3.4 Energy consumption in dwellings

In table 3.4.1 there are presented figures of average total annual energy consumption (which covers all purposes of use) per one dwelling for the Czech Republic as a whole, regions and dwellings in urban and rural localities (areas), including agricultural and entrepreneurial (business) activities. In the right-hand side of the table there are presented figures concerning dwellings excluding these activities. The highest specific consumption in urban dwellings is in Prague, the lowest then in Olomoucky Region (by18%). The difference may be due to the different size of the dwellings and the use of energy appliances in them. The highest consumption of energy in rural dwellings is in the Zlinsky Region (120.7 GJ) and the smallest in the Kralovehradecky Region (lower by 19% compared with the Zlinsky Region).

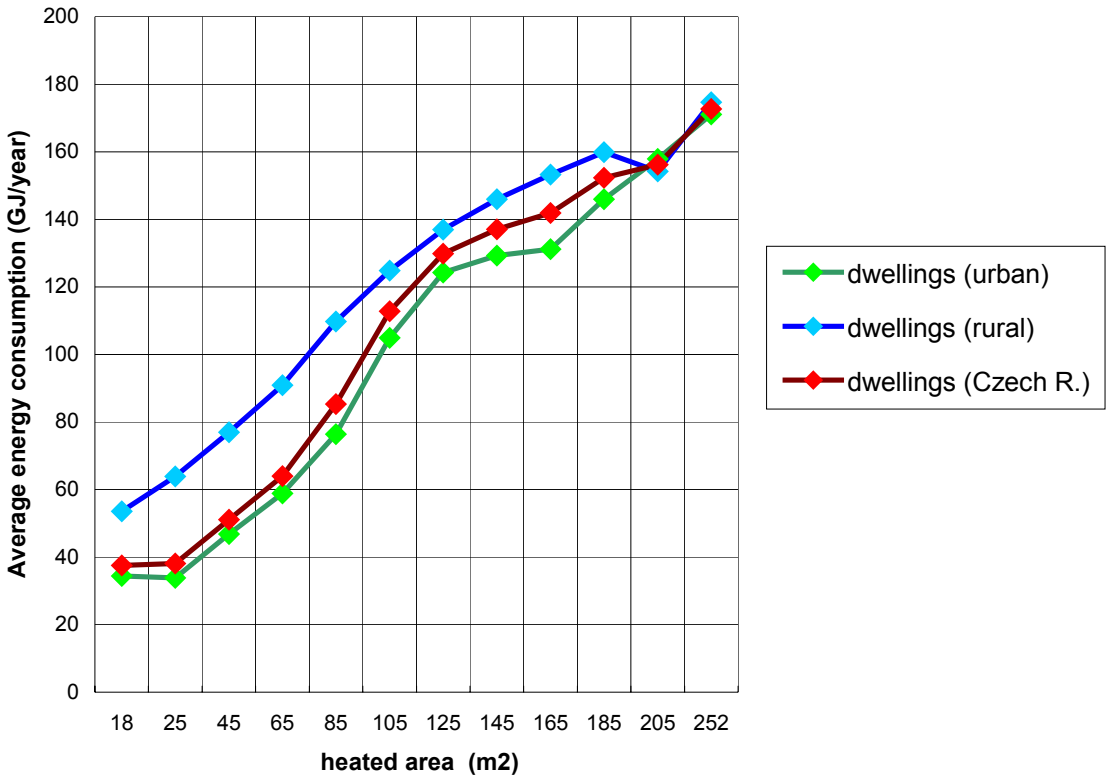
Average total annual energy consumption related to dwelling in division according to localities, including agricultural and business activities and per dwelling excluding these activities - GJ/dwelling

Table 3.4.1

Region / locality	Dwellings including business activities [GJ/dwelling]			Dwellings excluding business Activities [GJ/dwelling]		
	Urban	Rural	Total	Urban	Rural	Total
Capital City Prague	75,8	x	75,8	74,9	x	74,9
Středočeský	66,0	102,3	76,2	66,5	101,3	75,5
Jihočeský	64,4	118,8	78,8	63,5	115,8	77,2
Plzeňský	69,7	110,7	81,0	69,4	110,4	80,9
Karlovarský	74,5	115,5	84,0	73,9	115,4	83,5
Ústecký	69,9	111,1	79,9	69,4	110,3	79,3
Liberecký	73,6	109,2	79,6	72,8	108,6	78,8
Královehradecký	66,1	99,2	73,9	65,1	97,7	72,8
Pardubický	63,8	108,3	76,8	63,2	107,5	76,3
Vysočina	63,8	115,7	78,2	63,5	115,5	77,9
Jihomoravský	64,2	115,3	79,8	63,8	114,6	79,3
Olomoucký	61,7	107,2	77,4	61,4	106,3	76,9
Zlínský	66,4	121,6	82,8	66,1	120,7	82,3
Moravskoslezský	72,3	113,8	83,3	72,0	113,1	82,9
ČR celkem	**68,9**	**111,3**	**78,9**	**68,3**	**110,5**	**78,2**

Figure 3.4.3 – Dependence of average total energy consumption per dwelling vs. its heated floor area.

Fig. 3.4.3 Average total energy consumption per dwelling vs. heated area of dwelling (CR)



This figure (graph 3.4.3) shows energy consumption vs. heated floor area relationship. About 80% of energy in dwellings is consumed by space heating that is closely related to the size of heated floor area. The shape of the relationship is also affected by the sample size and the number of dwellings in urban localities or rural localities where this relationship is of rather different character, as it is evident from curves course.

Way of energy supply provision

Table 3.4.2 shows basic characteristics of dwellings at various ways of their energy supply provision (combination of used fuels and energy in one dwelling). Values of energy consumption per dwelling at combination of electricity with all kinds of solid fuels seem to be above average (even with respecting lower combustion efficiency). It may be caused by the fact that consumption of solid fuels was estimated (on the basis of issued invoices concerning supplies) and evidently overestimated. Ascertained energy consumption values concerning dwelling (at combination of electricity with natural gas) at almost one third of all surveyed dwellings are above average, as well. At the same time, it was possible to correct this consumption by gas bills for consumed natural gas here. Validity of ascertained data on total energy consumption related to one dwelling will be considered in chapter 4 where next needed information to this issue is presented.

Way of energy supply provision of dwellings

Table 3.4.2

	Locality									
	Urban					Rural				
Energy	**Energy consumption GJ**	No. of dwellings	Average heated area m^2	Energy consumption on heated area, GJ/m^2	**Energy consumption per dwelling GJ/dwelling**	**Energy consumption GJ**	No. of dwellings	Average heated area m^2	Energy consumption on heated area, GJ/m^2	**Energy consumption per dwelling GJ/dwelling**
E	41 288,1	921	76,6	0,585	**44,8**	21 821,0	480	81,5	0,558	**45,5**
E+NG	880 747,9	10 012	81,8	1,076	**88,0**	305 308,0	2 917	94,1	1,112	**104,7**
E+LPG	5 808,4	116	80,2	0,625	**50,1**	6 435,0	129	77,5	0,644	**49,9**
E+LIG.	38 395,0	449	78,2	1,093	**85,5**	53 328,0	616	81,9	1,057	**86,6**
E+coke	14 260,0	93	104,1	1,473	**153,3**	4 029,8	33	96,8	1,262	**122,1**
E+wood	38 915,8	319	88,5	1,378	**122,0**	82 356,2	600	83,6	1,642	**137,3**
E+HC	5 979,1	61	86,8	1,130	**98,0**	5 917,4	56	99,4	1,064	**105,7**
E+CH	14 050,3	276	59,4	0,857	**50,9**	5 783,8	111	67,9	0,767	**52,1**
E+CH+HW	202 552,6	4 646	54,9	0,793	**43,6**	16 246,5	326	58,4	0,854	**49,8**
E+NG+CH+HW	528 030,2	10 772	59,9	0,819	**49,0**	4 970,5	80	63,5	0,979	**62,1**

Continuing of table

	Total CR					
Energy	**Energy consumption GJ**	No. of dwellings	Average heated area m^2	Energy consumption on heated area, GJ/m^2	**Energy consumption per dwelling GJ/dwelling**	**Energy consumption per m^2 heated area, GJ/m^2 - data for CR**
E	63109,2	1401	78,3	0,575	**45,0**	**0,575**
E+NG	1186055,9	12929	84,6	1,085	**91,7**	**1,085**
E+LPG	12243,4	245	78,8	0,635	**50,0**	**0,635**
E+LIG.	91722,9	1065	80,4	1,072	**86,1**	**1,072**
E+coke	18289,8	126	102,2	1,421	**145,2**	**1,421**
E+wood	121272,0	919	85,3	1,547	**132,0**	**1,547**
E+HC	11896,5	117	92,8	1,096	**101,7**	**1,096**
E+CH	19834,1	387	61,9	0,828	**51,3**	**0,828**
E+CH+HW	218799,1	4972	55,2	0,798	**44,0**	**0,798**
E+NG+CH+HW	533021,3	10852	59,9	0,820	**49,1**	**0,820**