

VIII. ENERGY

The section comprises data characterizing the movement of the energy flows.

The overall energy balance comprises all primary and secondary energy sources, their transformation and final use in the national economy branches.

Primary energy is the energy as it is obtained from nature i.e. that is not transformed, as hydro power, coal, crude petroleum, natural gas, firewood and heat produced and tapped in chemical processes.

Secondary energy is that obtained by transformation of primary energy (or from other types of secondary energy) as electricity, derived gases, oil products.

The national energy statistics records also the gross energy consumption, i.e. total energy consumed in the country including losses. In other words, the gross energy consumption is the sum of primary energy produced plus net imports of various energy sources (primary and secondary) plus changes in stocks.

Final energy consumption includes the delivered and used energy for productive (excluding production of another type of energy) and non-productive needs of the consumers.

A negligible part of the primary energy is used for direct (final) consumption and the largest part is used for production of secondary energy resources as electricity, briquettes, coke, liquid fuels etc.. The amounts of fuels and energy inputs for transformation are indicated in the energy balance by the sign „-“, while those obtained as a result of transformed secondary resources by the sign „+“.

The change in stocks indicated by „+“ shows decrease in the stocks of energy sources at the end of the year and this indicated by „-“ shows increase.

The consumption of producing energy enterprises supplies information on the energy used for exploitation

of the installed equipment at the enterprises producing primary energy and transforming energy enterprises.

Ship bunkering represents the delivered amounts of fuels needed for long distance travel of ships irrespective of their nationality.

The energy reduced to conventional fuel is equivalent to the amounts of fuels that would have been needed for production of a definite amount of electricity by thermal plants for public use.

The information on the overall energy balance is shown in terrajoules.

Joule and its multiplies are used as general energy units in the world practice. The conversion of one type into another measure unit is effected by the following relation:

$$1 \text{ Gigajoule} = 34 \text{ Kg coal equivalent} = 0.239$$

$$\text{Gigacal} = 278 \text{ Kwh}$$

$$1 \text{ Terajoule} = 10^3 \text{ Gigajoules}$$

Data shown in Table 6. „Energy independence of the national economy“ monitors its provision with domestic primary energy sources.

Energy intensiveness is estimated on the basis of energy consumption obtained as sum of:

- production of natural energy sources;
- production of electricity by nuclear and hydro plants;
- the difference between the volume of imports and exports of all energy resources (incl. the difference of bunkering);
- the difference between the availability of all energy resources at the beginning and at the end of the year.