Appendix1 T he main data indicators and symbols are explained in this paper

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Symbol | Description | Formula | Unit | Explanation |
|  | Total carbon emissions |  | 10,000 tCO2 | Total carbon emissions = Carbon emissions from primary industry (C1) + Carbon emissions from secondary industry (C2) + Carbon emissions from tertiary industry (C3) |
|  | Carbon emissions from agriculture and forestry consumption sectors |  | 10,000 tCO2 | Total carbon emissions from the agriculture and forestry consumption sectors |
|  | Secondary carbon emissions |  | 10,000 tCO2 | Total carbon emissions from the secondary industry |
|  | Carbon emissions from the energy supply sector |  | 10,000 tCO2 | Carbon emissions from the energy supply sector this year |
|  | Carbon emissions from the industrial consumption sector |  | 10,000 tCO2 | Carbon emissions from the industrial consumption sector this year |
|  | Carbon emissions from tertiary industries |  | 10,000 tCO2 | The total carbon emissions of the tertiary industry are composed of the carbon emissions of the transportation consumption department and the construction consumption department. |
|  | Carbon emissions from transportation consumption sector |  | 10,000 tCO2 | Carbon emissions from the transportation consumption sector this year |
|  | Carbon emissions from the building consumption sector |  | 10,000 tCO2 | Carbon emissions from the construction consumption sector this year |
|  | Carbon emissions from residential consumption |  | 10,000 tCO2 | Carbon emissions from residents’ consumption this year |
|  | Carbon emissions intensity (Energy structure intensity) |  | 10,000 tCO2 / 10,000 tce | Also known as carbon emission factor, indicates the amount of CO2 emissions per unit of energy consumption. A lower value indicates a higher proportion of non-fossil energy consumption and lower greenhouse gas emissions from energy consumption. |
|  | Carbon emission growth rate |  | % | Growth rate of carbon emissions compared to the previous year |
|  | Total population |  | 10,000 people | Total population of the region |
|  | Population growth rate |  | % | Growth rate of population compared to the previous year |
|  | Gross Domestic Product (GDP) |  | 100 million yuan | GDP equals the sum of the production values of the primary, secondary, and tertiary industries |
|  | GDP growth rate |  | % | Growth rate of GDP compared to the previous year |
|  | Agriculture and forestry consumption sector GDP |  | 100 million yuan | Agricultural and forestry consumption sector GDP |
|  | Secondary GDP |  | 100 million yuan | The total GDP of the secondary industry consists of the GDP of the energy supply sector and the industrial consumption sector. |
|  | Energy supply sector GDP |  | 100 million yuan | Energy supply sector GDP |
|  | Industrial consumption sector GDP |  | 100 million yuan | Industrial consumption sector GDP |
|  | GDP of the three industries |  | 100 million yuan | The total GDP of the tertiary industry is composed of the GDP of the transportation consumption sector and the construction consumption sector. |
|  | Transportation consumption sector GDP |  | 100 million yuan | Gross domestic product of transportation consumption sector this year |
|  | Construction consumption sector GDP |  | 100 million yuan | Gross domestic product of the construction consumption sector this year |
|  | Total energy consumption |  |  | Total energy consumption includes consumption in agriculture and forestry sectors, energy supply sectors, industrial consumption sectors, transportation sectors, building consumption sectors, and residential consumption sectors |
|  | Energy consumption growth rate |  | % | Growth rate of energy consumption compared to the previous year |
|  | Energy consumption in agriculture and forestry consumption sectors |  | 10,000t ce | Energy consumption in agriculture and forestry consumption sectors this year |
|  | Secondary energy consumption |  | 10,000 tce | The energy consumption of the secondary industry consists of the energy consumption of the energy supply sector and the industrial consumption sector. |
|  | Energy consumption in the energy supply sector |  | 10,000 tce | Energy consumption in the energy supply sector this year |
|  | Energy consumption in industrial consumption sector |  | 10,000 tce | Energy consumption in the industrial consumption sector this year |
|  | Energy consumption of tertiary industries |  | 10,000 tce | The energy consumption of the tertiary industry consists of the energy consumption of the transportation consumption department and the construction consumption department. |
|  | Energy consumption in transportation consumption sector |  | 10,000 tce | Energy consumption in the transportation consumption sector this year |
|  | Energy consumption in building consumption sector |  | 10,000 tce | Energy consumption in the building consumption sector this year |
|  | Residential energy consumption |  | 10,000 tce | Energy consumption in regional residents this year |
|  | Carbon emissions per unit GDP |  | 10,000 tCO2 / 100 million yuan | Amount of CO2 emissions per unit GDP |
|  | Per capita GDP (Economic development effect) |  | 100 million yuan / 10,000 people | Ratio of total GDP to total population |
|  | Energy consumption per unit GDP |  | 10,000 tce / 100 million yuan | Also known as energy consumption intensity, it is an important indicator of regional energy utilization efficiency. Lower energy consumption per unit GDP indicates higher energy utilization efficiency. |