Comments and methodical explanatory notes (indicators contents)

***Primary energy sources**, in 2012, achieved again decrease of 2.4 % in comparison with the previous year. Primary sources level of liquid and solid fuels decreased, primary sources of gaseous fuels showed a growth. The primary sources structure have not changed much – small reduction of solid fuels share was absorbed by increased share of gaseous fuels. The GDP in 2012 decreased by 1.3 % and the indicator of energy intensity (demandingness), ratio of primary energy sources and GDP, dropped in 2012 in comparison with 2011 by 1.2 % (from 0.492 GJ/thous.CZK to 0.486 GJ/thous.CZK (both in constant prices of 2005)).*

The foreign trade with electricity concerning imports and exports increased, imports more noticeably – nearly by 11 %. By this the mutual proportion of electricity exports and imports lowered to 2.5 – which means that export exceeded the import 2.5 times. In 2010, electricity exports exceeded its imports 3.25 times. In 2011, the balance of imports and exports was historically at the highest level in the Czech Republic – 17 120 GWh.

***Energy sources**, extracted in the Czech Republic and imported into the Czech Republic are, for the most part, upgraded (from about 85.6 % in 2012) in order to improve or change their utility value for their utilization in the final consumption. In addition to electric and heat energy production there are concerned further methods for fuels upgrading, especially crude oil processing and hard coal coking. In 2012, crude oil products participated in total upgraded/improved fuels production (without electricity and heat production) with 70.9 % and coking products with 20.2 %.*

***Production** in transformation energy processes in 2012 in comparison with 2011 increased by 1.1 % (by 10 552 TJ). Although the production has fallen in most processes the increase in production in process of crude oil processing (by 3.8 %, 11 929 TJ) and in heat generation (by 1.9 %, 3 232 TJ) caused the overall growth.*

***Fuels and energy input** in 2012 was lower than in 2011 by 0.9 %. This input decreased by 1.4 % at electricity production and by 1.0 % at fuels upgrading processes.*

***Average efficiency of transformation processes** in 2012 increased in comparison with 2011 from 58.9 % to 60.1 %. Production efficiency increased the most of all in process of crude oil processing.*

*Considerable increase in values in process of **generator gas production** is caused by methodological adjustment. From 2012, into this process there is included, besides generator gas production from brown coal, gas works gas from tar and other liquid fuels production, as well.*

***Energy processes for fuels upgrading** - these are productive activities, whose results is enhancement, let us say change of utility value of energy matters (fuels), that pass through them. Under energy processes in an energy balance there are considered only those processes in which on the one hand a fuel charge/input and on the other hand production/output from processes (utilizable products) and losses on the charge/input are qualified by means of a balance form.*
In these processes there occur, as a rule, substantial chemical and physical changes in charged fuels and energy. The report/questionnaire EP 8-01 ascertains data concerning energy balance indicators of the following energy processes:

- high-temperature carbonization in coking plants
- gasification under pressure of coal
- liquid fuels production from crude oil
- generator gas/gas works gas production in industrial coal gasification plants (gasification in industrial generating stations)
- blast-furnace process

Data for electric and heat energy balance compilation are surveyed by the statistical statement EP 10-01 and are presented in the second part of this publication.

***Primary energy sources** – fuels and energy sources gained directly, which did not pass through upgrading processes, i.e. natural resources (indigenous production of fuel, biomass, biofuels in petroleum fuels, biogases, electricity from hydroelectric, wind and solar photovoltaic power plants, primary heat - heat from nuclear fuel), fuels and energy imports decreased by their exports, stock level change and other sources.*

***Charge/Input** - represents fuels (energy) that directly enter into energy process where they are processed in order to improve their utility value (e.g. lignite for patent fuels production, crude oil for liquid fuels production, and so on.).*

***Production (utilizable products)** - all energy and non-energy products which originate in an energy process.*

***Working consumption** - it is the total fuel and energy consumption expended on an energy process operation, i.e. on obtaining utilizable products of the energy process.*

***Total losses** in the energy process are defined as a difference between charge including working consumption and production.*

***Suppliers stock/supplies** - fuels stock level designed for sale (at mining, production and business enterprises).*

***Consumers stock/supplies** - fuels stock level designed for enterprises (companies) production and operation. Stocks draw is the difference between opening (on the 1st of January of the observed year) and closing stocks level (on the 31st of December of the observed year).*

***Energy process efficiency** - quotient of production and sum of the charge/input and working consumption of the relevant energy process.*