

English translation

I n t r o d u c t i o n

The present publication *Electricity and Heat production and distribution in 2003* contains the results of processing the enterprise statistical forms EP 10-01 (Annual Report on Electricity and Heat Generation and Distribution) for 2003. The report EP 10-01 monitors electricity and heat generation, as well as further indicators related to the generation and distribution of electricity and heat (particularly output of electricity plants, fuels and energy consumption used for electricity and heat generation, distribution losses, electricity sales to industrial branches and the like). Since 1999 the report has been updated and extended especially with items of renewable fuels consumption for electricity and heat generation.

The reporting units comprise entrepreneurial entities, i.e. business in the area of Production and distribution of electricity (NACE 401) and Steam and hot water supply (403) with 6 or more employees and business classified under the other NACE codes with a registered unit generating electricity or heat (power plants, combined heat and power plants, heating plants) with 20 or more employees. This means that above all, industrial enterprises, in addition to electricity, heat generating and distribution enterprises, are reporting units. Each reporting unit presents only one questionnaire depending on its place of business (e.g. the ČEZ in Prague).

The sample of respondents, like in last years, was based on the Business Register run by the Czech Statistical Office (CzSO) by main activity. The resulting list of respondents is not yet fully exhaustive, since it is impossible to find out whether a business entity really carried out the required activity in a given period and we are unable to identify always precisely the auxiliary activity of a reporting unit, too. 751 respondents presented their questionnaires for 2003.

Data on electricity and heat generation, on the consumption of fuels and energy used for this generation, imports, exports, own electricity consumption for electricity generation, distribution losses and other data constitute inputs into the task of *Energy Balance 2003* and can be made, in connection with its processing, further more accurate.

In the publication supplement there is presented a results of statistical survey on combined heat and power production in 2002, which was performed by the CzSO energy statistics unit in the course of 2003 pursuant to Eurostat requirements.

Methodological explanatory notes (contents of indicators)

The CzSO divides electricity and heat sector into two groups according to the NACE code, under which the respective unit is registered in the Business Register. Units registered in the NACE code 401 and 403 (with branch activity corresponding to electricity and steam and hot water production and distribution) are filled in the first group. Units registered in other NACE code are filled in the second group. The first group almost corresponds to the former category public plants, the second one to the autoproducer plants. The list of all units registered and classified in the NACE 401 and the list of important units in the NACE 403, which presented the questionnaire EP 10-01 for 2003, is given on page 5. In this time it is difficult to divide electricity and heat production and distribution into public plants and autoproducer plants sectors because, during privatization some units became independent bodies and they are classified under their main activity into category electricity and steam and hot water production and distribution. *Energetický regulační úřad – ERÚ* (Energy Regulatory Office), which at present compiles balances in electricity area on the Czech Republic level, does not define public and autoproducer.

CzSO processes electric energy balances from the statistical point of view, while other subjects provides technical and supply balances. ČEZ had provided Czech Republic electricity balances till the 1999, since the 2000 to the first half of the 2001 *Ústřední elektroenergetický dispečink - ÚED* (Central Dispatch Centre) and in this time *ERÚ*. Till 1998 the CzSO **electricity production** data were lower than data published by ČEZ. The CzSO data for 1999 on electricity generation are higher, but *ÚED* and *ERÚ* data for 2000, 2001, 2002 and 2003, when *ÚED* precised and improved list of statistical units and estimated missing data, are significantly higher than CzSO data. Discrepancies between data presented by the CzSO and *ÚED* were caused, first of all, so that CzSO did not estimate missing data. We consider ČEZ, *ÚED*, *ERÚ* data as more precise data and therefore they are used in all next CzSO publications. This publication shows results of statistical survey in way, in which data were collected.

Discrepancies between data presented by the CzSO and *ERÚ* (*ÚED*, ČEZ)

Electricity generation - GWh	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
ERO (CDC, ČEZ)	58882	58705	60847	64257	64598	65112	64368	73466	74647	76348	83227
CSO	58769	58589	60685	64188	64516	65029	64506	72699	74038	76023	83004
Discrepancy	-113	-116	-162	-69	-82	-83	+138	-767	-609	-767	-223
Discrepancy in - %	-0,19	-0,20	-0,27	-0,11	-0,13	-0,13	+0,21	-1,05	-0,82	-0,43	-0,27

Because there is no subject in Czech Republic, which processes national **heat** balance sheet, there is no comparison between collected data and other sources. That is why heat data are presented in forms in which they were collected.

Installed capacity:

The highest capacity reached by machine set permanently, under maintaining basic parameters.

Attainable capacity:

Capacity installed decreased by breakdowns of permanent nature.

Available capacity:

The highest capacity reached with respect to all technical and operational conditions, i.e. attainable output decreased by temporary breakdowns.

Electricity generation:

Production of power measured at the terminal connectors of generators.

Own consumption of electricity used for electricity generation:

The sum of electricity consumed for pumping water, transporting and preparing fuel, etc. (energy consumed for repumping is not included).

Electricity imports, exports:

Invoiced imports and exports were substituted by customs declared ones in 1994 (including international balance); imports and exports as measured represent the amount of electricity that crossed the state border and relates only to the neighbouring countries regardless of the country of destination or origin (imports and exports balance = imports minus exports).

Specific fuel consumption used for electricity production:

Fuel burnt divided by electricity produced in GJ and electricity production in MWh.

Heat generation in boilers:

The amount of heat obtained by burning fuel in individual steam generators.

Heat delivery from boiler room:

The amount of heat delivered from boiler room used for electricity and heat generation.

Own heat consumption in boiler room:

Difference between heat generation in boilers and heat delivery from boiler room.

Heat delivery to be used for supply:

Heat delivery from boiler room decreased by heat used for electricity production (heat intended for sale, as well as for use in own enterprise of public energy industry or autoproducer plant).

Note: Table 1a gives electricity production and own electricity consumption grossed to data by the ČEZ and ÚED ČR. Table 1b (imports and exports as measured) contains ČEZ data, since 2001 CEPS a.s. . All the other tables show data collected by statistical questionnaire EP 10-01.

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1. Table Row description:

Table 1a

Indicator

Gross electricity production

Including power plants:

thermal

hydro

nuclear

Saldo of foreign exchange

Own use

Total sources = Domestic sources

Distribution losses

Net consumption:

Including:

wholesale

retail

other

consumption of autoproduction

Net consumption

Transformation consumption

Including:

consumption for heat production

consumption of pumping storage

consumption for mining and fuel transformation

Final consumption

consumption for production and services

residential

Gross electricity production – electricity and heat production and distribution

Including power plants:

thermal

hydro

nuclear

Gross electricity production – other plants

Including power plants:

thermal

hydro

nuclear

Table 1b

Country
Import from Germany
 Poland
 Austria
 Slovakia
Total import
Export to Germany
 Poland
 Austria
 Slovakia
Others

Total export
Saldo for foreign exchanges
1) Import and Export by countries only lines 220 kV and 400 kV

Table 18

Indicator
Total gross heat production
Including:
 CHP plants
 district heating plants
 nuclear plants
 secondary and renewable sources
Heat production from combustible fuels
Own use
Net Heat production
Consumption for electricity generation
Heat production for distribution
Including:
 public plants
 other plants
Distribution losses
Total consumption
Fuel transformation consumption
Consumption for mining
Final consumption
Including:
 consumption for production and services
 residential

Table 2 - 17 and 19 - 32

01	Agriculture, hunting and related service activities
02	Forestry, logging and related service activities
A	Agriculture, hunting and forestry
05	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing
B	Fishing
A+B	Agriculture, hunting, forestry, fishing
10	Mining of coal and lignite; extraction of peat
11	Extraction of crude petroleum and natural gas; service activities
12	Mining of uranium and thorium ores
CA	Mining and quarrying of energy producing materials
14	Other mining and quarrying
CB	Mining and quarrying except energy producing materials
C	Mining and quarrying
15	Manufacture of food products and beverages
16	Manufacture of food products
DA	Manufacture of food products; beverages and tobacco
17	Manufacture of textiles
18	Manufacture of wearing apparel; dressing and dyeing of fur
DB	Manufacture of textiles and textile products
19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear
DC	Manufacture of leather and leather products
20	Manufacture of wood and of products of wood and cork, except furniture; manuf. of articles of straw and plaiting materials
DD	Manufacture of wood and wood products
21	Manufacture of pulp, paper and paper products
22	Publishing, printing and reproduction of recorded media
DE	Manufacture of pulp, paper and paper products; publishing and printing
23	Manufacture of coke, refined petroleum products and nuclear fuel
DF	Manufacture of coke, refined petroleum products and nuclear fuel
24	Manufacture of chemicals and chemical products
DG	Manufacture of chemicals, chemical products and man-made fibres
25	Manufacture of rubber and plastic products
DH	Manufacture of rubber and plastic products
26	Manufacture of other non-metallic mineral products

DI	Manufacture of other non-metallic mineral products
27	Manufacture of basic metals
28	Manufacture of fabricated metal products, except machinery and equipment
DJ	Manufacture of basic metals and fabricated metal products
29	Manufacture of machinery and equipment n.e.c.
DK	Manufacture of machinery and equipment n.e.c.
31	Manufacture of electrical machinery and apparatus n.e.c.
32	Manufacture of radio, television and communication equipment and apparatus
33	Manufacture of medical, precision and optical instruments, watches and clocks
DL	Manufacture of electrical and optical equipment
34	Manufacture of motor vehicles, trailers and semitrailers
35	Manufacture of other transport equipment
DM	Manufacture of transport equipment
36	Manufacture of furniture; manufacturing n.e.c.
37	Recycling
DN	Manufacturing n.e.c.
D	Manufacturing
40	Electricity, gas, steam and hot water supply
41	Collection, purification and distribution of water
E	Electricity, gas and water supply
C+D+E	Industry in total
45	Construction
F	Construction
50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods
G	Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
55	Hotels and restaurants
H	Hotels and restaurants
60	Land transport; transport via pipelines
63	Supporting and auxiliary transport activities; activities of travel agencies

64	Post and telecommunications
I	Transport, storage and communication
65	Financial intermediation except insurance and pension funding
66	Insurance and pension funding, except compulsory social security
J	Financial intermediation
70	Real estate activities
73	Research and development
74	Other business activities
K	Real estate, renting and business activities
75	Public administration and defence; compulsory social security
L	Public administration and defence; compulsory social security
85	Health and social work
N	Health and social work
90	Sewage and refuse disposal, sanitation and similar activities
92	Activities of membership organizations n.e.c.
93	Other service activities
O	Other community, social and personal service activities
T O T A L C R	
Including: electricity and heat production and distribution	
other plants	

2. Table column description:

Table: 2, 3, 4, 5, 6, 7, 8

Section, Subcategory, Category (a)
 Thermal power plants sets
 condensing (1)
 condensing with extraction (2)
 back - pressure (3)
 total for fuels (4)
 Steam gas cycle and co-generation sets
 gas part of steam-gas cycle and co-generation (5)
 steam part of steam-gas cycle (6)
 total (7)
 Total (8)
 on waste heat (9)
 nuclear (10)
 gas, diesel (11)

Hydro and pumping storage power plants sets hydro (12)
pumping storage (13)
total (14)
wind (15)
Total sets (16)

Table: 9, 10, 11, 12, 13, 14, 15, 16, 24, 25, 26, 27, 28, 29, 30, 31

Section, Subcategory, Category (a)
Hard coal (1)
Brown coal (2)
BKP (3)
Coke (4)
Other solid fuels (5)
Total solid fuels (6)
Diesel/gas oil (7)
Light fuel oil (8)
heavy fuel oil (9)
Other liquid fuels (10)
Total liquid fuels (11)
Natural gas (12)
Coke oven gas (13)
Energogas (14)
Gas work gas (15)
Blast furnace gas (16)
Other gas fuels (17)
Total gas fuels (18)
Total fuels (19)

Table: 17, 32

Section, Subcategory, Category (a)
Solid biomass products
wood (1)
other vegetal wastes (2)
total (3)
Black liquor (4)
Gases derived from biomass
biogas (5)
landfill and sludge gas (6)
total (7)
Industrial wastes (8)
Municipal solid wastes (9)
Renewable fuels total (10)

Other fuels (11)

Table 19, 20, 21, 22, 23

Section, Subcategory, Category (a)

Combined heat plant (1)

Heat plant (2)

Nuclear plant (3)

Waste heat and renewables (4)

Co-generation and steam-gas plant (5)

Total (6)

Poznámky:

Notes: