.26	-4.69	-8.31
INDUSTRIAL	29036.	27057.	31067.	-11.57	-12.55	19.04	24.80	27.03	-5.35	-4.79
TOTAL	61902.	60813.	65877.	-5.05	-6.17	24.75	30.85	33.57	-3.32	-5.11

WISCONSIN

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	11298.	11904.	12377.	-2.78	-2.90	27.30	31.35	34.37	7.66	4.95
COMMERCIAL	6887.	7611.	8245.	-11.90	-9.82	28.78	32.33	33.85	7.98	9.60
INDUSTRIAL	11227.	10654.	11176.	1.70	-0.02	17.15	21.00	23.45	15.28	13.30
TOTAL	29392.	30169.	31798.	-3.50	-3.68	23.77	27.94	30.40	9.03	8.09

Table A. (continued)

DELAWARE

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	1412.	1483.	1564.	-5.14	-5.42	40.82	43.50	45.26	-4.69	-7.14
COMMERCIAL	1122.	1164.	1183.	-9.76	-7.69	37.13	40.04	41.35	-7.05	-8.22
INDUSTRIAL	2870.	2484.	2632.	5.73	-7.47	25.58	29.30	28.91	-6.52	-3.53
TOTAL	5404.	5131.	5379.	-0.93	-6.92	31.96	35.84	36.40	-7.05	-5.88

MARYLAND AND D. C.

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	10020.	10505.	10994.	-11.51	-10.37	35.84	39.49	40.55	20.34	17.93
COMMERCIAL	9900.	10469.	10864.	-11.80	-10.94	35.87	38.47	41.29	20.56	13.96
INDUSTRIAL	12041.	11558.	13469.	-3.49	-17.67	23.36	26.68	25.25	36.69	45.82
TOTAL	31961.	32532.	35327.	-8.75	-13.33	31.15	34.61	34.94	24.28	24.75

VIRGINIA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	14559.	15450.	16670.	-5.42	-7.07	28.21	34.52	35.08	-4.23	-4.65
COMMERCIAL	9544.	10342.	10990.	-8.69	-6.96	27.27	33.99	34.23	-6.66	-5.03
INDUSTRIAL	9007.	8745.	9672.	6.05	-4.59	18.24	23.35	22.89	-1.05	1.77
TOTAL	33110.	34537.	37332.	-3.49	-6.40	25.23	31.53	31.67	-5.14	-3.72

WEST VIRGINIA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	4542.	4862.	5121.	-3.68	-3.44	27.23	32.70	35.85	-5.17	-9.94
COMMERCIAL	2643.	2848.	3023.	-3.46	-3.23	25.69	31.29	34.21	-7.62	-11.79
INDUSTRIAL	9950.	9157.	9906.	9.29	-3.66	15.24	20.78	21.81	-14.47	-12.89
TOTAL	17135.	16867.	18050.	3.40	-3.53	20.03	25.99	27.87	-11.19	-11.55

N. AND S. CAROLINA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	27323.	28843.	30817.	-3.68	-5.28	25.30	29.37	32.98	0.10	-5.34
COMMERCIAL	15749.	16979.	17983.	-8.66	-7.94	23.14	27.29	29.67	-2.98	-5.25
INDUSTRIAL	33686.	32053.	35244.	5.46	-6.62	14.82	19.40	20.55	3.05	5.15
TOTAL	76759.	77875.	84044.	-1.00	-6.41	20.26	24.82	27.06	-0.52	-1.91

GEORGIA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	15471.	16409.	18467.	-6.03	-10.40	23.02	28.14	29.33	3.87	0.56
COMMERCIAL	10625.	11099.	12189.	-6.08	-9.61	26.83	34.09	35.62	-6.05	7.83
INDUSTRIAL	14093.	13507.	14590.	5.38	-3.69	16.08	23.23	23.07	-4.78	-0.98
TOTAL	40189.	41015.	45246.	-2.28	-8.02	21.59	28.13	29.00	2.49	-2.21

FLORIDA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	33329.	34627.	35969.	-2.99	-0.81	28.42	34.11	36.65	2.64	1.25
COMMERCIAL	18918.	20520.	21213.	-6.61	-4.20	30.57	36.35	37.82	1.17	2.52
INDUSTRIAL	13370.	13615.	14185.	2.49	1.14	18.89	24.00	25.06	8.73	4.14
TOTAL	65617.	68762.	71367.	-2.98	-1.43	27.10	32.78	35.09	2.68	1.93

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Table A. (continued)

MINNESOTA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	9396.	10019.	10652.	1.92	0.63	27.84	30.91	33.29	4.39	2.94
COMMERCIAL	4150.	4436.	4814.	2.98	1.74	30.46	33.48	35.17	-2.19	-2.00
INDUSTRIAL	10969.	11024.	11875.	1.25	-0.51	17.30	21.32	23.65	-0.17	-3.01
TOTAL	24515.	25479.	27341.	1.80	0.33	23.61	27.21	29.43	1.53	-0.03

IOWA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	7635.	8226.	8462.	-2.74	0.07	28.78	32.66	36.10	2.08	-0.15
COMMERCIAL	4208.	4622.	4818.	-1.70	0.81	28.83	33.60	36.60	-5.54	-7.41
INDUSTRIAL	6716.	6660.	7166.	8.16	4.36	15.74	19.95	22.24	-4.21	-3.68
TOTAL	18559.	19508.	20446.	0.75	1.75	24.07	28.56	31.41	-2.74	-3.44

MISSOURI

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	11706.	13092.	13532.	-5.65	-0.59	28.55	31.43	35.13	2.46	1.02
COMMERCIAL	6917.	7479.	7705.	0.20	4.37	27.28	30.59	34.45	-1.86	-5.47
INDUSTRIAL	11242.	11079.	11882.	1.78	-1.48	16.99	20.48	23.55	-2.11	-4.34
TOTAL	29865.	31650.	33119.	-1.66	0.24	23.90	27.40	30.82	-0.46	-2.91

NORTH DAKOTA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	1661.	1763.	1995.	7.37	0.19	26.39	28.65	30.83	-10.75	-10.72
COMMERCIAL	1033.	1123.	1267.	0.22	-1.58	23.93	26.17	28.50	-4.75	-6.67
INDUSTRIAL	490.	559.	632.	11.85	16.02	21.84	25.36	26.69	-18.37	-14.64
TOTAL	3184.	3445.	3894.	5.76	2.18	24.91	27.31	29.40	-10.15	-10.34

SOUTH DAKOTA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	1847.	1964.	2134.	0.16	-4.10	26.26	28.02	31.51	10.34	8.17
COMMERCIAL	965.	1021.	1123.	0.34	-2.71	28.42	31.02	34.58	-2.30	-3.92
INDUSTRIAL	451.	483.	493.	6.85	15.59	17.48	19.03	21.58	7.96	10.77
TOTAL	3263.	3468.	3750.	1.14	-1.10	25.69	27.65	31.13	5.65	3.67

NEBRASKA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	4255.	4635.	4837.	-3.49	-1.83	22.49	25.40	29.51	13.61	8.94
COMMERCIAL	3542.	3774.	4032.	1.99	1.84	19.33	22.61	26.57	12.03	7.74
INDUSTRIAL	2296.	2395.	2673.	-2.26	-6.19	13.18	15.71	18.60	21.37	18.50
TOTAL	10093.	10804.	11542.	-1.30	-1.56	19.26	22.28	25.95	14.17	10.36

KANSAS

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	5839.	6513.	6768.	-5.29	-1.44	24.73	28.83	31.83	4.53	2.81
COMMERCIAL	5165.	5777.	6188.	-2.28	2.16	22.02	26.12	29.50	7.54	7.26
INDUSTRIAL	5581.	5586.	5826.	6.80	8.84	13.42	17.80	20.52	3.38	2.57
TOTAL	16585.	17876.	18782.	-0.54	2.94	20.08	24.51	27.56	4.25	3.58

Table A. (continued)

KENTUCKY

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	9433.	10098.	10728.	-2.36	-5.17	21.60	24.44	26.24	2.15	6.07
COMMERCIAL	7540.	8730.	10231.	-8.18	-20.11	14.21	15.59	16.68	23.81	31.76
INDUSTRIAL	13117.	13737.	17025.	-0.95	-15.95	13.69	19.58	20.68	-25.47	-15.34
TOTAL	30090.	32565.	37984.	-3.32	-14.03	16.30	20.02	21.17	-4.88	3.16

TENNESSEE

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	21693.	22467.	23636.	-4.??	-7.85	15.65	20.69	23.00	-6.35	-8.00
COMMERCIAL	3618.	3672.	3887.	-5.??	-9.68	19.72	25.02	27.19	3.02	2.37
INDUSTRIAL	31469.	30143.	33999.	5.87	-4.12	11.04	17.20	19.17	-12.85	-11.83
TOTAL	56780.	56282.	61522.	1.05	-5.90	13.35	19.10	21.15	-9.41	-9.37

ALABAMA

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	13121.	13953.	14768.	-5.47	-3.92	20.89	25.15	27.58	-6.47	-10.31
COMMERCIAL	5747.	6204.	6486.	-9.65	-6.76	24.13	28.34	30.28	-8.91	-9.85
INDUSTRIAL	23044.	21120.	24126.	6.38	-5.67	12.20	17.12	18.31	-4.53	-3.12
TOTAL	41912.	41277.	45380.	0.12	-5.26	16.55	21.52	23.04	-7.37	-7.14

MISSISSIPPI

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	7363.	7868.	8237.	-9.52	-7.98	23.10	25.17	31.32	13.72	1.80
COMMERCIAL	4034.	4318.	4714.	-12.62	-16.25	25.48	27.12	33.13	12.47	2.68
INDUSTRIAL	6698.	6525.	7237.	1.05	-5.02	16.39	20.25	23.81	6.19	4.72
TOTAL	18095.	18711.	20188.	-6.55	-8.85	21.15	23.90	29.05	10.20	2.39

ARKANSAS

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	5725.	6356.	6703.	-8.89	-9.76	26.35	29.21	33.94	12.55	6.69
COMMERCIAL	3389.	3817.	4084.	-6.61	-4.23	25.35	27.50	32.24	11.73	5.65
INDUSTRIAL	7063.	5195.	6489.	41.80	-11.50	15.58	16.42	22.72	12.34	-7.08
TOTAL	16177.	15368.	17276.	8.81	-9.11	21.44	24.46	29.32	6.54	2.83

LOUISIANA

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	11649.	12536.	13373.	-2.87	1.41	24.61	24.86	26.70	17.33	17.85
COMMERCIAL	6845.	7619.	8129.	-3.63	0.21	23.90	24.62	27.52	14.37	8.53
INDUSTRIAL	17360.	17146.	19535.	4.46	-8.32	12.48	12.65	13.29	19.57	26.57
TOTAL	35854.	37301.	41037.	0.34	-3.46	18.60	19.20	20.48	15.90	19.72

OKLAHOMA

SECTOR	ACTUAL DEMAND 1974	1975	1976	FORECAST ERROR (%) 1975	1976	ACTUAL PRICE 1974	1975	1976	FORECAST ERROR (%) 1975	1976
RESIDENTIAL	8016.	8945.	9407.	0.16	4.34	23.93	25.67	29.93	6.07	1.94
COMMERCIAL	5729.	6146.	6532.	3.38	4.03	20.11	22.32	26.24	5.04	0.93
INDUSTRIAL	6463.	6533.	7185.	6.01	-3.86	11.21	13.59	17.63	7.58	-1.53
TOTAL	20208.	21624.	23124.	2.84	1.70	18.74	21.07	25.07	5.47	1.67

Table A. (continued)

TEXAS

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	37849.	40180.	41421.	2.58	11.15	24.07	27.30	31.16	6.17	6.76
COMMERCIAL	30108.	32178.	33723.	2.5?	5.58	20.75	24.24	27.65	3.84	1.81
INDUSTRIAL	52448.	52243.	57335.	5.76	-3.78	11.56	14.88	18.48	6.22	1.46
TOTAL	120405.	124601.	132479.	3.90	3.27	17.79	21.30	24.78	5.10	5.26

MONTANA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	1877.	2038.	2232.	-0.09	-3.87	22.30	21.92	22.34	3.30	0.59
COMMERCIAL	1488.	1544.	1669.	10.77	11.57	20.45	20.87	20.62	-5.07	-4.91
INDUSTRIAL	5963.	5089.	5795.	19.97	16.35	5.03	6.21	6.09	10.79	17.08
TOTAL	9328.	8671.	9696.	13.62	10.87	10.96	12.52	12.33	-1.03	0.18

IDAHO

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	3393.	3786.	4104.	-0.90	-1.83	15.67	16.44	18.34	2.33	-1.81
COMMERCIAL	3218.	3292.	3517.	3.56	0.13	14.06	16.01	17.90	2.88	-1.91
INDUSTRIAL	5556.	5540.	5547.	24.58	35.47	6.90	8.55	10.16	-3.20	-8.62
TOTAL	12167.	12620.	13168.	11.45	14.41	11.24	12.86	14.78	-2.49	-8.29

WYOMING

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	785.	864.	970.	4.04	2.59	23.79	23.67	24.14	7.46	8.84
COMMERCIAL	1443.	1511.	1730.	16.07	9.83	16.90	17.33	17.73	9.35	13.71
INDUSTRIAL	1835.	1966.	2086.	21.10	24.82	10.70	10.89	12.02	8.48	8.47
TOTAL	4063.	4341.	4786.	15.96	14.90	15.43	15.69	16.54	6.75	8.19

COLORADO

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	4749.	5095.	5361.	2.94	3.31	27.53	31.04	32.64	-1.32	-2.26
COMMERCIAL	5864.	6296.	6273.	4.55	12.18	22.42	25.83	28.69	-1.69	-6.09
INDUSTRIAL	3109.	3335.	4120.	-3.52	-12.09	14.20	17.58	19.24	-7.52	-8.47
TOTAL	13722.	14726.	15754.	2.17	2.82	22.32	25.77	27.56	-1.94	-3.67

NEW MEXICO

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	1795.	1903.	2027.	0.97	1.89	29.05	32.71	35.53	-7.29	-10.52
COMMERCIAL	2552.	2646.	2904.	13.63	7.96	22.48	25.25	27.69	-5.78	-8.02
INDUSTRIAL	1517.	1650.	1992.	5.24	3.84	14.73	17.57	20.84	-11.35	-17.04
TOTAL	5864.	6199.	6923.	7.51	5.00	22.49	25.49	28.01	-7.69	-10.99

ARIZONA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	6651.	6940.	7214.	-2.56	-4.41	28.96	36.45	39.02	-4.26	-11.64
COMMERCIAL	6300.	6624.	6891.	-8.09	-4.99	25.03	32.28	35.23	-0.06	-8.93
INDUSTRIAL	5788.	5726.	6076.	7.89	6.48	17.63	22.68	24.60	6.12	-4.05
TOTAL	18739.	19290.	20181.	-0.76	-1.33	24.14	30.93	13.38	-1.40	-9.63

Table A. (continued)

UTAH

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	2420.	2520.	2683.	3.70	2.00	22.95	27.61	31.70	-13.77	-18.41
COMMERCIAL	2054.	2256.	2560.	1.27	-5.10	20.20	23.77	26.15	-5.03	-5.82
INDUSTRIAL	2187.	2333.	2362.	-8.25	5.61	14.08	17.07	20.03	-5.59	-7.84
TOTAL	6661.	7109.	7605.	-0.99	0.73	19.13	22.93	26.21	-8.13	-12.18

NEVADA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	2794.	2831.	2785.	3.73	8.38	18.79	23.55	28.41	-0.40	-4.11
COMMERCIAL	2524.	2745.	2451.	-1.92	12.65	21.05	26.15	30.38	0.20	-1.09
INDUSTRIAL	2108.	1756.	2167.	22.44	-3.49	13.41	13.39	19.54	13.44	-11.38
TOTAL	7426.	7332.	7403.	6.10	6.32	18.03	22.09	26.47	0.14	-3.31

WASHINGTON

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	19417.	21011.	22316.	-1.10	-1.91	11.16	12.29	12.68	0.78	-1.07
COMMERCIAL	9256.	9959.	10722.	1.12	-1.02	12.57	13.83	14.08	-0.88	-0.41
INDUSTRIAL	27243.	26412.	28967.	3.60	-8.01	3.33	4.35	4.51	6.30	3.72
TOTAL	55916.	57382.	62005.	1.45	-4.60	7.58	8.90	9.11	0.72	1.76

OREGON

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	11565.	12246.	12419.	2.72	5.90	14.53	16.45	18.57	-9.21	-13.94
COMMERCIAL	6760.	7700.	7868.	0.58	5.26	14.89	16.12	17.22	-3.53	-2.91
INDUSTRIAL	12959.	12194.	13628.	7.74	-2.80	4.94	6.76	8.01	-2.07	-4.74
TOTAL	31284.	32140.	33915.	4.11	2.22	10.64	12.69	14.01	-6.94	-7.47

CALIFORNIA

SECTOR	ACTUAL DEMAND			FORECAST ERROR (%)		ACTUAL PRICE			FORECAST ERROR (%)	
	1974	1975	1976	1975	1976	1974	1975	1976	1975	1976
RESIDENTIAL	41408.	43383.	45055.	1.86	-4.49	30.79	33.35	35.42	-2.44	-1.66
COMMERCIAL	44739.	46655.	49576.	-7.71	-8.22	27.63	30.27	33.38	-1.93	-4.03
INDUSTRIAL	43646.	42742.	45776.	-0.94	-6.11	18.01	21.22	24.33	-0.42	-3.38
TOTAL	129793.	132780.	140407.	-2.40	-6.33	25.40	28.37	31.08	-1.76	-2.96

Appendix B

REGRESSION RESULTS OF THE VERSION II MODEL

Table B.1. Three stage least squares estimates of residential demand by region, 1955-1976[a]

Normalized variable: ln ERS

Region	Constant	ln ERS$_{t-1}$	ln (PER/CPI)	D·ln (PER/CPI)	ln (PC1/CPI)	ln CR	ln (POP/CR)	ln HDD	ln CDD	ln (FGR/CPI)	S·ln (RGC/CR)	S·ln RGC	R²
New England	-3.112 (-4.77)	0.818 (52.39)	-0.210 (-9.56)		0.130 (4.20)	0.299 (5.54)	0.146 (2.73)	0.183 (4.10)	0.017 (2.22)	0.051 (4.02)			0.993
Middle Atlantic	-4.165 (-3.18)	0.647 (23.63)	-0.218 (-9.68)	0.015 (8.32)	0.365 (8.09)	0.639 (7.07)	0.318 (4.45)	-0.013 (-0.36)	0.030 (2.76)		-0.003 (-3.72)		0.999
East North Central	-2.708 (-1.95)	0.680 (14.31)	-0.349 (-5.33)	0.009 (2.84)	0.047 (0.90)	0.409 (2.73)	-0.120 (-0.64)	0.013 (0.25)	0.014 (0.93)			-0.002 (-1.53)	0.996
West North Central	-8.318 (-7.14)	0.637 (17.28)	-0.254 (-4.79)		0.0004 (0.01)	0.810 (8.67)		0.126 (2.39)		0.019 (1.37)			0.995
South Atlantic	-1.035 (-1.52)	0.723 (32.90)	-0.299 (-9.05)	0.017 (5.21)	0.237 (7.16)	0.302 (6.93)	0.169 (2.62)	0.068 (4.07)	0.047 (2.92)	0.042 (2.48)			0.995
East South Central	-6.201 (-4.86)	0.572 (10.69)	-0.355 (-6.96)	0.015 (2.98)	0.300 (4.03)	0.741 (4.55)	0.293 (1.65)	0.173 (4.55)	0.104 (3.02)	0.052 (0.84)	-0.001 (-0.73)		0.996
West South Central	-9.134 (-5.75)	0.568 (10.44)	-0.392 (-4.79)		0.172 (2.36)	0.988 (5.34)	0.425 (2.91)	0.140 (4.25)	0.138 (3.76)	0.007 (0.14)			0.996
Mountain	-2.963 (-3.61)	0.627 (16.93)	-0.139 (-2.95)		0.462 (5.58)	0.636 (8.54)	0.691 (5.92)	0.156 (2.49)	0.033 (2.02)	0.069 (2.57)			0.984
Pacific	-3.790 (-3.03)	0.811 (18.84)	-0.076 (-1.53)		0.024 (0.35)	0.285 (2.61)		0.179 (4.81)	0.019 (2.01)				0.997

[a] The figures in parentheses are estimated asymptotic t-ratios; R² is the squared correlation coefficient between the actual and estimated values of the normalized variables; S is a dummy variable having the value of one for 1971-76 and zero otherwise; all other state and reclassification dummy coefficients are not presented.

Table B.2. Three stage least squares estimates
of residential price by region, 1955-1976[a]

Normalized variable: PER-TOC

Region	Constant	ERS/CR	$(ERS/CR)^2$	CR	R^2
New England	11.877 (6.57)	−5977 (−11.97)	480396 (10.04)	0.00002 (7.39)	0.979
Middle Atlantic	20.169 (6.74)	−4291 (−5.56)	455749 (7.18)	0.000001 (0.38)	0.989
East North Central	14.533 (16.39)	−2231 (−4.76)	137230 (4.01)	0.000001 (1.58)	0.992
West North Central	20.949 (26.92)	−3696 (−10.34)	214437 (7.44)	0.000007 (5.54)	0.992
South Atlantic	20.318 (20.20)	−2662 (−14.63)	180408 (11.92)	−0.000002 (−3.53)	0.983
East South Central	15.041 (22.70)	−1823 (−12.75)	80669 (10.98)	0.000001 (0.90)	0.995
West South Central	25.693 (11.51)	−4293 (−15.38)	272343 (11.45)	0.0000004 (0.45)	0.994
Mountain	10.888 (10.04)	−1353 (−5.08)	58883 (4.03)	0.000003 (1.91)	0.983
Pacific	16.596 (25.93)	−838 (−2.85)	39884 (3.26)	−0.000001 (−2.33)	0.997

[a]The figures in parentheses are estimated asymptotic t-ratios; R^2 is the squared correlation coefficient between the actual and estimated values of the normalized variables; all state and reclassification dummy coefficients are not presented.

Table B.3. Three stage least squares estimates of commercial demand by region, 1955-1976[a]

Normalized variable: ln ECS

Region	Constant	ln ECS$_{t-1}$	ln (PEC/CPI)	D·ln (PEC/CPI)	ln (PCI/CPI)	ln CC	ln POP	ln HDD	ln CDD	ln (PGC/CPI)	S·ln (CGC/CC)	ln (CGC/CC)	R²
New England	-2.209 (-1.29)	0.805 (26.25)	-0.294 (-4.39)		0.275 (3.09)		0.321 (2.43)	0.132 (0.94)	0.010 (0.41)	0.128 (2.71)			0.988
Middle Atlantic	-2.831 (-4.29)	0.402 (7.09)	-0.208 (-2.70)		1.272 (7.10)		0.716 (10.27)		0.002 (0.03)	0.153 (3.75)	-0.009 (-2.64)		0.988
East North Central	-0.608 (-0.86)	0.795 (15.27)	-0.289 (-2.67)	0.013 (2.35)	0.149 (2.24)		0.215 (3.40)	0.106 (1.66)	0.040 (1.69)	0.031 (0.51)			0.995
West North Central	-2.744 (-3.81)	0.851 (25.09)	-0.172 (-2.89)			0.343 (5.28)			0.037 (1.59)	0.086 (1.53)			0.988
South Atlantic	0.432 (0.57)	0.698 (22.82)	-0.355 (-6.12)	0.026 (3.93)	0.350 (5.06)		0.308 (4.48)		0.027 (0.82)	0.049 (1.66)			0.988
East South Central	-1.089 (-1.13)	0.510 (8.95)	-0.589 (-6.39)	0.025 (2.61)	0.373 (3.70)	0.366 (4.47)			0.150 (2.68)	0.266 (2.78)	-0.00089 (-0.36)		0.966
West South Central	-0.581 (-1.92)	0.880 (19.62)	-0.171 (-2.09)		-0.007 (-0.12)	0.139 (3.42)			0.051 (1.18)	0.045 (1.02)			0.997
Mountain	-5.161 (-6.48)	0.504 (12.23)	-0.433 (-7.18)	-0.019 (-2.57)		0.976 (10.13)			0.033 (1.07)				0.972
Pacific	-14.116 (-7.29)	0.437 (10.19)	-0.205 (-1.83)		0.556 (2.51)	1.263 (8.27)			0.073 (2.97)		-0.257 (-4.66)		0.992

[a]The figures in parentheses are estimated asymptotic t-ratios; R² is the squared correlation coefficient between the actual and estimated values of the normalized variables; S is a dummy variable having the value of one for 1971-76 and zero otherwise; all other state and reclassification dummy coefficients are not presented.

Table B.4. Three stage least squares estimates
of commercial price by region, 1955-1976[a]

Normalized variable: PEC-TOC

Region	Constant	ECS/CC	$(ECS/CC)^2$	CC	R^2
New England	11.725 (3.67)	-770 (-9.82)	9648 (8.86)	0.0001 (2.89)	0.983
Middle Atlantic	34.824 (16.75)	-308 (-5.44)	6143 (6.59)	-0.00005 (-9.58)	0.989
East North Central	14.384 (12.86)	-460 (-13.01)	5284 (11.61)	0.00002 (2.42)	0.988
West North Central	16.086 (11.55)	-625 (-12.71)	7342 (7.47)	0.00004 (2.30)	0.991
South Atlantic	20.528 (26.99)	-403 (-1 .92)	5299 (14.30)	-0.00001 (-4.25)	0.981
East South Central	15.573 (10.86)	305 (-2.70)	2910 (1.49)	-0.00001 (-0.60)	0.981
West South Central	17.491 (10.88)	-500 (-12.82)	5984 (9.82)	0.00000001 (0.002)	0.995
Mountain	12.933 (21.66)	-353 (-12.31)	3146 (11.14)	0.00004 (4.11)	0.976
Pacific	8.252 (10.87)	-270 (-6.97)	2429 (6.09)	0.00001 (3.23)	0.994

[a]The figures in parentheses are estimated asymptotic t-ratios; R^2 is the squared correlation coefficient between the actual and estimated values of the normalized variables; all other state and reclassification dummy coefficients are not presented.

Table B.5. Three stage least squares estimates of industrial demand by region, 1955-1976[a]

Normalized variable: ln EIS

Region	Constant	ln EIS_{t-1}	ln (PEI/WPI)	D·ln (PEI/WPI)	ln (VA/WPM)	ln (PGI/WPI)	S·ln (IGC/CI)	ln (PC/WPI)	LCI	D_1·ln (VA/WPM)	D_2·ln (VA/WPM)	ln (POI/WPI)	R^2
New England	-0.989	0.667	-0.038		0.454		-0.007						0.921
	(-1.88)	(18.38)	(-0.52)		(7.47)		(-2.51)						
Middle Atlantic	-2.183	0.291	-0.081	0.041	0.990		-0.011			0.138	0.066	0.009	0.996
	(-2.21)	(6.65)	(-0.67)	(3.50)	(10.98)		(-4.58)			(2.28)	(1.18)	(0.35)	
East North Central	-0.691	0.342	-0.391	0.036	0.741		-0.012	0.089	0.096				0.977
	(-1.09)	(7.67)	(-3.04)	(3.48)	(13.37)		(-4.36)	(1.42)	(4.80)				
West North Central	0.476	0.711	-0.172		0.259	0.120							0.971
	(0.80)	(20.44)	(-1.38)		(5.04)	(2.15)							
South Atlantic	0.326	0.822	-0.077		0.187	0.003	-0.001						0.968
	(1.44)	(32.29)	(-1.44)		(4.61)	(0.13)	(-0.68)						
East South Central	0.929	0.449	-0.298		0.528	0.027		0.218					0.956
	(1.98)	(6.90)	(-2.01)		(7.41)	(0.27)		(2.24)					
West South Central	0.467	0.769	-0.111		0.223	0.045							0.962
	(1.95)	(17.29)	(-1.69)		(5.79)	(1.69)							
Mountain	1.798	0.523	-0.201		0.374	0.067							0.919
	(4.46)	(13.47)	(-1.88)		(7.95)	(0.94)							
Pacific	0.134	0.606	-0.041		0.372				0.036				0.930
	(0.22)	(10.51)	(-0.46)		(4.81)				(1.99)				

[a]The figures in parentheses are estimated asymptotic t-ratios; R^2 is the squared correlation coefficient between the actual and estimated values of the normalized variables; S is a dummy variable having the value of one for 1971-76 and zero otherwise; D_1 is the state dummy for New York; D_2 is the state dummy for New Jersey; all other state and reclassification dummy coefficients are not presented.

Table B.6. Three stage least squares estimates
of industrial price by region, 1955-1976[a]

Normalized variable: PEI-TO'

Region	Constant	EIS/CI	$(EIS/CI)^2$	CI	R^2
New England	-8.656 (-4.38)	1.915 (0.99)	0.661 (0.87)	0.001 (4.28)	0.959
Middle Atlantic	-3.078 (-2.38)	6.365 (3.07)	-1.668 (-1.89)	-0.0001 (6.33)	0.974
East North Central	-1.359 (-2.84)	-0.412 (-1.20)	0.044 (0.68)	0.00005 (1.79)	0.965
West North Central	-7.305 (-9.40)	6.986 (6.57)	-2.532 (-5.68)	0.00037 (6.13)	0.974
South Atlantic	-5.770 (-9.93)	2.165 (3.47)	-0.292 (-2.39)	0.0001 (4.04)	0.931
East South Central	-5.081 (-8.33)	3.841 (4.69)	-0.719 (-3.70)	0.00015 (3.34)	0.949
West South Central	-10.925 (-7.78)	11.569 (4.94)	-5.680 (-4.32)	0.0002 (5.50)	0.951
Mountain	-14.685 (-10.19)	1.141 (5.83)	-0.030 (-5.15)	0.0005 (5.04)	0.971
Pacific	-3.065 (-18.47)	0.210 (2.17)	-0.014 (-1.58)	0.00001 (4.33)	0.995

[a] The figures in parentheses are estimated asymptotic t-ratios; R^2 is the squared correlation coefficient between the actual and estimated values of the normalized variables; all state and reclassification dummy coefficients are not presented.

Appendix C

FORECASTS OF ELECTRICITY COSTS

TABLE C.1. ACTUAL (1976) AND ASSUMED SHARES OF POWER GENERATED BY OIL, COAL, AND GAS (%)

STATE	OIL				COAL				GAS			
	1976	1980	1985	1990	1976	1980	1985	1990	1976	1980	1985	1990
ME	100.0	100.0	100.0	64.7	0.0	0.0	0.0	35.3	0.0	0.0	0.0	0.0
NH	45.7	47.5	47.5	47.5	54.3	52.5	52.5	52.5	0.0	0.0	0.0	0.0
VT	67.7	67.7	67.7	67.7	25.4	25.4	25.4	25.4	6.9	6.9	6.9	6.9
MA	99.3	97.8	97.8	97.8	0.0	1.6	1.6	1.6	0.7	0.6	0.6	0.6
RI	90.5	90.5	90.5	90.4	0.0	0.0	0.0	0.0	9.5	9.5	9.5	9.6
CT	99.7	99.7	99.7	99.7	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
NY	78.3	78.7	77.6	76.4	21.0	20.6	21.7	22.9	0.7	0.7	0.7	0.7
NJ	64.7	64.8	65.0	65.0	31.0	30.9	30.6	30.6	4.3	4.3	4.4	4.4
PA	9.9	10.1	10.1	10.1	90.1	89.9	89.9	89.9	0.0	0.0	0.0	0.0
OH	1.8	1.8	1.8	1.8	97.9	97.9	97.9	97.9	0.3	0.3	0.3	0.3
IN	1.3	1.3	1.9	1.9	98.2	98.3	97.7	97.7	0.5	0.4	0.4	0.4
IL	7.4	8.2	8.5	8.9	89.1	88.4	88.1	87.8	3.5	3.4	3.4	3.3
MI	15.1	16.1	15.4	15.4	79.6	78.7	79.6	79.6	5.3	5.2	5.0	5.0
WI	2.5	3.1	3.0	3.0	93.7	93.3	93.5	93.5	3.8	3.6	3.5	3.5
MN	5.4	5.2	4.8	4.8	89.1	89.5	90.3	90.3	5.4	5.2	5.0	5.0
IA	3.9	4.7	4.5	4.5	82.4	82.4	83.0	83.0	13.7	12.9	12.5	12.5
MO	2.0	2.8	3.5	3.5	93.2	92.5	92.0	92.0	4.8	4.7	4.5	4.5
ND	16.8	16.8	16.6	16.6	81.0	81.1	81.3	81.3	2.2	2.1	2.1	2.1
SD	3.2	5.4	5.4	5.4	94.3	92.1	92.1	92.1	2.6	2.5	2.5	2.5
NB	14.8	13.4	12.5	12.5	60.5	64.6	66.7	66.7	24.6	22.1	20.9	20.9
KS	17.1	16.6	15.6	15.6	31.1	34.0	38.1	38.1	51.7	49.4	46.3	46.3
DE	62.8	60.8	60.8	61.3	33.6	35.7	35.7	34.8	3.6	3.5	3.5	3.4
MD	49.8	49.6	50.6	50.9	49.4	45.6	48.6	48.3	0.8	0.8	0.8	0.8
VA	51.1	51.1	51.1	51.1	48.8	48.8	48.8	48.8	0.1	0.1	0.1	0.1
WV	0.6	0.6	0.6	0.6	99.4	99.4	99.4	99.4	0.0	0.0	0.0	0.0
NSC	0.8	1.0	1.0	1.0	99.2	99.0	99.0	99.0	0.0	0.0	0.0	0.0
GA	11.7	11.5	12.6	12.4	87.3	87.6	86.5	86.7	1.0	0.9	0.9	0.9
FL	66.0	65.9	65.0	64.5	18.5	19.0	20.3	21.0	15.5	15.1	14.7	14.5
KY	0.2	0.3	0.3	0.3	99.8	99.7	99.7	99.7	0.0	0.0	0.0	0.0
TN	2.3	2.3	2.3	2.3	97.7	97.7	97.7	97.7	0.0	0.0	0.0	0.0
AL	0.8	0.8	0.7	0.7	98.4	98.4	98.5	98.5	0.8	0.8	0.8	0.8
MS	54.3	51.6	50.1	47.5	26.7	30.3	32.4	35.9	19.0	18.1	17.5	16.6
AR	80.2	71.9	55.7	55.7	0.0	10.3	30.6	30.6	19.8	17.8	13.7	13.7
LA	17.6	17.7	17.1	16.5	0.0	0.7	3.8	7.8	82.4	81.6	79.1	75.7
OK	0.6	0.9	0.7	0.7	0.0	3.3	7.9	7.9	99.4	95.8	91.4	91.4
TX	1.7	1.7	1.8	1.8	10.1	12.6	15.8	16.4	88.2	85.7	82.4	81.8
MT	0.8	0.7	0.6	0.6	97.4	97.6	98.0	98.0	1.8	1.7	1.4	1.4
ID	11.1	11.1	11.1	11.1	0.0	0.0	0.0	0.0	88.9	88.9	88.9	88.9
WY	0.4	0.5	0.4	0.4	99.3	99.3	99.4	99.4	0.3	0.2	0.2	0.2
CO	3.3	3.2	3.1	2.9	76.5	77.7	78.9	79.5	20.2	19.1	18.0	17.6
NM	3.1	3.0	2.9	2.9	66.1	67.5	68.1	68.1	30.8	29.5	29.0	29.0
AZ	18.4	18.2	17.7	17.7	69.6	70.6	71.5	71.5	12.0	11.2	10.8	10.8
UT	0.8	0.8	0.6	0.6	91.8	92.9	93.9	93.9	7.4	6.3	5.5	5.5
NV	2.9	2.8	2.7	2.6	77.5	77.7	78.9	80.0	19.6	19.5	18.4	17.4
WA	0.3	0.4	0.4	0.6	99.7	99.6	99.6	99.4	0.0	0.0	0.0	0.0
OR	100.0	100.0	16.6	16.6	0.0	0.0	83.4	83.4	0.0	0.0	0.0	0.0
CA	67.0	67.2	67.3	67.5	0.0	0.0	0.5	0.5	33.0	32.8	32.2	32.0

TABLE C.2. ACTUAL (1976) AND ASSUMED SHARES OF POWER GENERATED BY STEAM, NUCLEAR, AND HYDRO PLANTS (%)

STATE	STEAM				NUCLEAR				HYDRO			
	1976	1980	1985	1990	1976	1980	1985	1990	1976	1980	1985	1990
ME	11.7	11.7	11.7	17.1	65.4	68.6	68.6	64.4	23.0	19.7	19.7	18.5
NH	73.0	73.7	57.8	57.8	0.0	0.0	21.5	21.5	27.0	26.3	20.7	20.7
VT	1.0	1.0	1.0	1.0	75.4	77.1	77.1	77.1	23.6	21.9	21.9	21.9
MA	87.6	87.8	86.1	82.8	11.1	10.9	12.7	16.0	1.3	1.3	1.2	1.2
RI	99.4	99.4	69.9	69.9	0.0	0.0	29.9	29.9	0.6	0.6	0.3	0.2
CT	47.5	47.2	47.2	47.2	50.9	51.3	51.3	51.3	1.6	1.5	1.5	1.5
NY	59.4	58.8	57.2	56.4	14.4	15.7	17.9	18.6	26.2	25.5	24.9	25.0
NJ	94.9	80.7	75.4	72.0	15.1	19.3	24.6	28.0	0.0	0.0	0.0	0.0
PA	84.5	83.6	81.2	80.7	14.3	15.2	17.6	17.5	1.2	1.2	1.2	1.8
OH	100.0	99.1	96.7	95.3	0.0	0.9	3.3	4.7	0.0	0.0	0.0	0.0
IN	99.2	99.3	96.7	96.7	0.0	0.0	2.6	2.6	0.8	0.7	0.7	0.7
IL	73.1	71.7	69.5	68.9	26.8	28.2	30.4	31.0	0.1	0.1	0.1	0.1
MI	84.5	83.1	81.3	81.3	14.2	15.6	17.5	17.5	1.3	1.3	1.2	1.2
WI	65.6	66.2	65.3	64.2	30.5	29.9	31.0	32.2	3.9	3.9	3.7	3.5
MN	63.7	64.6	66.0	66.0	34.7	33.8	32.4	32.4	1.7	1.6	1.6	1.6
IA	82.6	83.3	79.9	79.9	13.8	13.2	16.8	16.8	3.6	3.4	3.2	3.2
MO	98.2	98.1	95.3	95.3	0.0	0.0	3.0	3.0	1.8	1.9	1.8	1.8
ND	43.9	44.9	45.2	45.2	47.2	46.4	46.1	46.1	8.9	8.8	8.7	8.7
SD	29.6	30.2	30.2	30.2	0.0	0.0	0.0	0.0	70.4	69.8	69.8	69.8
NB	47.7	50.4	48.0	48.0	42.9	40.7	40.9	40.9	9.4	8.9	11.0	11.0
KS	100.0	100.0	97.0	97.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0
DE	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	78.1	77.3	77.6	73.8	16.5	17.4	17.2	21.3	5.4	5.3	5.2	4.9
VA	76.8	74.5	69.7	67.9	20.9	23.1	24.4	26.4	2.3	2.4	5.8	5.7
WV	99.4	99.4	99.4	99.4	0.0	0.0	0.0	0.0	0.6	0.6	0.6	0.6
NSC	86.7	84.2	83.8	79.9	4.1	7.0	7.6	12.0	9.2	8.8	8.6	8.1
GA	81.7	81.4	79.0	79.3	8.9	9.6	11.5	11.4	9.4	9.1	9.4	9.3
FL	89.1	88.4	87.5	87.6	10.6	11.3	12.2	12.1	0.3	0.3	0.3	0.3
KY	94.5	94.5	94.9	95.0	0.0	0.0	0.0	0.0	5.5	5.5	5.1	5.0
TN	84.3	79.9	73.0	73.0	0.0	4.4	12.5	12.5	15.7	15.8	14.5	14.5
AL	75.0	72.9	71.5	71.5	7.7	10.3	12.3	12.3	17.3	16.8	16.2	16.2
MS	100.0	100.0	83.5	84.2	0.0	0.0	16.5	15.8	0.0	0.0	0.0	0.0
AR	51.8	52.3	58.7	58.7	31.6	32.7	28.4	28.4	16.6	15.0	13.0	13.0
LA	100.0	100.0	96.3	96.4	0.0	0.0	3.7	3.6	0.0	0.0	0.0	0.0
OK	95.6	95.8	94.3	92.7	0.0	0.0	1.8	3.4	4.4	4.2	3.9	3.9
TX	99.3	99.3	97.7	97.4	0.0	0.0	1.7	2.0	0.7	0.7	0.6	0.6
MT	22.7	23.5	26.8	26.8	0.0	0.0	0.0	0.0	77.3	76.5	73.2	73.2
ID	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	99.9	99.9	99.9	99.9
WY	93.4	93.6	94.0	94.0	0.0	0.0	0.0	0.0	6.6	6.4	6.0	6.0
CO	92.9	91.9	92.1	92.2	0.0	1.0	1.0	1.0	7.1	7.1	6.9	6.8
NM	99.6	99.6	99.6	99.6	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4
AZ	71.3	72.6	68.8	67.1	0.0	0.0	5.1	7.4	28.7	27.4	26.1	25.5
UT	72.3	75.3	76.9	76.9	0.0	0.0	0.0	0.0	27.7	24.7	23.1	23.1
NV	89.0	89.0	89.5	90.1	0.0	0.0	0.0	0.0	11.0	11.0	10.5	9.9
WA	6.0	6.2	6.2	6.1	2.3	2.9	5.5	6.7	91.7	90.7	88.4	87.1
OR	0.0	0.2	0.9	0.9	5.6	5.6	5.5	9.1	94.4	94.2	93.6	90.0
CA	76.1	73.5	72.3	71.7	4.1	7.2	8.0	9.1	19.8	19.3	19.6	19.2
AVG.	71.8	71.5	69.2	68.8	12.1	12.7	15.4	15.9	16.1	15.8	15.4	15.2

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TABLE C 1. ASSUMED GROWTH RATE OF OIL, COAL, AND GAS PRICES (%)

	OIL			COAL			GAS		
STATE	1976-1980	1980-1985	1985-1990	1976-1980	1980-1985	1985-1990	1976-1980	1980-1985	1985-1990
ME	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
NH	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
VT	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
MA	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
RI	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
CT	12.20	11.20	6.50	5.60	4.60	6.50	11.60	10.60	7.10
NY	13.10	12.10	6.40	8.80	7.80	6.70	15.30	14.30	7.20
NJ	13.10	12.10	6.40	8.80	7.80	6.70	15.30	14.30	7.20
PA	13.70	12.70	6.40	9.90	8.90	6.80	13.00	12.00	8.80
OH	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
IN	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
IL	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
MI	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
WI	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
MN	11.00	10.00	6.60	8.20	7.20	6.30	14.50	13.50	10.20
IA	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
MO	13.00	12.00	6.60	8.70	7.70	6.10	17.60	16.60	9.80
ND	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
SD	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
NB	13.00	12.00	6.60	8.70	7.70	6.10	17.60	16.60	9.80
KS	13.00	12.00	6.60	8.70	7.70	6.10	17.60	16.60	9.80
DE	13.70	12.70	6.40	9.90	8.90	6.80	13.00	12.00	8.80
MD	13.70	12.70	6.40	9.90	8.90	6.80	13.00	12.00	8.80
VA	13.70	12.70	6.40	9.90	8.90	6.80	13.00	12.00	8.80
WV	13.70	12.70	6.40	9.90	8.90	6.80	13.00	12.00	8.80
NSC	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
GA	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
FL	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
KY	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
TN	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
AL	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
MS	13.30	12.30	6.70	10.50	9.50	6.30	16.20	15.20	8.70
AR	14.50	13.50	6.60	7.60	6.60	6.00	18.20	17.20	7.00
LA	14.50	13.50	6.60	7.60	6.60	6.00	18.20	17.20	7.00
CK	14.50	13.50	6.60	7.60	6.60	6.00	18.20	17.20	7.00
TX	14.50	13.50	6.60	7.60	6.60	6.00	18.20	17.20	7.00
MT	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.30
ID	12.00	11.00	5.00	8.90	7.90	5.20	16.70	15.70	6.20
WY	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
CO	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
NM	14.50	13.50	6.60	7.60	6.60	6.00	18.20	17.20	7.00
AZ	11.70	10.70	5.00	11.10	10.10	6.50	16.00	15.00	7.00
UT	12.80	11.80	6.70	7.30	6.30	5.20	18.70	17.70	6.80
NV	11.70	10.70	5.00	11.10	10.10	6.50	16.00	15.00	7.00
WA	12.00	11.00	5.00	8.90	7.90	5.20	16.70	15.70	6.20
OR	.2.00	11.00	5.00	8.90	7.90	5.20	16.70	15.70	6.20
CA	11.70	10.70	5.00	11.10	10.10	6.50	16.00	15.00	7.00

TABLE C.4. ADDITIONAL INPUT ASSUMPTIONS

STATE	BTU PER GALLON OF OIL	BTU PER POUND OF COAL	BTU PER CUB. FT. OF GAS	BTU PER KILOWATT HOURS	1974 ELEC. GEN. IN 1000 KWH BY NUCLEAR PLANTS	1974 FUEL COSTS IN DOLLARS FOR NUCLEAR PLANTS
ME	148403.	13683.	1000.	11351.	3574304.	11838868.
NH	147699.	13683.	1000.	11025.	0.	0.
VT	135548.	12319.	1000.	16807.	2490043.	4564318.
MA	146259.	13683.	1001.	10029.	3575219.	9291130.
RI	147450.	13683.	1000.	12803.	0.	0.
CT	144924.	13302.	1000.	10511.	7263944.	24524928.
NY	145892.	11978.	1025.	10645.	9908801.	36368976.
NJ	143474.	12810.	1028.	10751.	7314144.	14764656.
PA	143689.	11881.	1001.	10288.	3602333.	8772400.
OH	138950.	10895.	864.	10137.	0.	0.
IN	136746.	10759.	1003.	10075.	0.	0.
IL	143314.	10081.	1031.	10694.	17579616.	33527376.
MI	141775.	11932.	761.	10419.	415840.	1173852.
WI	138332.	10732.	1013.	11051.	7943139.	19938048.
MN	145190.	8899.	970.	11029.	4362917.	9593778.
IA	138477.	10010.	1007.	11291.	2957024.	7577510.
MO	139417.	10884.	969.	10612.	0.	0.
ND	138734.	7029.	1036.	14119.	0.	0.
SD	148524.	6849.	997.	12520.	0.	0.
NB	147375.	10330.	958.	10769.	0.	0.
KS	147079.	10182.	974.	11459.	0.	0.
DE	145823.	12538.	1078.	10576.	454825.	801130.
MD	147464.	12242.	1020.	10410.	0.	0.
VA	135939.	11697.	1020.	9788.	5952646.	17249136.
WV	143409.	11934.	1020.	9532.	0.	0.
NSC	147701.	12109.	1029.	10027.	11574104.	21221648.
GA	142640.	11895.	1029.	10293.	0.	0.
FL	150474.	11657.	1064.	10608.	7877326.	13672168.
KY	137836.	10857.	1010.	10063.	0.	0.
TN	138716.	11097.	1029.	10038.	0.	0.
AL	137440.	11495.	1147.	10290.	0.	0.
MS	148932.	11596.	1013.	10679.	0.	0.
AR	148951.	11596.	1019.	11191.	170612.	472641.
LA	147871.	11596.	1069.	10382.	0.	0.
OK	142251.	11596.	1042.	10229.	0.	0.
TX	143394.	6568.	1022.	10330.	0.	0.
MT	98579.	8170.	1109.	10961.	0.	0.
ID	137103.	9620.	1059.	13250.	0.	0.
WY	139584.	9832.	1066.	10736.	0.	0.
CO	143014.	9759.	877.	11320.	0.	0.
NM	141260.	8910.	1032.	10705.	0.	0.
AZ	145276.	10615.	1073.	10805.	0.	0.
UT	142730.	11470.	949.	11071.	0.	0.
NV	143073.	11039.	1068.	11113.	0.	0.
WA	136843.	9035.	1035.	10313.	0.	0.
OR	13642?.	10687.	1035.	18600.	0.	0.
CA	146158.	8051.	1059.	10134.	3485256.	4670021.
AVG.	142049.	10869.	1012.	11103.	5583448.	13340140.

TABLE C.5. PROJECTED FUEL COSTS FOR CONVENTIONAL STEAM AND NUCLEAR PLANTS (MILLS / KWH)

STATE	STEAM				NUCLEAR			
	1976	1980	1985	1990	1976	1980	1985	1990
ME	19.78	31.34	53.29	57.65	4.22	6.50	10.69	15.04
NH	16.40	23.68	36.21	49.61	NA	NA	7.82	11.00
VT	35.98	54.35	87.99	120.90	2.38	3.68	6.05	8.50
MA	18.44	29.01	49.21	67.43	3.31	5.10	8.39	11.80
RI	23.85	37.73	64.00	87.89	NA	NA	7.82	11.00
CT	20.51	32.50	55.24	75.69	4.30	6.63	10.90	15.33
NY	18.81	30.22	52.01	70.51	4.67	7.21	11.85	16.66
NJ	20.19	31.92	54.54	74.70	2.57	3.96	6.52	9.16
PA	11.45	17.20	27.39	37.89	3.10	4.78	7.86	11.06
OH	10.05	13.85	19.77	26.89	NA	4.76	7.82	11.00
IN	7.04	9.70	14.11	19.21	NA	NA	7.82	11.00
IL	10.86	15.50	23.05	31.98	2.43	3.75	6.16	8.66
MI	12.95	18.80	28.13	39.07	3.59	5.54	9.11	12.82
WI	10.29	14.47	20.93	28.85	3.19	4.93	8.10	11.40
MN	8.37	11.75	17.13	23.69	2.80	4.32	7.10	9.98
IA	10.34	15.04	23.29	30.87	3.26	5.03	8.27	11.63
MO	7.23	10.63	16.58	22.75	NA	NA	7.82	11.00
ND	10.72	15.98	25.46	34.37	NA	4.76	7.82	11.00
SD	7.57	10.99	16.15	21.25	NA	NA	NA	NA
NB	10.72	16.39	27.12	38.58	NA	4.76	7.82	11.00
KS	10.04	16.72	30.29	44.80	NA	NA	7.82	11.00
DE	16.89	27.04	47.27	65.33	NA	NA	NA	NA
MD	15.53	24.64	42.54	58.52	NA	4.76	7.82	11.00
VA	17.78	28.75	50.36	68.94	3.69	5.69	9.35	13.16
WV	10.53	15.38	23.61	32.80	NA	NA	NA	NA
NSC	10.65	15.91	25.09	34.06	2.33	3.60	5.92	8.32
GA	12.16	18.52	30.51	41.56	NA	4.76	7.82	11.00
FL	15.98	26.21	46.43	64.49	2.21	3.41	5.60	7.88
KY	7.17	10.72	16.90	22.94	NA	NA	NA	NA
TN	9.93	14.89	23.62	32.10	NA	4.76	7.82	11.00
AL	10.85	16.26	25.74	35.04	NA	4.76	7.82	11.00
MS	15.67	25.33	44.65	61.22	NA	NA	7.82	11.00
AR	19.87	32.57	52.41	72.03	3.53	5.44	8.94	12.58
LA	9.94	18.65	33.70	52.84	NA	NA	7.82	11.00
OK	10.40	20.10	42.79	59.90	NA	NA	7.82	11.00
TX	9.77	18.40	38.82	54.04	NA	NA	7.82	11.00
MT	3.67	4.95	6.89	8.96	NA	NA	NA	NA
ID	19.83	36.05	73.12	98.26	NA	NA	NA	NA
WY	3.42	4.61	6.30	8.15	NA	NA	NA	NA
CO	7.50	11.27	18.56	24.53	NA	4.76	7.82	11.00
NM	6.01	10.04	19.12	26.49	NA	NA		
AZ	7.81	12.20	20.37	26.96	NA	NA	7.82	11.00
UT	7.52	10.40	15.01	19.63	NA	NA	NA	NA
NV	7.97	13.00	22.72	30.66	NA	NA	NA	NA
WA	6.47	9.14	13.40	17.39	NA	4.76	7.82	11.00
OR			24.84	31.77	NA	4.76	7.82	11.00
CA	21.82	35.31	61.74	81.14	1.71	2.63	4.33	6.08
AVG.	13.43	21.02	33.48	45.41	3.08	4.76	7.82	11.00

TABLE C.6. PROJECTED COSTS OF FUEL AND NON-FUEL EXPENSES FOR ELECTRICAL GENERATION (MILLS / KWH)

STATE	FUEL EXPENSES				NON-FUEL EXPENSES				TOTAL			
	1976	1980	1985	1990	1976	1980	1985	1990	1976	1980	1985	1990
ME	5.07	8.14	13.58	19.52	16.14	22.79	33.49	44.81	21.21	30.92	47.07	64.33
NH	11.97	17.44	22.62	31.05	27.38	38.64	56.78	75.99	39.35	56.09	79.40	107.04
VT	2.16	3.37	5.53	7.75	22.83	32.23	47.36	63.37	24.99	35.60	52.89	71.12
MA	16.53	26.03	43.44	57.74	20.52	28.96	42.55	56.95	37.05	55.00	85.99	114.69
RI	23.71	37.50	47.04	64.72	20.53	28.98	42.59	56.99	44.24	66.49	89.63	121.71
CT	11.93	18.75	31.68	43.61	26.38	37.24	54.71	73.22	38.31	55.99	86.40	116.83
NY	11.85	18.91	31.88	42.89	36.58	51.64	75.88	101.54	48.43	70.55	107.76	144.44
NJ	17.52	26.54	42.71	56.34	29.50	41.64	61.18	81.88	47.02	68.18	103.89	138.21
PA	10.11	15.11	23.62	32.50	25.73	36.31	53.36	71.40	35.84	51.42	76.98	103.91
OH	10.05	13.77	19.38	26.14	17.18	23.37	32.78	43.87	27.23	37.14	52.17	70.01
IN	6.99	9.64	13.85	18.86	15.15	20.62	28.92	38.70	22.14	30.25	42.76	57.56
IL	8.59	12.17	17.89	24.72	22.19	31.32	46.02	61.58	30.78	43.49	63.91	86.30
MI	11.46	16.49	24.47	34.01	22.62	31.93	46.92	62.79	34.08	48.43	71.39	96.80
WI	7.73	11.06	16.22	22.20	23.26	32.84	48.25	64.56	30.99	43.90	64.46	86.77
MN	6.30	9.05	13.61	18.88	24.20	34.16	50.20	67.18	30.50	43.22	63.81	86.06
IA	9.00	13.20	20.01	26.64	25.68	36.25	53.27	71.29	34.68	49.46	73.28	97.92
MO	7.10	10.42	16.02	21.99	24.33	33.10	46.42	62.12	31.43	43.52	62.45	84.12
ND	0.16	9.38	15.12	20.61	26.09	36.83	54.11	72.41	32.25	46.20	69.23	93.02
SD	2.24	3.32	4.87	6.41	34.53	46.97	65.88	88.16	36.77	50.29	70.75	94.57
NB	6.43	10.20	16.23	23.03	14.70	20.74	30.48	40.79	21.13	30.94	46.71	63.82
KS	10.04	16.72	29.61	43.77	21.30	28.97	40.64	54.38	31.34	45.69	70.25	98.16
DE	16.89	27.04	47.27	65.33	22.36	30.42	42.66	57.09	39.25	57.45	89.93	122.42
MD	12.64	19.87	34.35	45.54	28.33	39.99	58.77	78.64	40.97	59.86	93.11	124.19
VA	14.43	22.73	37.40	50.31	18.58	26.23	38.54	51.57	33.01	48.95	75.94	101.88
WV	10.46	15.29	23.47	32.60	14.70	20.00	28.05	37.53	25.16	35.28	51.51	70.13
NSC	9.33	13.64	21.47	28.21	17.58	24.82	36.47	48.81	26.91	38.46	57.94	77.01
GA	10.21	15.52	25.02	34.20	19.96	28.18	41.40	55.40	30.17	43.70	66.42	89.60
FI	14.47	23.55	41.30	57.44	21.56	30.43	44.71	59.83	36.03	53.98	86.01	117.27
KY	6.77	10.13	16.03	21.79	14.76	20.08	28.16	37.68	21.53	30.21	44.19	59.47
TN	8.37	12.10	18.23	24.82	10.21	14.41	21.17	28.34	18.58	26.51	39.41	53.16
AL	8.38	12.34	19.36	26.39	18.43	26.02	38.23	51.16	26.81	38.37	57.59	77.55
MS	15.67	25.33	38.56	53.29	15.04	21.23	31.20	41.75	30.71	46.56	69.75	95.04
AR	11.41	18.80	33.28	45.82	18.63	26.30	38.64	51.71	30.04	45.10	71.92	97.53
LA	9.94	18.65	37.54	51.33	10.47	14.24	19.97	26.73	20.41	32.89	57.52	78.06
OK	9.95	19.27	40.49	55.89	12.54	17.07	23.94	32.03	22.49	36.33	64.43	87.92
TX	9.70	18.27	38.08	52.87	15.34	20.87	29.26	39.16	25.04	39.14	67.34	92.03
MT	0.83	1.16	1.85	2.40	14.02	19.07	26.74	35.79	14.85	20.23	28.59	38.19
ID	0.02	0.04	0.07	0.10	13.51	18.38	25.78	34.50	13.53	18.42	25.85	34.60
WY	3.20	4.32	5.92	7.66	17.55	23.88	33.79	44.82	20.75	28.20	39.42	52.49
CO	6.97	10.41	17.17	22.73	21.04	28.62	40.14	53.72	28.01	39.03	57.31	76.45
NM	5.99	10.00	19.04	26.39	21.69	29.51	41.39	55.39	27.68	39.51	60.43	81.78
AZ	5.57	8.85	14.41	18.90	30.08	40.93	57.40	76.81	35.65	49.77	71.81	95.72
UT	5.44	7.83	11.54	15.09	17.95	24.42	34.25	45.83	23.39	32.25	45.79	60.92
NV	7.10	11.57	20.34	27.61	22.74	30.94	43.40	58.08	29.84	42.51	63.73	85.69
WA	0.46	0.72	1.25	1.81	13.39	18.20	25.53	34.17	13.84	18.93	26.78	35.98
OR	0.17	0.41	0.65	1.29	18.61	25.31	35.51	47.51	13.78	25.72	36.16	48.30
CA	16.67	26.13	45.01	58.72	16.30	22.17	31.10	41.61	32.97	48.30	76.11	100.34
AVG.	9.02	14.07	22.95	31.32	20.47	28.45	41.01	54.89	29.49	42.52	63.96	86.20

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TABLE C.7. ANNUAL GROWTH RATES OF FUEL, NON-FUEL AND TOTAL ELECTRICITY COST (%)

	FUEL			NON-FUEL			TOTAL		
STATE	1976-1980	1980-1985	1985-1990	1976-1980	1980-1985	1985-1990	1976-1980	1980-1985	1985-1990
ME	12.58	10.79	7.53	9.00	8.00	6.00	9.89	8.76	6.45
NH	9.87	5.33	6.54	9.00	8.00	6.00	9.27	7.20	6.16
VT	11.82	10.40	6.98	9.00	8.00	6.00	9.25	8.24	6.10
MA	12.02	10.78	5.86	9.00	8.00	6.00	10.33	9.35	5.93
RI	12.15	4.64	6.59	9.00	8.00	6.00	10.72	6.16	6.31
CT	11.97	11.06	6.60	9.00	8.00	6.00	9.95	9.06	6.22
NY	12.40	11.01	6.11	9.00	8.00	6.00	9.86	8.84	6.03
NJ	10.94	9.98	5.69	9.00	8.00	6.00	9.73	8.79	5.87
PA	10.55	9.35	6.59	9.00	8.00	6.00	9.45	8.40	6.18
OH	8.19	7.08	6.16	8.00	7.00	6.00	8.07	7.03	6.06
IN	8.37	7.52	6.37	8.00	7.00	6.00	8.12	7.17	6.12
IL	9.10	8.01	6.67	9.00	8.00	6.00	9.03	8.00	6.19
MI	9.53	8.21	6.81	9.00	8.00	6.00	9.13	8.07	6.28
WI	9.37	7.96	6.48	9.00	8.00	6.00	9.09	7.99	6.12
MN	9.50	8.50	6.76	9.00	8.00	6.00	9.10	8.11	6.16
IA	10.07	8.67	5.89	9.00	8.00	6.00	9.28	8.18	5.97
MO	10.07	8.98	6.54	8.00	7.00	6.00	8.48	7.49	6.14
ND	11.07	10.02	6.40	9.00	8.00	6.00	9.40	8.42	6.09
SD	10.25	9.00	5.64	8.00	7.00	6.00	8.14	7.07	5.98
NB	12.20	9.74	7.26	9.00	8.00	6.00	10.00	8.58	6.44
KS	13.59	12.11	8.13	8.00	7.00	6.00	9.89	8.98	6.92
DE	12.47	11.82	6.69	8.00	7.00	6.00	9.99	9.38	6.36
MD	11.98	11.57	5.81	9.00	8.00	6.00	9.94	9.24	5.93
VA	12.03	10.48	6.11	9.00	8.00	6.00	10.35	9.18	6.05
WV	9.94	8.95	6.79	8.00	7.00	6.00	8.82	7.86	6.36
NSC	9.98	9.49	5.61	9.00	8.00	6.00	9.34	8.54	5.86
GA	11.05	10.01	6.45	9.00	8.00	6.00	9.71	8.73	6.17
FL	12.94	11.89	6.82	9.00	8.00	6.00	10.63	9.77	6.40
KY	10.59	9.61	6.33	8.00	7.00	6.00	8.84	7.90	6.12
TN	9.64	8.55	6.37	9.00	8.00	6.00	9.29	8.25	6.17
AL	10.18	9.41	6.40	9.00	8.00	6.00	9.37	8.46	6.13
MS	12.75	8.77	6.69	9.00	8.00	6.00	10.96	8.42	6.38
AR	13.30	12.10	6.60	9.00	8.00	6.00	10.69	9.73	6.28
LA	17.03	15.02	6.46	8.00	7.00	6.00	12.67	11.82	6.30
OK	17.97	16.01	6.66	8.00	7.00	6.00	12.74	12.19	6.41
TX	17.14	15.82	6.79	8.00	7.00	6.00	11.81	11.47	6.45
MT	8.67	9.67	5.40	8.00	7.00	6.00	8.04	7.16	5.96
ID	16.11	15.20	6.09	8.00	7.00	6.00	8.01	7.02	6.00
WY	7.79	6.53	5.29	8.00	7.00	6.00	7.97	6.93	5.89
CO	10.54	10.52	5.77	8.00	7.00	6.00	8.65	7.99	5.93
NM	13.67	13.75	6.75	8.00	7.00	6.00	9.30	8.87	6.24
AZ	12.28	10.25	5.58	8.00	7.00	6.00	8.70	7.61	5.92
UT	9.52	8.06	5.51	8.00	7.00	6.00	8.36	7.26	5.88
NV	13.00	11.34	6.31	8.00	7.00	6.00	9.35	8.43	6.10
WA	11.93	11.68	7.62	8.00	7.00	6.00	8.14	7.19	6.08
OR	23.89	9.95	14.52	8.00	7.00	6.00	8.18	7.05	6.18
CA	11.88	11.49	5.46	8.00	7.00	6.00	10.02	9.52	5.68
AVG.	11.79	10.14	6.56	8.53	7.53	6.00	9.49	8.42	6.15

Appendix D

INPUT ASSUMPTIONS

Table D.1. Projected annual growth rates (%) of
population and real per capita personal income

Region and state	Population (POP)				Income (PCI)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	0.02	0.72	0.60	0.38	0.92	3.56	3.01	2.84
New Hampshire	2.35	2.15	1.97	1.54	1.91	4.87	4.28	3.90
Vermont	1.74	1.07	1.02	0.52	1.85	4.00	3.51	3.04
Massachusetts	0.55	0.64	0.62	0.45	1.54	3.38	2.94	2.80
Rhode Island	0.22	0.61	0.57	0.37	1.60	3.41	2.93	2.76
Connecticut	1.46	0.65	0.63	0.54	1.83	3.45	2.98	2.84
Middle Atlantic								
New York	-0.17	0.33	0.32	0.08	1.23	2.58	2.24	2.05
New Jersey	0.72	0.77	0.74	0.70	1.81	3.22	2.74	2.76
Pennsylvania	-0.21	0.40	0.38	0.06	1.70	3.21	2.76	2.49
East North Central								
Ohio	0.37	0.f	0.65	0.32	2.08	3.45	2.99	2.70
Indiana	0.44	0.3ъ	0.37	0.15	2.27	3.18	2.71	2.57
Illinois	0.43	0.39	0.38	0.31	1.91	3.02	2.55	2.54
Michigan	1.01	0.61	0.59	0.13	2.72	3.05	2.82	2.38
Wisconsin	1.04	0.81	0.77	0.67	2.30	3.46	2.98	2.93
West North Central								
Minnesota	0.35	0.77	0.74	0.38	3.10	3.45	3.37	2.87
Iowa	0.20	0.49	0.46	0.16	3.89	3.36	2.88	2.64
Missouri	0.35	0.33	0.32	0.26	2.28	3.24	2.79	2.68
North Dakota	0.12	0.28	0.30	0.28	2.43	3.30	2.90	2.93
South Dakota	0.15	0.23	0.20	0.13	5.25	3.26	2.79	2.79
Nebraska	0.26	0.57	0.52	0.42	2.68	3.24	3.14	2.90
Kansas	-0.10	0.49	0.47	0.37	2.03	3.37	2.89	2.85
South Atlantic								
Delaware	1.72	1.89	1.70	1.01	1.54	.33	3.79	3.52
Maryland and D.C.	0.76	1.18	1.11	0.98	1.76	3.96	3.63	3.41
Virginia	1.03	1.19	1.12	1.14	1.79	4.54	4.00	3.86
West Virginia	0.27	0.32	0.30	0.01	1.70	3.40	3.15	2.89
North Carolina	1.31	1.32	1.23	1.00	1.54	3.50	3.03	3.13
South Carolina	1.15	0.96	0.91	0.70	1.82	3.86	3.57	3.35
Georgia	0.97	1.40	1.30	1.34	1.85	4.94	4.77	4.30
Florida	3.76	2.53	2.24	1.59	2.47	5.71	4.91	4.40
East South Central								
Kentucky	0.81	0.93	0.87	0.62	2.06	4.37	4.02	3.67
Tennessee	1.43	1.21	1.14	0.75	2.07	4.76	4.19	4.01
Alabama	0.07	0.53	0.51	0.50	1.96	4.14	3.63	3.43
Mississippi	0.32	0.61	0.60	0.57	1.97	4.58	4.29	3.82
West South Central								
Arkansas	0.81	1.75	1.60	0.95	1.66	5.36	5.01	4.54
Louisiana	0.27	0.85	0.82	0.79	2.48	4.10	3.64	3.48
Oklahoma	0.36	0.95	0.90	0.86	2.48	4.15	3.65	3.65
Texas	1.14	1.72	1.57	1.24	2.68	4.64	4.23	3.95
Mountain								
Montana	0.17	0.24	0.18	0.28	1.26	3.14	2.65	2.79
Idaho	1.27	1.42	1.33	1.39	1.91	3.85	3.52	3.74
Wyoming	3.06	0.63	0.52	0.36	3.18	3.11	2.99	2.88
Colorado	1.95	1.83	1.67	1.37	2.40	4.62	4.25	3.78
New Mexico	0.26	0.57	0.54	0.69	2.32	3.68	3.20	3.13
Arizona	2.87	2.73	2.39	2.00	2.72	5.91	5.09	4.74
Utah	0.73	1.55	1.44	1.12	2.00	4.55	4.19	3.73
Nevada	2.79	3.01	2.60	1.99	3.51	5.40	4.62	4.42
Pacific								
Washington	0.43	0.92	0.87	0.83	2.05	3.46	3.18	3.09
Oregon	1.07	1.66	1.52	1.16	2.85	4.23	4.06	3.56
California	0.99	0.96	0.91	0.58	2.28	3.51	2.98	2.85

Table D.2. Projected annual growth rates (%) of the value added in manufacturing

Region and state	Value added (VA/WPM)			
	1976-80	1980-85	1985-90	1990-2000
New England				
Maine	2.07	3.91	3.33	3.16
New Hampshire	2.87	5.10	4.77	4.63
Vermont	2.82	4.78	4.56	4.57
Massachusetts	2.17	4.01	3.74	3.72
Rhode Island	2.50	4.50	4.03	4.20
Connecticut	2.49	4.23	3.89	3.91
Middle Atlantic				
New York	1.74	3.25	2.97	3.21
New Jersey	2.62	4.50	4.21	4.22
Pennsylvania	2.19	3.69	3.31	3.88
East North Central				
Ohio	2.60	4.36	4.04	4.10
Indiana	2.57	4.54	4.26	4.35
Illinois	2.55	4.26	3.94	3.89
Michigan	2.34	3.96	3.43	3.56
Wisconsin	2.51	4.37	3.95	3.90
West North Central				
Minnesota	2.73	4.75	4.36	4.25
Iowa	2.95	5.06	4.73	4.69
Missouri	2.49	4.36	3.89	3.95
North Dakota	4.62	5.68	5.36	4.77
South Dakota	2.85	4.87	4.31	4.55
Nebraska	2.89	5.05	4.63	4.32
Kansas	3.07	4.69	4.38	4.35
South Atlantic				
Delaware	3.17	5.29	4.75	4.79
Maryland and D.C.	2.27	3.90	3.52	3.59
Virginia	2.96	5.11	4.74	4.66
West Virginia	2.34	4.10	3.76	3.77
North Carolina	3.30	5.53	5.04	4.79
South Carolina	3.27	5.93	5.34	5.26
Georgia	2.96	5.35	4.62	4.58
Florida	3.38	5.81	5.36	5.10
East South Central				
Kentucky	3.37	5.63	5.32	5.07
Tennessee	3.63	5.76	5.38	5.24
Alabama	3.06	5.46	4.96	4.91
Mississippi	3.35	5.53	5.09	4.95
West South Central				
Arkansas	3.75	6.37	6.17	6.38
Louisiana	3.69	6.25	6.00	6.12
Oklahoma	3.72	6.29	6.06	5.89
Texas	3.28	5.46	5.12	4.95
Mountain				
Montana	2.56	3.60	3.09	3.38
Idaho	3.79	5.58	5.08	5.51
Wyoming	3.14	5.28	5.54	5.46
Colorado	2.70	4.82	4.40	4.31
New Mexico	3.00	5.50	5.10	5.11
Arizona	3.65	6.62	6.46	6.11
Utah	3.26	5.44	5.22	5.20
Nevada	3.21	5.34	5.05	4.39
Pacific				
Washington	2.57	4.14	3.46	3.53
Oregon	3.10	4.73	4.08	4.19
California	2.64	4.48	4.13	4.17

Table D.3. Projected annual growth rates (%) of the numbers of
residential, commercial, and industrial customers

Region and state	Residential customers (CR)			Commercial customers (CC)		Industrial customers (CI)	
	1976-80	1980-85	1985-2000	1976-80	1980-2000	1976-80	1980-2000
New England							
Maine	2.8	2.3	2.0	2.65	2.30	2.65	2.65
New Hampshire	2.9	2.7	2.3	4.55	3.88	4.55	4.55
Vermont	2.6	2.3	1.9	2.79	2.30	2.79	2.79
Massachusetts	1.8	1.5	0.9	0.67	0.40	0.67	0.67
Rhode Island	1.1	0.9	0.4	1.27	0.56	1.47	1.47
Connecticut	1.9	1.7	1.2	1.04	0.71	1.60	1.60
Middle Atlantic							
New York	1.5	1.5	0.9	1.00	0.60	1.00	1.00
New Jersey	1.5	1.4	1.0	1.39	0.99	1.39	1.39
Pennsylvania	1.4	1.2	0.8	0.94	0.63	0.83	0.83
East North Central							
Ohio	1.8	1.5	1.1	1.30	0.95	1.30	1.30
Indiana	1.8	1.4	1.1	1.79	1.41	2.21	2.21
Illinois	1.8	1.6	1.2	0.86	0.65	1.01	1.01
Michigan	2.0	1.8	1.4	1.64	1.28	0.69	0.69
Wisconsin	2.2	1.9	1.6	1.26	1.06	0.47	0.47
West North Central							
Minnesota	2.2	1.9	1.6	1.10	0.93	4.07	4.07
Iowa	1.3	1.1	0.8	1.26	0.92	3.60	3.60
Missouri	1.7	1.5	1.2	2.35	1.88	5.08	5.08
North Dakota	1.4	0.9	0.8	1.23	1.09	3.97	3.97
South Dakota	1.2	0.7	0.7	1.14	1.14	2.38	2.38
Nebraska	1.9	1.6	1.4	2.42	2.12	2.37	2.37
Kansas	1.0	0.9	1.0	1.58	1.76	1.79	1.79
South Atlantic							
Delaware	2.7	2.3	1.8	2.33	1.82	2.33	2.33
Maryland and D.C.	1.64	1.66	1.12	1.35	0.91	1.16	1.16
Virginia	2.3	1.9	1.5	2.71	2.13	0.95	0.95
West Virginia	2.0	1.6	1.4	1.08	0.95	0.96	0.96
North Carolina	2.65	2.05	1.70	3.36	2.85	1.27	1.27
South Carolina	2.67	2.02	1.75	1.79	1.52	1.27	1.27
Georgia	2.4	2.0	1.6	3.05	2.45	3.89	3.89
Florida	3.9	3.9	3.7	4.53	4.29	5.21	5.21
East South Central							
Kentucky	2.1	1.7	1.4	2.11	1.74	2.09	2.09
Tennessee	2.0	1.7	1.5	2.93	2.59	4.89	4.89
Alabama	2.1	1.6	1.3	3.99	3.24	3.86	3.86
Mississippi	2.5	1.9	1.7	4.02	3.60	2.43	2.43
West South Central							
Arkansas	2.5	2.1	1.9	1.29	2.07	1.59	1.59
Louisiana	2.3	2.0	1.6	1.79	1.43	3.45	3.45
Oklahoma	2.1	1.8	1.6	2.22	1.97	1.68	1.68
Texas	2.6	2.3	2.1	2.94	2.68	5.58	5.58
Mountain							
Montana	2.2	1.8	1.6	2.63	2.34	2.63	2.63
Idaho	2.9	2.5	2.5	3.07	3.07	3.66	3.66
Wyoming	2.6	2.0	2.0	3.19	3.19	3.19	3.19
Colorado	2.8	2.5	2.2	2.80	3.37	3.00	3.83
New Mexico	3.0	2.4	2.2	3.00	3.19	3.42	3.42
Arizona	4.2	3.9	3.7	3.80	4.55	3.27	4.27
Utah	2.8	2.5	2.6	2.73	2.84	4.83	5.83
Nevada	4.2	4.3	3.7	4.07	4.50	5.63	6.63
Pacific							
Washington	1.9	1.9	1.5	1.48	1.17	0.85	0.85
Oregon	2.2	2.1	1.8	3.62	3.13	3.62	3.62
California	2.1	2.1	1.7	1.96	1.59	2.48	2.48

Table D.4. Projected annual growth rates (%) of numbers of natural gas customers

Region	Residential customers (RGC)			Commercial customers (CGC)			Industrial customers (IGC)		
	1976–80	1980–85	1985–2000	1976–80	1980–85	1985–2000	1976–80	1980–85	1985–2000
New England	0.12	0.04	0.04	0.43	0.17	0.17	-1.16	-1.49	-1.61
Middle Atlantic	0.23	0.19	0.19	0.49	0.40	0.39	-0.86	-0.54	-1.71
East North Central	1.08	1.04	1.04	1.57	1.46	1.45	-1.00	-0.40	-0.80
West North Central	1.14	1.18	1.17	1.53	1.53	1.47	-0.78	-0.98	-1.03
South Atlantic	1.44	1.35	1.33	1.27	1.25	1.23	-0.57	-0.70	-1.49
East South Central	1.23	1.27	1.25	0.96	1.00	1.04	-0.91	0	-2.38
West South Central	1.03	1.05	1.05	0.84	0.83	0.84	-1.73	-0.55	-1.15
Mountain	2.53	2.41	2.26	2.60	2.08	1.95	0	0	-1.49
Pacific	1.06	1.14	1.13	1.20	1.27	1.26	0	-1.3	0

Table D.5.a. Projected annual growth rates (%) of natural gas (residential
and commercial) price in real terms for the base price case

Region and state	Price of natural gas (PGR)				Price of natural gas (PGC)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
New Hampshire	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
Vermont	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
Massachusetts	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
Rhode Island	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
Connecticut	1.62	1.62	1.12	2.45	1.64	1.64	1.31	2.81
Middle Atlantic								
New York	2.73	2.73	2.44	2.59	2.34	2.34	2.83	2.91
New Jersey	2.73	2.73	2.44	2.59	2.34	2.34	2.83	2.91
Pennsylvania	3.84	3.84	1.71	1.39	2.88	2.88	1.90	1.60
East North Central								
Ohio	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
Indiana	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
Illinois	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
Michigan	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
Wisconsin	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
West North Central								
Minnesota	5.04	5.04	1.28	3.15	4.95	4.95	1.42	3.51
Iowa	5.95	5.95	2.33	1.94	6.95	5.95	2.66	2.12
Missouri	5.95	5.95	2.33	1.94	6.95	6.95	2.66	2.12
North Dakota	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
South Dakota	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
Nebraska	5.95	5.95	2.33	1.94	6.95	6.95	2.66	2.12
Kansas	5.95	5.95	2.33	1.94	6.95	6.95	2.66	2.12
South Atlantic								
Delaware	3.84	3.84	1.71	1.39	2.88	2.88	1.90	1.60
Maryland and D.C.	3.84	3.84	1.71	1.39	2.88	2.88	1.90	1.60
Virginia	3.84	3.84	1.71	1.39	2.88	2.88	1.90	1.60
West Virginia	3.84	3.84	1.71	1.39	2.88	2.88	1.90	1.60
North Carolina	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
South Carolina	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
Georgia	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
Florida	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
East South Central								
Kentucky	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
Tennessee	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
Alabama	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
Mississippi	4.54	4.54	1.50	1.39	3.98	3.98	1.77	1.63
West South Central								
Arkansas	5.86	5.86	1.50	3.00	7.57	7.57	1.83	3.47
Louisiana	5.86	5.86	1.50	3.00	7.57	7.57	1.83	3.47
Oklahoma	5.86	5.86	1.50	3.00	7.57	7.57	1.83	3.47
Texas	5.86	5.86	1.50	3.00	7.57	7.57	1.83	3.47
Mountain								
Montana	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
Idaho	6.05	6.05	2.35	-0.04	6.19	6.19	2.68	-0.04
Wyoming	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
Colorado	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
New Mexico	5.86	5.86	1.50	3.00	4.57	4.57	1.83	3.47
Arizona	8.96	8.96	0.55	0.58	6.42	6.42	0.63	0.67
Utah	9.14	9.14	1.34	3.18	10.13	10.13	1.44	3.38
Nevada	8.96	8.96	0.55	0.58	6.42	6.42	0.63	0.67
Pacific								
Washington	6.05	6.05	2.35	-0.04	6.19	6.19	2.68	-0.04
Oregon	6.05	6.05	2.35	-0.04	6.19	6.19	2.68	-0.04
California	8.96	8.96	0.55	0.58	6.42	6.42	0.63	0.67

Table D.5.b. Projected annual growth rates (%) of natural gas (PGI)
and coal price in real terms for the base price case

Region and state	Price of natural gas (PGI)				Price of coal (PC)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
New Hampshire	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
Vermont	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
Massachusetts	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
Rhode Island	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
Connecticut	4.55	4.55	2.05	5.85	-1.36	-1.36	1.49	1.14
Middle Atlantic								
New York	8.25	8.25	2.16	4.13	1.84	1.84	1.69	1.11
New Jersey	8.25	8.25	2.16	4.13	1.84	1.84	1.69	1.11
Pennsylvania	5.97	5.97	3.79	5.02	2.91	2.91	1.33	1.06
East North Central								
Ohio	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
Indiana	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
Illinois	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
Michigan	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
Wisconsin	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
West North Central								
Minnesota	7.54	7.54	5.16	7.60	1.22	1.22	1.28	1.21
Iowa	10.63	10.63	4.81	6.98	1.67	1.67	1.11	1.17
Missouri	10.63	10.63	4.81	6.98	1.67	1.67	1.11	1.17
North Dakota	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
South Dakota	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
Nebraska	10.63	10.63	4.81	6.98	1.67	1.67	1.11	1.17
Kansas	10.63	10.63	4.81	6.98	1.67	1.67	1.11	1.17
South Atlantic								
Delaware	5.97	5.97	3.79	5.02	2.91	2.91	1.81	1.18
Maryland and D.C.	5.97	5.97	3.79	5.02	2.91	2.91	1.81	1.18
Virginia	5.97	5.97	3.79	5.02	2.91	2.91	1.81	1.18
West Virginia	5.97	5.97	3.79	5.02	2.91	2.91	1.81	1.18
North Carolina	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
South Carolina	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
Georgia	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
Florida	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
East South Central								
Kentucky	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
Tennessee	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
Alabama	9.15	9.15	3.66	5.76	3.48	3.48	1.33	1.06
Mississippi	9.15	9.15	3.66	5.76	3.48	3.46	1.33	1.06
West South Central								
Arkansas	11.24	11.24	2.03	3.80	0.59	0.59	1.02	1.08
Louisiana	11.24	11.24	2.03	3.80	0.59	0.59	1.02	1.08
Oklahoma	11.24	11.24	2.03	3.80	0.59	0.59	1.02	1.08
Texas	11.24	11.24	2.03	3.80	0.59	0.59	1.02	1.08
Mountain								
Montana	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
Idaho	9.73	9.73	1.16	6.47	1.92	1.92	0.21	1.14
Wyoming	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
Colorado	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
New Mexico	11.24	11.24	2.03	3.80	0.59	0.59	1.02	1.08
Arizona	8.96	8.96	2.04	3.48	4.99	4.99	1.46	1.35
Utah	11.65	11.65	1.75	3.82	0.28	0.28	0.17	1.81
Nevada	8.96	8.96	2.04	3.48	4.99	4.99	1.46	1.35
Pacific								
Washington	9.73	9.73	1.16	6.47	1.92	1.92	0.21	1.14
Oregon	9.73	9.73	1.16	6.47	1.92	1.92	0.21	1.14
California	8.96	8.96	2.04	3.48	4.99	4.99	1.46	1.35

Table D.5.c. Projected annual growth rates (%) of oil prices
in real terms for the base price case

Region and state	Price of No. 2 oil (POR)				Price of No. 6 oil (POI)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
New Hampshire	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
Vermont	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
Massachusetts	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
Rhode Island	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
Connecticut	4.07	4.07	1.70	5.03	5.23	5.23	1.46	5.43
Middle Atlantic								
New York	4.53	4.53	1.75	4.99	6.12	6.12	1.41	5.31
New Jersey	4.53	4.53	1.75	4.99	6.12	6.12	1.41	5.31
Pennsylvania	5.08	5.08	1.69	4.87	6.70	6.70	1.37	5.18
East North Central								
Ohio	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
Indiana	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
Illinois	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
Michigan	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
Wisconsin	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
West North Central								
Minnesota	4.36	4.36	1.90	5.31	4.00	4.00	1.63	5.69
Iowa	4.44	4.44	1.92	5.37	6.03	6.03	1.62	5.61
Missouri	4.44	4.44	1.92	5.37	6.03	6.03	1.62	5.61
North Dakota	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
South Dakota	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
Nebraska	4.44	4.44	1.92	5.37	6.03	6.03	1.62	5.61
Kansas	4.44	4.44	1.92	5.37	6.03	6.03	1.62	5.61
South Atlantic								
Delaware	5.08	5.08	1.69	4.87	6.70	6.70	1.37	5.18
Maryland and D.C.	5.08	5.08	1.69	4.87	6.70	6.70	1.37	5.18
Virginia	5.08	5.08	1.69	4.87	6.70	6.70	1.37	5.18
West Virginia	5.08	5.08	1.69	4.87	6.70	6.70	1.37	5.18
North Carolina	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
South Carolina	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
Georgia	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
Florida	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
East South Central								
Kentucky	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
Tennessee	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
Alabama	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
Mississippi	5.69	5.69	1.67	4.87	6.28	6.28	1.65	5.65
West South Central								
Arkansas	6.00	6.00	1.82	5.11	7.48	7.48	1.63	5.64
Louisiana	6.00	6.00	1.82	5.11	7.48	7.48	1.63	5.64
Oklahoma	6.00	6.00	1.82	5.11	7.48	7.48	1.63	5.64
Texas	6.00	6.00	1.82	5.11	7.48	7.48	1.63	5.64
Mountain								
Montana	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
Idaho	4.58	4.58	0.50	5.44	5.02	5.02	-0.05	6.01
Wyoming	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
Colorado	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
New Mexico	6.00	6.00	1.82	5.11	7.48	7.48	1.63	5.64
Arizona	4.44	4.44	0.50	5.44	4.70	4.70	-0.05	6.09
Utah	4.75	4.75	1.88	5.27	5.77	5.77	1.70	5.80
Nevada	4.44	4.44	0.50	5.44	4.70	4.70	-0.05	6.01
Pacific								
Washington	4.58	4.58	0.50	5.44	5.02	5.02	-0.05	6.01
Oregon	4.58	4.58	0.50	5.44	5.02	5.02	-0.05	6.01
California	4.44	4.44	0.50	5.44	4.70	4.70	-0.05	6.09

Table D.6.a. Projected annual growth rates (%) of natural gas (residential and commercial) price in real terms for the high price case

Region and state	Price of natural gas (PGR)				Price of natural gas (PGC)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
New Hampshire	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
Vermont	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
Massachusetts	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
Rhode Island	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
Connecticut	3.24	3.24	2.24	4.90	3.28	3.28	2.62	5.62
Middle Atlantic								
New York	5.46	5.46	4.88	5.18	4.68	4.68	5.66	5.82
New Jersey	5.46	5.46	4.88	5.18	4.68	4.68	5.66	5.82
Pennsylvania	7.68	7.68	3.42	2.78	5.76	5.76	3.80	3.20
East North Central								
Ohio	10.08	10.08	2.56	6.30	9.90	9.90	2.84	7.02
Indiana	10.08	10.08	2.56	6.30	9.90	9.90	2.84	7.02
Illinois	10.08	10.08	2.56	⊾.30	9.90	9.90	2.84	7.02
Michigan	10.08	10.08	2.56	6.30	9.90	9.90	2.84	7.02
Wisconsin	10.08	10.08	2.56	6.30	9.90	9.90	2.84	7.02
West North Central								
Minnesota	10.08	10.08	2.56	6.30	9.90	9.90	2.84	7.02
Iowa	11.90	11.90	4.66	3.88	13.90	13.90	5.32	4.24
Missouri	11.90	11.90	4.66	3.88	13.90	13.90	5.32	4.24
North Dakota	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
South Dakota	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
Nebraska	11.90	11.90	4.66	3.88	13.90	13.90	5.32	4.24
Kansas	11.90	11.90	4.66	3.88	13.90	13.90	5.32	4.24
South Atlantic								
Delaware	7.68	7.68	3.42	2.78	5.76	5.76	3.80	3.20
Maryland and D.C.	7.68	7.68	3.42	2.78	5.76	5.76	3.80	3.20
Virginia	7.68	7.68	3.42	2.78	5.76	5.76	3.80	3.20
West Virginia	7.68	7.68	3.42	2.78	5.76	5.76	3.80	3.20
North Carolina	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
South Carolina	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
Georgia	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
Florida	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
East South Central								
Kentucky	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
Tennessee	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
Alabama	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
Mississippi	9.08	9.08	3.00	2.78	7.96	7.96	3.54	3.26
West South Central								
Arkansas	11.72	11.72	3.00	6.00	15.14	15.14	3.66	6.94
Louisiana	11.72	11.72	3.00	6.00	15.14	15.14	3.66	6.94
Oklahoma	11.72	11.72	3.00	6.00	15.14	15.14	3.66	6.94
Texas	11.72	11.72	3.00	6.00	15.14	15.14	3.66	6.94
Mountain								
Montana	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
Idaho	12.10	12.10	4.70	-0.02	12.38	12.38	5.36	-0.02
Wyoming	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
Colorado	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
New Mexico	11.72	11.72	3.00	6.00	15.14	15.14	3.66	6.94
Arizona	17.92	17.92	1.10	1.16	12.84	12.84	1.26	1.34
Utah	18.28	18.28	2.68	6.36	20.26	20.26	2.88	6.76
Nevada	17.92	17.92	1.10	1.16	12.84	12.84	1.26	1.34
Pacific								
Washington	12.10	12.10	4.70	-0.02	12.38	12.38	5.36	-0.02
Oregon	12.10	12.10	4.70	-0.02	12.38	12.38	5.36	-0.02
California	17.92	17.92	1.10	1.16	12.84	12.84	1.26	1.34

Table D.6.b. Projected annual growth rates (%) of natural gas (industrial)
and coal prices in real terms for the high price case

Region and state	Price of natural gas (PGI)				Price of coal (PC)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
New Hampshire	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
Vermont	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
Massachusetts	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
Rhode Island	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
Connecticut	9.10	9.10	4.10	11.70	-0.68	-0.68	2.98	2.28
Middle Atlantic								
New York	16.50	16.50	4.32	8.26	3.68	3.68	3.38	2.22
New Jersey	16.50	16.50	4.32	8.26	3.68	3.68	3.38	2.22
Pennsylvania	11.94	11.94	7.58	10.04	5.82	5.82	2.66	2.12
East North Central								
Ohio	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
Indiana	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
Illinois	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
Michigan	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
Wisconsin	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
West North Central								
Minnesota	15.08	15.08	10.32	15.20	2.44	2.44	2.56	2.42
Iowa	21.26	21.26	9.62	13.96	3.34	3.34	2.22	2.34
Missouri	21.26	21.26	9.62	13.96	3.34	3.34	2.22	2.34
North Dakota	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
South Dakota	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
Nebraska	21.26	21.26	9.62	13.96	3.34	3.34	2.22	2.34
Kansas	21.26	21.26	9.62	13.96	3.34	3.34	2.22	2.34
South Atlantic								
Delaware	11.94	11.94	7.58	10.04	5.82	5.82	3.62	2.36
Maryland and D.C.	11.94	11.94	7.58	10.04	5.82	5.82	3.62	2.36
Virginia	11.94	11.94	7.58	10.04	5.82	5.82	3.62	2.36
West Virginia	11.94	11.94	7.58	10.04	5.82	5.82	3.62	2.36
North Carolina	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
South Carolina	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
Georgia	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
Florida	18.30	18.30	7.32	11.52	6.96	6.95	2.66	2.12
East South Central								
Kentucky	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
Tennessee	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
Alabama	18.30	18.30	7.32	11.52	6.96	6.96	2.56	2.12
Mississippi	18.30	18.30	7.32	11.52	6.96	6.96	2.66	2.12
West South Central								
Arkansas	22.48	22.48	4.06	7.60	1.18	1.18	2.04	2.08
Louisiana	22.48	22.48	4.06	7.60	1.18	1.18	2.04	2.08
Oklahoma	22.48	22.48	4.06	7.60	1.18	1.18	2.04	2.08
Texas	22.48	22.48	4.06	7.60	1.18	1.18	2.04	2.08
Mountain								
Montana	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
Idaho	19.46	19.46	2.32	12.94	3.84	3.84	0.42	2.28
Wyoming	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
Colorado	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
New Mexico	22.48	22.48	4.06	7.60	1.18	1.18	2.04	2.16
Arizona	17.92	17.92	4.08	6.96	9.98	9.98	2.92	2.70
Utah	23.30	23.30	3.50	7.64	0.56	0.56	0.34	3.62
Nevada	17.92	17.92	4.08	6.96	9.98	9.98	2.92	2.70
Pacific								
Washington	19.46	19.46	2.32	12.94	3.84	3.84	0.42	2.28
Oregon	19.46	19.46	2.32	12.94	3.84	3.84	0.42	2.28
California	17.92	17.92	4.08	6.96	9.98	9.98	2.92	2.70

Table D.6.c. Projected annual growth rates (%) of oil prices
in real terms for the high price case

Region and state	Price of No. 2 oil (POR)				Price of No. 6 oil (POI)			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.86
New Hampshire	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.86
Vermont	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.86
Massachusetts	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.86
Rhode Island	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.86
Connecticut	8.14	8.14	3.40	10.06	10.46	10.46	2.92	10.96
Middle Atlantic								
New York	9.06	9.06	3.50	9.98	12.24	12.24	2.82	10.62
New Jersey	9.06	9.06	3.50	9.98	12.24	12.24	2.82	10.62
Pennsylvania	10.16	10.16	3.38	9.74	13.40	13.40	2.74	10.36
East North Central								
Ohio	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
Indiana	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
Illinois	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
Michigan	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
Wisconsin	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
West North Central								
Minnesota	8.72	8.72	3.80	10.62	8.00	8.00	3.26	11.38
Iowa	8.88	8.88	3.84	10.74	12.06	12.06	3.24	11.22
Missouri	8.88	8.88	3.84	10.74	12.06	12.06	3.24	11.22
North Dakota	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
South Dakota	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
Nebraska	8.88	8.88	3.84	10.74	12.06	12.06	3.24	11.22
Kansas	8.88	8.88	3.84	10.74	12.06	12.06	3.24	11.22
South Atlantic								
Delaware	10.16	10.16	3.38	9.74	13.40	13.40	2.74	10.36
Maryland and D.C.	10.16	10.16	3.38	9.74	13.40	13.40	2.74	10.36
Virginia	10.16	10.16	3.38	9.74	13.40	13.40	2.74	10.36
West Virginia	10.16	10.16	3.38	9.74	13.40	13.40	2.74	10.36
North Carolina	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
South Carolina	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
Georgia	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
Florida	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
East South Central								
Kentucky	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
Tennessee	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
Alabama	11.38	11.38	3.34	9.74	12.56	12.56	3.30	11.30
Mississippi	11.38	11.38	3.34	9.74	12.56	12.56	3.40	11.30
West South Central								
Arkansas	12.00	12.00	3.64	10.22	14.96	14.96	3.26	11.28
Louisiana	12.00	12.00	3.64	10.22	14.96	14.96	3.26	11.28
Oklahoma	12.00	12.00	3.64	10.22	14.96	14.96	3.26	11.28
Texas	12.00	12.00	3.64	10.22	14.96	14.96	3.26	11.28
Mountain								
Montana	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
Idaho	9.16	9.16	1.00	10.88	10.04	10.04	-0.03	12.02
Wyoming	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
Colorado	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
New Mexico	12.00	12.00	3.64	10.22	14.96	14.96	3.26	11.28
Arizona	8.88	8.88	1.00	10.88	9.40	9.40	-0.03	12.18
Utah	9.50	9.50	3.76	10.54	11.54	11.54	3.40	11.60
Nevada	8.88	8.88	1.00	10.88	9.40	9.40	-0.03	12.02
Pacific								
Washington	9.16	9.16	1.00	10.88	10.04	10.04	-0.03	12.02
Oregon	9.16	9.16	1.00	10.88	10.04	10.04	-0.03	12.02
California	8.88	8.88	1.00	10.88	9.40	9.40	-0.03	12.18

Table D.7. Projected annual growth rates (%) of total average
electricity cost (TOC) for the base and high cases

Region and state	Base case				High case			
	1976-80	1980-85	1985-90	1990-2000	1976-80	1980-85	1985-90	1990-2000
New England								
Maine	9.89	8.76	6.45	6.52	12.69	13.10	8.50	7.91
New Hampshire	9.27	7.20	6.16	6.59	10.13	8.97	7.06	8.62
Vermont	9.25	8.24	6.10	5.97	10.54	10.54	7.73	6.67
Massachusetts	10.38	9.35	5.93	7.38	12.96	12.60	7.11	11.19
Rhode Island	10.72	6.16	6.31	7.81	13.67	9.48	7.68	11.71
Connecticut	9.95	9.06	6.22	7.05	12.32	12.43	7.86	9.86
Middle Atlantic								
New York	9.86	8.84	6.03	6.70	11.56	11.32	6.92	9.15
New Jersey	9.73	8.79	5.87	6.67	11.91	11.78	6.91	9.58
Pennsylvania	9.45	8.40	6.18	6.04	10.73	10.21	7.14	7.21
East North Central								
Ohio	8.07	7.03	6.06	5.15	8.60	7.74	6.83	6.03
Indiana	8.12	7.17	6.12	5.23	8.56	7.87	6.73	6.03
Illinois	9.03	8.00	6.19	6.18	9.95	9.44	7.36	7.53
Michigan	9.18	8.07	6.28	6.46	10.30	9.69	7.55	8.42
Wisconsin	9.09	7.99	6.12	5.95	9.99	9.45	7.38	6.93
West North Central								
Minnesota	9.10	8.11	6.16	6.07	9.99	9.47	7.30	7.05
Iowa	9.28	8.18	5.97	6.23	10.26	10.27	6.75	7.68
Missouri	8.48	7.49	6.14	5.16	9.15	8.70	6.90	5.75
North Dakota	9.40	8.42	6.09	6.38	10.73	10.65	7.35	8.01
South Dakota	8.14	7.07	5.98	5.14	8.27	7.32	6.06	5.53
Nebraska	10.00	8.58	6.44	6.53	12.25	12.14	8.79	9.19
Kansas	9.89	8.98	6.92	7.00	12.52	13.34	9.66	11.81
South Atlantic								
Delaware	9.99	9.38	6.36	6.99	12.75	13.18	7.46	10.81
Maryland and D.C.	9.94	9.24	5.93	6.45	11.89	12.09	6.96	8.96
Virginia	10.35	9.18	6.05	6.95	13.35	13.31	7.41	10.25
West Virginia	8.82	7.86	6.36	5.17	10.11		7.36	5.93
North Carolina	9.34	8.54	5.86	7.11	10.70		6.73	10.20
South Carolina	9.34	8.54	5.86	7.11	10.70	10.21	6.73	10.20
Georgia	9.71	8.73	6.17	7.43	11.33	10.97	7.10	10.66
Florida	10.63	9.77	6.40	7.84	13.46	13.58	7.80	12.03
East South Central								
Kentucky	8.84	7.90	6.12	6.85	10.04	9.40	6.72	10.09
Tennessee	9.29	8.25	6.17	7.71	11.07	10.75	7.29	11.25
Alabama	9.37	8.46	6.13	7.26	10.72	10.26	7.01	10.10
Mississippi	10.96	8.42	6.38	7.91	14.42	12.77	8.06	12.24
West South Central								
Arkansas	10.69	9.78	6.28	7.30	14.18	14.17	7.78	10.96
Louisiana	12.67	11.82	6.30	6.89	18.44	19.90	7.76	10.59
Oklahoma	12.74	12.14	6.41	6.60	18.61	20.66	8.16	10.15
Texas	11.81	11.47	6.45	6.56	16.92	19.48	8.10	10.07
Mountain								
Montana	8.04	7.16	5.96	5.09	8.11	7.30	6.01	5.33
Idaho	8.01	7.02	6.00	5.02	8.03	7.06	6.01	5.09
Wyoming	7.97	6.93	5.89	5.17	8.07	7.06	5.95	5.59
Colorado	8.65	7.99	5.93	5.60	9.90	10.71	6.54	7.51
New Mexico	9.30	8.87	6.24	5.85	11.32	13.08	7.31	8.38
Arizona	8.70	7.61	5.92	5.66	9.64	9.15	6.34	7.43
Utah	8.36	7.26	5.88	5.35	8.82	8.25	6.16	6.38
Nevada	9.25	8.43	6.10	5.48	10.99	11.23	6.86	7.04
Pacific								
Washington	8.14	7.19	6.08	5.09	8.31	7.77	6.63	5.46
Oregon	8.18	7.05	6.18	5.19	8.37	7.40	6.87	5.72
California	10.02	9.52	5.68	7.59	13.24	13.86	6.34	11.87

Appendix E

FORECASTS OF ELECTRICITY DEMAND AND PRICE BY STATE
AND BY REGION: 1980, 1985, 1990, 1995, AND 2000

NEW ENGLAND REGION   VERSION II   BASE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	2.8	1.5	2.3	6.9	3.7	2.2	2.5	8.8	5.0	3.2	3.1	11.7	6.2	4.4	3.9	15.1
NEW HAMPSHIRE	2.3	0.9	2.0	5.3	2.8	1.2	2.2	6.2	3.8	1.8	2.8	9.5	5.0	3.1	3.9	12.1
VERMONT	1.5	0.8	0.9	3.3	1.9	0.8	1.0	3.9	2.4	1.2	1.3	5.2	3.1	1.7	1.7	6.9
MASSACHUSETTS	11..	10.6	7.9	31.0	12.1	11.6	9.4	33.1	13.5	13.5	10.3	38.8	15.7	16.3	13.2	46.5
RHODE ISLAND	1.3	1.5	1.3	4.8	1.9	1.5	1.4	5.0	2.1	1.8	1.8	5.9	2.5	2.2	2.4	7.3
CONNECTICUT	7.9	6.0	5.4	19.5	8.9	6.9	6.4	22.5	10.5	8.2	8.1	27.1	12.3	9.8	10.4	33.0
REGIONAL TOTAL	18.0	21.1	19.9	70.8	31.4	24.2	21.9	79.5	37.3	29.7	27.4	96.8	44.9	37.5	35.4	120.8

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	7.5	5.6	4.8	18.6	8.9	6.9	5.9	22.5
NEW HAMPSHIRE	6.4	4.6	5.2	16.5	8.0	6.6	7.1	22.0
VERMONT	3.9	2.2	2.3	8.8	4.5	2.9	3.1	11.1
MASSACHUSETTS	1..	19.0	16.7	54.9	19.1	21.5	21.1	63.5
RHODE ISLAND	2.6	1.5	3.1	8.5	2.6	2.7	4.0	9.7
CONNECTICUT	-	11.4	13.4	39.3	15.4	13.2	17.2	46.4
REGIONAL TOTAL	52.0	45.5	45.5	146.7	58.6	53.9	58.4	175.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	5.9	7.8	3.7	5.7
NEW HAMPSHIRE	5.7	9.1	4.9	6.1
VERMONT	5.1	7.8	4.2	5.4
MASSACHUSETTS	2.2	3.1	3.7	2.9
RHODE ISLAND	2.1	2.9	4.2	3.0
CONNECTICUT	3.2	3.6	4.8	3.8
REGIONAL AVERAGE	3.4	4.2	4.2	3.9

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FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	34.9	35.1	19.4	29.5	44.8	42.5	29.7	39.7	61.9	56.6	44.4	55.6	81.4	73.9	60.6	73.5
NEW HAMPSHIRE	45.6	48.9	29.6	40.1	61.0	63.2	44.8	55.7	84.0	81.9	64.9	77.2	114.1	105.5	88.5	103.8
VERMONT	40.0	37.0	25.9	35.1	51.1	45.4	30.9	44.5	70.8	60.0	46.1	61.8	94.0	78.5	62.5	81.8
MASSACHUSETTS	49.7	47.0	37.3	45.5	70.0	63.2	51.5	62.7	100.0	93.8	79.4	92.1	127.2	126.1	105.6	120.5
RHODE ISLAND	48.2	43.0	36.0	43.0	70.4	64.8	58.0	65.0	92.0	86.9	79.9	86.6	122.1	118.9	110.4	117.1
CONNECTICUT	44.7	41.7	33.2	40.5	60.1	58.3	43.8	54.9	86.5	87.8	68.3	81.4	113.5	120.9	93.1	109.2
REGIONAL AVERAGE	43.8	42.1	30.2	39.0	59.6	56.2	43.1	53.7	82.5	77.8	63.8	75.8	108.7	104.0	86.9	101.0

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	106.3	97.7	82.1	97.1	138.3	129.2	111.0	127.9
NEW HAMPSHIRE	156.0	142.2	123.6	141.7	211.4	193.5	171.0	192.7
VERMONT	122.5	104.0	84.0	106.9	158.4	137.5	112.6	139.2
MASSACHUSETTS	172.4	177.8	149.9	167.3	235.9	248.7	212.8	232.4
RHODE ISLAND	174.0	172.7	162.6	169.3	248.9	249.3	238.6	244.6
CONNECTICUT	153.4	168.9	131.2	150.3	207.5	233.9	184.4	206.4
REGIONAL AVERAGE	147.4	143.9	122.2	138.9	200.0	198.7	171.7	190.6

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	6.2	5.5	8.5	6.7
NEW HAMPSHIRE	6.8	5.7	8.2	7.0
VERMONT	6.3	5.5	6.5	6.2
MASSACHUSETTS	6.9	7.3	7.7	7.2
RHODE ISLAND	6.9	7.5	8.3	7.4
CONNECTICUT	6.9	7.9	7.7	7.3
REGIONAL AVERAGE	6.7	6.7	7.8	7.0

NEW ENGLAND REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	2.8	1.5	2.3	6.9	3.9	2.4	2.6	9.2	5.6	4.1	3.2	13.4	7.5	6.2	4.0	18.3
NEW HAMPSHIRE	2.3	0.9	2.0	5.3	2.9	1.1	2.2	6.5	4.3	2.5	2.9	9.7	6.0	4.7	3.9	14.9
VERMONT	1.5	0.6	0.9	3.3	2.0	0.9	1.0	4.0	2.7	1.5	1.3	5.8	3.0	2.4	1.7	8.2
MASSACHUSETTS	11.6	10.6	7.9	31.0	12.9	12.8	8.5	35.1	16.5	17.4	10.6	45.7	21.5	22.7	13.6	59.4
RHODE ISLAND	1.3	1.5	1.3	4.8	2.0	1.7	1.4	5.4	2.6	2.4	1.8	7.0	3.2	3.3	2.4	9.2
CONNECTICUT	7.9	6.0	5.4	19.5	9.4	7.5	6.4	23.6	12.3	10.0	8.2	30.9	15.7	12.7	10.7	39.7
REGIONAL TOTAL	28.0	21.1	19.9	70.8	33.1	26.5	22.1	83.7	43.9	37.9	28.0	112.6	57.5	52.1	36.5	149.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	9.4	8.3	5.0	23.6	11.7	10.8	6.2	29.7
NEW HAMPSHIRE	9.1	7.8	5.4	21.5	10.5	11.7	7.4	30.0
VERMONT	4.5	3.3	2.4	10.8	5.6	4.3	3.2	13.9
MASSACHUSETTS	26.9	28.0	17.5	74.3	32.7	33.8	22.5	91.5
RHODE ISLAND	3.9	4.2	3.2	11.6	4.6	5.2	4.2	14.4
CONNECTICUT	19.3	15.6	14.0	49.6	23.3	19.0	18.2	61.2
REGIONAL TOTAL	72.1	67.2	47.4	191.4	88.4	84.8	61.7	240.7

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	7.3	10.6	3.9	7.2
NEW HAMPSHIRE	7.0	12.6	5.0	7.7
VERMONT	6.2	10.5	4.4	6.8
MASSACHUSETTS	4.5	5.6	3.9	4.8
RHODE ISLAND	4.1	5.8	4.3	4.7
CONNECTICUT	5.1	5.5	5.0	5.2
REGIONAL AVERAGE	5.3	6.7	4.4	5.5

NEW ENGLAND REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	34.9	35.1	19.4	29.5	42.8	39.7	27.3	37.5	57.9	52.1	36.7	50.9	77.8	73.4	47.5	69.4
NEW HAMPSHIRE	45.6	48.9	29.6	40.1	57.8	58.7	41.1	52.3	79.2	72.4	56.3	70.6	109.4	95.9	73.3	95.3
VERMONT	40.0	37.0	25.9	35.1	49.6	42.6	28.6	42.6	68.1	55.3	38.6	57.7	93.2	79.1	49.9	79.1
MASSACHUSETTS	49.7	47.0	37.3	45.5	64.4	59.7	45.9	58.0	82.6	87.4	61.2	79.4	104.4	127.6	78.2	107.3
RHODE ISLAND	48.2	43.0	36.0	43.0	62.4	57.4	50.1	57.4	81.6	80.4	68.8	77.7	104.9	113.5	89.8	103.9
CONNECTICUT	44.7	41.7	33.2	40.5	56.4	56.8	39.5	51.9	75.9	87.0	53.8	73.5	100.6	127.8	69.6	101.0
REGIONAL AVERAGE	43.8	42.1	30.2	39.0	55.6	52.5	38.7	49.9	74.2	72.4	52.6	68.3	98.4	102.9	68.0	92.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	99.4	97.5	58.4	89.7	125.6	127.5	71.4	114.6
NEW HAMPSHIRE	145.1	129.8	90.5	125.6	190.9	175.5	111.4	165.0
VERMONT	120.4	106.9	61.5	102.4	153.5	141.6	75.8	130.7
MASSACHUSETTS	129.5	176.3	95.6	139.4	161.5	241.3	116.9	180.6
RHODE ISLAND	130.9	153.9	110.2	133.6	163.9	207.5	135.7	171.4
CONNECTICUT	128.1	176.9	85.9	131.6	162.2	242.3	105.7	170.4
REGIONAL AVERAGE	125.6	140.2	83.7	120.4	159.6	189.3	102.8	155.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	5.9	5.4	6.6	6.3
NEW HAMPSHIRE	6.5	4.9	6.7	6.4
VERMONT	6.2	5.6	4.9	6.0
MASSACHUSETTS	5.4	7.4	5.4	6.3
RHODE ISLAND	5.7	7.2	6.7	6.5
CONNECTICUT	6.0	8.3	5.4	6.7
REGIONAL AVERAGE	5.9	6.6	6.0	6.4

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	2.8	1.5	2.3	6.9	3.7	2.1	2.5	8.6	4.6	2.8	3.1	10.8	5.4	3.6	3.8	13.2
NEW HAMPSHIRE	2.3	0.9	2.0	5.3	2.8	1.2	2.1	6.2	3.7	1.8	2.8	8.4	4.8	2.9	3.8	11.7
VERMONT	1.5	0.6	0.9	3.3	1.9	0.8	1.0	3.9	2.3	1.1	1.2	4.9	2.8	1.5	1.6	6.3
MASSACHUSETTS	11.6	10.6	7.9	31.0	11.9	11.4	8.4	32.6	12.3	12.3	10.1	35.7	13.3	14.1	12.8	41.4
RHODE ISLAND	1.8	1.5	1.3	4.8	1.8	1.5	1.4	4.9	1.9	1.5	1.8	5.3	2.0	1.7	2.3	6.2
CONNECTICUT	7.9	6.0	5.4	19.5	8.8	6.8	6.3	22.2	9.6	7.6	7.9	25.5	10.5	8.7	10.1	29.7
REGIONAL TOTAL	28.0	21.1	19.9	70.8	30.9	23.7	21.8	78.3	34.4	27.2	26.9	90.7	38.8	32.6	34.4	108.5

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	6.2	4.4	4.6	15.8	7.0	5.4	5.6	18.7
NEW HAMPSHIRE	5.9	4.3	5.1	15.6	7.0	6.0	6.8	20.1
VERMONT	3.2	1.8	2.2	7.5	3.3	1.9	2.8	8.5
MASSACHUSETTS	13.6	15.3	16.0	46.1	12.7	15.4	19.9	49.3
RHODE ISLAND	1.9	1.8	2.9	6.8	1.6	1.6	3.7	7.2
CONNECTICUT	11.0	9.7	12.8	34.0	11.0	10.6	16.2	38.2
REGIONAL TOTAL	41.9	37.2	43.7	125.9	42.7	40.9	55.1	142.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	4.8	6.3	3.5	4.7
NEW HAMPSHIRE	5.2	8.8	4.9	5.9
VERMONT	4.4	6.6	4.0	4.8
MASSACHUSETTS	1.0	2.1	3.5	2.1
RHODE ISLAND	0.5	1.1	3.9	1.8
CONNECTICUT	2.1	2.7	4.6	3.0
REGIONAL AVERAGE	2.4	3.1	4.0	3.1

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	34.9	35.1	19.4	29.5	47.3	45.2	32.3	42.2	73.4	69.4	57.1	67.5	101.7	96.6	84.8	95.3
NEW HAMPSHIRE	45.6	48.9	29.6	40.1	62.5	64.6	46.2	57.2	91.3	89.9	72.7	84.7	126.9	120.4	103.8	117.6
VERMONT	40.0	37.0	25.9	35.1	52.5	46.8	32.4	45.8	81.1	72.1	58.4	73.0	109.1	96.7	82.6	98.7
MASSACHUSETTS	49.7	47.0	37.3	45.5	74.6	67.5	56.1	67.2	120.3	111.6	99.5	111.2	161.2	154.2	139.6	151.9
RHODE ISLAND	48.2	43.0	36.0	43.0	77.3	71.6	64.8	71.8	116.9	110.9	104.4	110.8	165.0	159.3	153.2	158.8
CONNECTICUT	44.7	41.7	33.2	40.5	63.7	61.6	47.6	58.4	102.9	102.0	85.9	97.3	143.3	145.8	125.8	138.0
REGIONAL AVERAGE	43.8	42.1	30.2	39.0	63.0	59.6	46.6	57.1	97.7	92.7	79.7	90.8	134.5	128.8	115.0	126.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MAINE	139.8	134.2	122.4	132.9	194.2	189.0	176.7	187.2
NEW HAMPSHIRE	185.6	176.1	158.1	173.8	270.7	260.3	229.8	256.9
VERMONT	166.9	154.0	139.8	155.4	260.1	249.3	236.5	249.2
MASSACHUSETTS	257.0	250.6	234.7	246.9	418.8	409.8	395.7	406.3
RHODE ISLAND	280.5	274.5	269.1	273.8	482.0	474.7	470.2	474.0
CONNECTICUT	218.0	224.3	200.9	213.3	336.4	345.6	320.2	332.0
REGIONAL AVERAGE	208.0	202.3	187.5	199.3	327.0	321.4	306.5	317.6

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MAINE	7.9	7.5	11.1	8.7
NEW HAMPSHIRE	7.6	6.7	9.4	8.0
VERMONT	7.4	7.1	8.7	7.7
MASSACHUSETTS	8.8	8.9	9.9	9.0
RHODE ISLAND	9.2	9.8	10.9	9.8
CONNECTICUT	8.7	9.3	10.0	9.1
REGIONAL AVERAGE	8.3	8.3	10.0	8.8

MIDDLE ATLANTIC REGION VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	29.4	30.5	29.6	99.3	32.6	34.5	30.7	108.2	39.0	45.1	38.9	134.9	44.6	59.0	49.1	168.8
NEW JERSEY	15.1	14.3	15.8	45.6	18.2	17.4	18.3	54.5	22.3	24.7	25.1	72.8	27.3	34.3	34.2	96.9
PENNSYLVANIA	28.8	17.9	43.4	91.9	34.2	21.1	48.2	105.6	41.4	29.6	61.4	135.1	49.4	40.2	77.3	170.3
REGIONAL TOTAL	73.3	63.0	96.7	236.9	85.0	73.0	97.2	268.3	101.9	99.3	125.4	342.9	121.3	133.5	160.5	435.9

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	49.4	73.4	62.8	205.7	54.6	90.5	80.4	249.5
NEW JERSEY	32.2	46.5	46.4	126.4	37.6	62.5	63.1	164.9
PENNSYLVANIA	56.7	51.3	100.5	212.9	64.3	64.9	131.1	265.8
REGIONAL TOTAL	138.8	171.2	209.6	545.0	156.6	218.0	274.6	680.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	3.0	4.8	3.7	3.9
NEW JERSEY	4.3	6.5	5.7	5.5
PENNSYLVANIA	3.9	5.9	4.2	4.5
REGIONAL AVERAGE	3.7	5.5	4.3	4.5

MIDDLE ATLANTIC REGION VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	53.7	55.6	25.5	45.1	69.9	73.3	44.9	63.3	100.6	108.1	75.2	95.3	131.3	147.5	105.1	129.1
NEW JERSEY	52.7	48.3	33.2	44.5	67.1	66.4	50.6	61.3	98.0	103.1	79.0	93.1	129.9	147.5	105.6	127.6
PENNSYLVANIA	41.2	38.0	25.7	33.1	55.6	50.0	37.7	46.1	78.8	74.4	56.7	67.6	105.2	105.5	76.3	91.9
REGIONAL AVERAGE	49.2	47.3	28.1	40.9	64.2	63.2	44.4	56.9	92.4	95.2	70.3	85.3	122.2	133.5	95.7	116.2

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	177.0	205.3	150.0	179.1	239.6	286.9	211.9	248.7
NEW JERSEY	177.1	218.8	145.4	180.8	241.3	327.6	198.7	257.9
PENNSYLVANIA	138.0	147.7	101.3	122.7	180.4	208.0	133.3	163.6
REGIONAL AVERAGE	164.0	190.6	132.2	160.9	220.4	274.2	181.3	223.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	6.6	7.2	10.6	7.8
NEW JERSEY	6.7	8.3	8.6	7.9
PENNSYLVANIA	6.9	7.6	8.1	7.6
REGIONAL AVERAGE	6.7	7.7	9.1	7.7

MIDDLE ATLANTIC REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	29.4	30.8	29.6	99.3	33.6	36.5	30.9	111.8	41.5	51.2	39.5	146.3	50.4	69.1	50.1	187.5
NEW JERSEY	15.1	14.3	15.8	45.6	18.7	18.4	18.4	56.1	24.1	27.8	25.4	78.1	30.1	39.6	34.8	105.5
PENNSYLVANIA	28.9	17.5	43.4	91.9	34.8	22.1	48.4	107.5	43.6	32.8	62.1	141.4	53.0	46.1	78.5	181.4
REGIONAL TOTAL	73.3	63.0	88.7	236.8	87.1	77.1	97.8	275.4	109.2	111.9	127.0	365.7	133.5	154.8	163.4	474.4

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	59.3	88.5	64.5	234.7	69.0	112.1	83.2	292.2
NEW JERSEY	36.8	54.5	47.6	140.3	44.7	74.3	65.1	186.1
PENNSYLVANIA	62.3	60.7	102.7	230.4	72.7	78.7	134.7	292.1
REGIONAL TOTAL	158.4	203.7	214.7	605.3	186.4	265.1	283.0	770.3

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	3.9	5.9	3.9	4.6
NEW JERSEY	5.0	7.5	5.8	6.2
PENNSYLVANIA	4.5	7.0	4.3	5.0
REGIONAL AVERAGE	4.4	6.6	4.5	5.1

MIDDLE ATLANTIC REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

| | 1976 ACTUAL | | | | 1980 | | | | 1985 | | | | 1990 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	53.7	55.6	25.5	45.1	64.3	68.6	39.2	58.2	83.0	94.7	56.9	79.7	104.3	130.0	76.1	106.5
NEW JERSEY	52.7	48.3	33.2	44.5	62.4	62.6	45.5	56.8	83.3	92.6	62.2	79.7	108.7	136.6	79.7	109.6
PENNSYLVANIA	41.2	38.0	25.7	33.1	52.8	47.3	34.4	43.2	70.4	67.5	46.3	58.9	92.1	97.9	58.8	78.9
REGIONAL AVERAGE	49.2	47.3	28.1	40.9	59.8	59.5	39.7	52.7	78.9	84.9	55.1	72.8	101.7	121.5	71.5	98.3

| | 1995 | | | | 2000 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	126.2	172.7	95.4	136.2	153.2	232.7	118.7	176.0
NEW JERSEY	136.9	200.1	95.8	147.6	173.4	300.6	113.2	203.4
PENNSYLVANIA	115.1	137.2	70.2	100.6	143.4	195.9	82.4	129.1
REGIONAL AVERAGE	126.1	170.0	87.1	128.2	156.6	243.1	104.8	169.5

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	4.9	6.3	9.1	6.3
NEW JERSEY	5.3	7.7	6.5	6.7
PENNSYLVANIA	5.9	7.0	6.1	6.4
REGIONAL AVERAGE	5.3	7.0	6.9	6.5

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	29.4	30.8	29.6	89.3	32.1	34.7	30.7	107.7	35.6	45.2	38.7	132.2	40.4	60.3	48.8	165.3
NEW JERSEY	15.1	14.3	15.8	45.6	17.8	17.5	18.3	54.1	20.7	24.5	24.9	70.9	24.5	34.8	33.9	94.1
PENNSYLVANIA	28.8	17.9	43.4	91.9	33.8	21.3	48.2	105.5	39.9	30.3	61.4	134.4	46.8	41.6	77.1	168.9
REGIONAL TOTAL	73.3	63.0	88.7	236.8	83.7	73.5	97.2	267.3	96.3	100.0	125.0	337.5	111.7	136.6	159.7	428.2

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	43.0	75.3	62.2	199.6	44.2	93.2	79.4	239.7
NEW JERSEY	27.5	47.3	45.8	121.9	30.0	64.0	61.9	157.6
PENNSYLVANIA	52.6	53.4	100.2	210.5	58.3	68.1	130.7	262.4
REGIONAL TOTAL	123.1	176.1	209.2	532.0	132.5	225.3	272.0	659.7

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	2.3	4.9	3.6	3.7
NEW JERSEY	3.5	6.6	5.6	5.3
PENNSYLVANIA	3.5	6.2	4.2	4.4
REGIONAL AVERAGE	3.1	5.7	4.3	4.3

MIDDLE ATLANTIC REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	53.7	55.6	25.5	45.1	73.4	77.0	48.5	66.8	116.7	124.7	91.7	111.6	158.4	176.8	133.1	157.6
NEW JERSEY	52.7	48.3	33.2	44.5	71.2	70.8	55.0	65.6	115.9	122.3	98.5	111.9	158.9	181.3	138.3	159.8
PENNSYLVANIA	41.2	39.0	25.7	33.1	57.1	51.9	39.5	47.8	85.3	83.0	64.6	75.1	117.0	122.3	91.0	106.2
REGIONAL AVERAGE	49.2	47.3	28.1	40.9	67.3	66.6	47.7	60.1	106.0	110.0	84.9	99.6	144.8	160.1	120.8	141.2

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
NEW YORK	239.0	270.6	212.7	242.9	361.0	415.2	335.9	375.1
NEW JERSEY	243.0	294.9	218.7	254.2	374.0	479.9	344.6	405.8
PENNSYLVANIA	159.5	178.5	127.9	149.0	217.7	261.3	178.8	209.5
REGIONAL AVERAGE	213.5	248.0	186.4	215.4	317.6	385.5	286.4	330.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
NEW YORK	8.0	8.6	12.5	9.3
NEW JERSEY	8.2	9.9	10.7	9.6
PENNSYLVANIA	7.7	8.7	9.4	8.7
REGIONAL AVERAGE	8.0	9.1	11.0	9.3

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	29.0	19.6	49.6	101.3	34.4	23.2	56.9	118.1	42.0	28.5	71.0	145.9	48.2	33.6	88.1	175.3
INDIANA	16.6	9.3	24.7	51.1	20.0	11.1	29.3	61.1	24.2	13.7	37.8	76.6	27.7	16.2	48.3	93.3
ILLINOIS	26.3	22.4	33.3	88.1	29.3	25.9	35.1	96.8	34.1	29.7	41.8	113.3	38.6	33.3	50.8	131.5
MICHIGAN	21.3	13.5	31.1	67.8	24.3	15.8	34.1	76.3	28.3	18.8	40.0	89.6	31.9	21.7	47.2	103.7
WISCONSIN	12.4	8.2	11.2	32.8	14.4	9.9	12.2	37.6	16.8	11.8	14.6	44.5	19.1	13.6	17.8	52.1
REGIONAL TOTAL	105.6	73.0	149.9	341.0	122.4	85.8	167.6	390.0	145.4	102.5	205.2	469.9	165.5	118.4	252.2	555.9

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	53.4	38.3	109.2	207.3	58.4	42.9	135.3	244.2
INDIANA	30.7	18.4	61.5	111.9	33.7	20.6	78.1	133.9
ILLINOIS	41.4	35.9	60.3	147.6	43.3	38.1	71.6	164.0
MICHIGAN	34.2	23.5	54.6	115.5	35.7	24.3	63.1	126.6
WISCONSIN	21.0	15.0	21.3	59.0	22.5	16.3	25.4	66.1
REGIONAL TOTAL	180.7	131.2	306.9	641.4	193.6	142.2	373.5	734.9

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	3.7	3.9	4.2	4.0
INDIANA	3.7	4.1	4.9	4.4
ILLINOIS	2.8	2.8	3.1	2.9
MICHIGAN	2.9	3.5	3.0	3.1
WISCONSIN	3.2	3.6	3.4	3.4
REGIONAL AVERAGE	3.3	3.5	3.8	3.6

EAST NORTH CENTRAL REGION VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	35.6	33.8	19.7	27.2	41.8	42..	27.7	34.5	53.6	56.0	38.2	46.4	67.6	72.6	51.5	60.2
INDIANA	30.2	29.4	19.9	25.0	37.1	36.4	26.3	31.7	47.9	47.5	36.1	42.0	60.5	60.7	47.7	53.9
ILLINOIS	39.6	37.6	22.5	31.8	49.0	48.6	32.0	42.2	65.5	67.3	48.3	59.2	83.6	87.7	66.4	77.6
MICHIGAN	38.9	40.3	27.0	33.6	50.3	52.1	35.5	43.9	68.5	71.2	53.5	62.2	88.7	92.4	73.4	82.3
WISCONSIN	34.4	33.9	23.4	30.4	44.9	44.0	33.8	40.9	61.7	61.0	50.4	57.8	79.9	80.8	68.4	76.1
REGIONAL AVERAGE	35.5	35.0	22.5	29.6	44.6	44.6	30.9	38.7	59.4	60.7	45.3	53.5	76.1	78.8	61.5	70.0

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	83.0	90.7	66.4	75.4	102.7	113.0	85.5	94.7
INDIANA	74.5	75.2	60.9	67.0	92.1	93.2	77.8	83.8
ILLINOIS	108.1	113.7	90.7	101.9	140.9	147.4	123.6	134.4
MICHIGAN	116.9	121.0	101.3	110.2	155.5	159.3	139.5	148.1
WISCONSIN	103.5	105.3	91.9	99.6	135.0	137.4	123.3	131.0
REGIONAL AVERAGE	97.2	101.1	82.2	90.8	125.2	130.1	109.9	118.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	4.7	5.6	7.1	5.8
INDIANA	5.1	5.3	6.4	5.6
ILLINOIS	5.7	6.2	8.0	6.6
MICHIGAN	6.1	6.1	7.4	6.6
WISCONSIN	6.2	6.4	7.9	6.8
REGIONAL AVERAGE	5.6	6.0	7.4	6.3

LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1975 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	29.0	19.6	49.6	101.3	35.(	23.6	59.6	121.8	44.0	29.9	78.8	157.5	52.3	36.7	103.0	198.1
INDIANA	16.6	9.3	24.7	51.1	20.3	11.3	30.7	62.9	25.3	14.5	41.9	.7	29.9	18.0	56.5	105.6
ILLINOIS	26.3	22.4	33.3	88.1	30.3	26.6	37.5	101.2	37.9	32.4	48.5	127.4	45.5	38.3	62.2	156.6
MICHIGAN	21.3	13.5	31.1	67.8	25.3	16.4	36.5	80.4	31.8	21.1	46.6	102.4	38.4	26.3	58.4	126.6
WISCONSIN	12.4	8.2	11.2	32.8	14.9	10.3	13.0	39.4	18.8	13.2	17.0	50.5	22.7	16.2	21.9	62.6
REGIONAL TOTAL	105.6	73.0	149.9	341.0	125.7	88.1	177.2	405.7	157.8	111.1	232.8	520.4	188.8	135.5	302.1	649.6

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	60.4	43.2	134.0	245.0	68.9	49.9	174.1	302.2
INDIANA	34.4	21.4	75.6	132.9	39.3	25.0	100.9	167.1
ILLINOIS	52.9	44.0	79.2	188.9	60.9	50.1	100.8	227.1
MICHIGAN	45.1	31.1	73.2	153.7	52.5	36.1	91.7	185.3
WISCONSIN	26.7	19.3	27.9	76.2	31.2	22.7	35.4	92.1
REGIONAL TOTAL	219.5	159.0	389.8	796.7	252.8	183.7	502.9	973.8

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	4.3	4.6	5.4	4.9
INDIANA	4.3	4.8	6.1	5.3
ILLINOIS	4.0	3.9	4.6	4.2
MICHIGAN	4.3	4.9	4.6	4.6
WISCONSIN	4.4	5.0	4.9	4.7
REGIONAL AVERAGE	4.2	4.5	5.1	4.7

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	35.6	33.8	19.7	27.2	40.7	41.3	26.0	33.4	50.6	53.8	34.9	43.1	61.6	68.9	44.7	53.9
INDIANA	30.2	29.4	19.9	25.0	36.2	35.5	25.3	30.7	45.3	45.1	33.0	39.0	55.5	56.5	41.4	48.1
ILLINOIS	38.6	37.6	22.5	31.8	46.4	46.6	29.5	39.7	57.6	61.9	40.5	51.8	70.0	79.4	52.8	65.1
MICHIGAN	38.9	40.3	27.0	33.6	47.3	49.3	32.5	40.8	59.4	63.3	44.3	53.1	72.9	79.5	57.2	66.9
WISCONSIN	34.4	33.9	23.4	30.4	42.2	41.5	31.2	38.3	53.8	54.9	42.2	50.1	66.6	70.5	54.4	63.3
REGIONAL AVERAGE	35.5	35.0	22.5	29.6	42.6	42.8	28.9	36.6	53.3	55.8	39.0	47.4	65.3	70.9	50.1	59.5

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	72.8	84.5	54.6	64.7	86.4	103.0	66.7	77.5
INDIANA	65.9	68.1	49.8	57.0	78.4	81.8	60.1	67.8
ILLINOIS	82.7	97.5	65.4	78.7	98.2	119.7	81.1	95.2
MICHIGAN	86.6	96.1	70.3	80.6	103.3	115.6	86.2	97.1
WISCONSIN	79.7	86.8	66.9	76.7	95.6	106.9	82.3	93.2
REGIONAL AVERAGE	77.6	86.6	61.4	71.5	92.4	105.4	75.3	86.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	4.0	5.2	6.0	5.0
INDIANA	4.4	4.8	5.4	4.8
ILLINOIS	4.3	5.5	6.3	5.3
MICHIGAN	4.6	5.0	5.5	5.0
WISCONSIN	4.8	5.4	6.2	5.4
REGIONAL AVERAGE	4.4	5.2	5.9	5.1

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	29.0	19.6	49.6	101.3	34.1	23.3	56.7	117.7	40.8	28.7	70.1	144.0	45.6	33.6	86.0	170.4
INDIANA	16.6	9.3	24.7	51.1	19.8	11.1	29.3	61.0	23.6	13.9	37.4	75.8	26.5	16.3	47.5	91.4
ILLINOIS	26.3	22.4	33.3	88.1	28.9	25.8	34.7	95.9	32.1	29.2	40.2	108.8	34.4	31.7	47.8	122.1
MICHIGAN	21.3	13.5	31.1	67.8	23.9	15.7	33.6	75.3	26.3	18.2	38.1	85.0	27.9	20.1	43.9	94.5
WISCONSIN	12.4	9.2	11.2	32.8	14.2	9.9	12.0	37.2	15.7	11.5	14.1	42.6	16.9	12.7	16.8	47.8
REGIONAL TOTAL	105.6	73.0	149.9	341.0	120.9	85.8	166.4	387.0	138.5	101.5	200.0	456.2	151.2	114.4	242.0	526.2

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	48.9	37.7	105.1	197.7	51.4	41.6	128.4	228.5
INDIANA	28.6	18.3	59.8	108.0	30.4	20.1	75.1	127.0
ILLINOIS	34.7	33.0	55.4	131.9	33.9	33.3	64.0	140.7
MICHIGAN	27.5	20.4	48.8	99.5	26.1	19.3	54.2	102.4
WISCONSIN	17.6	13.5	19.7	52.3	17.9	14.2	23.1	56.8
REGIONAL TOTAL	157.3	122.8	298.8	589.4	159.7	128.4	344.9	655.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	3.3	3.9	4.0	3.8
INDIANA	3.4	4.1	4.8	4.2
ILLINOIS	1.9	2.5	2.6	2.4
MICHIGAN	1.9	2.9	2.5	2.4
WISCONSIN	2.3	3.1	2.9	2.7
REGIONAL AVERAGE	2.6	3.3	3.5	3.1

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	35.6	33.8	19.7	27.2	42.3	42.7	27.6	35.1	55.5	58.3	40.3	48.5	72.0	77.4	56.3	64.9
INDIANA	30.2	29.4	19.9	25.0	37.4	36.8	26.7	32.1	49.4	49.3	37.8	43.6	63.6	64.4	51.4	57.3
ILLINOIS	38.6	37.6	22.5	31.8	50.2	49.8	33.1	43.4	71.0	72.3	53.7	64.5	95.3	97.9	77.8	88.7
MICHIGAN	38.9	40.3	27.0	33.6	51.9	53.7	37.1	45.5	75.5	77.8	60.3	69.0	103.4	106.1	87.9	96.6
WISCONSIN	34.4	33.9	23.4	30.4	46.1	45.1	35.0	42.1	67.1	66.8	55.8	63.2	91.8	92.1	80.4	87.8
REGIONAL AVERAGE	35.5	35.0	22.5	29.6	45.6	45.6	31.9	39.6	63.7	64.9	49.6	57.8	85.2	87.6	70.8	79.1

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
OHIO	91.7	99.4	75.7	84.4	117.8	127.8	101.6	110.3
INDIANA	80.6	82.1	68.0	73.8	102.9	105.1	90.2	95.7
ILLINOIS	130.9	133.6	113.2	123.7	182.1	183.9	164.1	173.8
MICHIGAN	149.0	151.3	133.0	141.4	217.3	218.9	200.5	208.5
WISCONSIN	124.7	125.1	113.1	120.3	170.6	170.9	158.8	165.7
REGIONAL AVERAGE	115.4	118.2	100.6	108.7	158.1	161.3	143.0	150.8

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
OHIO	5.2	6.1	7.8	6.4
INDIANA	5.5	5.8	7.0	6.1
ILLINOIS	6.7	7.1	9.3	7.6
MICHIGAN	7.2	7.2	8.8	7.8
WISCONSIN	7.3	7.4	9.2	7.9
REGIONAL AVERAGE	6.4	6.8	8.5	7.3

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	10.7	4.8	11.9	28.2	13.1	6.2	15.4	35.8	16.2	8.4	21.7	47.7	19.3	10.6	29.3	60.9
IOWA	8.5	4.8	7.2	21.0	9.5	6.0	8.7	24.2	10.7	7.8	10.8	30.1	11.7	9.7	14.4	36.8
MISSOURI	13.5	7.7	11.9	34.2	15.7	9.7	13.3	40.0	18.9	13.7	17.8	52.1	21.9	18.5	23.3	65.8
NORTH DAKOTA	2.0	1.3	0.6	4.1	2.2	1.6	0.9	5.0	2.5	2.1	1.4	6.3	2.7	2.5	1.9	7.5
SOUTH DAKOTA	2.1	1.1	0.5	4.0	2.3	1.3	0.6	4.5	2.6	1.8	0.8	5.5	2.8	2.3	1.0	6.5
NEBRASKA	4.8	4.0	2.7	12.2	5.6	5.2	3.1	14.7	6.6	7.1	4.2	19.0	7.7	9.3	5.7	23.9
KANSAS	6.8	6.2	5.8	19.2	7.6	8.0	6.8	23.0	8.3	10.5	9.1	28.5	9.0	13.2	11.8	34.7
REGIONAL TOTAL	48.4	29.9	40.5	122.9	56.0	38.0	48.3	147.1	65.8	51.4	65.7	189.2	75.1	66.0	87.4	236.3

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	22.3	12.4	38.7	75.7	25.5	14.2	51.2	93.7
IOWA	12.4	11.2	19.0	43.8	12.9	12.5	25.0	51.9
MISSOURI	24.8	23.6	30.4	81.5	27.9	29.4	40.0	100.6
NORTH DAKOTA	2.8	2.9	2.5	8.7	2.9	3.3	3.1	9.8
SOUTH DAKOTA	3.0	2.8	1.3	7.5	3.1	3.3	1.6	8.7
NEBRASKA	8.6	11.6	7.4	29.1	9.4	14.1	9.7	35.0
KANSAS	9.5	15.7	15.0	41.1	9.9	18.2	19.2	48.5
REGIONAL TOTAL	83.4	80.3	114.3	287.4	91.7	95.1	149.9	348.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	4.3	5.8	6.7	5.7
IOWA	2.4	5.1	5.1	4.1
MISSOURI	3.5	6.4	4.9	4.8
NORTH DAKOTA	2.1	5.0	8.3	4.4
SOUTH DAKOTA	1.9	5.2	5.3	3.5
NEBRASKA	3.3	6.2	5.5	4.9
KANSAS	2.1	5.5	5.1	4.3
REGIONAL AVERAGE	3.2	5.8	5.6	4.8

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	33.3	35.2	23.6	29.4	43.0	44.8	33.2	39.0	60.4	62.8	48.0	55.1	79.3	83.9	64.3	72.7
IOWA	36.1	36.8	22.2	31.4	47.8	48.2	33.0	42.8	66.7	67.8	50.7	61.1	86.2	89.4	68.6	80.0
MISSOURI	35.1	34.4	23.5	30.8	45.0	44.5	34.4	41.3	60.6	61.8	49.9	57.1	78.4	83.8	67.8	76.1
NORTH DAKOTA	30.8	28.5	26.7	29.4	42.0	37.9	38.2	39.9	60.1	57.0	56.5	58.1	78.7	77.7	74.7	77.3
SOUTH DAKOTA	31.5	34.6	21.6	31.1	41.7	42.8	31.5	40.6	56.8	57.7	46.7	55.6	74.3	76.7	64.2	73.5
NEBRASKA	29.5	26.6	18.6	26.0	39.7	36.7	28.2	36.0	56.3	55.7	42.8	52.9	74.4	77.8	57.8	71.7
KANSAS	31.8	29.5	20.5	27.6	42.3	43.1	32.0	39.4	60.1	66.9	50.2	59.4	80.5	94.3	70.6	82.4
REGIONAL AVERAGE	32.6	32.2	22.4	29.4	43.1	42.6	32.9	39.9	60.1	61.4	49.3	57.0	78.8	83.4	66.9	76.2

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	104.1	111.1	86.2	95.9	136.9	146.3	115.7	126.4
IOWA	113.2	118.7	93.8	106.0	149.6	156.8	127.8	140.6
MISSOURI	98.2	109.4	87.9	' 6	123.5	142.0	113.8	125.1
NORTH DAKOTA	104.7	105.9	100.0	103.7	140.0	143.2	134.0	139.1
SOUTH DAKOTA	94.0	98.8	83.7	94.0	119.3	127.4	108.8	120.5
NEBRASKA	99.0	107.1	78.5	96.9	132.4	145.4	106.4	130.4
KANSAS	109.1	129.3	99.2	113.3	149.0	175.2	138.9	155.0
REGIONAL AVERAGE	103.2	111.4	89.9	101.0	135.8	148.0	120.8	133.9

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	6.4	6.4	7.4	6.7
IOWA	6.4	6.5	8.4	6.9
MISSOURI	5.9	6.6	7.8	6.7
NORTH DAKOTA	6.9	7.4	7.6	7.1
SOUTH DAKOTA	6.3	5.9	8.1	6.3
NEBRASKA	6.6	8.0	8.4	7.5
KANSAS	6.8	8.7	9.2	8.1
REGIONAL AVERAGE	6.5	7.0	8.1	7.0

LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	10.7	4.8	11.9	28.2	13.4	6.4	15.3	36.2	17.5	9.0	21.1	49.0	21.6	11.9	28.8	64.2
IOWA	8.5	4.8	7.2	21.0	9.8	6.1	8.1	24.7	11.6	8.4	10.6	31.6	13.3	11.1	14.4	39.9
MISSOURI	13.5	7.7	11.9	34.2	16.0	9.8	13.2	40.2	20.0	14.3	16.9	52.9	24.0	20.2	22.2	68.5
NORTH DAKOTA	2.0	1.3	0.6	4.1	2.3	1.6	0.9	5.1	2.7	2.1	1.3	6.5	3.0	2.7	1.9	8.1
SOUTH DAKOTA	2.1	1.1	0.5	4.0	2.4	1.3	0.6	4.5	2.7	1.7	0.7	5.5	3.0	2.3	1.0	6.7
NEBRASKA	4.8	4.0	2.7	12.2	5.8	5.4	3.2	15.2	7.3	7.8	4.3	20.4	8.8	10.7	5.9	26.9
KANSAS	6.8	6.2	5.8	19.2	7.9	8.2	6.9	23.5	9.3	11.3	9.1	30.3	10.7	14.8	12.2	38.6
REGIONAL TOTAL	48.4	29.9	40.5	122.9	57.5	38.8	48.1	149.4	71.0	54.6	64.1	196.1	84.5	73.7	86.4	252.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	26.1	14.8	38.4	81.8	31.4	17.9	50.5	102.9
IOWA	14.9	15.9	19.3	49.6	16.7	16.9	25.9	61.2
MISSOURI	28.1	27.1	28.7	86.5	32.6	35.2	36.7	108.0
NORTH DAKOTA	3.4	3.4	2.7	9.9	3.7	4.1	3.6	12.1
SOUTH DAKOTA	3.3	2.9	1.3	8.0	3.6	3.7	1.7	9.6
NEBRASKA	10.4	14.2	8.2	34.6	12.3	18.5	11.4	44.5
KANSAS	12.3	18.9	16.1	48.3	14.0	23.7	21.1	60.2
REGIONAL TOTAL	98.5	95.2	114.6	318.8	114.3	120.0	151.0	398.5

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	5.2	6.7	6.5	6.1
IOWA	3.3	6.2	5.1	4.7
MISSOURI	4.2	7.1	4.6	5.1
NORTH DAKOTA	3.0	5.6	8.3	5.0
SOUTH DAKOTA	2.4	5.2	4.9	3.7
NEBRASKA	4.4	7.2	5.8	5.8
KANSAS	3.3	6.4	5.4	5.1
REGIONAL AVERAGE	4.1	6.6	5.6	5.3

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	33.3	35.2	23.6	29.4	40.6	42.3	30.7	36.6	52.9	55.8	40.4	47.9	67.1	74.0	50.8	60.9
IOWA	36.1	36.8	22.2	31.4	44.8	45.2	29.9	39.8	57.5	59.0	41.3	52.3	71.6	77.2	52.9	66.3
MISSOURI	35.1	34.4	23.5	30.8	43.3	42.8	32.6	39.6	55.2	56.8	44.3	52.1	68.7	76.5	57.3	67.3
NORTH DAKOTA	30.8	28.5	26.7	29.4	39.2	34.9	35.2	37.0	51.1	47.5	46.7	48.9	64.3	63.6	58.8	62.7
SOUTH DAKOTA	31.5	34.6	21.6	31.1	40.2	41.3	29.9	39.2	52.5	53.1	42.0	51.2	66.0	67.7	55.2	65.0
NEBRASKA	29.5	26.6	18.6	26.0	36.6	33.7	24.9	33.0	47.6	48.1	33.1	44.6	60.3	67.7	40.5	58.8
KANSAS	31.8	29.5	20.5	27.6	39.0	40.4	28.7	36.4	49.6	59.2	39.3	50.1	61.6	83.2	50.7	66.6
REGIONAL AVERAGE	32.6	32.2	22.4	29.4	40.5	40.1	30.3	37.4	52.3	54.2	41.0	49.6	65.7	72.9	52.3	63.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	82.2	95.0	61.2	74.4	100.9	121.0	74.2	91.0
IOWA	86.0	98.1	64.1	80.7	103.4	124.5	77.3	98.1
MISSOURI	82.8	100.7	70.7	84.4	100.0	132.2	87.1	106.3
NORTH DAKOTA	77.8	81.7	69.8	76.9	94.1	104.7	81.6	93.9
SOUTH DAKOTA	79.7	84.7	68.3	79.8	96.5	107.0	84.0	98.5
NEBRASKA	73.7	91.2	45.7	74.3	90.2	121.9	48.3	92.7
KANSAS	74.0	111.1	61.8	84.7	89.3	146.8	74.8	107.2
REGIONAL AVERAGE	79.4	94.7	63.1	79.?	96.3	122.6	75.3	98.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	5.1	5.5	5.6	5.3
IOWA	5.0	5.4	6.4	5.5
MISSOURI	4.9	5.9	6.6	5.7
NORTH DAKOTA	5.4	5.9	5.8	5.6
SOUTH DAKOTA	5.4	4.9	6.9	5.4
NEBRASKA	5.2	6.9	5.7	6.0
KANSAS	4.8	7.7	6.7	6.5
REGIONAL AVERAGE	5.1	6.0	6.2	5.7

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	10.7	4.8	11.9	28.2	13.0	6.3	15.8	36.2	15.7	8.7	23.4	49.3	18.2	10.8	34.1	65.1
IOWA	8.5	4.8	7.2	21.0	9.4	6.2	8.7	25.0	10.3	8.7	13.4	33.2	11.0	11.3	20.2	43.7
MISSOURI	13.5	7.7	11.9	34.2	15.7	10.1	14.4	41.4	18.7	15.4	22.3	58.3	21.3	21.9	32.6	78.2
NORTH DAKOTA	2.0	1.3	0.6	4.1	2.2	1.6	1.0	5.1	2.4	2.4	1.8	6.9	2.5	3.0	2.6	8.5
SOUTH DAKOTA	2.1	1.1	0.5	4.0	2.4	1.4	0.6	4.7	2.6	2.2	1.0	6.3	2.9	3.1	1.5	8.0
NEBRASKA	4.8	4.0	2.7	12.2	5.5	5.3	3.3	14.9	6.1	7.5	4.9	19.5	6.6	9.8	7.1	24.7
KANSAS	6.8	6.2	5.8	19.2	7.4	8.2	7.2	23.3	7.4	10.9	10.3	29.3	7.4	13.5	14.0	35.7
REGIONAL TOTAL	48.4	29.9	40.5	122.9	55.5	39.1	51.1	150.7	63.2	55.7	77.2	202.8	69.8	73.4	112.0	264.0

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	20.6	12.8	50.7	86.7	23.1	15.0	77.8	119.4
IOWA	11.3	13.3	30.1	56.1	11.2	14.7	45.0	73.0
MISSOURI	23.8	28.6	47.3	103.0	26.4	36.3	70.1	137.1
NORTH DAKOTA	2.5	3.5	3.4	10.0	2.5	4.0	4.5	11.6
SOUTH DAKOTA	3.0	4.0	2.0	9.6	3.2	4.9	2.7	11.5
NEBRASKA	6.8	11.9	9.8	30.1	6.9	13.8	13.7	36.3
KANSAS	6.8	15.2	18.2	41.1	6.1	15.8	23.3	46.3
REGIONAL TOTAL	74.8	89.2	161.5	336.6	79.4	104.6	237.0	435.3

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	3.9	5.9	7.8	6.2
IOWA	1.9	6.3	7.7	5.4
MISSOURI	3.3	7.7	7.5	6.1
NORTH DAKOTA	1.6	6.4	10.5	5.3
SOUTH DAKOTA	2.1	7.6	8.1	5.0
NEBRASKA	2.2	6.5	7.2	5.2
KANSAS	0.6	5.7	6.5	4.5
REGIONAL AVERAGE	2.7	6.6	7.5	5.6

WEST NORTH CENTRAL REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	33.3	35.2	23.6	29.4	44.2	45.9	34.0	39.9	65.2	68.2	51.7	59.1	89.6	95.2	71.0	80.5
IOWA	36.1	36.8	22.2	31.4	49.2	49.7	33.8	43.8	74.5	76.9	55.3	67.2	99.8	107.1	73.3	89.1
MISSOURI	35.1	34.4	23.5	30.8	45.9	45.5	35.3	42.0	64.5	68.0	53.6	61.2	86.1	98.8	74.9	85.0
NORTH DAKOTA	30.8	28.5	26.7	29.4	43.8	39.8	40.1	41.7	68.4	67.8	65.1	67.3	94.8	99.9	90.1	95.2
SOUTH DAKOTA	31.5	34.6	21.6	31.1	41.9	42.8	31.9	40.7	57.7	60.5	47.9	57.0	75.9	85.7	65.4	78.0
NEBRASKA	29.5	26.6	18.6	26.0	42.3	39.5	30.5	38.5	68.6	69.5	53.7	65.0	100.2	106.5	79.5	96.6
KANSAS	31.8	29.5	20.5	27.6	45.5	46.7	35.3	42.7	77.1	85.3	67.3	76.7	116.9	132.3	107.0	118.9
REGIONAL AVERAGE	32.6	32.2	22.4	29.4	44.7	44.3	34.4	41.3	68.0	70.9	56.4	64.8	94.7	103.7	80.2	91.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MINNESOTA	122.4	131.5	95.2	107.4	168.2	182.1	124.5	140.6
IOWA	140.0	152.0	101.8	121.9	198.2	213.2	138.7	163.6
MISSOURI	110.6	135.3	99.0	112.2	142.7	182.5	130.3	147.0
NORTH DAKOTA	136.1	146.2	128.9	137.3	196.8	211.7	185.1	197.5
SOUTH DAKOTA	97.7	117.5	86.2	103.9	126.1	159.4	112.6	137.8
NEBRASKA	150.5	161.4	120.8	144.8	228.4	242.5	183.4	216.2
KANSAS	197.4	214.5	186.5	198.9	337.9	351.1	325.1	335.9
REGIONAL AVERAGE	136.4	151.2	116.9	132.3	199.8	220.4	171.4	191.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MINNESOTA	7.3	7.4	8.2	7.5
IOWA	7.5	7.9	8.9	7.7
MISSOURI	6.6	7.8	8.6	7.5
NORTH DAKOTA	8.4	9.4	9.1	8.8
SOUTH DAKOTA	6.5	6.7	8.2	6.8
NEBRASKA	9.1	10.4	10.9	9.P
KANSAS	9.7	11.3	12.5	11.0
REGIONAL AVERAGE	7.9	8.7	9.5	8.5

SOUTH ATLANTIC REGION   VERSION II   BASE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	1.6	1.2	2.6	5.4	1.9	1.3	3.2	6.5	2.5	1.7	3.9	8.2	3.2	2.2	4.9	10.4
MARYLAND AND D. C.	11.0	10.9	13.5	36.0	13.0	11.5	20.2	45.5	15.7	13.4	27.1	57.2	19.2	16.3	33.6	70.4
VIRGINIA	16.7	11.0	9.7	41.7	20.4	13.0	10.7	49.3	25.1	16.0	12.5	60.0	30.9	20.2	15.2	74.1
WEST VIRGINIA	5.1	3.0	9.9	18.1	6.5	3.9	12.4	22.9	8.3	4.9	15.4	28.7	10.1	5.9	18.7	35.0
NORTH CAROLINA	20.4	11.9	20.4	54.1	25.1	14.5	22.7	64.1	31.6	18.4	27.2	79.4	38.9	23.3	34.0	98.8
SOUTH CAROLINA	10.4	6.1	14.8	32.2	13.1	7.6	16.3	38.0	16.3	9.4	19.4	46.4	20.1	11.7	24.5	57.8
GEORGIA	18.5	12.2	14.6	45.7	21.5	14.3	16.3	52.5	26.5	18.7	19.4	65.1	33.0	24.9	23.8	82.5
FLORIDA	38.0	21.2	14.2	73.3	42.9	26.1	15.5	86.9	57.2	36.2	18.1	114.6	78.0	51.0	22.1	155.3
REGIONAL TOTAL	119.6	77.4	99.7	306.6	144.2	92.3	117.4	365.6	183.2	118.6	143.1	459.5	233.5	155.6	176.7	584.3

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	3.9	2.6	6.0	12.6	4.5	3.1	7.3	15.0
MARYLAND AND D. C.	22.4	19.3	40.1	83.3	25.4	22.3	46.9	96.3
VIRGINIA	36.3	24.4	18.5	88.6	41.7	29.1	22.3	104.1
WEST VIRGINIA	12.1	6.9	22.6	41.8	14.4	8.0	27.1	49.7
NORTH CAROLINA	45.3	27.5	42.0	118.0	51.2	31.3	51.3	137.5
SOUTH CAROLINA	23.3	13.5	33.9	69.6	26.3	15.2	38.7	82.4
GEORGIA	38.9	31.1	28.9	99.8	44.7	37.9	34.6	118.2
FLORIDA	98.2	65.3	27.1	195.9	118.2	79.3	32.9	236.8
REGIONAL TOTAL	280.5	190.8	216.1	709.7	326.4	226.1	261.1	840.0

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	5.4	4.5	4.4	4.7
MARYLAND AND D. C.	4.7	3.0	6.7	4.9
VIRGINIA	4.5	4.4	3.3	4.2
WEST VIRGINIA	5.0	4.9	4.7	4.8
NORTH CAROLINA	4.7	4.9	3.7	4.4
SOUTH CAROLINA	4.8	4.7	3.6	4.3
GEORGIA	4.2	5.2	3.6	4.3
FLORIDA	5.7	6.5	3.2	5.5
REGIONAL AVERAGE	4.9	5.1	4.2	4.7

FORECASTS OF ELECTRICITY PRICE (\$ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	45.3	41.4	28.9	36.4	58.0	54.3	41.5	49.2	81.4	79.1	64.0	72.6	106.1	106.1	86.3	96.8
MARYLAND AND D. C.	52.7	53.5	37.4	47.1	70.0	67.8	53.6	62.0	100.6	101.0	81.5	91.5	130.4	135.8	107.0	120.3
VIRGINIA	35.1	34.2	22.9	31.7	47.7	47.2	34.7	44.4	69.5	69.9	54.6	66.2	92.5	94.1	73.7	88.7
WEST VIRGINIA	35.9	34.2	21.8	27.9	44.2	41.4	30.2	36.1	58.3	56.1	43.3	49.8	75.1	73.6	58.2	65.7
NORTH CAROLINA	32.9	29.8	21.4	27.8	42.7	36.6	29.6	36.5	59.9	51.6	44.7	52.6	78.0	66.5	59.6	68.7
SOUTH CAROLINA	33.1	29.5	19.3	25.9	43.2	37.7	28.6	35.6	61.5	54.8	43.7	52.5	80.9	72.8	57.6	69.1
GEORGIA	29.3	35.6	23.1	29.0	40.4	46.4	33.2	39.8	59.3	66.5	50.7	58.8	80.7	89.6	68.6	79.9
FLORIDA	36.7	37.0	27.1	35.1	50.2	51.8	39.8	48.8	75.8	78.1	66.1	75.0	102.0	104.3	92.1	101.5
REGIONAL AVERAGE	37.6	37.0	25.2	32.6	49.5	47.9	36.4	44.0	70.8	69.6	56.1	64.9	93.2	92.9	75.4	86.3

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	142.1	144.0	120.1	131.0	191.2	194.9	167.4	180.3
MARYLAND AND D. C.	173.5	184.4	145.3	162.3	231.8	249.1	198.5	219.4
VIRGINIA	125.9	128.5	103.4	121.5	170.8	174.7	144.8	165.8
WEST VIRGINIA	93.6	92.6	74.2	82.9	117.5	116.7	94.6	104.8
NORTH CAROLINA	104.4	90.2	83.9	93.5	139.7	123.0	117.9	127.4
SOUTH CAROLINA	108.8	100.1	80.3	94.1	146.1	137.0	112.1	128.0
GEORGIA	113.2	123.9	98.3	112.2	157.9	170.4	140.8	156.9
FLORIDA	144.4	147.4	136.4	144.3	204.6	207.8	200.8	205.2
REGIONAL AVERAGE	125.8	126.4	105.2	117.8	170.0	171.7	147.1	161.0

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	6.3	7.0	8.1	7.2
MARYLAND AND D. C.	6.7	6.9	7.8	6.9
VIRGINIA	7.2	7.5	8.7	7.6
WEST VIRGINIA	5.4	5.6	7.3	6.3
NORTH CAROLINA	6.4	5.9	7.6	6.7
SOUTH CAROLINA	6.6	6.7	8.1	7.3
GEORGIA	7.5	6.8	8.1	7.5
FLORIDA	7.6	7.6	9.1	7.9
REGIONAL AVERAGE	6.7	6.8	8.1	7.2

SOUTH ATLANTIC REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	1.6	1.2	2.6	5.4	2.0	1.4	3.2	6.7	2.9	2.0	4.1	9.1	4.0	2.7	5.4	12.2
MARYLAND AND D. C.	11.0	10.9	13.5	36.0	13.7	12.1	20.6	47.2	18.5	15.6	29.1	64.2	24.3	19.9	37.9	83.7
VIRGINIA	16.7	11.0	9.7	41.7	21.4	13.7	11.0	51.5	28.6	18.3	13.4	67.6	36.9	24.1	17.0	87.2
WEST VIRGINIA	5.1	3.0	9.9	18.1	6.7	4.0	12.6	23.3	9.0	5.4	16.0	30.5	11.6	6.9	20.0	38.7
NORTH CAROLINA	20.4	11.9	20.4	54.1	25.9	15.2	23.0	65.9	34.6	21.1	28.5	86.5	44.1	28.4	36.6	112.2
SOUTH CAROLINA	10.4	6.1	14.8	32.2	13.5	8.0	16.5	39.1	17.9	10.7	20.5	50.4	22.8	13.8	26.8	65.2
GEORGIA	18.5	12.2	14.6	45.7	22.4	14.9	16.6	54.4	29.7	21.0	20.4	71.8	38.8	29.0	26.0	94.7
FLORIDA	36.0	21.2	14.2	73.3	45.5	27.9	15.9	91.8	67.9	43.7	13.5	134.7	98.8	65.9	25.1	195.0
REGIONAL TOTAL	119.6	77.4	99.7	306.6	151.0	97.3	119.3	379.8	209.2	137.7	151.6	515.0	281.5	190.7	194.7	688.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	5.2	3.5	7.0	15.6	6.6	4.4	9.0	20.3
MARYLAND AND D. C.	30.6	24.7	47.8	105.1	37.8	30.3	59.8	130.3
VIRGINIA	46.0	30.8	21.7	110.2	56.8	39.3	27.8	138.5
WEST VIRGINIA	14.4	8.3	24.7	47.7	17.7	9.9	30.4	58.3
NORTH CAROLINA	54.6	37.0	47.1	142.6	66.9	47.7	60.7	180.2
SOUTH CAROLINA	28.2	17.3	35.8	83.5	34.5	21.3	49.1	107.8
GEORGIA	49.1	38.7	33.0	121.9	61.3	50.9	42.0	155.5
FLORIDA	137.1	93.6	32.4	270.4	187.2	130.8	42.0	369.9
REGIONAL TOTAL	365.3	254.0	249.6	897.1	468.9	334.6	320.8	1160.8

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	7.0	6.1	5.2	6.0
MARYLAND AND D. C.	5.8	4.4	7.7	6.2
VIRGINIA	5.8	5.8	4.1	5.4
WEST VIRGINIA	6.0	6.0	5.1	5.6
NORTH CAROLINA	5.7	6.4	4.3	5.3
SOUTH CAROLINA	5.7	6.0	4.3	5.2
GEORGIA	5.5	6.4	4.2	5.3
FLORIDA	7.5	8.4	4.2	7.2
REGIONAL AVERAGE	6.3	6.6	4.9	6.0

SOUTH ATLANTIC REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	45.3	41.9	28.9	36.4	54.1	50.9	37.4	45.3	68.7	68.6	49.3	59.8	88.1	92.0	62.1	77.4
MARYLAND AND D. C.	52.7	53.5	37.4	47.1	64.6	63.5	47.8	56.9	83.2	83.0	61.1	74.2	106.5	119.6	74.2	94.8
VIRGINIA	35.1	34.2	22.9	31.7	44.4	44.5	30.5	41.1	60.5	62.4	41.4	56.8	80.9	84.7	53.1	76.0
WEST VIRGINIA	35.9	34.2	21.8	27.9	42.6	39.9	28.4	34.4	53.9	52.1	37.5	45.0	68.0	67.5	47.5	57.2
NORTH CAROLINA	32.9	29.8	21.4	27.8	40.9	34.5	27.3	34.5	54.5	45.0	36.7	46.1	71.4	57.3	47.0	59.5
SOUTH CAROLINA	33.1	29.5	19.3	25.9	41.3	35.6	26.0	33.5	56.0	48.7	34.7	45.5	73.5	64.9	42.9	58.8
GEORGIA	29.3	35.6	23.1	29.0	37.9	44.0	30.1	37.2	52.2	59.9	40.4	51.1	71.1	81.1	51.8	68.9
FLORIDA	36.7	37.8	27.1	35.1	45.6	47.3	34.4	44.2	61.9	64.4	47.9	60.6	82.8	85.8	62.9	81.2
REGIONAL AVERAGE	37.6	37.0	25.2	32.6	46.4	45.0	32.7	40.9	61.4	61.1	43.6	54.9	80.3	81.6	55.2	71.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	109.6	117.7	74.4	95.8	136.5	150.1	89.1	118.1
MARYLAND AND D. C.	132.3	155.9	95.3	116.2	165.1	203.0	97.3	142.3
VIRGINIA	103.9	109.9	64.3	97.0	133.3	142.2	77.2	123.5
WEST VIRGINIA	83.8	84.0	57.3	70.0	103.7	104.5	69.0	85.7
NORTH CAROLINA	89.6	70.3	57.2	73.4	112.5	86.3	69.4	90.4
SOUTH CAROLINA	93.1	82.7	48.4	71.2	117.0	105.3	50.8	83.7
GEORGIA	92.8	105.5	63.3	88.8	120.8	137.3	77.1	114.3
FLORIDA	105.1	107.8	78.1	102.7	132.9	134.7	96.7	129.4
REGIONAL AVERAGE	101.3	104.2	66.0	89.4	127.7	132.9	78.3	110.9

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	4.9	5.9	5.6	5.5
MARYLAND AND D. C.	5.1	5.9	5.0	5.1
VIRGINIA	6.2	6.7	6.2	6.5
WEST VIRGINIA	4.7	5.0	5.7	5.3
NORTH CAROLINA	5.7	4.8	5.8	5.6
SOUTH CAROLINA	5.9	5.8	5.9	6.0
GEORGIA	6.5	6.1	6.0	6.4
FLORIDA	6.0	6.0	6.2	6.2
REGIONAL AVERAGE	5.6	5.8	5.7	5.8

SOUTH ATLANTIC REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	1.6	1.2	2.6	5.4	1.9	1.3	3.1	6.4	2.3	1.5	3.7	7.5	2.7	1.8	4.4	9.1
MARYLAND AND D. C.	11.0	10.9	13.5	35.0	12..	11.2	20.1	44.8	14.5	12.3	26.0	53.7	16.9	14.4	31.3	63.7
VIRGINIA	16.7	11.0	9.7	41.7	19.8	12.6	10.6	48.1	22.5	14.2	11.8	54.2	26.1	16.9	13.7	63.5
WEST VIRGINIA	5.1	3.0	9.9	18.1	6.4	3.8	12.4	22.8	8.1	4.7	15.2	28.1	9.7	5.6	18.1	33.6
NORTH CAROLINA	20.4	11.9	20.4	54.1	25.0	14.4	22.6	63.7	31.0	17.7	26.8	77.5	37.5	21.7	32.9	94.7
SOUTH CAROLINA	10.4	6.1	14.8	32.2	13.0	7.5	16.2	37.8	16.0	9.0	19.0	45.3	19.4	11.0	23.6	55.4
GEORGIA	18.5	12.2	14.6	45.7	21.2	14.2	16.2	52.1	25.3	17.8	18.9	62.5	30.7	23.2	22.7	77.3
FLORIDA	36.0	21.2	14.2	73.3	41.6	25.3	15.3	84.5	50.7	31.6	17.1	102.2	64.4	41.5	20.2	129.5
REGIONAL TOTAL	119.6	77.4	99.7	306.6	141.8	90.3	116.5	360.1	170.3	108.8	138.4	431.0	207.5	136.2	166.9	526.8

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	3.0	2.0	5.2	10.2	2.9	2.0	6.0	10.9
MARYLAND AND D. C.	18.3	15.9	36.0	71.5	18.8	16.8	40.3	77.3
VIRGINIA	28.0	18.6	16.0	70.0	28.2	15.3	18.3	73.6
WEST VIRGINIA	11.4	6.5	21.6	39.6	13.3	7.3	25.6	46.5
NORTH CAROLINA	40.9	23.4	39.5	106.8	41.8	23.3	46.1	114.3
SOUTH CAROLINA	21.1	11.7	28.7	63.2	21.4	11.7	34.1	69.1
GEORGIA	33.5	27.0	26.7	88.0	34.2	29.2	30.4	94.8
FLORIDA	71.1	46.0	23.5	144.5	71.1	45.7	26.8	147.5
REGIONAL TOTAL	227.4	151.2	197.2	593.9	231.8	155.3	227.7	634.0

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	4.1	3.2	3.8	3.7
MARYLAND AND D. C.	3.1	2.0	6.2	4.2
VIRGINIA	3.3	3.1	2.5	3.0
WEST VIRGINIA	4.7	4.5	4.4	4.5
NORTH CAROLINA	4.5	4.4	3.5	4.1
SOUTH CAROLINA	4.5	4.3	3.4	3.9
GEORGIA	3.7	4.7	3.2	3.9
FLORIDA	4.2	4.9	2.6	4.1
REGIONAL AVERAGE	4.0	4.1	3.7	3.9

SOUTH ATLANTIC REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	45.3	41.4	28.9	36.4	62.1	58.1	45.7	53.2	99.9	96.3	83.3	91.0	135.9	133.4	118.6	126.9
MARYLAND AND D. C.	52.7	53.5	37.4	47.1	73.9	71.3	57.6	65.8	118.8	117.2	100.8	109.5	160.7	162.1	140.2	150.8
VIRGINIA	35.1	34.2	22.9	31.7	51.3	50.5	38.7	48.0	85.6	84.7	72.9	82.2	118.6	118.3	104.8	115.2
WEST VIRGINIA	35.9	34.2	21.8	27.9	45.5	42.7	31.5	37.4	63.1	60.6	48.2	54.6	84.0	82.1	67.9	75.0
NORTH CAROLINA	32.9	29.8	21.4	27.8	44.2	38.1	31.1	38.0	65.3	57.1	50.6	58.2	87.3	76.3	70.2	78.6
SOUTH CAROLINA	33.1	29.5	19.3	25.9	44.7	39.1	30.2	37.2	67.2	60.5	50.1	58.4	90.6	82.7	69.2	79.6
GEORGIA	29.3	35.6	23.1	29.0	42.2	48.2	35.2	41.7	67.2	74.2	59.5	66.9	93.9	102.4	84.0	93.6
FLORIDA	36.7	37.8	27.1	35.1	54.4	56.0	44.4	53.1	95.5	97.7	87.6	94.8	135.5	138.4	129.7	135.6
REGIONAL AVERAGE	37.6	37.0	25.2	32.6	52.3	50.5	39.3	46.8	82.8	81.1	69.1	77.0	113.3	112.0	98.1	106.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
DELAWARE	214.1	211.6	196.9	204.8	344.3	340.9	327.8	334.6
MARYLAND AND D. C.	238.3	241.7	216.1	227.7	357.0	361.3	334.0	345.7
VIRGINIA	184.8	184.4	171.5	181.3	291.7	290.8	280.0	288.2
WEST VIRGINIA	107.6	106.0	89.7	97.6	138.7	137.3	118.8	127.4
NORTH CAROLINA	130.0	118.4	113.6	121.2	197.6	187.1	184.0	189.8
SOUTH CAROLINA	135.9	128.1	113.2	123.8	207.5	200.7	185.4	195.1
GEORGIA	149.1	158.5	139.6	149.1	239.1	248.5	231.6	239.6
FLORIDA	233.0	236.4	231.6	233.4	406.8	411.1	410.9	408.9
REGIONAL AVERAGE	174.1	173.1	159.0	167.4	272.8	272.2	259.0	266.2

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FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
DELAWARE	8.2	8.7	10.6	9.3
MARYLAND AND D. C.	8.3	8.2	9.9	8.7
VIRGINIA	9.1	9.3	11.5	9.7
WEST VIRGINIA	6.3	6.5	8.4	7.3
NORTH CAROLINA	7.2	7.0	8.8	7.7
SOUTH CAROLINA	7.5	7	9.5	8.4
GEORGIA	8.7	7.8	9.7	8.7
FLORIDA	9.8	9.7	11.8	10.1
REGIONAL AVERAGE	8.2	8.2	10.2	8.9

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	10.7	10.2	15.2	37.3	14.1	12.1	17.8	45.4	18.9	14.9	24.5	60.2	24.1	18.1	32.6	77.2
TENNESSEE	23.6	3.9	32.6	60.7	27.6	5.7	39.1	73.2	34.4	8.3	51.5	95.2	42.5	11.3	66.6	121.6
ALABAMA	14.8	6.5	24.1	45.8	17.7	9.4	28.5	56.1	22.3	13.7	37.0	73.5	27.4	18.6	47.1	93.9
MISSISSIPPI	8.2	4.7	7.2	20.7	9.2	5.8	8.5	24.1	11.5	8.0	10.9	31.2	14.5	10.8	13.9	40.2
REGIONAL TOTAL	57.4	25.3	79.2	164.5	68.7	33.0	93.9	198.8	87.1	44.9	123.9	260.2	108.5	58.8	160.1	332.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	28.6	20.7	41.0	93.1	33.1	23.4	50.8	110.7
TENNESSEE	49.2	13.3	80.8	144.9	56.3	15.0	97.2	170.3
ALABAMA	31.4	22.6	56.6	111.7	35.3	26.6	67.6	130.6
MISSISSIPPI	16.8	12.8	16.5	47.2	18.8	14.6	19.5	54.1
REGIONAL TOTAL	126.0	69.5	194.9	396.8	143.4	79.6	235.1	465.7

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	6.0	4.2	5.6	5.3
TENNESSEE	4.3	7.9	5.2	5.1
ALABAMA	4.5	7.8	4.9	5.3
MISSISSIPPI	4.1	6.1	4.8	4.9
REGIONAL AVERAGE	4.7	6.2	5.2	5.2

EAST SOUTH CENTRAL REGION VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	26.2	16.7	18.8	20.4	32.8	28.1	29.7	30.3	44.3	43.6	41.1	42.3	57.9	56.6	53.1	55.5
TENNESSEE	23.0	27.2	18.6	20.9	31.1	34.4	27.0	29.2	46.6	46.3	40.9	43.5	64.4	59.5	55.9	59.2
ALABAMA	27.6	30.3	18.3	23.0	35.9	37.8	26.4	31.3	50.2	51.2	39.9	45.2	65.8	65.6	54.0	59.8
MISSISSIPPI	31.3	33.1	23.8	29.1	44.8	45.9	37.4	42.4	64.2	65.1	57.3	62.0	85.9	86.3	78.9	83.5
REGIONAL AVERAGE	27.0	26.8	19.9	23.3	36.2	36.6	30.1	33.3	51.3	51.0	44.8	48.2	68.5	67.0	60.5	64.5

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	78.0	76.8	71.2	74.6	105.5	103.9	96.4	100.8
TENNESSEE	51.5	83.2	81.1	84.9	129.3	117.8	117.5	121.5
ALABAMA	90.1	88.6	77.4	83.3	123.9	121.0	110.6	116.4
MISSISSIPPI	123.2	123.0	116.1	120.6	177.6	176.7	170.4	174.7
REGIONAL AVERAGE	95.7	92.9	86.5	90.9	134.1	129.8	123.7	128.3

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	5.8	9.1	7.7	7.4
TENNESSEE	7.6	5.8	8.2	7.7
ALABAMA	6.4	5.7	8.0	7.0
MISSISSIPPI	7.5	7.1	8.9	7.8
REGIONAL AVERAGE	6.9	6.8	8.3	7.5

EAST SOUTH CENTRAL REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	10.7	10.2	15.2	37.3	14.6	12.8	19.0	47.9	20.7	17.1	28.5	68.4	27.5	22.0	42.4	94.9
TENNESSEE	23.6	3.5	32.6	60.7	28.7	6.4	42.0	78.0	37.6	11.1	61.0	110.7	47.8	17.0	87.0	153.4
ALABAMA	14.8	6.5	24.1	45.8	18.5	10.4	31.1	60.5	24.9	17.3	45.7	89.7	32.0	25.9	66.8	125.7
MISSISSIPPI	8.2	4.7	7.2	20.7	10.6	6.8	9.4	26.8	13.7	11.0	13.5	39.1	18.3	16.7	19.0	55.4
REGIONAL TOTAL	57.4	25.3	79.2	164.5	71.8	36.5	101.5	213.2	96.9	56.4	148.7	307.0	125.7	81.6	215.2	429.4

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	34.8	27.5	62.5	128.8	43.3	34.3	99.9	183.3
TENNESSEE	59.3	24.1	120.8	206.3	73.1	33.2	167.3	276.4
ALABAMA	39.6	36.2	96.1	173.4	48.6	49.7	142.8	243.1
MISSISSIPPI	23.6	23.8	26.2	75.4	30.0	33.5	36.1	101.9
REGIONAL TOTAL	157.3	111.7	305.6	583.9	195.0	150.6	446.1	804.7

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	7.0	5.6	7.6	6.9
TENNESSEE	5.2	11.1	7.3	6.8
ALABAMA	5.7	10.4	7.5	7.5
MISSISSIPPI	5.9	9.5	7.2	7.3
REGIONAL AVERAGE	5.8	8.7	7.4	7.1

EAST SOUTH CENTRAL REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	26.2	16.7	18.8	20.4	31.2	27.6	28.2	29.0	39.7	40.4	35.8	38.2	50.9	56.2	42.5	48.3
TENNESSEE	23.0	27.2	18.6	20.9	29.5	31.8	25.0	27.3	42.1	38.9	34.4	37.5	57.9	48.7	44.7	49.3
ALABAMA	27.6	30.3	18.3	23.0	33.7	35.4	23.7	28.8	43.8	45.0	30.5	37.1	56.2	57.7	36.6	46.1
MISSISSIPPI	31.3	33.1	23.8	29.1	39.4	40.6	32.3	37.2	51.4	53.1	44.5	49.5	66.1	69.1	57.6	64.0
REGIONAL AVERAGE	27.0	26.8	19.9	23.3	33.5	33.8	27.3	30.6	44.3	44.4	36.3	40.6	57.8	57.9	45.3	51.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	63.7	73.9	46.1	57.1	80.3	96.9	40.5	61.1
TENNESSEE	75.8	60.3	55.1	61.7	99.1	75.9	67.8	77.1
ALABAMA	70.2	72.0	41.0	54.2	88.1	90.7	42.2	61.4
MISSISSIPPI	82.3	86.7	70.4	79.5	103.4	10?.7	85.6	99.0
REGIONAL AVERAGE	73.0	73.2	53.1	63.2	92.7	93.3	59.0	74.7

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	4.9	9.1	6.0	6.3
TENNESSEE	6.8	4.3	6.5	6.3
ALABAMA	5.2	4.7	5.1	5.1
MISSISSIPPI	5.5	5.4	6.5	5.8
REGIONAL AVERAGE	5.6	5.7	6.1	5.9

EAST SOUTH CENTRAL REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	10.7	10.2	15.2	37.3	14.1	12.3	18.5	46.3	18.5	15.6	26.9	63.0	23.4	19.1	36.8	81.9
TENNESSEE	23.6	3.9	32.6	60.7	27.3	5.9	40.1	74.0	32.7	8.4	54.4	96.6	39.6	11.2	71.1	123.1
ALABAMA	14.8	6.5	24.1	45.8	17.6	9.7	29.5	57.3	21.6	14.4	40.0	76.8	26.1	19.7	51.9	98.5
MISSISSIPPI	8.2	4.7	7.2	20.7	8.8	5.6	8.5	23.5	9.9	7.0	10.7	28.3	11.6	9.0	13.5	34.9
REGIONAL TOTAL	57.4	25.3	79.2	164.5	67.7	33.5	96.7	201.1	82.8	45.4	132.1	264.6	100.6	59.0	173.3	338.4

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	25.8	20.6	44.6	94.1	27.2	21.3	52.7	104.4
TENNESSEE	42.5	11.8	82.9	138.5	43.6	11.5	94.8	151.4
ALABAMA	28.0	22.2	60.5	111.7	28.8	23.6	69.5	122.9
MISSISSIPPI	11.8	9.0	15.1	36.9	11.4	8.5	16.6	37.4
REGIONAL TOTAL	108.1	63.7	203.1	381.1	111.0	64.9	233.5	416.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	5.7	4.6	6.5	5.8
TENNESSEE	3.7	7.9	5.7	5.2
ALABAMA	4.1	8.2	5.6	5.6
MISSISSIPPI	2.5	4.7	4.6	3.8
REGIONAL AVERAGE	4.1	6.2	5.8	5.3

EAST SOUTH CENTRAL REGION   VERSION IA   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE (\$ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	26.2	16.7	18.8	20.4	33.9	29.5	30.8	31.4	48.4	46.9	45.2	46.6	64.7	65.7	59.7	62.6
TENNESSEE	23.0	27.2	18.6	20.9	32.7	36.1	28.9	30.9	53	54.0	48.8	50.8	76.1	73.4	69.9	72.2
ALABAMA	27.6	30.3	18.3	23.0	37.3	39.1	27.6	32.6	55.8	57.0	45.1	50.4	75.6	76.4	63.5	69.3
MISSISSIPPI	31.3	33.1	23.8	29.1	0.0	51.1	42.5	47.5	86.4	87.2	79.3	83.8	124.5	125.1	117.8	122.0
REGIONAL AVERAGE	27.0	26.8	19.9	23.3	38.5	38.9	32.4	35.6	61.0	61.3	54.6	57.9	85.2	85.2	77.7	81.5

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
KENTUCKY	98.7	98.8	92.8	95.8	152.9	151.2	146.7	149.3
TENNESSEE	123.4	120.7	118.4	120.2	203.0	201.5	200.6	201.4
ALABAMA	116.1	116.1	104.5	109.7	181.0	180.4	170.5	174.9
MISSISSIPPI	217.4	217.8	210.6	214.7	382.9	383.5	375.9	379.8
REGIONAL AVERAGE	138.9	138.4	131.6	135.1	230.0	229.1	223.4	226.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
KENTUCKY	6.7	10.3	9.6	8.3
TENNESSEE	8.9	7.3	9.9	9.3
ALABAMA	7.5	6.8	9.3	8.2
MISSISSIPPI	10.4	10.0	12.1	10.8
REGIONAL AVERAGE	8.5	8.6	10.2	9.3

WEST SOUTH CENTRAL REGION   VERSION II   BASE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	6.7	4.1	6.5	17.8	7.4	4.8	7.9	20.7	9.4	5.7	10.4	26.2	12.2	6.6	13.7	33.5
LOUISIANA	13.4	8.1	19.5	44.2	15.7	10.3	20.3	49.8	18.2	12.2	23.5	58.1	21.7	13.8	29.5	69.9
OKLAHOMA	9.4	6.5	7.2	24.5	11.3	8.2	8.5	29.7	12.8	9.6	10.6	35.1	15.2	10.7	13.8	42.1
TEXAS	41.4	33.7	57.3	136.5	51.3	43.0	70.6	169.9	62.7	52.4	87.5	208.6	78.8	61.1	108.5	256.0
REGIONAL TOTAL	70.9	52.5	90.5	223.0	85.7	66.3	107.3	270.1	103.1	79.9	131.9	328.0	128.0	92.2	165.5	401.5

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	14.6	7.2	18.0	41.0	17.0	7.6	23.5	49.4
LOUISIANA	25.0	15.0	37.7	83.6	28.3	15.9	48.6	99.8
OKLAHOMA	17.7	11.6	17.8	50.1	20.2	12.4	23.1	59.1
TEXAS	95.9	69.6	133.7	308.4	115.5	77.6	164.3	368.3
REGIONAL TOTAL	153.2	103.5	207.3	483.0	181.0	113.3	259.5	576.5

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	4.4	3.5	5.5	4.6
LOUISIANA	3.5	3.9	3.0	3.3
OKLAHOMA	3.5	3.6	4.8	3.9
TEXAS	4.7	4.3	4.7	4.6
REGIONAL AVERAGE	4.3	4.1	4.4	4.3

WEST SOUTH CENTRAL REGION   VERSION II   BASE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

| | 1976 ACTUAL | | | | 1980 | | | | 1985 | | | | 1990 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	33.9	32.2	22.7	29.3	48.4	46.3	35.7	42.9	70.5	67.8	57.6	64.7	93.5	88.3	78.4	86.1
LOUISIANA	26.7	27.5	13.3	20.5	39.0	39.0	22.7	31.9	59.3	60.5	42.6	52.3	78.1	78.0	58.9	69.4
OKLAHOMA	29.9	26.2	17.6	25.1	42.4	38.6	30.1	37.6	66.0	62.4	53.6	60.9	86.7	81.8	73.1	80.7
TEXAS	31.2	27.6	18.5	24.8	44.8	40.8	31.9	38.2	69.5	64.3	57.3	62.9	94.1	84.2	80.7	85.8
REGIONAL AVERAGE	30.4	28.4	18.0	24.9	43.7	41.2	30.1	37.7	66.3	63.7	52.8	60.2	88.1	83.0	72.8	80.5

| | 1995 | | | | 2000 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	128.4	120.9	111.3	119.3	176.8	167.1	157.3	165.7
LOUISIANA	104.6	102.6	83.0	93.7	140.3	135.7	116.4	127.0
OKLAHOMA	115.5	108.8	100.1	108.0	154.6	145.7	136.5	145.1
TEXAS	126.6	111.1	113.0	116.9	170.1	147.7	156.9	159.2
REGIONAL AVERAGE	118.8	110.8	101.8	109.5	160.4	140.0	141.8	149.3

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	7.5	7.5	9.3	8.0
LOUISIANA	8.0	7.7	11.2	9.1
OKLAHOMA	7.9	8.5	10.7	8.7
TEXAS	8.2	8.3	11.1	9.3
REGIONAL AVERAGE	7.9	8.0	10.5	8.7

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WEST SOUTH CENTRAL REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	6.7	4.1	6.5	17.8	7.9	5.0	8.0	21.5	11.1	6.5	10.8	29.2	14.8	8.4	15.1	39.4
LOUISIANA	13.4	8.1	19.5	44.2	16.7	10.7	21.2	52.3	21.5	14.0	26.6	66.9	26.5	17.2	36.1	85.9
OKLAHOMA	9.4	6.5	7.2	24.5	12.2	8.6	8.8	31.4	15.9	11.6	11.8	41.6	19.8	14.7	16.3	53.9
TEXAS	41.4	33.7	57.3	136.5	54.1	44.7	72.4	176.4	72.8	60.4	94.3	234.4	94.1	78.2	123.2	304.5
REGIONAL TOTAL	70.9	52.5	90.5	223.0	90.9	69.0	110.3	281.6	121.2	92.6	143.6	372.2	155.2	118.5	190.7	483.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	18.8	10.6	21.1	51.9	23.5	13.0	29.7	68.1
LOUISIANA	32.0	20.4	50.3	110.6	38.5	23.8	71.7	144.2
OKLAHOMA	24.1	17.5	22.8	68.8	29.2	21.5	32.0	87.8
TEXAS	118.4	98.3	159.1	387.1	148.2	121.9	204.2	488.8
REGIONAL TOTAL	193.3	147.1	253.2	618.3	239.4	180.2	337.7	788.9

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	5.8	5.3	6.2	5.9
LOUISIANA	5.0	5.5	4.5	4.9
OKLAHOMA	5.5	5.9	6.0	5.8
TEXAS	6.0	6.2	5.6	5.9
REGIONAL AVERAGE	5.8	6.0	5.5	5.7

WEST SOUTH CENTRAL REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	33.9	32.2	22.7	29.3	44.1	41.9	31.2	38.6	57.7	53.4	42.5	50.9	75.7	67.1	54.5	65.5
LOUISIANA	26.7	27.5	13.3	20.5	35.5	35.0	17.6	27.6	47.8	48.0	24.7	38.0	62.5	62.5	31.3	48.4
OKLAHOMA	29.9	26.2	17.6	25.1	37.7	33.6	24.6	32.6	50.0	45.4	33.1	43.6	64.7	59.0	41.9	55.7
TEXAS	31.2	27.6	18.5	24.8	41.2	36.6	26.9	34.0	57.3	50.0	38.6	47.6	77.4	65.0	52.1	63.6
REGIONAL AVERAGE	30.4	28.4	18.0	24.9	39.7	36.8	25.1	33.2	53.2	49.2	34.7	45.0	70.1	63.4	44.9	58.3

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	95.6	81.5	65.7	80.2	121.1	98.9	77.6	97.3
LOUISIANA	78.6	77.0	36.3	57.6	98.8	93.8	40.2	66.6
OKLAHOMA	81.0	72.9	49.1	67.6	101.8	89.1	55.4	80.5
TEXAS	99.8	80.3	66.8	80.8	128.6	98.4	85.3	102.2
REGIONAL AVERAGE	88.8	77.9	54.5	71.5	112.6	95.0	64.6	86.6

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	5.9	5.4	6.4	5.9
LOUISIANA	6.3	6.0	6.3	6.3
OKLAHOMA	5.7	6.0	6.4	5.9
TEXAS	6.7	6.3	7.7	7.0
REGIONAL AVERAGE	6.1	5.9	6.7	6.3

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	6.7	4.1	6.5	17.8	7.0	4.8	8.0	20.3	7.8	5.4	10.5	24.4	9.5	5.8	13.9	30.0
LOUISIANA	13.4	8.1	19.5	44.2	14.7	10.1	19.9	48.1	13.7	10.8	22.0	50.0	14.7	10.8	26.6	56.0
OKLAHOMA	9.4	6.5	7.2	24.5	10.4	8.0	8.4	28.4	9.2	8.1	10.0	28.9	9.5	7.6	12.5	31.4
TEXAS	41.4	33.7	57.3	136.5	48.2	42.0	70.4	165.5	48.1	45.6	84.3	183.8	55.0	46.3	101.8	209.3
REGIONAL TOTAL	70.9	52.5	90.5	223.0	80.4	64.9	106.7	262.4	78.8	69.8	126.8	286.7	88.7	70.5	154.8	326.8

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	10.0	5.7	17.7	34.4	10.0	5.2	22.2	38.4
LOUISIANA	14.8	10.2	33.0	62.3	14.2	9.0	40.7	68.8
OKLAHOMA	9.7	7.0	15.6	34.3	9.5	6.2	19.3	37.1
TEXAS	59.6	45.7	122.2	234.4	62.3	42.9	145.4	258.3
REGIONAL TOTAL	94.1	68.6	188.4	365.4	96.0	63.4	227.5	402.6

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	2.5	2.5	5.6	3.8
LOUISIANA	0.7	2.0	2.2	1.7
OKLAHOMA	0.1	1.1	4.0	1.8
TEXAS	2.0	2.3	4.2	3.1
REGIONAL AVERAGE	1.6	2.1	3.9	2.8

WEST SOUTH CENTRAL REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE (¢ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	33.9	32.2	22.7	29.3	53.1	51.0	40.4	47.5	91.1	89.1	79.2	85.4	127.1	124.7	115.4	121.0
LOUISIANA	26.7	27.5	13.3	20.5	43.6	44.4	28.5	37.1	88.7	90.7	75.8	83.0	124.0	124.9	111.5	117.8
OKLAHOMA	29.9	26.2	17.6	25.1	48.6	45.0	36.8	43.8	105.3	101.4	94.1	100.0	150.4	145.8	139.3	144.6
TEXAS	31.2	27.6	18.5	24.8	49.6	46.5	38.0	43.7	101.0	98.4	93.9	97.0	144.0	139.7	140.6	141.3
REGIONAL AVERAGE	30.4	28.4	18.0	24.9	48.7	46.7	35.9	43.0	96.5	94.9	95.7	91.4	136.4	133.9	126.7	131.2

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
ARKANSAS	204.9	202.6	193.4	198.5	335.9	334.1	324.3	328.8
LOUISIANA	197.8	197.7	185.9	191.0	320.4	319.5	308.8	312.9
OKLAHOMA	237.1	232.4	225.9	230.7	378.1	373.6	366.1	370.7
TEXAS	225.3	220.3	227.0	225.2	356.3	351.4	364.9	360.4
REGIONAL AVERAGE	216.3	213.2	208.1	211.3	347.7	344.7	341.0	343.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
ARKANSAS	9.9	10.1	12.3	10.7
LOUISIANA	11.6	11.4	16.4	13.3
OKLAHOMA	12.2	13.0	15.9	13.3
TEXAS	11.6	12.3	15.6	13.2
REGIONAL AVERAGE	11.3	11.7	14.9	12.6

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	2.2	1.7	5.8	9.9	2.7	2.4	6.9	12.3	3.7	3.3	8.1	15.4	4.6	4.4	9.0	18.4
IDAHO	4.1	3.5	5.5	13.5	5.3	4.4	6.3	16.4	7.7	5.9	8.1	22.2	10.8	7.7	9.9	29.0
WYOMING	1.0	1.7	2.1	4.9	1.5	2.3	2.4	6.3	2.3	2.9	2.9	8.2	2.9	3.7	3.5	10.3
COLORADO	5.4	6.2	4.1	16.8	7.2	8.0	5.5	22.1	11.6	10.8	6.7	31.1	17.9	14.5	8.0	43.1
NEW MEXICO	2.0	2.9	2.0	7.5	2.6	3.5	2.3	9.1	3.5	4.6	2.8	11.7	4.5	6.0	3.4	15.0
ARIZONA	7.2	6.5	6.1	21.2	9.9	9.3	6.9	27.4	17.8	13.6	9.9	42.2	29.9	19.8	11.1	64.1
UTAH	2.7	2.6	2.4	8.1	3.4	3.2	2.6	9.8	5.3	4.2	3.3	13.7	8.1	5.5	4.0	18.8
NEVADA	2.8	2.5	2.2	7.7	3.6	3.1	2.2	9.2	6.2	4.7	2.6	14.0	10.1	7.2	3.1	21.1
REGIONAL TOTAL	27.4	28.0	30.1	89.6	36.3	36.1	35.0	112.6	58.1	49.9	43.2	158.4	88.8	68.7	52.0	219.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	5.7	5.5	10.1	21.8	7.1	6.8	11.4	25.9
IDAHO	14.5	10.0	12.5	37.8	19.5	12.8	15.8	49.1
WYOMING	3.6	4.7	4.2	12.7	4.4	6.0	5.1	15.8
COLORADO	25.3	19.0	9.3	57.8	36.3	24.8	10.9	76.8
NEW MEXICO	5.8	7.7	4.0	18.9	7.4	9.8	4.8	23.7
ARIZONA	45.7	28.3	13.9	92.6	68.2	40.3	17.4	132.5
UTAH	11.5	6.9	4.9	24.9	15.8	8.8	6.0	32.7
NEVADA	15.1	10.7	3.7	30.5	21.9	15.8	4.4	43.6
REGIONAL TOTAL	127.7	92.8	62.6	297.0	180.6	125.0	75.8	400.2

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	5.3	7.1	3.2	4.5
IDAHO	7.1	5.8	4.2	5.6
WYOMING	8.2	5.5	3.7	5.5
COLORADO	9.0	6.2	4.8	7.0
NEW MEXICO	5.9	5.3	3.8	5.1
ARIZONA	10.7	7.8	4.4	8.2
UTAH	8.2	5.6	3.9	6.2
NEVADA	9.6	7.9	2.7	7.5
REGIONAL AVERAGE	8.8	6.6	4.0	6.6

MOUNTAIN REGION   VERSION II   BASE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	22.3	20.6	6.1	12.3	25.2	22.9	9.6	15.8	29.9	28.1	14.7	21.4	35.7	34.7	20.6	27.9
IDAHO	18.3	17.9	10.2	14.8	22.3	22.1	13.3	18.7	30.2	29.8	18.4	25.7	41.5	39.3	24.3	34.9
WYOMING	24.1	17.7	12.0	16.5	29.8	25.1	18.9	23.9	39.9	36.2	29.4	34.8	52.3	49.3	41.5	47.5
COLORADO	32.6	28.7	19.2	27.6	40.7	37.5	28.2	36.1	53.9	52.7	42.9	50.9	69.0	69.1	58.3	66.9
NEW MEXICO	35.5	27.7	20.8	28.0	41.3	35.3	27.1	34.9	56.0	50.9	42.7	50.4	71.3	67.2	58.6	66.4
ARIZONA	39.0	35.2	24.6	33.4	49.8	48.1	35.9	45.5	68.4	69.0	53.0	65.2	93.4	93.8	71.7	89.5
UTAH	31.7	26.1	20.0	26.2	37.3	32.4	24.9	32.1	45.8	43.2	35.1	42.2	56.7	55.9	46.8	54.2
NEVADA	28.4	30.4	19.5	26.5	38.3	40.9	25.2	35.9	57.3	60.6	40.5	55.2	82.4	84.2	56.5	79.0
REGIONAL AVERAGE	29.0	25.9	16.6	23.2	35.6	33.0	22.9	30.4	47.7	46.3	34.6	43.2	62.8	61.7	47.3	58.3

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	42.7	42.5	27.1	35.3	52.1	52.5	35.5	44.7
IDAHO	56.2	50.3	30.8	46.0	76.9	64.3	39.0	61.1
WYOMING	66.9	64.7	55.5	62.2	85.8	84.5	73.5	81.2
COLORADO	89.5	89.8	77.6	87.6	118.3	117.0	102.9	11'.5
NEW MEXICO	90.7	87.8	78.7	86.6	116.7	115.2	105.2	1 3.5
ARIZONA	127.9	125.5	95.2	122.0	176.9	167.6	126.2	166.9
UTAH	71.2	71.1	61.0	69.0	91.2	90.6	79.5	88.8
NEVADA	114.6	114.8	75.7	109.8	159.4	157.1	101.2	152.4
REGIONAL AVERAGE	82.5	80.8	62.7	77.3	109.7	106.1	82.9	103.0

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	3.4	3.8	9.1	6.0
IDAHO	6.0	5.8	6.4	6.3
WYOMING	5.7	7.6	9.3	7.8
COLORADO	5.5	6.5	8.2	6.5
NEW MEXICO	5.1	6.5	7.7	6.4
ARIZONA	6.4	7.2	7.9	7.3
UTAH	4.2	5.6	6.2	5.3
NEVADA	7.9	7.6	7.9	8.1
REGIONAL AVERAGE	5.7	6.5	7.8	6.8

MOUNTAIN REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

| | 1976 ACTUAL | | | | 1980 | | | | 1985 | | | | 1990 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	2.2	1.7	5.8	9.9	2.7	2.4	6.9	12.3	3.6	3.5	8.0	15.4	4.7	4.6	9.1	18.9
IDAHO	4.1	3.5	5.5	13.5	5.4	4.4	6.3	16.5	7.9	6.0	9.0	22.4	11.1	8.0	10.2	30.0
WYOMING	1.0	1.7	2.1	4.9	1.5	2.3	2.3	6.3	2.2	3.0	2.8	8.3	3.0	4.0	3.5	10.7
COLORADO	5.4	6.2	4.1	16.8	7.2	9.3	5.5	22.4	11.7	11.8	6.8	32.3	18.6	16.4	8.3	46.2
NEW MEXICO	2.0	2.9	2.0	7.5	2.7	3.7	2.3	9.4	3.7	5.2	2.9	12.8	5.0	7.2	3.6	17.2
ARIZONA	7.2	6.9	6.1	21.2	9.9	9.5	6.9	27.8	17.8	14.4	9.0	43.4	30.9	21.5	11.8	67.6
UTAH	2.7	2.6	2.4	8.1	3.4	3.2	2.6	9.8	5.3	4.4	3.2	13.8	8.2	5.9	4.1	19.4
NEVADA	2.8	2.5	2.2	7.7	3.6	3.2	2.3	9.4	6.3	5.1	2.9	14.7	10.6	7.9	3.5	22.8
REGIONAL TOTAL	27.4	28.0	30.1	89.6	36.4	37.1	35.2	114.0	58.4	53.6	43.5	163.1	92.2	75.5	54.0	232.6

| | 1995 | | | | 2000 | | | |
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	5.9	6.0	10.5	22.9	7.5	7.5	12.2	27.9
IDAHO	15.5	10.4	12.9	39.6	21.3	13.5	16.4	52.2
WYOMING	3.8	5.2	4.4	13.6	4.7	6.9	5.4	17.4
COLORADO	27.7	22.5	10.0	64.1	39.9	30.5	12.0	87.9
NEW MEXICO	6.7	9.5	4.5	22.7	8.9	13.1	5.6	29.0
ARIZONA	49.2	31.4	15.3	101.0	75.7	45.8	19.8	148.8
UTAH	12.0	7.6	5.1	26.4	16.9	9.8	6.3	35.3
NEVADA	16.3	11.5	4.3	33.7	26.4	17.8	5.3	49.2
REGIONAL TOTAL	137.1	104.8	66.9	324.1	199.3	144.5	83.0	448.6

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	5.4	7.6	3.3	4.7
IDAHO	7.4	6.0	4.4	5.9
WYOMING	8.3	6.1	3.8	5.7
COLORADO	9.3	7.1	5.1	7.5
NEW MEXICO	6.7	6.7	4.4	6.1
ARIZONA	10.9	8.4	4.9	8.6
UTAH	8.3	6.1	4.0	6.4
NEVADA	10.0	8.7	3.4	8.1
REGIONAL AVERAGE	9.1	7.3	4.3	7.1

LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWH)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	22.3	20.6	6.1	12.3	24.8	22.4	9.1	15.3	28.4	26.7	13.2	20.0	32.8	32.3	17.7	25.2
IDAHO	18.3	17.9	10.2	14.8	21.9	21.8	12.9	18.3	29.2	23.0	17.1	24.7	40.2	37.9	21.6	33.1
WYOMING	24.1	17.7	12.0	16.5	28.9	24.3	18.0	23.1	37.1	33.9	26.6	32.3	46.9	45.0	36.0	42.6
COLORADO	32.6	28.7	19.2	27.6	38.9	35.7	26.4	34.4	47.7	46.9	36.6	44.9	58.6	59.8	47.8	57.0
NEW MEXICO	35.5	27.7	20.8	28.0	38.9	32.9	24.7	32.6	47.2	42.6	34.1	41.9	56.6	54.0	44.3	52.6
ARIZONA	39.0	35.2	24.6	33.4	47.5	46.3	33.6	43.4	61.4	63.9	46.1	58.9	82.5	85.7	59.8	79.4
UTAH	31.7	26.1	20.0	26.2	36.2	31.5	23.8	31.1	42.6	40.8	31.9	39.3	51.1	51.9	41.1	49.1
NEVADA	28.4	30.6	19.5	26.5	35.7	38.8	22.0	33.6	49.0	54.4	32.2	47.7	70.2	75.1	42.7	67.6
REGIONAL AVERAGE	29.0	25.5	16.6	23.2	34.1	31.7	21.4	29.0	42.8	42.3	29.7	39.7	54.9	55.2	38.9	50.8

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	37.9	38.7	22.2	30.7	44.7	46.8	27.7	37.7
IDAHO	55.6	47.5	26.2	43.7	73.6	60.6	31.8	58.9
WYOMING	57.3	57.0	45.5	53.4	70.4	72.3	57.0	66.9
COLORADO	72.1	74.2	55.3	70.7	91.5	92.5	73.1	89.2
NEW MEXICO	66.4	66.5	54.5	63.9	78.9	82.4	67.0	78.1
ARIZONA	111.1	111.3	73.6	105.2	153.8	145.1	90.4	142.1
UTAH	61.7	64.1	50.8	60.2	76.5	79.6	62.8	74.8
NEVADA	98.0	101.1	53.2	93.3	138.3	137.2	66.1	129.9
REGIONAL AVERAGE	70.0	70.1	48.2	65.1	91.6	89.6	59.5	84.7

* TOTAL INCLUDES MISCELLANEOUS USES.

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	2.8	3.3	7.9	5.2
IDAHO	5.8	5.5	5.5	5.9
WYOMING	4.9	6.9	8.2	7.0
COLORADO	4.3	5.4	6.7	5.3
NEW MEXICO	3.4	4.9	5.5	4.6
ARIZONA	5.5	6.6	6.5	6.4
UTAH	3.5	5.0	5.3	4.6
NEVADA	6.7	6.7	5.7	6.9
REGIONAL AVERAGE	4.7	5.7	6.3	5.8

MOUNTAIN REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	2.2	1.7	5.8	9.9	2.8	2.4	7.2	12.7	4.1	3.3	8.9	16.7	5.3	4.3	10.1	20.2
IDAHO	4.1	3.5	5.5	13.5	5.5	4.4	6.5	16.7	8.2	5.9	8.8	23.4	11.7	7.7	11.0	31.1
WYOMING	1.0	1.7	2.1	4.9	1.6	2.2	2.4	6.4	2.5	2.9	3.2	8.7	3.3	3.7	3.9	11.1
COLORADO	5.4	6.3	4.1	16.8	7.4	7.8	5.6	22.3	12.5	9.6	7.1	31.2	19.5	12.5	8.4	43.1
NEW MEXICO	2.0	2.5	2.0	7.5	2.6	3.4	2.3	9.0	3.5	3.8	2.8	11.0	4.5	4.7	3.4	13.6
ARIZONA	7.2	6.9	6.1	21.2	10.2	9.1	7.0	27.8	19.3	12.9	9.2	43.5	32.7	18.6	11.8	66.4
UTAH	2.7	2.6	2.4	8.1	3.5	3.1	2.7	10.0	5.9	4.1	3.6	14.5	9.1	5.3	4.5	20.2
NEVADA	2.8	2.5	2.2	7.7	3.7	3.0	2.2	9.3	6.6	4.3	2.6	13.9	10.7	6.3	3.1	20.9
REGIONAL TOTAL	27.4	28.0	30.1	89.6	37.4	35.5	36.0	114.1	62.6	46.7	46.3	162.9	96.8	63.1	56.4	226.7

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	6.7	5.4	11.6	24.3	8.4	6.7	13.5	29.2
IDAHO	15.8	9.5	14.3	40.9	21.1	12.8	18.9	53.9
WYOMING	4.2	4.6	4.8	13.9	5.2	5.8	6.0	17.3
COLORADO	28.0	15.5	9.7	56.8	39.2	18.9	11.2	73.9
NEW MEXICO	5.7	5.5	4.0	16.4	7.2	6.3	4.6	19.6
ARIZONA	49.4	25.6	14.7	94.3	72.5	34.8	18.1	132.0
UTAH	13.0	6.5	5.5	26.8	18.1	8.0	6.8	35.2
NEVADA	15.8	9.2	3.7	29.8	22.8	13.2	4.4	41.9
REGIONAL TOTAL	138.5	82.3	68.4	303.2	194.5	106.5	83.5	403.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	6.4	7.1	4.1	5.2
IDAHO	7.7	5.8	5.0	6.2
WYOMING	9.2	5.5	4.6	6.1
COLORADO	9.6	5.1	5.2	7.0
NEW MEXICO	5.9	3.5	3.8	4.4
ARIZONA	11.4	7.3	4.9	8.5
UTAH	9.1	5.3	4.7	6.7
NEVADA	10.1	7.0	2.7	7.4
REGIONAL AVERAGE	9.4	6.0	4.6	6.9

MOUNTAIN REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	22.3	20.6	6.1	12.3	25.1	23.0	9.7	15.9	30.1	28.2	15.2	21.6	36.5	34.9	21.2	28.3
IDAHO	18.3	17.5	10.2	14.9	22.5	22.1	13.4	18.9	31.6	29.9	18.9	26.2	44.9	39.4	24.7	36.2
WYOMING	24.1	17.7	12.0	16.5	29.9	25.2	19.1	24.0	40.5	36.5	29.9	35.2	53.9	49.8	42.3	48.4
COLORADO	32.6	20.7	19.2	27.6	41.9	38.9	29.6	37.5	61.9	60.6	51.0	59.9	82.2	81.3	71.2	79.6
NEW MEXICO	35.5	27.7	20.8	28.0	43.4	37.6	29.3	37.1	69.2	64.4	55.9	63.7	93.1	89.0	80.5	88.2
ARIZONA	39.0	35.2	24.6	33.4	51.1	49.2	37.2	46.8	75.3	73.7	59.1	71.2	106.2	100.9	81.4	100.0
UTAH	31.7	26.1	20.0	26.2	37.5	32.7	25.2	32.4	47.8	44.8	37.1	44.1	60.8	58.3	50.0	57.6
NEVADA	28.4	30.4	19.5	26.5	40.5	42.7	27.4	37.9	68.4	68.8	50.7	65.1	101.5	96.3	73.0	95.5
SECTIONAL AVERAGE	29.0	25.5	16.6	23.2	36.5	33.9	23.9	31.3	53.1	50.9	39.7	48.2	72.4	68.7	55.5	66.7

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
MONTANA	44.7	43.0	28.2	36.2	56.0	53.5	37.2	46.6
IDAHO	61.8	50.4	31.4	48.1	85.3	64.5	40.1	64.0
WYOMING	70.8	66.3	57.7	64.7	93.2	89.0	78.0	86.1
COLORADO	116.2	114.0	103.3	113.2	166.9	160.4	149.1	162.2
NEW MEXICO	133.3	129.5	121.3	128.9	193.6	190.9	192.1	189.7
ARIZONA	155.1	141.7	117.3	145.1	226.3	198.9	168.6	210.3
UTAH	90.5	76.2	68.0	76.7	108.9	100.3	92.5	103.4
NEVADA	148.3	135.7	105.4	138.7	214.5	191.3	151.2	200.1
REGIONAL AVERAGE	101.3	94.7	79.1	93.9	143.1	131.0	112.3	132.8

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
MONTANA	3.6	3.8	9.3	6.1
IDAHO	6.6	5.8	6.5	6.6
WYOMING	5.9	7.7	9.4	8.0
COLORADO	6.8	7.7	9.8	7.9
NEW MEXICO	7.1	8.7	10.1	8.5
ARIZONA	7.4	7.8	8.9	8.1
UTAH	4.8	5.9	6.8	5.8
NEVADA	9.5	8.6	9.9	9.6
REGIONAL AVERAGE	6.7	7.3	9.0	7.8

PACIFIC REGION   VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	22.3	10.7	29.0	63.9	26.8	13.3	29.9	72.1	32.1	17.4	34.6	86.7	37.3	22.3	40.4	103.1
OREGON	12.4	7.9	13.6	34.3	13.9	10.9	15.9	41.1	16.6	19.6	19.5	55.2	19.8	30.1	23.9	74.4
CALIFORNIA	45.1	49.6	45.8	150.4	50.9	62.5	48.1	173.0	59.3	83.6	56.9	214.1	68.8	112.7	69.2	268.6
REGIONAL TOTAL	79.9	69.2	88.4	248.5	91.6	86.8	93.9	286.2	108.0	119.6	111.0	356.0	125.9	165.1	133.4	446.1

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	42.5	28.2	47.2	121.5	46.1	35.4	55.3	143.0
OREGON	23.2	46.8	29.7	100.1	27.0	72.2	35.6	136.7
CALIFORNIA	77.8	145.4	93.6	328.6	85.9	185.8	100.7	398.9
REGIONAL TOTAL	173.5	220.4	159.9	550.2	161.0	293.4	191.6	678.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	6.5	7.9	11.2	8.6
OREGON	5.1	9.6	8.6	8.5
CALIFORNIA	6.5	7.5	8.5	7.5
REGIONAL AVERAGE	6.1	8.2	8.9	7.9

PACIFIC REGION   VERSION II   BASE PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	12.7	14.1	4.5	9.1	17.2	20.1	8.4	14.0	23.5	28.9	13.8	20.6	30.8	41.1	20.0	28.7
OREGON	18.6	17.2	8.0	14.0	22.7	22.5	11.9	18.5	29.2	36.6	18.0	27.7	37.3	62.3	25.4	43.7
CALIFORNIA	35.4	33.4	24.3	31.1	46.6	46.2	35.5	43.1	67.4	69.5	57.4	65.4	85.5	91.5	76.5	85.7
REGIONAL AVERAGE	22.2	21.6	12.3	18.1	28.9	29.7	18.6	25.2	40.0	45.0	29.7	37.9	51.2	64.9	40.6	52.7

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	38.6	57.0	26.9	38.3	48.4	79.7	35.7	51.3
OREGON	46.3	105.3	33.8	70.5	57.7	181.1	44.5	120.3
CALIFORNIA	119.4	130.8	111.4	122.6	168.6	187.7	161.6	176.2
REGIONAL AVERAGE	68.1	97.7	57.3	77.1	91.6	149.5	80.6	115.9

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	3.7	5.4	2.4	3.5
OREGON	3.4	10.1	4.1	5.7
CALIFORNIA	3.1	6.0	3.0	4.2
REGIONAL AVERAGE	3.3	6.5	3.0	4.3

PACIFIC REGION VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	22.3	19.7	20.0	63.9	26.9	13.4	30.0	72.5	32.6	17.7	35.0	87.9	38.4	22.9	41.1	105.9
OREGON	12.4	7.5	12.6	34.3	13.9	11.0	16.0	41.3	16.9	19.3	19.7	55.9	20.3	30.6	24.2	75.9
CALIFORNIA	45.1	40.6	65.8	156.4	51.6	64.2	89.5	176.0	62.7	90.0	59.3	226.0	75.2	122.8	71.8	288.7
REGIONAL TOTAL	79.8	68.2	98.4	248.5	92.5	88.6	94.5	289.8	112.1	126.8	113.0	369.0	134.0	176.2	136.8	470.0

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	44.1	29.5	49.3	125.2	50.8	36.9	56.9	149.5
OREGON	24.3	47.6	29.8	102.6	28.7	73.2	36.6	139.5
CALIFORNIA	89.1	164.5	87.5	365.3	104.5	218.6	107.2	461.0
REGIONAL TOTAL	157.6	240.6	165.6	593.1	184.1	328.2	200.8	749.4

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	3.9	5.5	2.5	3.6
OREGON	3.6	10.2	4.2	5.9
CALIFORNIA	3.7	6.7	3.2	4.8
REGIONAL AVERAGE	3.8	7.0	3.2	4.7

PACIFIC REGION   VERSION II   LOW PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	12.7	14.1	4.5	9.1	16.7	19.6	7.9	13.5	22.0	27.6	12.1	19.1	28.0	38.6	16.7	25.8
OREGON	18.6	17.2	8.0	14.0	22.1	22.3	11.1	17.9	27.4	35.1	16.0	26.0	33.6	59.6	21.4	40.2
CALIFORNIA	35.4	33.4	24.3	31.1	42.6	42.2	31.5	39.1	53.0	55.6	43.0	51.3	64.5	72.1	55.6	65.6
REGIONAL AVERAGE	22.2	21.6	12.3	18.1	27.1	28.0	16.8	23.5	34.1	39.4	23.7	32.1	42.0	56.8	31.2	43.9

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	33.9	53.1	21.2	33.4	41.0	73.7	26.8	43.6
OREGON	39.9	101.0	26.8	64.7	47.6	174.4	33.4	110.8
CALIFORNIA	76.1	91.6	69.3	81.6	90.3	119.3	83.7	102.9
REGIONAL AVERAGE	50.0	81.9	38.8	59.9	59.6	122.1	47.9	85.8

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	5.8	7.5	9.8	7.7
OREGON	4.3	9.3	7.3	7.8
CALIFORNIA	4.4	5.7	6.1	5.5
REGIONAL AVERAGE	4.7	7.2	6.9	6.5

PACIFIC REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY DEMAND (1000 GIGAWATT HOURS)

	1976 ACTUAL				1980				1985				1990			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	22.7	10.7	29.0	63.9	26.8	13.3	29.9	72.1	32.0	17.3	34.5	86.3	36.9	22.1	40.1	102.2
OREGON	12.	7.5	13.6	34.3	13.9	10.9	15.9	41.1	16.5	18.5	19.5	55.0	19.6	29.9	23.7	73.9
CALIFORNIA	45.1	49.6	45.8	150.4	50.2	60.8	47.7	169.9	55.7	76.6	55.4	201.0	62.1	101.6	66.8	246.9
REGIONAL TOTAL	79.8	68.2	88.4	248.5	90.8	85.0	93.4	283.0	104.2	112.4	109.3	342.4	118.6	153.6	130.7	423.0

	1995				2000			
STATE	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	41.8	27.5	46.8	120.0	47.0	35.0	54.8	140.9
OREGON	22.8	46.5	28.9	99.1	26.3	71.7	35.2	134.5
CALIFORNIA	66.6	124.0	79.5	289.3	68.6	148.5	93.9	333.1
REGIONAL TOTAL	131.2	198.3	155.2	508.5	141.9	255.2	183.8	608.5

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY DEMAND FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	3.7	5.3	2.4	3.4
OREGON	3.3	10.0	4.0	5.6
CALIFORNIA	2.3	5.3	2.7	3.6
REGIONAL AVERAGE	.9	6.0	2.8	3.9

PACIFIC REGION   VERSION II   HIGH PRICE CASE

FORECASTS OF ELECTRICITY PRICE ($ / 1000 KWHR)

STATE	1976 ACTUAL				1980				1985				1990			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	12.7	14.1	4.5	9.1	17.2	20.1	8.5	14.1	24.0	29.4	14.4	21.2	32.1	42.2	21.5	30.0
OREGON	18.6	17.2	8.0	14.0	22.8	23.0	11.9	18.6	29.7	37.0	18.5	28.2	38.9	63.4	27.1	45.1
CALIFORNIA	35.4	33.4	24.3	31.1	51.3	50.8	40.1	47.7	89.3	90.8	79.1	86.9	117.8	122.3	108.5	117.1
REGIONAL AVERAGE	22.2	21.6	12.3	18.1	30.4	31.3	20.2	26.8	47.7	52.4	37.3	45.4	62.9	76.0	52.4	64.1

STATE	1995				2000			
	RES	COM	IND	TOTAL	RES	COM	IND	TOTAL
WASHINGTON	40.7	58.8	29.4	40.5	51.8	82.5	39.6	54.8
OREGON	49.2	107.3	36.9	73.1	62.7	184.4	49.9	124.8
CALIFORNIA	200.3	208.2	191.9	201.4	345.5	357.2	338.0	348.8
REGIONAL AVERAGE	96.7	124.8	86.1	105.0	153.3	208.0	142.5	176.1

FORECASTED ANNUAL GROWTH RATES OF ELECTRICITY PRICE FOR 1976-1990 (PERCENT)

STATE	RES	COM	IND	TOTAL
WASHINGTON	6.8	8.2	11.8	8.9
OREGON	5.4	9.8	9.1	8.7
CALIFORNIA	9.0	9.7	11.3	9.9
REGIONAL AVERAGE	7.7	9.4	10.9	9.5

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