# Additional files

Table SA1. The total carbon emissions in XPCC and Xinjiang from 1998 to 2018 (Note: The unit of the figures in the table is Mt CO2.)

|  |  |  |
| --- | --- | --- |
| Year | XPCC | Xinjiang |
| 1998 | 6.11 | 63.50 |
| 1999 | 6.23 | 62.30 |
| 2000 | 6.71 | 65.40 |
| 2001 | 5.48 | 53.50 |
| 2002 | 7.37 | 69.70 |
| 2003 | 7.71 | 77.20 |
| 2004 | 8.99 | 90.20 |
| 2005 | 11.84 | 101.10 |
| 2006 | 14.46 | 113.90 |
| 2007 | 15.79 | 125.30 |
| 2008 | 18.59 | 137.20 |
| 2009 | 25.84 | 156.70 |
| 2010 | 29.72 | 167.60 |
| 2011 | 41.30 | 203.00 |
| 2012 | 52.64 | 251.50 |
| 2013 | 72.51 | 292.70 |
| 2014 | 92.64 | 329.20 |
| 2015 | 109.39 | 344.20 |
| 2016 | 111.64 | 370.00 |
| 2017 | 115.33 | 403.61 |
| 2018 | 115.71 | - |

Table SA2. The total carbon emissions in XPCC and Xinjiang from 1998 to 2018.

|  |  |  |
| --- | --- | --- |
| Year | XPCC | Xinjiang |
| 1998 | 2.54 | 3.63 |
| 1999 | 2.57 | 3.51 |
| 2000 | 2.76 | 3.54 |
| 2001 | 2.24 | 2.85 |
| 2002 | 2.95 | 3.66 |
| 2003 | 3.03 | 3.99 |
| 2004 | 3.51 | 4.59 |
| 2005 | 4.61 | 5.03 |
| 2006 | 5.61 | 5.56 |
| 2007 | 6.11 | 5.98 |
| 2008 | 7.22 | 6.44 |
| 2009 | 10.04 | 7.26 |
| 2010 | 11.40 | 7.68 |
| 2011 | 15.80 | 9.19 |
| 2012 | 19.88 | 11.26 |
| 2013 | 26.84 | 12.93 |
| 2014 | 33.90 | 14.32 |
| 2015 | 39.55 | 14.59 |
| 2016 | 39.39 | 15.43 |
| 2017 | 38.37 | 16.51 |
| 2018 | 37.26 | - |

Note: The unit of the figures in the table is t CO2/capita.

Table SA3. The carbon emission intensity of XPCC and Xinjiang from 1998 to 2018

|  |  |  |
| --- | --- | --- |
| Year | XPCC | Xinjiang |
| 1998 | 3.74 | 5.74 |
| 1999 | 3.88 | 5.36 |
| 2000 | 3.80 | 4.80 |
| 2001 | 2.89 | 3.59 |
| 2002 | 3.44 | 4.32 |
| 2003 | 2.99 | 4.09 |
| 2004 | 3.11 | 4.08 |
| 2005 | 3.58 | 3.88 |
| 2006 | 3.85 | 3.74 |
| 2007 | 3.58 | 3.56 |
| 2008 | 3.55 | 3.29 |
| 2009 | 4.23 | 3.68 |
| 2010 | 3.86 | 3.11 |
| 2011 | 4.28 | 3.09 |
| 2012 | 4.40 | 3.37 |
| 2013 | 4.83 | 3.49 |
| 2014 | 5.33 | 3.58 |
| 2015 | 5.65 | 3.73 |
| 2016 | 5.23 | 3.89 |
| 2017 | 4.93 | 3.71 |
| 2018 | 4.60 | - |

Note: The unit of the figures in the table is t CO2/104 RMB.

Table SA4. Carbon emission against energy structure in the XPCC from 1998 to 2018

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fossil fuel type | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
| Raw Coal | 4.51 | 4.67 | 4.93 | 4.80 | 5.40 | 5.79 | 6.70 | 8.40 | 10.78 | 11.67 | 14.15 |
| Cleaned Coal | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Washed Coal | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Briquettes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.03 | 0.09 |
| Coke | 0.06 | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.41 | 0.59 | 0.97 | 1.02 |
| Coke Oven Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Coking Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crude Oil | 0.03 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gasoline | 0.38 | 0.33 | 0.40 | 0.02 | 0.38 | 0.37 | 0.48 | 0.35 | 0.35 | 0.35 | 0.27 |
| Kerosene | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| Diesel Oil | 0.68 | 0.63 | 0.80 | 0.06 | 0.83 | 0.73 | 0.81 | 1.46 | 1.34 | 1.25 | 1.22 |
| Fuel Oil | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 |
| LPG | 0.00 | 0.07 | 0.07 | 0.00 | 0.07 | 0.07 | 0.07 | 0.11 | 0.06 | 0.06 | 0.06 |
| Refinery Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Petroleum Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Natural Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.23 | 0.15 | 0.16 | 0.23 |
| Non-fossil Heat | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-fossil Electricity | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Process | 0.45 | 0.46 | 0.49 | 0.56 | 0.66 | 0.74 | 0.79 | 0.85 | 1.13 | 1.29 | 1.55 |

Note: The unit of the figures in the table is Mt CO2.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fossil fuel type | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Raw Coal | 19.01 | 21.16 | 29.90 | 37.87 | 56.00 | 72.04 | 82.16 | 93.55 | 97.30 | 98.49 |
| Cleaned Coal | 0.28 | 1.15 | 1.48 | 1.81 | 1.48 | 2.14 | 3.00 | 2.02 | 1.66 | 2.07 |
| Other Washed Coal | 0.00 | 0.01 | 0.17 | 0.04 | 0.17 | 0.17 | 0.14 | 0.51 | 0.87 | 0.83 |
| Briquettes | 0.06 | 0.02 | 0.06 | 0.13 | 0.17 | 0.08 | 0.08 | 0.12 | 0.10 | 0.35 |
| Coke | 2.33 | 2.55 | 3.97 | 4.07 | 4.25 | 5.80 | 13.38 | 4.62 | 5.48 | 5.90 |
| Coke Oven Gas | 0.00 | 0.01 | 0.00 | 0.17 | 0.18 | 0.20 | 0.22 | 0.14 | 0.26 | 0.31 |
| Other Gas | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Coking Products | 0.01 | 0.02 | 0.00 | 0.15 | 0.51 | 0.53 | 0.66 | 0.72 | 0.61 | 0.68 |
| Crude Oil | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gasoline | 0.33 | 0.32 | 0.35 | 0.36 | 0.64 | 0.70 | 0.83 | 0.97 | 0.56 | 0.57 |
| Kerosene | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Diesel Oil | 1.19 | 1.37 | 1.54 | 1.70 | 2.49 | 2.65 | 3.21 | 3.17 | 2.27 | 2.20 |
| Fuel Oil | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LPG | 0.05 | 0.05 | 0.12 | 0.07 | 0.22 | 0.21 | 0.36 | 0.07 | 0.03 | 0.02 |
| Refinery Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Petroleum Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Natural Gas | 0.73 | 0.26 | 0.19 | 0.33 | 1.05 | 1.10 | 1.37 | 2.15 | 1.26 | 1.14 |
| Non-fossil Heat | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-fossil Electricity | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Process | 1.84 | 2.81 | 3.51 | 5.95 | 5.36 | 7.00 | 3.98 | 3.59 | 4.92 | 3.14 |

Note: The unit of the figures in the table is Mt CO2.

Table SA5. Carbon emission against industrial structure in the XPCC from 1998 to 2018

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sectors | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
| Other Minerals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Logging and Transport of Wood and Bamboo | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tobacco Processing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Manufacturing Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Petroleum and Natural Gas Extraction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electronic and Telecommunications Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Instruments, Meters, Cultural and Office Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furniture Manufacturing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cultural, Educational and Sports Articles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electric Equipment and Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Timber Processing, Bamboo, Cane, Palm Fiber & Straw Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Printing and Record Medium Reproduction | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Leather, Furs, Down and Related Products | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Rubber Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nonferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Garments and Other Fiber Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ordinary Machinery | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transportation Equipment | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Tap Water | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Equipment for Special Purposes | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 |
| Metal Products | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Nonmetal Minerals Mining and Dressing | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 |
| Scrap and waste | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Papermaking and Paper Products | 0.04 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 | 0.04 |
| Medical and Pharmaceutical Products | 0.02 | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 | 0.01 |
| Chemical Fiber | 0.00 | 0.00 | 0.11 | 0.00 | 0.01 | 0.01 | 0.02 |
| Beverage Production | 0.07 | 0.08 | 0.07 | 0.06 | 0.47 | 0.05 | 0.05 |
| Textile Industry | 0.39 | 0.39 | 0.30 | 0.23 | 0.11 | 0.18 | 0.13 |
| Plastic Products | 0.00 | 0.01 | 0.01 | 0.05 | 0.03 | 0.03 | 0.04 |
| Transportation, Storage, Post and Telecommunication Services | 0.11 | 0.08 | 0.10 | 0.08 | 0.09 | 0.06 | 0.14 |
| Construction | 0.27 | 0.26 | 0.27 | 0.10 | 0.29 | 0.32 | 0.36 |
| Food Processing | 0.62 | 0.69 | 0.46 | 0.41 | 0.27 | 0.40 | 0.22 |
| Coal Mining and Dressing | 0.21 | 0.38 | 0.40 | 0.33 | 0.28 | 0.25 | 0.10 |
| Food Production | 0.01 | 0.04 | 0.10 | 0.13 | 0.34 | 0.29 | 0.33 |
| Smelting and Pressing of Ferrous Metals | 0.03 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 |
| Farming, Forestry, Animal Husbandry, Fishery and Water Conservancy | 0.90 | 0.87 | 1.02 | 0.46 | 1.09 | 1.02 | 1.02 |
| Wholesale, Retail Trade and Catering Services | 0.85 | 0.77 | 0.82 | 0.38 | 0.88 | 0.92 | 1.03 |
| Smelting and Pressing of Nonferrous Metals | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nonmetal Mineral Products | 1.03 | 0.96 | 1.10 | 1.20 | 1.29 | 1.60 | 2.00 |
| Raw Chemical Materials and Chemical Products | 0.05 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Petroleum Processing and Coking | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| Production and Supply of Electric Power, Steam and Hot Water | 1.43 | 1.57 | 1.84 | 1.97 | 2.15 | 2.54 | 3.22 |
| Total Consumption | 6.11 | 6.23 | 6.71 | 5.48 | 7.37 | 7.71 | 8.99 |

Note: The unit of the figures in the table is Mt CO2.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sectors | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Other Minerals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Logging and Transport of Wood and Bamboo | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tobacco Processing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Manufacturing Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Petroleum and Natural Gas Extraction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electronic and Telecommunications Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Instruments, Meters, Cultural and Office Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furniture Manufacturing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cultural, Educational and Sports Articles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electric Equipment and Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Timber Processing, Bamboo, Cane, Palm Fiber & Straw Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Printing and Record Medium Reproduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Leather, Furs, Down and Related Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rubber Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nonferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Garments and Other Fiber Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Ordinary Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transportation Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Tap Water | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Equipment for Special Purposes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Metal Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| Nonmetal Minerals Mining and Dressing | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Scrap and waste | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 |
| Ferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 |
| Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.00 | 0.02 |
| Papermaking and Paper Products | 0.04 | 0.08 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
| Medical and Pharmaceutical Products | 0.01 | 0.02 | 0.04 | 0.05 | 0.04 | 0.04 | 0.05 |
| Chemical Fiber | 0.03 | 0.02 | 0.01 | 0.04 | 0.04 | 0.03 | 0.21 |
| Beverage Production | 0.05 | 0.05 | 0.06 | 0.09 | 0.08 | 0.08 | 0.10 |
| Textile Industry | 0.10 | 0.10 | 0.08 | 0.08 | 0.11 | 0.13 | 0.11 |
| Plastic Products | 1.09 | 2.76 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 |
| Transportation, Storage, Post and Telecommunication Services | 0.16 | 0.16 | 0.13 | 0.03 | 0.60 | 0.25 | 0.26 |
| Construction | 0.22 | 0.23 | 0.24 | 0.22 | 0.22 | 0.25 | 0.28 |
| Food Processing | 0.31 | 0.48 | 0.61 | 0.56 | 0.52 | 0.62 | 0.63 |
| Coal Mining and Dressing | 0.14 | 0.15 | 0.17 | 0.22 | 0.17 | 0.22 | 0.43 |
| Food Production | 0.18 | 0.23 | 0.51 | 0.55 | 0.62 | 0.64 | 0.77 |
| Smelting and Pressing of Ferrous Metals | 0.08 | 0.15 | 0.09 | 0.12 | 0.16 | 0.22 | 0.37 |
| Farming, Forestry, Animal Husbandry, Fishery and Water Conservancy | 1.18 | 1.32 | 1.25 | 1.25 | 1.33 | 1.19 | 1.33 |
| Wholesale, Retail Trade and Catering Services | 1.72 | 1.02 | 1.05 | 1.08 | 1.10 | 1.13 | 1.31 |
| Smelting and Pressing of Nonferrous Metals | 0.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.30 | 0.75 |
| Nonmetal Mineral Products | 2.13 | 2.82 | 2.99 | 3.57 | 4.17 | 5.61 | 6.55 |
| Raw Chemical Materials and Chemical Products | 0.01 | 0.06 | 1.03 | 3.27 | 6.25 | 6.51 | 7.56 |
| Petroleum Processing and Coking | 0.61 | 0.94 | 1.44 | 1.26 | 1.43 | 2.62 | 8.41 |
| Production and Supply of Electric Power, Steam and Hot Water | 3.76 | 3.85 | 6.03 | 5.95 | 8.46 | 9.80 | 12.07 |
| Total Consumption | 11.84 | 14.46 | 15.79 | 18.59 | 25.84 | 29.72 | 41.30 |

Note: The unit of the figures in the table is Mt CO2.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sectors | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
| Other Minerals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Logging and Transport of Wood and Bamboo | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Tobacco Processing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Other Manufacturing Industry | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Petroleum and Natural Gas Extraction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electronic and Telecommunications Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Instruments, Meters, Cultural and Office Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Furniture Manufacturing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Gas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cultural, Educational and Sports Articles | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Electric Equipment and Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Timber Processing, Bamboo, Cane, Palm Fiber & Straw Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| Printing and Record Medium Reproduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Leather, Furs, Down and Related Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rubber Products | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 |
| Nonferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Garments and Other Fiber Products | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 |
| Ordinary Machinery | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transportation Equipment | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Production and Supply of Tap Water | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Equipment for Special Purposes | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Metal Products | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 |
| Nonmetal Minerals Mining and Dressing | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| Scrap and waste | 0.04 | 0.05 | 0.05 | 0.02 | 0.02 | 0.03 | 0.04 |
| Ferrous Metals Mining and Dressing | 0.00 | 0.00 | 0.08 | 0.09 | 0.05 | 0.06 | 0.00 |
| Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Papermaking and Paper Products | 0.05 | 0.05 | 0.06 | 0.05 | 0.04 | 0.03 | 0.02 |
| Medical and Pharmaceutical Products | 0.06 | 0.06 | 0.06 | 0.05 | 0.03 | 0.02 | 0.03 |
| Chemical Fiber | 0.02 | 0.10 | 0.06 | 0.05 | 0.31 | 0.32 | 0.43 |
| Beverage Production | 0.10 | 0.16 | 0.21 | 0.16 | 0.16 | 0.11 | 0.09 |
| Textile Industry | 0.12 | 0.11 | 0.12 | 0.12 | 0.08 | 0.03 | 0.02 |
| Plastic Products | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 |
| Transportation, Storage, Post and Telecommunication Services | 0.28 | 0.28 | 0.31 | 0.31 | 0.24 | 0.34 | 0.29 |
| Construction | 0.36 | 0.48 | 0.61 | 0.71 | 0.72 | 0.68 | 0.50 |
| Food Processing | 0.69 | 0.67 | 0.80 | 0.86 | 0.83 | 0.80 | 0.68 |
| Coal Mining and Dressing | 0.78 | 1.23 | 2.63 | 2.55 | 2.34 | 1.63 | 1.29 |
| Food Production | 0.61 | 1.62 | 1.53 | 1.77 | 1.82 | 1.99 | 1.94 |
| Smelting and Pressing of Ferrous Metals | 0.40 | 0.86 | 2.30 | 9.81 | 1.23 | 2.25 | 3.21 |
| Farming, Forestry, Animal Husbandry, Fishery and Water Conservancy | 1.48 | 1.57 | 1.60 | 1.75 | 2.34 | 2.43 | 2.64 |
| Wholesale, Retail Trade and Catering Services | 1.26 | 3.05 | 3.03 | 4.33 | 5.10 | 1.97 | 1.87 |
| Smelting and Pressing of Nonferrous Metals | 0.53 | 3.57 | 7.69 | 9.46 | 8.74 | 11.94 | 11.88 |
| Nonmetal Mineral Products | 9.62 | 9.50 | 10.43 | 6.19 | 6.28 | 7.81 | 6.51 |
| Raw Chemical Materials and Chemical Products | 13.08 | 9.87 | 13.93 | 19.11 | 18.45 | 17.93 | 17.50 |
| Petroleum Processing and Coking | 6.09 | 17.29 | 23.00 | 21.52 | 25.36 | 24.47 | 19.93 |
| Production and Supply of Electric Power, Steam and Hot Water | 17.05 | 21.93 | 24.08 | 30.45 | 37.43 | 40.46 | 46.81 |
| Total Consumption | 52.64 | 72.51 | 92.64 | 109.39 | 111.64 | 115.33 | 115.71 |

Note: The unit of the figures in the table is Mt CO2.

Table SA6. Decomposition results of the CO2 emission driving factors in the XPCC from 1998-2018

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | ES（Energy structure effect） | T（Technical effect） | A（Economic effect） | POP（Population effect） | Total effect |
| 1998-1999 | -14.67 | 38.39 | -15.36 | 3.51 | 11.87 |
| 1999-2000 | 25.46 | -39.23 | 59.79 | 1.87 | 47.88 |
| 2000-2001 | -113.08 | -51.98 | 36.46 | 6.16 | -122.44 |
| 2001-2002 | 117.32 | -3.36 | 63.02 | 11.89 | 188.88 |
| 2002-2003 | 45.18 | -151.18 | 127.58 | 12.25 | 33.84 |
| 2003-2004 | -96.76 | 129.74 | 87.65 | 7.07 | 127.70 |
| 2004-2005 | -46.49 | 190.62 | 138.94 | 2.38 | 285.45 |
| 2005-2006 | -121.18 | 216.90 | 161.48 | 4.92 | 262.12 |
| 2006-2007 | 14.20 | -122.95 | 238.55 | 3.10 | 132.89 |
| 2007-2008 | 112.22 | -125.22 | 300.25 | -7.75 | 279.50 |
| 2008-2009 | -140.85 | 526.83 | 339.43 | 0.06 | 725.46 |
| 2009-2010 | -113.59 | -142.30 | 607.28 | 36.37 | 387.77 |
| 2010-2011 | -22.26 | -7397.09 | 8568.30 | 8.81 | 1157.76 |
| 2011-2012 | 89.14 | 10375.41 | -9391.82 | 61.97 | 1134.71 |
| 2012-2013 | -101.32 | 692.43 | 1273.25 | 122.19 | 1986.55 |
| 2013-2014 | 39.59 | 759.32 | 1118.70 | 95.06 | 2012.67 |
| 2014-2015 | 100.08 | 500.33 | 955.29 | 119.72 | 1675.42 |
| 2015-2016 | 56.28 | -914.91 | 813.59 | 270.32 | 225.27 |
| 2016-2017 | 128.31 | -798.33 | 373.43 | 664.87 | 368.28 |
| 2017-2018 | -277.15 | -522.55 | 459.09 | 378.84 | 38.23 |
| Average | -15.98 | 158.04 | 315.74 | 90.18 | 547.99 |
| Contribution rate | -2.92% | 28.84% | 57.62% | 16.46% | 100.00% |

Note: The unit of the figures in the table is 104 t CO2.