Explanatory Notes on Main Statistical Indicators

Total Primary Energy Production refers to the total production of primary energy by all energy producing enterprises in the country in a given period of time. It is a comprehensive indicator to show the level, scale, composition and pace of development of energy production of the country. The production of primary energy includes that of coal, crude oil, natural gas, hydro-power and electricity generated by nuclear energy and other means such as wind power and geothermal power. However, it does not include the production of fuels of low calorific value, bio-energy, solar energy and secondary energy converted from primary energy.

Total Energy Consumption refers to the total consumption of energy of various kinds by the production sectors of the economy and the households in a given period of time. It includes the primary kinds of energy such as coal, crude oil, natural gas, hydro-power, nuclear power, wind power, solar power, geothermal power and bio-energy; the secondary kinds of energy and their products which are transformed from the primary energy such as washed coal, coke, coal gas, electricity, heating, and petroleum products; and other kinds of fossil energy, renewable energy and new energy. The renewable energy, including hydro-power, wind power, solar power, geothermal power and bio-energy, refers to the part attained with some given technical means and used for commercial purposes. Total energy consumption can be divided into three parts: end-use energy consumption; loss during the process of energy conversion; and energy loss.

(1) End-use Energy Consumption: It refers to the total energy consumption by the production sectors and the households in the country (region) in a given period of time. It does not include the consumption during the conversion of primary energy into secondary energy and the loss in the process of energy conversion.

(2) Loss During the Process of Energy Conversion: It refers to the total input of various kinds of energy for conversion, minus the total output of various kinds of energy in the country in a given period of time. It is an indicator to show the loss that occurs during the process of energy conversion.

(3) Energy Loss: It refers to the total of the loss of energy during the course of energy transport, distribution and storage and the loss caused by any objective reason in a given period of time. The loss of various kinds of gas due to gas discharges and stocktaking is not included.

Elasticity Ratio of Energy Production is an indicator to show the relationship between the growth rate of energy production and the growth rate of the national economy. The formula is:

$$\text{Elasticity Ratio of Energy Production} = \frac{\text{Average Annual Growth Rate of Energy Production}}{\text{Average Annual Growth Rate of National Economy}}$$

The average annual growth rate of the national economy can be measured by indicators such as the Gross National Product and the Gross Domestic Product, depending on the purposes or needs. The Gross Domestic Product has been used in the calculation of the ratio in this Yearbook.

Elasticity Ratio of Electricity Production is an indicator to show the relationship between the growth rate of electricity production and the growth rate of the national economy. Generally speaking, the growth rate of electricity production should be higher than that of the national economy.

Its formula is:

$$\text{Elasticity Ratio of Electricity Production} = \frac{\text{Average Annual Growth Rate of Electricity Production}}{\text{Average Annual Growth Rate of National Economy}}$$

Elasticity Ratio of Energy Consumption is an indicator to show the relationship between the growth rate of energy consumption and the growth rate of the national economy. The formula is:

$$\text{Elasticity Ratio of Energy Consumption} = \frac{\text{Average Annual Growth Rate of Energy Consumption}}{\text{Average Annual Growth Rate of National Economy}}$$

Elasticity Ratio of Electricity Consumption is an indicator to show the relationship between the growth rate of electricity consumption and the growth rate of the national economy. The formula is:

$$\text{Elasticity Ratio of Electricity Consumption} = \frac{\text{Average Annual Growth Rate of Electricity Consumption}}{\text{Average Annual Growth Rate of National Economy}}$$

Efficiency of Energy Processing and Conversion refers to the ratio of the total output of energy products of various kinds after processing and conversion to the total input of energy of various kinds for processing and conversion in the same reference period. It is an important indicator to show the current conditions of energy processing and conversion equipment, production technique and management. The formula is:

$$\text{Efficiency of Energy Processing \& Conversion} = \frac{\text{Output of Energy After Processing \& Conversion}}{\text{Input of Energy for Processing \& Conversion}} \times 100\%$$