

CHAPTER 8

SUMMARY AND CONCLUSIONS

The awareness of the exhaustibility of natural resources that gained ground during the sixties led to serious efforts for conservation of these resources as far as possible. In the case of Energy, the awareness was translated firstly by attempting to save it by more efficient utilization and secondly by finding new non-conventional energy resources. The latter attempt is still in its infant stage and so far very little has been achieved in rendering any non-conventional energy source as a new commercial source of energy. But serious efforts are being made towards the energy saving aspect by technological renovations and improvements. As India is a very vast country and different supply and demand situations across the region in the case of energy exist, this study has focussed the attention on the regional dimension viz. the regional variability in the consumption. The present study has been taken up to understand the regional variability in fuel consumption and to explore the scope for energy saving.

8.1 Data Base of the Study

The study is based on the information on the large scale manufacturing industries in India for 1970. The data have been compiled from the reports of the Annual Survey of Industries. The detailed data for eleven fuels for each of the industries

classified according to the highest level of disaggregation (i.e. coded in 7 digits) and for each region are available from these reports. There are 24 regions (i.e. States including Union Territories) for the year under study. The study has been carried out in value terms as also in energy units. The particular energy unit, chosen for the present study, is Tonne Coal Replacement (TCR).

8.2 Regional Fuel Consumption and Inter-Fuel Substitutability

It has been shown that the variation in fuel consumption of the industrial sector between regions depends, among others, on the factors like development level of a region, availability of fuels and the industry-mix. Presenting a broad picture of fuel consumption regionwise, the regional variation in fuel consumption has been confirmed by statistical tests. It is found that this variation arises mainly because of the differential pattern of availability and requirement. The impact of these factors on the regional consumption variation has been studied with the help of the six economic variables viz. production of fuels, prices of fuels, relative prices of different fuels, level of industrialization at the regional level, industry-mix of a region, and level of mechanization of a region; by using the multiple regression technique. It has been observed that the absolute fuel consumption depends on its production and price. The fuel consumption further has been found to depend on the share of industrial output. The share of heavy fuel using industries and level of mechanization have

been found to be statistically insignificant, which as argued, can be due to a statistical lacuna of comparing absolute figures with the relative one. The relation between relative consumption of fuels and their relative prices, which under certain assumptions has provided the estimates of elasticity of substitution between fuels. At the aggregate industrial level, the elasticity of substitution between a single fuel against all other fuels has shown that Coal has the highest elasticity of substitution (2.99) which is followed by Electricity (1.70) and Other Fuel Oils (1.15). For the same, the inter-fuel elasticity of substitution has indicated that the elasticity of substitution between Other Fuel Oils and Coal is the highest (3.68), followed by that between Electricity and Other Fuel Oils (2.07) and the least value of elasticity of substitution (1.48) is observed between Coal and Electricity. However, the variation in the industry-mix across regions has been a limitation in respect of these results. The results carried out at the individual industry level have indicated a similar trend, which also suffers from the limitation of product-mix. Hence, while the exact magnitudes of these elasticities cannot be accepted at their face value, the trends in these elasticities, it is hoped, will remain unaffected. Even so it has been broadly concluded that the highest substitutability exists between Other Fuel Oils and Coal. A moderate inter-fuel substitution has also been observed between Electricity and Other Fuel Oils. The substitution between Coal and Electricity has been found to be the lowest.

8.3 Regional Energy Efficiency on Physical Basis

For understanding the energy efficiency of a region, a model, which isolates the main factors influencing it viz. the energy intensity of a region and its structure or the level of industrialization, has been applied. The results regarding the intensity effect have indicated that Madhya Pradesh, Bihar, Uttar Pradesh and Orissa have been using a significantly high proportion energy to produce the same industrial income as that of all India. On the other hand, Maharashtra, Karnataka and Kerala have been found to be energy efficient States. The industry-mix naturally affects the energy intensity of a region. Hence it has been found desirable to assess the region for its energy efficiency at the individual industry level. Taking into consideration the objective of the study, the industries, which consume more than average energy per unit of its output, have been considered and they are labelled as HFU (heavy fuel using) industries. The results have shown that even at the individual industry level, Bihar, Orissa and Uttar Pradesh turn out to be energy inefficient.

For assessing the performance of a region for the energy use, the regions and the industries have been classified into a four-fold grouping on the basis of the intensity and structure effects (isolated by the model). It has been observed that about one-third value added of the total HFU industry group comes from the energy efficient regions. On the other hand, about 43 per cent income from the same group has been found to have generated from the energy inefficient group. Alcohol

(53.96 per cent), Chemical Fertilizers (74.80 per cent), Heavy Chemicals (59.35 per cent), Glass and Glass Products (78.56 per cent), Cement (66.94 per cent) and Iron and Steel (other than Basic) (76.30 per cent) are noted to be the industries which have more than half the share of their income generated by the energy efficient regions. On the other hand, Textiles (72.19 per cent) and Structural Clay Products (53.89 per cent) are noted to have their significant income generated from energy inefficient regions.

8.4 Minimum Energy Cost Locations for Industries

While physical energy saving is an important factor, a costwise consideration of energy consumption is equally important. It is felt that a region chooses a fuel technology such that it minimizes the energy cost to produce the same output, in comparison with any other region's fuel technology and fuel prices. The model developed to study this aspect has provided the actual and hypothetical costs (based on a certain fuel technology with other region's fuel prices). The comparisons of minimum costs on both considerations have indicated that the existing minimum cost is largely due to more efficient technology rather than the price advantage. In other words, it has been found that the variation in regional fuel technologies is relatively more important a factor than the regional price variation in explaining the variation in energy costs.

Before concluding about the promotion of industries in different regions on the basis of physical and cost efficiency of energy use, an exercise to obtain optimal allocations of

industries with the objective of minimum energy consumption, based on the Linear Programming technique has been carried out. The solution of the L.P. model has provided the optimal locations for each industry along with their production levels. The model by and large has picked up those locations for which the energy is minimum for a given industry as obtained by the cost exercise, discussed earlier, with some exceptions which are due to the constraints imposed in the model for the minimum industrial income level of a region. Thus broadly this model has advocated Andhra Pradesh for Alcohol industry, Punjab and Orissa for Textiles industry, Maharashtra for Paper industry, Tamil Nadu for Chemical Fertilizers industry, West Bengal for Heavy Chemicals, West Bengal and Bihar for Structural Clay Products, Haryana for Glass and Glass Products, West Bengal for Pottery—China—Earthenware industry and Maharashtra and Rajasthan for Non-Ferrous Metal industry.

The solution of the L.P. model has provided the minimum energy cost to satisfy the inter-industry demand of 1970, which has amounted to Rs. 119803 lakh. The actual cost for the same with existing allocation of industries has been worked out as Rs. 155667 lakh. This has been found to result into energy saving to the tune of Rs. 35864 lakh, which is equivalent to 23 per cent saving of energy for inter-industry use alone. It has been noted that it is not feasible or desirable to allocate any industry in only one region to minimize the energy cost. In view of this, the above results, it has been noted, need not be accepted per se, but they certainly indicate that there is

sufficient scope for energy saving in the Indian industrial sector by shifting the industrial locations.

8.5 Impact of Energy Price Hike

It has been shown that the large hike in Petroleum Products during the recent years, not only has a significant impact on the prices of the other sectors' output in the economy, but it has also led to compositional or structural change in the same. This impact has been analysed in the input-output frame. The impact of the energy price hike on the structure of the economy in terms of output composition has been studied with the help of energy intensities of economic activities over the period (1968-1983). The results have shown that the relative output levels have altered only in the case of HFU industries in the economy. At the regional level also it would have been useful to assess how the hike in energy prices has affected the composition, particularly the output-mix over time and secondly to examine how the relative position of a region as regards the price of a particular industry group has changed as a result of the hike in the energy prices. To examine the changes over time, regional input-output tables for different time periods was a prerequisite which are not available. Hence only the impact of the energy price hike on the regional prices of other sectors output has been studied. The results have shown that the energy price increase has affected the regional prices of other economic sectors differently. As a consequence it has been found that the relative advantage of a region for a given industry has changed over the

period. The large hike in Petroleum prices has been found to have improved the comparative position of the Coal based States like Orissa, Bihar and Madhya Pradesh and these States, it has been noted, happen to be less developed also. The subsequent increases in Coal and other fuel prices have to an extent been found to have diminished the advantage gained initially as a result of Petroleum price hike. While pricing of Coal has to depend mainly on the costs of its extraction it has been argued, that the impact of it on the industrial development of Coal producing States, which also happen to have a relatively larger consumption of it, should also be one of the important considerations in its pricing policy.

Table A-1 : Regionwise Prices of Each Fuel Per TCR Unit (1970, Total Industrial Sector)

| State | Fuel | Coal | Coke | Coal gas | Firewood | Charcoal | Aviation and Motor Spirit | Diesel Oil | Other fuel oils | Lubricating oils | Industrial and Power Alcohol | Electricity |
|-----------------------------|------|--------|--------|----------|----------|----------|---------------------------|------------|-----------------|------------------|------------------------------|-------------|
| Andhra Pradesh | | 53.90 | 106.44 | 1361.45 | 65.15 | 183.14 | 228.32 | 91.42 | 156.87 | 1153.01 | - | 128.57 |
| Assam | | 53.49 | 109.49 | neg. | 22.58 | 222.12 | 239.74 | 71.26 | 156.87 | 1281.12 | - | 185.71 |
| Bihar | | 60.78 | 125.16 | 108.43 | 52.37 | 228.81 | 222.61 | 84.70 | 156.87 | 1080.60 | 1993.75 | 128.57 |
| Gujarat | | 82.03 | 164.46 | 939.76 | 84.14 | 234.43 | 224.51 | 87.39 | 122.00 | 1019.33 | 469.12 | 171.43 |
| Jammu and Kashmir | | 107.57 | 323.08 | - | 157.06 | 145.44 | 213.10 | 77.98 | 580.99 | 1643.18 | - | 142.85 |
| Kerala | | 110.73 | 192.64 | - | 43.66 | 161.79 | 235.93 | 80.67 | 139.44 | 1030.47 | 390.93 | 114.28 |
| Madhya Pradesh | | 45.80 | 148.54 | - | 59.26 | 250.55 | 228.32 | 108.90 | 162.68 | 1108.45 | - | 157.14 |
| Tamil Nadu | | 46.50 | 182.24 | 325.30 | 64.20 | 218.42 | 215.00 | 80.67 | 139.44 | 1208.71 | 1387.80 | 142.85 |
| Maharashtra | | 53.23 | 168.26 | 361.45 | 88.26 | 237.29 | 218.81 | 73.95 | 139.44 | 1075.02 | 684.12 | 142.85 |
| Karnataka | | 85.20 | 153.41 | - | 45.15 | 148.08 | 230.22 | 95.45 | 162.68 | 1208.71 | 5531.66 | 100.00 |
| Orissa | | 68.97 | 48.21 | 301.20 | 47.94 | 135.40 | 226.42 | 73.95 | 185.92 | 1158.58 | 4065.68 | 100.00 |
| Punjab | | 95.94 | 158.80 | - | 120.04 | 353.55 | 251.15 | 73.95 | 209.16 | 1208.71 | - | 57.14 |
| Rajasthan | | 75.77 | 126.74 | - | 77.69 | 299.96 | 239.74 | 68.57 | 156.87 | 1069.46 | - | 200.00 |
| Uttar Pradesh | | 67.91 | 135.78 | 385.54 | 86.47 | 226.78 | 232.12 | 96.80 | 174.30 | 1097.30 | 664.58 | 128.57 |
| West Bengal | | 44.92 | 100.65 | 277.11 | 52.85 | 193.27 | 209.29 | 69.91 | 145.25 | 907.93 | 918.68 | 171.43 |
| Andaman and Nicobar Islands | | 200.00 | 189.64 | - | 147.55 | 263.43 | 190.27 | 164.02 | 673.95 | 1331.25 | - | 471.43 |
| Delhi | | 78.05 | 154.20 | 602.41 | 135.37 | 307.25 | 222.61 | 71.25 | 174.30 | 1036.04 | - | 214.29 |
| Himachal Pradesh | | 90.69 | 151.84 | - | 72.46 | 268.49 | 209.29 | 111.59 | 226.59 | 1164.15 | - | 185.71 |
| Tripura | | 115.00 | - | - | 33.65 | - | 237.83 | 99.49 | 290.50 | 1359.10 | - | 271.43 |
| Pondicherry | | 88.26 | - | - | 88.26 | - | 215.00 | 107.56 | 342.78 | 1230.99 | - | 128.57 |
| Goa, Daman and Diu | | - | - | - | 44.15 | 98.17 | 239.74 | 60.50 | 151.06 | 1481.65 | - | 200.00 |
| Manipur | | - | - | - | - | - | - | 29.17 | 580.99 | 1392.52 | - | 300.00 |
| Haryana | | 91.37 | 140.59 | 1192.77 | 83.88 | 319.96 | 209.29 | 67.22 | 197.54 | 1253.27 | 547.30 | 171.43 |
| Chandigarh | | 99.68 | 176.99 | - | 175.44 | 581.74 | 256.86 | 104.87 | 168.48 | 1247.70 | - | 157.14 |
| India | | 59.44 | 126.17 | 5.24 | 59.95 | 164.17 | 220.49 | 79.68 | 142.83 | 1065.06 | 732.59 | 135.42 |

Table A-2 : Relative Prices of All Fuels With Reference to Coal Price (Prices in TCR Unit)

| State | Fuel | Coke | Coal gas | Firewood | Charcoal | Aviation and Motor Spirit | Diesel Oil | Other Fuel Oils | Lubricating Oils | Power Alcohol | Electricity |
|-----------------------------|------|------|----------|----------|----------|---------------------------|------------|-----------------|------------------|---------------|-------------|
| Andhra Pradesh | | 1.97 | 25.56 | 1.21 | 3.40 | 4.24 | 1.70 | 2.91 | 21.39 | - | 2.39 |
| Assam | | 2.05 | 0.00 | 0.42 | 4.15 | 4.48 | 1.33 | 2.93 | 23.95 | - | 3.47 |
| Bihar | | 2.06 | 1.78 | 0.86 | 3.76 | 3.66 | 1.39 | 2.58 | 17.78 | 32.80 | 2.12 |
| Gujarat | | 2.00 | 11.46 | 1.03 | 2.86 | 2.74 | 1.07 | 1.49 | 12.42 | 5.72 | 2.09 |
| Jammu and Kashmir | | 3.00 | - | 1.46 | 1.35 | 1.98 | 0.72 | 5.40 | 15.27 | - | 1.33 |
| Kerala | | 1.74 | - | 0.39 | 1.46 | 2.13 | 0.73 | 1.26 | 9.31 | 3.53 | 1.03 |
| Madhya Pradesh | | 3.24 | - | 1.29 | 5.47 | 4.99 | 2.38 | 3.55 | 24.20 | - | 3.43 |
| Tamil Nadu | | 3.92 | 7.00 | 1.38 | 4.70 | 4.62 | 1.73 | 3.00 | 25.99 | 29.85 | 3.07 |
| Maharashtra | | 3.16 | 6.79 | 1.66 | 4.46 | 4.11 | 1.39 | 2.62 | 20.20 | 12.85 | 2.68 |
| Karnataka | | 1.80 | - | 0.53 | 1.74 | 2.70 | 1.12 | 1.91 | 14.19 | 64.93 | 1.17 |
| Orissa | | 0.70 | 4.37 | 0.70 | 1.96 | 3.28 | 1.07 | 2.70 | 16.80 | 58.95 | 1.45 |
| Punjab | | 1.66 | - | 1.25 | 3.69 | 2.62 | 0.77 | 2.18 | 12.60 | - | 0.60 |
| Rajasthan | | 1.67 | - | 1.03 | 3.96 | 3.16 | 0.90 | 2.07 | 14.11 | - | 2.64 |
| Uttar Pradesh | | 2.00 | 5.68 | 1.27 | 3.34 | 3.42 | 1.43 | 2.57 | 16.16 | 9.79 | 1.89 |
| West Bengal | | 2.24 | 6.17 | 1.18 | 4.30 | 4.66 | 1.56 | 3.23 | 20.21 | 20.45 | 3.82 |
| Andaman and Nicobar Islands | | 0.95 | - | 0.74 | 1.32 | 0.95 | 0.82 | 3.37 | 6.66 | - | 2.36 |
| Delhi | | 1.98 | 7.72 | 1.73 | 3.94 | 2.85 | 0.91 | 2.23 | 13.27 | - | 2.75 |
| Himachal Pradesh | | 1.67 | - | 0.80 | 2.96 | 2.31 | 1.23 | 2.50 | 12.84 | - | 2.05 |
| Tripura | | - | - | 0.29 | - | 2.07 | 0.87 | 2.53 | 11.82 | - | 2.36 |
| Pondicherry | | - | - | 1.00 | - | 2.44 | 1.22 | 3.88 | 13.95 | - | 1.46 |
| Goa, Daman and Diu* | | - | - | - | - | - | - | - | - | - | - |
| Manipur* | | - | - | - | - | - | - | - | - | - | - |
| Haryana | | 1.54 | 13.05 | 0.92 | 3.50 | 2.29 | 0.74 | 2.16 | 13.72 | 5.99 | 1.88 |
| Chandigarh | | 1.78 | - | 1.76 | 5.84 | 2.58 | 1.05 | 1.69 | 12.52 | - | 1.58 |

* These two States do not use coal, hence no relative prices are evaluated.

Table A-3.1 : State x Industry Price of Coal (Rs./M. Tonne)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|-------|-------|-------|---------|---------|--------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|
| State | | | | | * | | | | | | | | | | | |
| Andhra Pradesh | 72.70 | 55.93 | 87.14 | - | - | 59.73 | - | - | - | - | 57.82 | 66.43 | 88.70 | 73.03 | - | 48.60 |
| Assam | - | 80.43 | - | - | - | - | - | - | - | - | - | - | 114.29 | 60.77 | - | - |
| Bihar | - | 68.10 | - | 41.09 | - | 46.85 | - | 40.00 | 44.22 | 31.28 | - | 52.59 | 70.80 | 36.58 | 49.15 | 39.66 |
| Gujarat | - | 91.42 | 93.16 | 45.45 | - | 81.34 | 85.50 | - | 71.12 | - | 99.99 | 89.34 | 115.79 | 94.98 | - | 71.12 |
| Kerala | - | 91.50 | - | - | - | - | - | - | 108.33 | - | - | - | - | - | - | - |
| Madhya Pradesh | 75.24 | 73.34 | 38.64 | - | - | - | - | - | 50.37 | - | 67.93 | 51.86 | 60.03 | 56.00 | - | 36.15 |
| Tamil Nadu | - | 81.92 | 91.22 | 94.47 | - | 103.95 | - | - | 87.70 | - | - | 95.10 | 100.60 | 160.62 | - | 34.10 |
| Maharashtra | - | 72.47 | 52.56 | 94.26 | - | 76.87 | 62.50 | - | 57.81 | 52.13 | - | - | 65.08 | 87.65 | 112.03 | 46.59 |
| Karnataka | - | 84.56 | 94.25 | - | - | - | - | - | 107.83 | - | - | 80.17 | 105.72 | 119.85 | - | - |
| Orissa | - | 52.64 | 47.93 | - | - | - | - | - | 70.19 | - | - | - | 81.52 | 65.45 | - | 25.53 |
| Punjab | - | 95.47 | - | - | - | - | - | - | - | - | - | - | 96.14 | 107.63 | - | 106.00 |
| Rajasthan | - | 92.14 | - | - | - | - | - | - | - | - | - | 77.30 | - | 123.29 | 112.50 | 145.07 |
| Uttar Pradesh | 82.91 | 77.44 | 78.92 | - | - | 61.84 | - | - | - | 83.64 | 88.45 | - | 82.49 | 73.34 | - | 65.98 |
| West Bengal | - | 54.97 | 47.21 | - | - | 59.34 | 47.12 | 56.34 | 46.42 | 51.63 | 58.78 | - | 44.53 | 62.57 | 80.68 | 41.62 |
| Delhi | - | 84.61 | - | - | - | - | - | - | - | 98.50 | 89.34 | - | 107.73 | 95.89 | - | - |
| Haryana | 90.83 | 92.36 | 80.93 | - | - | - | - | - | - | 90.10 | 86.31 | - | 73.16 | 108.11 | - | - |

* Coal is not used in this industry.

Table A-3.2 : State x Industry Price of Electricity (Rs./KWH)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|------|------|------|---------|---------|-------|--------|------|------|------|------|------|-------|--------|------|------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | 0.24 | 0.13 | 0.08 | 0.07 | - | 0.10 | 0.13 | - | - | - | 0.20 | 0.07 | 0.23 | 0.24 | - | - |
| Assam | - | 0.11 | - | - | - | - | - | - | - | - | - | - | 0.17 | 0.25 | - | 0.20 |
| Bihar | - | 0.13 | - | 0.05 | - | 0.14 | - | 0.13 | - | 0.27 | - | 0.11 | 0.07 | 0.11 | 0.11 | 0.38 |
| Gujarat | - | 0.12 | 0.12 | 0.09 | - | 0.12 | 0.11 | - | 0.17 | - | 0.16 | 0.11 | 0.17 | 0.16 | 0.09 | 0.16 |
| Kerala | - | 0.12 | - | - | 0.29 | 0.06 | - | - | 0.17 | - | - | - | - | - | - | 0.33 |
| Madhya Pradesh | 0.16 | 0.12 | 0.14 | - | - | - | - | - | 0.16 | - | 0.18 | 0.10 | 0.10 | 0.14 | - | - |
| Tamil Nadu | - | 1.06 | 0.09 | 0.09 | 0.34 | 0.05 | 0.15 | - | 0.14 | - | - | 0.07 | 0.14 | 0.14 | 0.11 | 0.27 |
| Maharashtra | - | 0.09 | 0.10 | 0.08 | 0.20 | 0.09 | 0.09 | 0.15 | 0.10 | 0.10 | - | - | 0.12 | 0.07 | 0.12 | 0.14 |
| Karnataka | - | 0.08 | 0.07 | - | 0.19 | - | - | - | 0.15 | - | - | 0.07 | 0.04 | 0.14 | 0.15 | 0.11 |
| Orissa | - | 0.15 | 0.10 | - | - | - | - | - | 0.14 | - | - | - | 0.11 | 0.05 | - | 0.24 |
| Punjab | - | 0.09 | - | - | - | - | - | - | - | - | - | - | 0.12 | 0.11 | - | 0.20 |
| Rajasthan | - | 0.12 | - | - | - | - | - | - | - | - | - | 0.11 | - | 0.18 | 0.15 | 0.17 |
| Uttar Pradesh | 0.18 | 0.13 | 0.11 | - | - | 0.06 | - | - | - | 0.14 | 0.19 | - | 0.11 | 0.17 | - | 0.86 |
| West Bengal | - | 0.13 | 0.12 | - | - | 0.07 | 0.13 | 0.09 | 0.15 | 0.13 | 0.16 | - | 0.09 | 0.12 | 0.09 | 0.20 |
| Delhi | - | 0.16 | - | - | - | - | - | - | - | 0.16 | 0.19 | - | 0.17 | 0.18 | - | - |
| Haryana | 0.15 | 0.12 | 0.11 | - | - | - | - | - | - | 0.08 | 0.14 | - | 0.15 | 0.09 | - | - |

Table A-3.3 : State x Industry Price of Other Fuel Oils (Rs./Litre)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|------|------|------|---------|---------|-------|--------|------|------|------|------|------|-------|--------|------|------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | - | 0.32 | 0.27 | 0.23 | - | 0.24 | - | - | - | - | - | 0.59 | 0.24 | 0.28 | - | 0.24 |
| Assam | - | - | - | - | - | - | - | - | - | - | - | - | 0.35 | 0.40 | - | - |
| Bihar | - | - | - | 0.33 | - | - | - | 0.33 | 0.27 | 0.50 | - | 0.63 | 0.27 | 0.29 | 0.27 | 0.28 |
| Gujarat | - | 0.25 | 0.51 | 0.60 | - | 0.21 | 0.24 | - | 0.25 | - | 0.22 | 0.21 | 0.26 | 0.28 | 0.28 | 0.17 |
| Kerala | - | 0.24 | - | - | - | 0.28 | - | - | 0.28 | - | - | - | - | - | - | 0.54 |
| Madhya Pradesh | - | 0.58 | 0.25 | - | - | - | - | - | 0.30 | - | 0.30 | 0.29 | 0.31 | 0.29 | - | 0.37 |
| Tamil Nadu | - | 0.24 | 0.27 | 0.23 | - | 0.25 | 0.51 | - | 0.23 | - | - | 0.23 | 0.27 | 0.27 | 0.26 | 0.17 |
| Maharashtra | - | 0.24 | 0.28 | 0.22 | 0.29 | 0.25 | 0.22 | 0.32 | 0.25 | 0.23 | - | - | 0.24 | 0.22 | 0.24 | 0.26 |
| Karnataka | - | 0.27 | 0.27 | - | - | - | - | - | 0.34 | - | - | 0.37 | 0.29 | 0.48 | 0.26 | - |
| Orissa | - | 0.86 | 0.23 | - | - | - | - | - | 0.26 | - | - | - | 0.37 | 0.27 | - | 0.20 |
| Punjab | - | 0.47 | - | - | - | - | - | - | - | - | - | - | 0.46 | 0.37 | - | - |
| Rajasthan | - | 0.59 | - | - | - | - | - | - | - | - | - | 0.27 | - | 0.60 | 0.42 | 1.00 |
| Uttar Pradesh | 0.31 | 0.48 | 0.29 | - | - | 0.41 | - | - | - | 0.31 | 0.45 | - | 0.29 | 0.35 | - | - |
| West Bengal | - | 0.40 | 0.25 | - | - | 0.26 | 0.24 | - | 0.57 | 0.22 | 0.36 | - | 0.25 | 0.25 | 0.26 | 0.19 |
| Delhi | - | 0.56 | - | - | - | - | - | - | - | 0.27 | 0.67 | - | 0.30 | 0.30 | - | - |
| Haryana | - | 0.64 | 0.30 | - | - | - | - | - | - | 0.31 | 0.91 | - | 0.37 | 0.28 | - | - |

Table A-4.1 : State x Industry Consumption Share of Coal (Value of Consumption)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|-------|-------|-------|---------|---------|-------|--------|------|-------|-------|-------|-------|-------|--------|-------|-------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | 55.79 | 13.34 | 47.36 | - | - | 8.88 | - | - | - | - | 83.58 | 65.36 | 2.47 | 0.62 | - | 94.99 |
| Assam | - | 16.26 | - | - | - | - | - | - | - | - | - | - | 7.38 | 5.42 | - | - |
| Bihar | - | 43.96 | - | 77.37 | - | 3.93 | - | 3.82 | 55.27 | 80.68 | - | 58.11 | 63.18 | 17.91 | 45.06 | 7.03 |
| Gujarat | - | 30.39 | 35.08 | - | - | 19.54 | 21.80 | - | 57.84 | - | 51.56 | 56.09 | 1.01 | 0.75 | - | 61.09 |
| Kerala | - | 0.63 | - | - | - | - | - | - | 2.03 | - | - | - | - | - | - | - |
| Madhya Pradesh | 80.04 | 28.41 | 45.81 | - | - | - | - | - | 58.40 | - | 54.00 | 61.73 | 19.50 | 1.94 | - | 98.81 |
| Tamil Nadu | - | 0.76 | 33.12 | 0.60 | - | 0.77 | - | - | 6.72 | - | - | 63.48 | 0.83 | 0.26 | - | 94.46 |
| Maharashtra | - | 9.55 | 16.80 | 0.09 | - | 2.15 | - | - | 28.74 | 1.11 | - | - | 0.88 | 0.51 | 0.25 | 93.05 |
| Karnataka | - | 8.97 | 53.08 | - | - | - | - | - | 9.15 | - | - | 69.25 | 10.66 | 3.17 | - | - |
| Orissa | - | 39.18 | 52.82 | - | - | - | - | - | 52.49 | - | - | - | 76.64 | 0.66 | - | 75.49 |
| Punjab | - | 37.97 | - | - | - | - | - | - | - | - | - | - | 35.59 | 9.65 | - | 72.26 |
| Rajasthan | - | 32.36 | - | - | - | - | - | - | - | - | - | 82.53 | - | 2.89 | 0.79 | 65.24 |
| Uttar Pradesh | 84.01 | 28.21 | 53.21 | - | - | 34.29 | - | - | - | 62.06 | 75.87 | - | 12.05 | 17.36 | - | 98.42 |
| West Bengal | - | 17.03 | 51.60 | - | - | 16.53 | 11.27 | 0.78 | 74.12 | 26.13 | 23.56 | - | 12.68 | 5.83 | 0.98 | 92.86 |
| Delhi | - | 54.17 | - | - | - | - | - | - | - | 67.36 | 83.60 | - | 4.13 | 15.40 | - | - |
| Haryana | 81.48 | 31.91 | 81.57 | - | - | - | - | - | - | 1.80 | 80.46 | - | 10.18 | 0.19 | - | - |

* Coal has not been used in this industry.

Table A-4.2 : State x Industry Consumption Share of Electricity (on the Value Basis)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 * |
|----------------|-------|-------|-------|---------|---------|-------|--------|-------|-------|-------|-------|-------|-------|--------|-------|----------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | 38.95 | 79.37 | 43.31 | 59.31 | - | 79.11 | 93.44 | - | - | - | 12.89 | 31.38 | 63.66 | 56.17 | - | - |
| Assam | - | 74.76 | - | - | - | - | - | - | - | - | - | - | 49.85 | 42.36 | - | - |
| Bihar | - | 45.65 | 40.09 | 2.41 | - | 94.36 | - | 86.51 | 21.30 | 5.26 | - | 38.25 | 9.71 | 65.52 | 16.33 | - |
| Gujarat | - | 61.40 | - | 89.46 | - | 13.28 | 43.25 | - | 6.09 | - | 15.78 | 20.58 | 50.28 | 31.31 | 48.04 | - |
| Kerala | - | 83.34 | - | - | 100.00 | 58.70 | - | - | 12.83 | - | - | - | - | - | - | - |
| Madhya Pradesh | 11.23 | 65.54 | 42.99 | - | - | - | - | - | 15.57 | - | 18.57 | 32.56 | 62.77 | 69.52 | - | - |
| Tamil Nadu | - | 97.67 | 42.74 | 67.62 | 86.49 | 72.60 | 93.55 | - | 11.82 | - | - | 21.35 | 58.37 | 59.57 | 87.89 | - |
| Maharashtra | - | 51.16 | 57.17 | 70.76 | 51.84 | 60.61 | 56.89 | 25.33 | 17.95 | 20.66 | - | - | 63.33 | 58.48 | 51.50 | - |
| Karnataka | - | 52.96 | 32.27 | - | 100.00 | - | - | - | 7.91 | - | - | 27.26 | 46.50 | 37.00 | 73.63 | - |
| Orissa | - | 54.89 | 39.88 | - | - | - | - | - | 14.02 | - | - | - | 15.11 | 89.85 | - | - |
| Punjab | - | 46.80 | - | - | - | - | - | - | - | - | - | - | 31.18 | 45.54 | - | - |
| Rajasthan | - | 58.66 | - | - | - | - | - | - | - | - | - | 13.76 | - | 7.72 | 73.26 | - |
| Uttar Pradesh | 6.08 | 64.82 | 39.32 | - | - | 50.56 | - | - | - | 8.03 | 19.26 | - | 63.35 | 29.91 | - | - |
| West Bengal | - | 74.34 | 43.08 | - | - | 77.68 | 75.76 | 97.59 | 21.58 | 15.61 | 25.47 | - | 50.01 | 31.70 | 57.80 | - |
| Delhi | - | 41.23 | - | - | - | - | - | - | - | 7.11 | 12.42 | - | 28.62 | 9.29 | - | - |
| Haryana | 12.96 | 59.71 | 14.71 | - | - | - | - | - | - | 26.76 | 17.18 | - | 54.92 | 42.93 | - | - |

* As the use of electricity in the production of electricity is negligible, the consumption share of it has not been reported.



Table A-4.3 : State x Industry Consumption of Other Fuel Oils (on Value Basis)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|------|-------|-------|---------|---------|-------|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | 3.16 | 1.19 | 3.91 | 36.75 | - | 10.41 | - | - | - | - | - | 0.06 | 30.91 | 21.80 | - | 2.86 |
| Assam | - | - | - | - | - | - | - | - | - | + | - | - | 37.54 | 10.34 | - | - |
| Bihar | - | - | - | 0.01 | - | - | - | 0.01 | 20.03 | 0.46 | - | 0.02 | 7.01 | 3.94 | 34.08 | 72.20 |
| Gujarat | - | 4.49 | 22.26 | 7.33 | - | 47.10 | 32.96 | - | 16.70 | - | 27.66 | 20.72 | 39.40 | 18.44 | 32.40 | 36.42 |
| Kerala | - | 9.09 | - | - | - | 40.97 | - | - | 3.64 | - | - | - | - | - | - | 7.88 |
| Madhya Pradesh | - | 0.46 | 7.30 | - | - | - | - | - | 3.84 | - | 23.76 | 2.73 | 0.55 | 15.99 | - | 0.17 |
| Tamil Nadu | - | 1.05 | 20.98 | 25.07 | - | 24.09 | 1.63 | - | 78.11 | - | - | 13.06 | 34.59 | 21.47 | 3.90 | 4.71 |
| Maharashtra | - | 32.21 | 15.88 | 27.48 | 27.09 | 33.50 | 37.73 | 19.25 | 25.38 | 64.66 | - | - | 28.55 | 21.05 | 31.13 | 0.48 |
| Karnataka | - | 31.50 | 10.52 | - | - | - | - | - | 2.49 | - | - | 0.27 | 6.72 | 2.38 | 24.56 | - |
| Orissa | - | 0.18 | 3.33 | - | - | - | - | - | 12.23 | - | - | - | 4.48 | 1.39 | - | 1.95 |
| Punjab | - | 1.43 | - | - | - | - | - | - | - | - | - | - | 19.92 | 6.67 | - | - |
| Rajasthan | - | 0.66 | - | - | - | - | - | - | - | - | - | 0.67 | - | 0.96 | 11.03 | 0.01 |
| Uttar Pradesh | 6.99 | 1.03 | 3.56 | - | - | 7.95 | - | - | - | 14.53 | 1.16 | - | 13.31 | 12.55 | - | - |
| West Bengal | - | 0.42 | 1.57 | - | - | 3.10 | 6.37 | - | 0.28 | 50.63 | 18.91 | - | 12.92 | 8.04 | 25.68 | 2.59 |
| Delhi | - | 0.71 | - | - | - | - | - | - | - | 22.38 | 0.25 | - | 43.44 | 10.51 | - | - |
| Haryana | - | 1.28 | 0.54 | - | - | - | - | - | - | 48.68 | 0.49 | - | 30.84 | 33.79 | - | - |

Table A-5.1 : State x Industry Consumption Share of Coal (on Quantity Basis)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 * | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|-------|-------|-------|---------|--------------|-------|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| Andhra Pradesh | 87.26 | 34.33 | 54.49 | - | - | 19.36 | - | - | - | - | 94.83 | 74.64 | 6.09 | 2.24 | - | 98.09 |
| Assam | - | 28.02 | - | - | - | - | - | - | - | - | - | - | 13.75 | 13.33 | - | - |
| Bihar | - | 70.86 | - | 94.00 | - | 12.46 | - | 17.57 | 83.19 | 93.23 | - | 80.36 | 75.01 | 47.13 | 72.20 | 21.99 |
| Gujarat | - | 44.85 | 54.81 | 0.01 | - | 29.55 | 33.21 | - | 70.02 | - | 62.57 | 66.04 | 1.74 | 1.58 | - | 69.19 |
| Kerala | - | 1.15 | - | - | - | - | - | - | 1.14 | - | - | - | - | - | - | - |
| Madhya Pradesh | 90.24 | 49.60 | 81.80 | - | - | - | - | - | 75.92 | - | 77.44 | 82.63 | 38.26 | 6.55 | - | 99.74 |
| Tamil Nadu | - | 11.17 | 43.95 | 0.81 | - | 0.64 | - | - | 10.11 | - | - | 67.33 | 1.48 | 0.32 | - | 98.22 |
| Maharashtra | - | 16.51 | 36.58 | 0.11 | - | 3.71 | 0.01 | - | 42.91 | 2.90 | - | - | 2.19 | 0.71 | 0.39 | 95.32 |
| Karnataka | - | 12.80 | 57.77 | - | - | - | - | - | 4.34 | - | - | 74.81 | 8.65 | 4.99 | - | - |
| Orissa | - | 73.80 | 77.12 | - | - | - | - | - | 64.44 | - | - | - | 87.52 | 0.77 | - | 92.92 |
| Punjab | - | 49.06 | - | - | - | - | - | - | - | - | - | - | 51.88 | 13.40 | - | 65.39 |
| Rajasthan | - | 48.75 | - | - | - | - | - | - | - | - | - | 91.08 | - | 4.40 | 1.43 | 51.75 |
| Uttar Pradesh | 92.87 | 50.23 | 70.24 | - | - | 45.05 | - | - | - | 75.25 | 91.49 | - | 21.58 | 35.95 | - | 99.58 |
| West Bengal | - | 40.42 | 79.59 | - | - | 26.03 | 32.93 | 1.76 | 92.94 | 50.22 | 46.06 | - | 32.82 | 12.46 | 1.84 | 96.63 |
| Delhi | - | 76.85 | - | - | - | - | - | - | - | 79.40 | 93.82 | - | 7.02 | 27.39 | - | - |
| Haryana | 91.29 | 48.42 | 90.83 | - | - | - | - | - | - | 3.23 | 91.39 | - | 25.42 | 0.29 | - | - |

* Coal has not been used in this industry.

Table A-5.2 : State x Industry Consumption Share of Electricity (on the Quantity Basis)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 * |
|----------------|-------|-------|-------|---------|---------|-------|--------|-------|-------|-------|-------|-------|-------|--------|-------|----------|
| Andhra Pradesh | 12.74 | 62.78 | 40.33 | 69.66 | - | 69.85 | 96.40 | - | - | - | 2.99 | 24.13 | 42.76 | 43.60 | - | - |
| Assam | - | 68.67 | - | - | - | - | - | - | - | - | - | - | 44.01 | 17.53 | - | - |
| Bihar | - | 26.33 | - | 1.85 | - | 84.10 | - | 76.52 | 7.07 | 0.49 | - | 18.35 | 8.09 | 41.55 | 8.40 | - |
| Gujarat | - | 50.00 | 33.37 | 95.84 | - | 9.87 | 34.88 | - | 2.10 | - | 8.33 | 14.22 | 42.29 | 27.24 | 59.08 | - |
| Kerala | - | 77.38 | - | - | 79.20 | 73.13 | - | - | 3.29 | - | - | - | - | - | - | - |
| Madhya Pradesh | 4.07 | 48.85 | 14.37 | - | - | - | - | - | 4.58 | - | 7.22 | 15.41 | 51.55 | 63.48 | - | - |
| Tamil Nadu | - | 78.19 | 38.46 | 68.86 | 50.72 | 83.90 | 94.92 | - | 8.02 | - | - | 21.70 | 52.50 | 57.87 | 87.98 | - |
| Maharashtra | - | 49.77 | 45.55 | 73.15 | 45.06 | 62.72 | 59.45 | 13.13 | 11.28 | 19.14 | - | - | 59.54 | 67.65 | 53.77 | - |
| Karnataka | - | 59.57 | 33.43 | - | 100.00 | - | - | - | 1.89 | - | - | 23.70 | 65.17 | 34.96 | 66.82 | - |
| Orissa | - | 25.32 | 19.87 | - | - | - | - | - | 5.96 | - | - | - | 9.05 | 94.15 | - | - |
| Punjab | - | 45.78 | - | - | - | - | - | - | - | - | - | - | 24.22 | 43.74 | - | - |
| Rajasthan | - | 46.37 | - | - | - | - | - | - | - | - | - | 7.42 | - | 5.65 | 70.45 | - |
| Uttar Pradesh | 2.19 | 47.42 | 26.73 | - | - | 49.32 | - | - | - | 4.04 | 7.43 | - | 57.46 | 18.40 | - | - |
| West Bengal | - | 53.24 | 18.11 | - | - | 70.13 | 56.71 | 98.07 | 6.00 | 8.48 | 13.22 | - | 44.40 | 24.24 | 64.27 | - |
| Delhi | - | 22.25 | - | - | - | - | - | - | - | 3.69 | 4.68 | - | 22.16 | 6.01 | - | - |
| Haryana | 6.13 | 48.11 | 8.32 | - | - | - | - | - | - | 36.21 | 8.20 | - | 45.72 | 50.43 | - | - |

* As the use of electricity in the production of electricity is negligible, the consumption share of it has not been reported.

Table A-5.3 : State x Industry Consumption of Other Fuel Oils (on Quantity Basis)

| Industry | 211 | 231 | 271 | 311.1.1 | 311.1.3 | 311.2 | 311(R) | 329 | 331 | 332 | 333 | 334 | 341.1 | 341(R) | 342 | 511 |
|----------------|------|-------|-------|---------|---------|-------|--------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| State | | | | | | | | | | | | | | | | |
| Andhra Pradesh | - | 0.91 | 2.49 | 29.62 | - | 9.80 | - | - | - | - | - | 0.01 | 48.76 | 34.98 | - | 1.01 |
| Assam | - | - | - | - | - | - | - | - | - | - | - | - | 39.12 | 6.59 | - | - |
| Bihar | - | - | - | - | - | - | - | 0.01 | 8.44 | 0.06 | - | - | 3.78 | 2.27 | 17.20 | 54.75 |
| Gujarat | - | 4.17 | 10.89 | 2.93 | - | 47.14 | 31.09 | - | 9.86 | - | 26.37 | 18.08 | 51.39 | 22.64 | 31.10 | 29.63 |
| Kerala | - | 10.70 | - | - | - | 26.59 | - | - | 1.36 | - | - | - | - | - | - | 5.09 |
| Madhya Pradesh | 0.15 | 0.18 | 3.51 | - | - | - | - | - | 1.42 | - | 13.22 | 1.13 | 0.36 | 17.96 | - | 0.03 |
| Tamil Nadu | - | 9.12 | 16.23 | 24.55 | - | 14.44 | 1.18 | - | 76.53 | - | - | 9.82 | 39.83 | 27.32 | 4.05 | 1.66 |
| Maharashtra | - | 29.55 | 11.26 | 25.92 | 39.56 | 31.20 | 37.89 | 11.60 | 15.23 | 64.77 | - | - | 33.81 | 19.90 | 38.56 | 0.15 |
| Karnataka | - | 24.54 | 6.90 | - | - | - | - | - | 0.64 | - | - | 0.11 | 3.40 | 1.61 | 31.70 | - |
| Orissa | - | 0.04 | 1.78 | - | - | - | - | - | 6.92 | - | - | - | 1.94 | 0.68 | - | 0.53 |
| Punjab | - | 0.65 | - | - | - | - | - | - | - | - | - | - | 10.50 | 4.63 | - | - |
| Rajasthan | - | 0.27 | - | - | - | - | - | - | - | - | - | 0.36 | - | 0.52 | 9.18 | - |
| Uttar Pradesh | 3.61 | 0.51 | 2.18 | - | - | 2.74 | - | - | - | 8.16 | 0.47 | - | 11.58 | 9.32 | - | - |
| West Bengal | - | 0.23 | 0.78 | - | - | 1.93 | 6.34 | - | 0.05 | 38.74 | 10.67 | - | 10.30 | 7.38 | 25.86 | 1.00 |
| Delhi | - | 0.26 | - | - | - | - | - | - | - | 16.47 | 0.06 | - | 46.25 | 10.12 | - | - |
| Haryana | - | 0.48 | 0.28 | - | - | - | - | - | - | 44.38 | 0.09 | - | 25.95 | 32.65 | - | - |

Table A-6 : Gross Output State x HFU Industries (1970 A.S.I., '000 Rs.)

| State | Andhra Pradesh | Assam | Bihar | Gujarat | Kerala | Madhya Pradesh | Tamil Nadu | Maha-rashtra | Karna-taka | Orissa | Punjab | Raja-sthan | Uttar Pradesh | West Bengal | Delhi | Haryana |
|----------|----------------|--------|----------|----------|---------|----------------|------------|--------------|------------|----------|---------|------------|---------------|-------------|---------|---------|
| Industry | | | | | | | | | | | | | | | | |
| 211 | 9,100 | - | - | - | - | 6,212 | - | - | - | - | - | - | 31,796 | - | - | 10,667 |
| 231 | 396,394 | 13,261 | 42,655 | 3597,745 | 189,429 | 855,000 | 2564,851 | 5045,536 | 520,978 | 99,584 | 409,344 | 379,208 | 1054,557 | 3171,022 | 309,451 | 299,856 |
| 271 | 67,705 | - | - | 58,838 | - | 159,386 | 100,305 | 396,220 | 136,696 | 201,936 | - | - | 69,433 | 339,683 | - | 100,985 |
| 311.1.1 | 214,256 | - | 174,049 | 308,420 | - | - | 102,152 | 257,200 | - | - | - | - | - | - | - | - |
| 311.2 | 14,493 | - | 12,392 | 355,142 | 99,107 | - | 142,675 | 776,797 | - | - | - | - | 74,489 | 94,518 | - | - |
| 311(R) | 2,461 | - | - | 271,557 | 25,729 | - | 48,247 | 1273,053 | 7,289 | - | - | - | 228,960 | 215,524 | - | - |
| 331 | - | - | 63,123 | 19,474 | 31,467 | 13,169 | 48,079 | 41,488 | 34,725 | 8,071 | - | - | - | 19,153 | - | - |
| 332 | - | - | 5,486 | - | - | - | - | 140,252 | - | - | - | - | 80,785 | 91,388 | 2,078 | 34,296 |
| 333 | 2,053 | - | - | 20,370 | - | 1,963 | - | - | - | - | - | - | 1,377 | 18,023 | 3,165 | 11,034 |
| 334 | 156,598 | - | 217,245 | 213,407 | - | 264,976 | 338,768 | - | 169,517 | - | - | 173,597 | - | - | - | - |
| 341.1 | 30,745 | 4,294 | 1461,953 | 94,922 | 34,422 | 1326,514 | 157,403 | 391,759 | 160,793 | 1057,211 | 118,305 | - | 161,756 | 1607,451 | 40,416 | 27,294 |
| 341(R) | 22,639 | 2,965 | 152,715 | 137,323 | - | 18,316 | 180,586 | 688,464 | 11,099 | 90,593 | 22,337 | 2,929 | 104,450 | 393,037 | 4,845 | 119,091 |
| 342 | - | - | 213,009 | 5,556 | - | - | 102,766 | 577,520 | 183,037 | - | - | 41,665 | - | 445,073 | - | - |
| 511 | 373,875 | 53,019 | 334,101 | 530,997 | 174,238 | 333,248 | 924,962 | 1307,853 | 481,595 | 127,198 | 219,277 | 178,804 | 659,983 | 897,290 | - | - |
| Total | 1290,319 | 73,539 | 2676,728 | 5613,751 | 554,392 | 2978,784 | 4710,794 | 10896,142 | 1705,729 | 1584,593 | 769,263 | 776,203 | 2467,586 | 7292,162 | 359,955 | 603,223 |

Tabla A-7 : Value Added State x HFU Industries (1970 A.S.I., '000 Rs.)

| State | Andhra Pradesh | Assam | Bihar | Gujarat | Kerala | Madhya Pradesh | Tamil Nadu | Maha-rashtra | Karna-taka | Orissa | Punjab | Raja-sthan | Uttar Pradesh | West Bengal | Delhi | Haryana |
|--|----------------|---------|----------|----------|---------|----------------|------------|--------------|------------|---------|---------|------------|---------------|-------------|---------|---------|
| Industry | | | | | | | | | | | | | | | | |
| 211 | 7,054 | - | - | - | - | 2,338 | - | - | - | - | - | - | 9,971 | - | - | 2,296 |
| 231 | 85,150 | 1,476 | 12,447 | 1019,699 | 41,958 | 195,824 | 605,079 | 1654,434 | 113,477 | 24,167 | 96,265 | 83,744 | 261,496 | 936,291 | 86,125 | 55,255 |
| 271 | 10,324 | - | - | 12,435 | - | 95,144 | 30,393 | 131,828 | 44,739 | 62,348 | - | - | 16,465 | 112,798 | - | 35,249 |
| 311.1.1 | 53,812 | - | 22,086 | 118,608 | - | - | 8,036 | 27,952 | - | - | - | - | - | - | - | - |
| 311.2 | 2,974 | - | 3,658 | 113,271 | 37,071 | - | 44,667 | 263,501 | - | - | - | - | 18,453 | 22,829 | - | - |
| 311(R) | 2,756 | - | - | 97,628 | 4,040 | - | 14,624 | 431,715 | 605 | - | - | - | 55,126 | 60,848 | - | - |
| 331 | - | - | 20,677 | 9,658 | 17,114 | 5,099 | 13,164 | 19,584 | 18,108 | 2,015 | - | - | - | 7,776 | - | - |
| 332 | - | - | 1,921 | - | - | - | - | 48,765 | - | - | - | - | 22,385 | 31,689 | 543 | 10,580 |
| 333 | 566 | - | - | 7,326 | - | 869 | - | - | - | - | - | - | (-169) | 12,210 | 1,091 | 4,260 |
| 334 | 42,416 | - | 36,280 | 42,788 | - | 72,679 | 72,497 | - | 42,594 | - | - | 34,625 | - | - | - | - |
| 341.1 | 4,579 | 538 | 458,944 | 18,858 | 5,657 | 194,269 | 38,571 | 86,046 | 12,353 | 167,666 | 19,484 | - | 40,896 | 293,025 | 5,111 | 4,341 |
| 341(R) | 585 | 1,682 | 10,520 | 41,327 | - | 5,508 | 69,913 | 220,352 | 7,392 | 24,125 | 7,876 | 977 | 27,713 | 95,522 | 1,230 | 29,291 |
| 342 | - | - | 105,328 | 1,335 | - | - | 34,675 | 90,316 | 72,551 | - | - | 8,412 | - | 121,268 | - | - |
| 511 | 200,883 | 16,613 | 112,012 | 214,703 | 128,067 | 153,395 | 436,873 | 506,423 | 316,176 | 56,831 | 139,603 | 107,722 | 229,921 | 267,745 | - | - |
| All HFU | 411,099 | 20,309 | 824,620 | 1697,636 | 233,907 | 725,125 | 1368,492 | 3496,039 | 627,995 | 337,152 | 263,228 | 235,480 | 682,257 | 1972,539 | 94,100 | 141,272 |
| All Industries | 1088,235 | 404,699 | 1700,134 | 2385,658 | 734,445 | 1003,855 | 2808,036 | 7569,559 | 1632,265 | 504,923 | 526,451 | 539,413 | 1928,491 | 4014,599 | 425,909 | 605,685 |
| Percentage of HFU in All Industries (With Textile) | 37.78 | 5.02 | 48.50 | 71.16 | 31.85 | 72.23 | 48.73 | 46.18 | 38.47 | 66.77 | 50.00 | 43.65 | 35.38 | 49.13 | 22.09 | 23.32 |
| Without Textile (Percentage) | 29.95 | 4.65 | 47.77 | 28.42 | 26.14 | 52.73 | 27.19 | 24.33 | 31.52 | 61.99 | 31.71 | 28.13 | 21.82 | 25.81 | 1.87 | 14.20 |

Table A-8.1 : Fuel Consumption: State x HFU Industries in Value Terms for 1970, ('000 Rs.)

| State | Andhra Pradesh | Assam | Bihar | Gujarat | Kerala | Madhya Pradesh | Tamil Nadu | Maha-rashtra | Karna-taka | Orissa | Punjab | Raja-sthan | Uttar Pradesh | West Bengal | Delhi | Haryana |
|--------------------|----------------|---------|----------|----------|---------|----------------|------------|--------------|------------|---------|---------|------------|---------------|-------------|---------|---------|
| 211 | 505 | - | - | - | - | 484 | - | - | - | - | - | - | 5,612 | - | - | 541 |
| 231 | 14,321 | 418 | 1,367 | 197,269 | 6,651 | 38,965 | 90,543 | 269,977 | 18,045 | 3,374 | 13,054 | 15,511 | 49,457 | 107,463 | 18,684 | 10,048 |
| 271 | 9,216 | - | - | 11,150 | - | 10,359 | 10,109 | 18,736 | 18,469 | 22,399 | - | - | 9,362 | 31,833 | - | 9,902 |
| 311.1.1 | 17,669 | - | 23,327 | 32,358 | - | - | 7,673 | 28,746 | - | - | - | - | - | - | - | - |
| 311.2 | 2,969 | - | 3,890 | 60,106 | 8,424 | - | 27,823 | 68,029 | - | - | - | - | 13,118 | 7,368 | - | - |
| 311(R) | 326 | - | - | 14,436 | 10 | - | 1,324 | 86,387 | 5 | - | - | - | 37,447 | 12,685 | - | - |
| 331 | - | - | 9,702 | 4,036 | 6,457 | 2,278 | 9,777 | 6,347 | 6,651 | 1,995 | - | - | - | 2,866 | - | - |
| 332 | - | - | 665 | - | - | - | - | 20,076 | - | - | - | - | 18,596 | 12,409 | 478 | 4,391 |
| 333 | 481 | - | - | 4,866 | - | 468 | - | - | - | - | - | - | 431 | 4,960 | 807 | 2,038 |
| 334 | 34,396 | - | 49,256 | 70,668 | - | 54,361 | 92,805 | - | 44,925 | - | - | 45,774 | - | - | - | - |
| 341.1 | 2,084 | 325 | 289,526 | 3,381 | 1,668 | 77,586 | 6,146 | 19,955 | 50,826 | 234,602 | 5,183 | - | 14,826 | 87,215 | 1,905 | 1,812 |
| 341(R) | 2,152 | 230 | 22,744 | 7,550 | - | 2,553 | 12,030 | 45,837 | 1,005 | 17,453 | 1,929 | 312 | 5,330 | 29,736 | 416 | 2,088 |
| 342 | - | - | 13,617 | 179 | - | - | 6,997 | 11,338 | 18,463 | - | - | 1,152 | - | 11,501 | - | - |
| 511 | 59,931 | 5,860 | 43,829 | 135,506 | 167 | 59,975 | 106,621 | 137,243 | 841 | 14,950 | 1,525 | 6,033 | 198,395 | 191,738 | - | - |
| All HFU Industries | 144,050 | 6,833 | 465,204 | 541,505 | 23,377 | 247,029 | 371,848 | 713,393 | 159,230 | 294,773 | 21,691 | 68,782 | 352,574 | 504,896 | 22,290 | 30,820 |
| All Industries | 1088,235 | 404,699 | 1700,134 | 2385,658 | 734,445 | 1003,855 | 2808,036 | 7569,559 | 1632,265 | 504,923 | 526,451 | 539,413 | 1928,491 | 4014,599 | 425,909 | 605,085 |

Table A-8.2 : Fuel Consumption (State x HFU Industry) in Physical Units for 1970 (TCR Units)

| State | Andhra Pradesh | Assam | Bihar | Gujarat | Kerala | Madhya Pradesh | Tamil Nadu | Maha-rashtra | Karna-taka | Orissa | Punjab | Raja-sthan | Uttar Pradesh | West Bengal | Delhi | Haryana |
|----------|----------------|----------|----------|----------|---------|----------------|------------|--------------|------------|----------|---------|------------|---------------|-------------|---------|---------|
| Industry | | | | | | | | | | | | | | | | |
| 211 | 835 | - | - | - | - | 5,671 | - | - | - | - | - | - | 61,211 | - | - | 5,307 |
| 231 | 98,898 | 2,974 | 12,455 | 1444,426 | 39,927 | 277,700 | 606,394 | 2015,147 | 143,772 | 33,698 | 104,368 | 111,032 | 356,891 | 817,927 | 128,209 | 71,201 |
| 271 | 90,610 | - | - | 75,480 | - | 149,560 | 82,362 | 157,539 | 175,292 | 319,294 | - | - | 89,814 | 437,029 | - | 106,545 |
| 311.1.1 | 146,048 | - | 467,226 | 220,562 | - | - | 53,645 | 223,573 | - | - | - | - | - | - | - | - |
| 311.2 | 22,575 | - | 22,784 | 411,780 | 77,736 | - | 318,503 | 472,649 | - | - | - | - | 161,154 | 78,799 | - | - |
| 311(R) | 1,660 | - | - | 103,734 | 28 | - | 6,099 | 565,633 | 18 | - | - | - | 399,427 | 189,134 | - | - |
| 331 | - | - | 141,994 | 45,990 | 105,435 | 34,622 | 72,534 | 73,085 | 129,562 | 22,109 | - | - | - | 49,118 | - | - |
| 332 | - | - | 17,901 | - | - | - | - | 134,794 | - | - | - | - | 179,525 | 124,118 | 4,117 | 24,384 |
| 333 | 7,332 | - | - | 39,738 | - | 4,752 | - | - | - | - | - | - | 4,041 | 42,258 | 8,029 | 20,779 |
| 334 | 452,335 | - | 672,547 | 670,302 | - | 731,387 | 912,028 | - | 516,964 | - | - | 535,728 | - | - | - | - |
| 341.1 | 9,441 | 21,426 | 3295,799 | 16,410 | 13,482 | 657,413 | 33,676 | 116,989 | 581,772 | 2513,648 | 36,748 | - | 99,772 | 730,883 | 10,316 | 9,573 |
| 341(R) | 7,940 | 1,357 | 215,015 | 35,261 | - | 13,362 | 61,022 | 353,797 | 5,349 | 227,294 | 11,921 | 1,660 | 34,890 | 220,002 | 2,398 | 12,973 |
| 342 | - | - | 168,837 | 1,163 | - | - | 43,582 | 61,926 | 92,469 | - | - | 5,606 | - | 73,531 | - | - |
| 511 | 1189,909 | 3565,217 | 353,304 | 1343,844 | 812 | 1865,944 | 2979,427 | 1503,960 | 520 | 475,290 | 15,713 | 69,592 | 2966,773 | 4339,317 | - | - |
| Total | 2027,583 | 3590,974 | 5410,256 | 4408,690 | 237,420 | 3740,411 | 5169,272 | 5679,092 | 1645,718 | 3591,333 | 168,750 | 723,618 | 4353,498 | 7120,316 | 153,069 | 250,762 |

Table A-9 : Energy Input Coefficients (Value Terms), 1970

| | Coal | Petroleum Products | Electri- City | Other Fuels |
|---------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 211</u> | | | | |
| Andhra Pradesh | 0.005824 | 0.000550 | 0.004066 | - |
| Madhya Pradesh | 0.001977 | 0.006761 | 0.008693 | - |
| Uttar Pradesh | 0.148226 | 0.015411 | 0.010725 | 0.002076 |
| Haryana | 0.041249 | 0.000562 | 0.006562 | 0.002249 |
| <u>Industry 231</u> | | | | |
| Andhra Pradesh | 0.004791 | 0.002104 | 0.028510 | 0.000518 |
| Assam | 0.005052 | 0.001810 | 0.023226 | 0.000980 |
| Bihar | 0.014090 | 0.002461 | 0.014629 | 0.000868 |
| Gujarat | 0.016461 | 0.004151 | 0.033260 | 0.000300 |
| Kerala | 0.000222 | 0.004466 | 0.029151 | 0.001140 |
| Madhya Pradesh | 0.011816 | 0.002089 | 0.027262 | 0.010429 |
| Tamil Nadu | 0.002164 | 0.004164 | 0.027976 | 0.001331 |
| Maharashtra | 0.004797 | 0.018760 | 0.025713 | 0.000990 |
| Karnataka | 0.002987 | 0.011955 | 0.017636 | 0.000721 |
| Crissa | 0.013145 | 0.001717 | 0.018417 | 0.000271 |
| Punjab | 0.011941 | 0.003284 | 0.014716 | 0.001505 |
| Rajasthan | 0.013154 | 0.003280 | 0.023844 | 0.000372 |
| Uttar Pradesh | 0.013165 | 0.002492 | 0.030247 | 0.000756 |
| West Bengal | 0.005731 | 0.002421 | 0.025017 | 0.000481 |
| Delhi | 0.026941 | 0.000378 | 0.020504 | 0.001913 |
| Haryana | 0.010618 | 0.002152 | 0.019866 | 0.000645 |

(continued)

Table A-9 : (continued)

| | Coal | Petroleum Products | Electri- city | Other Fuels |
|-------------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 271</u> | | | | |
| Andhra Pradesh | 0.064072 | 0.010014 | 0.058592 | 0.002599 |
| Gujarat | 0.065502 | 0.044818 | 0.074850 | 0.001530 |
| Madhya Pradesh | 0.029658 | 0.007121 | 0.027832 | 0.000125 |
| Tamil Nadu | 0.032916 | 0.022139 | 0.042476 | 0.001844 |
| Maharashtra | 0.007645 | 0.010246 | 0.026018 | 0.001603 |
| Karnataka | 0.069819 | 0.017396 | 0.042452 | 0.001866 |
| Orissa | 0.058439 | 0.006244 | 0.044123 | 0.001837 |
| Uttar Pradesh | 0.071709 | 0.009304 | 0.052986 | 0.000763 |
| West Bengal | 0.048339 | 0.003165 | 0.040364 | 0.001820 |
| Haryana | 0.077556 | 0.002773 | 0.013982 | 0.000773 |
| <u>Industry 311.1.1</u> | | | | |
| Andhra Pradesh | - | 0.030239 | 0.044409 | 0.000233 |
| Bihar | 0.103695 | 0.021913 | 0.003235 | 0.005182 |
| Gujarat | 0.000003 | 0.009766 | 0.089002 | 0.000717 |
| Tamil Nadu | 0.000401 | 0.020548 | 0.045491 | 0.000832 |
| Maharashtra | 0.000089 | 0.029557 | 0.072706 | 0.000397 |
| <u>Industry 311.2</u> | | | | |
| Andhra Pradesh | 0.018009 | 0.023529 | 0.160422 | 0.000828 |
| Bihar | 0.010733 | 0.000565 | 0.257828 | 0.004116 |
| Gujarat | 0.027865 | 0.080615 | 0.018942 | 0.015200 |
| Kerala | - | 0.034398 | 0.049038 | 0.000101 |
| Tamil Nadu | 0.001493 | 0.047640 | 0.141132 | 0.004122 |
| Maharashtra | 0.001735 | 0.027969 | 0.049000 | 0.002141 |
| Uttar Pradesh | 0.060277 | 0.016338 | 0.088872 | 0.010284 |
| West Bengal | 0.012876 | 0.003269 | 0.060496 | 0.001238 |

(continued)

Table A-9 : (continued)

| | Coal | Petroleum Products | Electri- city | Other Fuels |
|-------------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 311 (R)</u> | | | | |
| Andhra Pradesh | - | 0.003657 | 0.121495 | 0.004876 |
| Gujarat | 0.010849 | 0.016987 | 0.021524 | 0.000409 |
| Tamil Nadu | - | 0.001531 | 0.040964 | 0.001293 |
| Maharashtra | 0.000002 | 0.024741 | 0.033740 | 0.000825 |
| West Bengal | 0.006417 | 0.006333 | 0.043146 | 0.001053 |
| <u>Industry 331</u> | | | | |
| Bihar | 0.082760 | 0.033648 | 0.031890 | 0.001442 |
| Gujarat | 0.117593 | 0.039026 | 0.012375 | 0.034303 |
| Kerala | 0.004131 | 0.011378 | 0.026091 | 0.161820 |
| Madhya Pradesh | 0.100539 | 0.014655 | 0.026805 | 0.030147 |
| Tamil Nadu | 0.013374 | 0.159176 | 0.023524 | 0.002870 |
| Maharashtra | 0.043699 | 0.063464 | 0.027285 | 0.017595 |
| Karnataka | 0.017451 | 0.010367 | 0.015090 | 0.147905 |
| Orissa | 0.123903 | 0.034569 | 0.033081 | 0.044480 |
| West Bengal | 0.110635 | 0.006318 | 0.032214 | 0.000104 |
| <u>Industry 332</u> | | | | |
| Bihar | 0.095151 | 0.009479 | 0.006198 | 0.007109 |
| Maharashtra | 0.001455 | 0.097952 | 0.026952 | 0.004107 |
| Uttar Pradesh | 0.139877 | 0.056137 | 0.018097 | 0.011277 |
| West Bengal | 0.035213 | 0.076827 | 0.021031 | 0.001664 |
| Delhi | 0.154957 | 0.058710 | 0.016362 | - |
| Haryana | 0.002070 | 0.082051 | 0.030820 | 0.000233 |

(continued)

Table A-9 : (continued)

| | Coal | Petroleum Products | Electri- city | Other Fuels |
|-----------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 333</u> | | | | |
| Andhra Pradesh | 0.195811 | 0.001461 | 0.030200 | 0.006820 |
| Gujarat | 0.122042 | 0.072705 | 0.037359 | 0.004614 |
| Madhya Pradesh | 0.127357 | 0.061641 | 0.043811 | 0.003057 |
| Uttar Pradesh | 0.237473 | 0.012346 | 0.060276 | 0.002905 |
| West Bengal | 0.035447 | 0.032449 | 0.038322 | 0.044225 |
| Delhi | 0.212638 | 0.004739 | 0.031596 | 0.005372 |
| Haryana | 0.148541 | 0.004169 | 0.031720 | 0.000181 |
| <u>Industry 334</u> | | | | |
| Andhra Pradesh | 0.143227 | 0.006578 | 0.068756 | 0.000581 |
| Bihar | 0.130848 | 0.007213 | 0.086124 | 0.000990 |
| Gujarat | 0.185336 | 0.076417 | 0.068011 | 0.000641 |
| Madhya Pradesh | 0.118290 | 0.009922 | 0.062591 | 0.001023 |
| Tamil Nadu | 0.172381 | 0.040069 | 0.057960 | 0.001131 |
| Karnataka | 0.182908 | 0.008483 | 0.072010 | 0.000719 |
| Rajasthan | 0.217262 | 0.008111 | 0.036228 | 0.001647 |
| <u>Industry 341.1</u> | | | | |
| Andhra Pradesh | 0.001659 | 0.021109 | 0.042739 | 0.001626 |
| Assam | 0.005589 | 0.031207 | 0.037727 | 0.001164 |
| Bihar | 0.119715 | 0.019416 | 0.018393 | 0.031948 |
| Gujarat | 0.000348 | 0.015433 | 0.017246 | 0.001276 |
| Madhya Pradesh | 0.011382 | 0.010064 | 0.036643 | 0.000288 |
| Tamil Nadu | 0.000318 | 0.013926 | 0.022350 | 0.001697 |
| Maharashtra | 0.000426 | 0.015879 | 0.030669 | 0.001455 |
| Karnataka | 0.033105 | 0.054511 | 0.144360 | 0.078467 |
| Orissa | 0.169635 | 0.017751 | 0.033439 | 0.000505 |
| Punjab | 0.015494 | 0.012257 | 0.013575 | 0.002215 |
| Uttar Pradesh | 0.010980 | 0.016704 | 0.057735 | 0.005712 |
| West Bengal | 0.006642 | 0.013047 | 0.026203 | 0.006509 |
| Delhi | 0.001930 | 0.021972 | 0.013386 | 0.009476 |
| Haryana | 0.006522 | 0.020957 | 0.035173 | 0.001392 |

(continued)

Table A-9 : (continued)

| | Coal | Petroleum Products | Electri- city | Other Fuels |
|------------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 341(R)</u> | | | | |
| Andhra Pradesh | 0.000574 | 0.030743 | 0.051681 | 0.009073 |
| Assam | 0.003710 | 0.018888 | 0.029005 | 0.016863 |
| Bihar | 0.024713 | 0.009161 | 0.090410 | 0.013698 |
| Gujarat | 0.000386 | 0.012401 | 0.016152 | 0.022640 |
| Madhya Pradesh | 0.002675 | 0.025824 | 0.095872 | 0.013541 |
| Tamil Nadu | 0.000172 | 0.017676 | 0.039627 | 0.009043 |
| Maharashtra | 0.000320 | 0.016424 | 0.036673 | 0.009295 |
| Karnataka | 0.002883 | 0.007658 | 0.033607 | 0.046671 |
| Orissa | 0.001269 | 0.003312 | 0.173082 | 0.014979 |
| Punjab | 0.007700 | 0.012266 | 0.036352 | 0.023503 |
| Rajasthan | 0.003073 | 0.003413 | 0.008194 | 0.091499 |
| Uttar Pradesh | 0.008808 | 0.010274 | 0.015175 | 0.016477 |
| West Bengal | 0.004366 | 0.009224 | 0.023733 | 0.037551 |
| Delhi | 0.013003 | 0.011765 | 0.007843 | 0.051807 |
| Haryana | 0.000034 | 0.007801 | 0.007415 | 0.002024 |
| <u>Industry 342</u> | | | | |
| Bihar | 0.028130 | 0.022844 | 0.010197 | 0.001258 |
| Gujarat | - | 0.011339 | 0.015479 | 0.005398 |
| Tamil Nadu | - | 0.006617 | 0.059397 | 0.001566 |
| Maharashtra | 0.000047 | 0.007678 | 0.009484 | 0.001206 |
| Karnataka | - | 0.025591 | 0.072341 | 0.000312 |
| Rajasthan | 0.000216 | 0.004824 | 0.019921 | 0.002232 |
| West Bengal | 0.000245 | 0.009151 | 0.014407 | 0.001122 |

(continued)

Table A-9 : (continued)

| | Coal | Petroleum Products | Electri- city | Other Fuels |
|---------------------|----------|-----------------------|------------------|----------------|
| <u>Industry 511</u> | | | | |
| Andhra Pradesh | 0.151722 | 0.007994 | - | - |
| Assam | - | 0.088987 | 0.000038 | 0.020162 |
| Bihar | 0.009222 | 0.121819 | 0.000018 | 0.000120 |
| Gujarat | 0.124530 | 0.077786 | 0.000802 | 0.000740 |
| Kerala | - | 0.000913 | 0.000023 | 0.000011 |
| Madhya Pradesh | 0.201889 | 0.002076 | - | 0.000360 |
| Tamil Nadu | 0.107883 | 0.005450 | 0.000003 | 0.000877 |
| Maharashtra | 0.051066 | 0.002864 | 0.000267 | 0.000684 |
| Karnataka | - | 0.000243 | 0.000002 | 0.000042 |
| Orissa | 0.088649 | 0.027800 | 0.000991 | - |
| Punjab | 0.004966 | 0.001688 | 0.000005 | 0.000215 |
| Rajasthan | 0.029222 | 0.015313 | 0.000006 | 0.000252 |
| Uttar Pradesh | 0.295349 | 0.004011 | 0.000512 | 0.000234 |
| West Bengal | 0.194481 | 0.014545 | 0.000135 | 0.000276 |

Table A-10 : Regional Energy Coefficients, 1970

| (TCRs per Rs.1,000 output) | | | | |
|----------------------------|----------|--------------------|-------------|-------------|
| State | Coal | Petroleum Products | Electricity | Other Fuels |
| <u>Industry 211</u> | | | | |
| Andhra Pradesh | 0.080110 | - | 0.011692 | - |
| Madhya Pradesh | 0.823728 | 0.051922 | 0.037186 | - |
| Uttar Pradesh | 1.787835 | 0.080745 | 0.042093 | 0.014468 |
| Haryana | 0.454111 | 0.000337 | 0.030515 | 0.012449 |
| <u>Industry 231</u> | | | | |
| Andhra Pradesh | 0.085662 | 0.004804 | 0.156619 | 0.002404 |
| Assam | 0.062816 | 0.003462 | 0.153978 | 0.003963 |
| Bihar | 0.206893 | 0.003373 | 0.076884 | 0.004835 |
| Gujarat | 0.180061 | 0.019217 | 0.200723 | 0.001475 |
| Kerala | 0.002423 | 0.023955 | 0.164139 | 0.020250 |
| Madhya Pradesh | 0.161109 | 0.002410 | 0.158653 | 0.002035 |
| Tamil Nadu | 0.026415 | 0.023536 | 0.184857 | 0.001617 |
| Maharashtra | 0.066198 | 0.129070 | 0.199475 | 0.006045 |
| Karnataka | 0.035320 | 0.070250 | 0.164401 | 0.005996 |
| Orissa | 0.249718 | 0.001607 | 0.085686 | 0.001455 |
| Punjab | 0.125073 | 0.006328 | 0.116723 | 0.006839 |
| Rajasthan | 0.142753 | 0.012042 | 0.135764 | 0.002243 |
| Uttar Pradesh | 0.169999 | 0.003948 | 0.160491 | 0.003981 |
| West Bengal | 0.104266 | 0.004155 | 0.137337 | 0.012180 |
| Delhi | 0.318419 | 0.002616 | 0.092191 | 0.001087 |
| Haryana | 0.114972 | 0.005618 | 0.114232 | 0.002634 |

(continued)

Table A-10 : (continued)

| State | Coal | Petroleum Products | Electricity | Other Fuels |
|-------------------------|----------|-----------------------|-------------|----------------|
| <u>Industry 271</u> | | | | |
| Andhra Pradesh | 0.735249 | 0.056198 | 0.544088 | 0.013698 |
| Gujarat | 0.703083 | 0.144643 | 0.428069 | 0.007057 |
| Madhya Pradesh | 0.767614 | 0.035331 | 0.134799 | 0.000611 |
| Tamil Nadu | 0.360853 | 0.135721 | 0.315755 | 0.008706 |
| Maharashtra | 0.145460 | 0.063353 | 0.181107 | 0.007685 |
| Karnataka | 0.740768 | 0.102141 | 0.428641 | 0.010792 |
| Orissa | 1.219347 | 0.031744 | 0.314205 | 0.015881 |
| Uttar Pradesh | 0.908631 | 0.035553 | 0.345821 | 0.003532 |
| West Bengal | 1.023928 | 0.014334 | 0.232943 | 0.015377 |
| Haryana | 0.958340 | 0.004710 | 0.087763 | 0.004249 |
| <u>Industry 311.1.1</u> | | | | |
| Andhra Pradesh | 0.000023 | 0.205674 | 0.474827 | 0.001128 |
| Bihar | 2.523416 | 0.079027 | 0.049610 | 0.032389 |
| Gujarat | 0.000071 | 0.026508 | 0.685420 | 0.003136 |
| Tamil Nadu | 0.004249 | 0.155472 | 0.361601 | 0.003832 |
| Maharashtra | 0.000949 | 0.230296 | 0.635865 | 0.002146 |
| <u>Industry 311.2</u> | | | | |
| Andhra Pradesh | 0.301525 | 0.164494 | 1.088036 | 0.003626 |
| Bihar | 0.229099 | 0.000435 | 1.546361 | 0.062737 |
| Gujarat | 0.342590 | 0.604018 | 0.114411 | 0.098465 |
| Kerala | - | 0.209137 | 0.573635 | 0.001594 |
| Tamil Nadu | 0.014361 | 0.324816 | 1.872904 | 0.020283 |
| Maharashtra | 0.022576 | 0.194757 | 0.381620 | 0.009506 |
| Uttar Pradesh | 0.974735 | 0.062892 | 1.066920 | 0.058931 |
| West Bengal | 0.216985 | 0.020376 | 0.584652 | 0.011675 |

(continued)

Table A-10 : (continued)

| State | Coal | Petroleum Products | Electricity | Other Fuels |
|-------------------------|----------|--------------------|-------------|-------------|
| <u>Industry 311 (R)</u> | | | | |
| Andhra Pradesh | - | 0.002918 | 0.650223 | 0.021356 |
| Gujarat | 0.126879 | 0.120008 | 0.133227 | 0.001881 |
| Tamil Nadu | - | 0.003134 | 0.192648 | 0.007175 |
| Maharashtra | 0.000039 | 0.179893 | 0.269647 | 0.003970 |
| West Bengal | 0.136180 | 0.038580 | 0.234550 | 0.004257 |
| <u>Industry 331</u> | | | | |
| Bihar | 1.871441 | 0.212269 | 0.158990 | 0.006777 |
| Gujarat | 1.653487 | 0.255994 | 0.049605 | 0.402466 |
| Kerala | 0.038135 | 0.064287 | 0.110316 | 3.137910 |
| Madhya Pradesh | 1.995899 | 0.091368 | 0.120290 | 0.421510 |
| Tamil Nadu | 0.152499 | 1.188118 | 0.121061 | 0.046949 |
| Maharashtra | 0.755857 | 0.703562 | 0.198739 | 0.103420 |
| Karnataka | 0.161844 | 0.066789 | 0.070494 | 3.431941 |
| Orissa | 1.765209 | 0.197657 | 0.163226 | 0.618300 |
| West Bengal | 2.383491 | 0.026379 | 0.153757 | 0.000791 |
| <u>Industry 332</u> | | | | |
| Bihar | 3.042107 | 0.057050 | 0.016077 | 0.147908 |
| Maharashtra | 0.027900 | 0.734865 | 0.183954 | 0.014363 |
| Uttar Pradesh | 1.672340 | 0.343153 | 0.089821 | 0.116960 |
| West Bengal | 0.682037 | 0.553955 | 0.115163 | 0.006986 |
| Delhi | 1.573147 | 0.334989 | 0.073099 | - |
| Haryana | 0.022976 | 0.429507 | 0.257459 | 0.001066 |
| <u>Industry 333</u> | | | | |
| Andhra Pradesh | 3.386751 | 0.001749 | 0.106722 | 0.076195 |
| Gujarat | 1.220569 | 0.539784 | 0.162543 | 0.027939 |
| Madhya Pradesh | 1.874682 | 0.324613 | 0.174733 | 0.046943 |
| Uttar Pradesh | 2.684822 | 0.018965 | 0.218083 | 0.012831 |
| West Bengal | 0.603052 | 0.172037 | 0.170820 | 0.346511 |
| Delhi | 2.380095 | 0.005602 | 0.118768 | 0.032354 |
| Haryana | 1.720953 | 0.005993 | 0.154477 | 0.001722 |

(continued)

Table A-10 : (continued)

| State | Coal | Petroleum Products | Electricity | Other Fuels |
|-----------------------|----------|-----------------------|-------------|----------------|
| <u>Industry 334</u> | | | | |
| Andhra Pradesh | 2.156100 | 0.032747 | 0.696951 | 0.002707 |
| Bihar | 2.487924 | 0.034891 | 0.568126 | 0.004858 |
| Gujarat | 2.074393 | 0.616446 | 0.446647 | 0.003471 |
| Madhya Pradesh | 2.280750 | 0.047152 | 0.425446 | 0.006856 |
| Tamil Nadu | 1.812639 | 0.289737 | 0.584189 | 0.005625 |
| Karnataka | 2.281470 | 0.041514 | 0.722774 | 0.003871 |
| Rajasthan | 2.810636 | 0.035879 | 0.228984 | 0.010541 |
| <u>Industry 341.1</u> | | | | |
| Andhra Pradesh | 0.018702 | 0.150047 | 0.131303 | 0.007046 |
| Assam | 0.048905 | 0.145542 | 0.156497 | 0.004639 |
| Bihar | 1.690898 | 0.126026 | 0.182492 | 0.254965 |
| Gujarat | 0.003002 | 0.091266 | 0.073118 | 0.005493 |
| Madhya Pradesh | 0.189599 | 0.049152 | 0.255499 | 0.001344 |
| Tamil Nadu | 0.003158 | 0.087243 | 0.112318 | 0.011234 |
| Maharashtra | 0.006550 | 0.106698 | 0.177804 | 0.007577 |
| Karnataka | 0.313123 | 0.382030 | 2.357848 | 0.565152 |
| Orissa | 2.080885 | 0.079258 | 0.215233 | 0.002247 |
| Punjab | 0.161160 | 0.061831 | 0.077417 | 0.010213 |
| Uttar Pradesh | 0.133096 | 0.092115 | 0.354405 | 0.037197 |
| West Bengal | 0.149166 | 0.070115 | 0.201861 | 0.033544 |
| Delhi | 0.017914 | 0.122386 | 0.056549 | 0.058391 |
| Haryana | 0.089140 | 0.094033 | 0.160343 | 0.007203 |

(continued)

Table A-10 : (continued)

| State | Coal | Petroleum Products | Electricity | Other Fuels |
|------------------------|----------|-----------------------|-------------|----------------|
| <u>Industry 341(R)</u> | | | | |
| Andhra Pradesh | 0.007863 | 0.146817 | 0.152931 | 0.045891 |
| Assam | 0.061046 | 0.165564 | 0.080270 | 0.150921 |
| Bihar | 0.675553 | 0.061797 | 0.595482 | 0.100466 |
| Gujarat | 0.004063 | 0.063036 | 0.069953 | 0.119729 |
| Madhya Pradesh | 0.047772 | 0.134555 | 0.463125 | 0.084066 |
| Tamil Nadu | 0.001069 | 0.099922 | 0.195538 | 0.041376 |
| Maharashtra | 0.003646 | 0.113907 | 0.347643 | 0.048704 |
| Karnataka | 0.024056 | 0.013993 | 0.168520 | 0.275434 |
| Orissa | 0.019394 | 0.021002 | 2.362242 | 0.106313 |
| Punjab | 0.071540 | 0.063626 | 0.233438 | 0.165101 |
| Rajasthan | 0.024923 | 0.006703 | 0.032025 | 0.502819 |
| Uttar Pradesh | 0.120096 | 0.052401 | 0.061469 | 0.100079 |
| West Bengal | 0.069775 | 0.051596 | 0.135699 | 0.302677 |
| Delhi | 0.135604 | 0.053055 | 0.029763 | 0.276692 |
| Haryana | 0.000311 | 0.040653 | 0.054934 | 0.013038 |
| <u>Industry 342</u> | | | | |
| Bihar | 0.572300 | 0.140217 | 0.066618 | 0.013492 |
| Gujarat | - | 0.065702 | 0.123596 | 0.019916 |
| Tamil Nadu | - | 0.043393 | 0.373112 | 0.007590 |
| Maharashtra | 0.000417 | 0.043408 | 0.057661 | 0.005743 |
| Karnataka | - | 0.166009 | 0.337592 | 0.001596 |
| Rajasthan | 0.001920 | 0.018692 | 0.094756 | 0.019142 |
| West Bengal | 0.003035 | 0.049121 | 0.106186 | 0.006872 |

(continued)

Table A-10 : (continued)

| State | Coal | Petroleum Products | Electricity | Other Fuels |
|---------------------|----------|-----------------------|-------------|----------------|
| <u>Industry 511</u> | | | | |
| Andhra Pradesh | 3.121851 | 0.060793 | - | - |
| Assam | - | 1.141708 | 0.000132 | - |
| Bihar | 0.232499 | 0.824428 | 0.000034 | 0.000519 |
| Gujarat | 1.751031 | 0.772829 | 0.003574 | 0.003348 |
| Kerala | - | 0.004551 | 0.000048 | 0.000060 |
| Madhya Pradesh | 5.584589 | 0.013021 | - | 0.001656 |
| Tamil Nadu | 3.163954 | 0.053446 | 0.000008 | 0.003728 |
| Maharashtra | 1.096168 | 0.049240 | 0.001362 | 0.003175 |
| Karnataka | - | 0.000895 | 0.000013 | 0.000175 |
| Orissa | 3.471949 | 0.261796 | 0.002873 | - |
| Punjab | 0.046854 | 0.024178 | 0.000016 | 0.000609 |
| Rajasthan | 0.201433 | 0.186568 | 0.000023 | 0.001192 |
| Uttar Pradesh | 4.476556 | 0.017166 | 0.000417 | 0.001089 |
| West Bengal | 4.672856 | 0.160558 | 0.000484 | 0.002127 |