

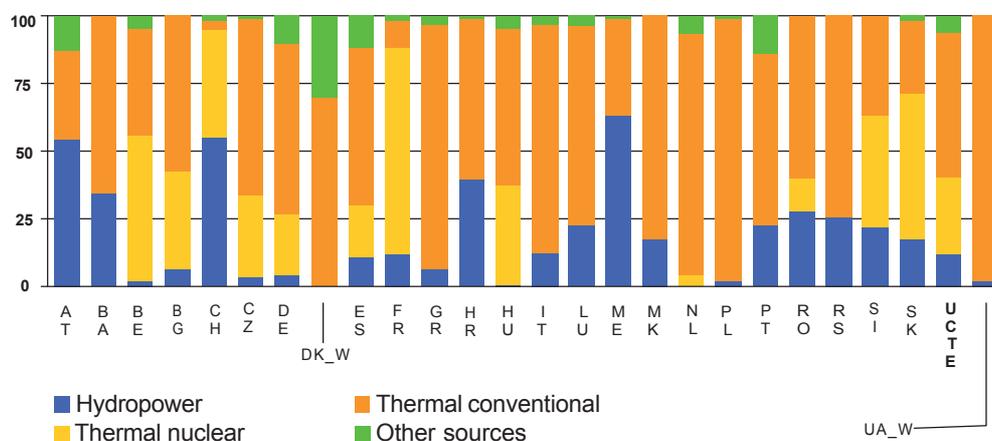


### 3 SYSTEM INFORMATION



**<sup>1</sup> All values of production and consumption are calculated to represent 100% of the national values**

	Page	
T1	Net electricity generation and its structure in 2007	134
T2	Development of net production of electricity	135
T3	UCTE Other renewable production including wind power	136
T4	National consumption and maximum load in 2007	137
G1	Highest and lowest load on 3rd Wednesday in 2007	138
G2	Physical energy flows in 2007	139
T5a	Development of physical exchanges on tie lines	140
T5b	Scheduled exchanges	141
G3	Balance of simultaneous power flows across the frontiers	142
T6	Development of the simultaneous power flows across the frontiers of the UCTE countries	146
T7	Maximum output capacity on 31 December 2007, 2006 and 2002	147
T8a	UCTE System Adequacy Retrospect 2007, Power Data	148
T8b	UCTE System Adequacy Retrospect 2007, Energy Data	149
G4	Simplified diagram of the interconnected network	150
G5	Monthly electricity exchanges across frontiers	152
G6	Load flows across frontiers	154
T9	Characteristics of the cross-frontier transmission lines	156
T9a	Unavailability of international tie lines - Overview	165
T10	Inventory of transmission network installations	170
T11	Number of circuits < 220 kV, 220 kV and 380 kV on cross-frontier transmission lines	172
T12	Main grid developments	173
T13	System reliability	176
T14a	Inventory of thermal units $\geq 10$ MW per country as of 31 December 2007	188
T14b	Commissioning and decommissioning of major thermal power units in 2007	189
T15a	Inventory of hydro power units $\geq 1$ MW as of 31 December 2007	190
T15b	Commissioning and decommissioning of hydro power units in 2007	191



Country	Thermal nuclear		Thermal conventional		Hydro-production		Other renewable		of which wind	Not clearly identifiable		Total TWh
	TWh	%	TWh	%	TWh	%	TWh	%	TWh	TWh	%	
AT	-	-	21,0	32,9	34,8	54,5	-	-	-	8,03	12,6	63,8
BA	-	-	7,8	66,0	4,0	34,0	-	-	-	-	-	11,8
BE <sup>3</sup>	45,9	54,0	33,7	39,7	1,7	2,0	3,6	4,3	0,49	-	-	84,9 <sup>2</sup>
BG	13,6	35,7	22,1	57,9	2,4	6,4	-	-	-	-	-	38,2
CH	26,3	40,0	2,1	3,3	36,4	55,2	1,1	1,6	0,01	-	-	65,9 <sup>2</sup>
CZ	24,6	30,2	54,0	66,3	2,5	3,1	0,3	0,4	0,12	-	-	81,4 <sup>2</sup>
DE <sup>4</sup>	133,2	22,8	366,0	62,7	24,4	4,2	60,5	10,4	39,54	-	-	584,0 <sup>2</sup>
DK_W	-	-	16,4	69,6	0,03	0,1	7,1	30,3	5,62	-	-	23,6 <sup>2</sup>
ES	52,7	19,0	161,9	58,3	29,9	10,8	33,4	12,0	26,89	-	-	277,9
FR	418,6	76,9	55,0	10,1	63,2	11,6	7,9	1,5	4,05	-	-	544,7 <sup>2</sup>
GR <sup>5</sup>	-	-	47,6	90,7	3,4	6,4	1,5	2,9	1,33	-	-	52,5 <sup>2</sup>
HR	-	-	6,7	60,2	4,4	39,4	0,04	0,4	0,04	-	-	11,1 <sup>2</sup>
HU	13,8	37,0	21,8	58,5	0,2	0,6	1,5	4,0	0,11	-	-	37,3 <sup>2</sup>
IT	-	-	253,9	84,2	38,0	12,6	9,6	3,2	4,03	-	-	301,4
LU	-	-	2,9	73,2	0,9	22,9	0,2	3,8	0,07	-	-	3,9
ME	-	-	0,8	37,1	1,3	62,7	0,004	0,2	-	-	-	2,1
MK	-	-	5,0	82,6	1,1	17,4	-	-	-	-	-	6,1
NL	4,0	4,0	88,6	89,2	0,1	0,1	6,6	6,7	3,44	0,01	0,01	99,3 <sup>2</sup>
PL	-	-	145,1	97,8	2,7	1,8	0,6	0,4	0,51	-	-	148,4 <sup>2</sup>
PT	-	-	28,4	63,5	10,2	22,9	6,1	13,6	4,01	-	-	44,6 <sup>2</sup>
RO	7,1	12,5	33,7	59,8	15,6	27,7	-	-	-	-	-	56,4 <sup>2</sup>
RS	-	-	29,0	74,5	9,9	25,5	-	-	-	-	-	38,9
SI	5,4	41,5	4,8	36,9	2,8	21,6	-	-	-	-	-	13,1 <sup>2</sup>
SK	14,2	54,4	7,1	27,1	4,5	17,3	0,3	1,2	0,01	-	-	26,1 <sup>2</sup>
UCTE <sup>6</sup>	759,4	29,1	1408,6	54,0	294,2	11,3	136,9	5,3	87,45	8,04	0,3	2607,1 <sup>2</sup>
UA_W	-	-	8,1	98,2	0,1	1,8	-	-	-	-	-	8,2

<sup>1</sup> All net production values are calculated to represent 100% of the national values. The percentage as referred to the national values are specified on page 10 and page 11 of this Yearbook.

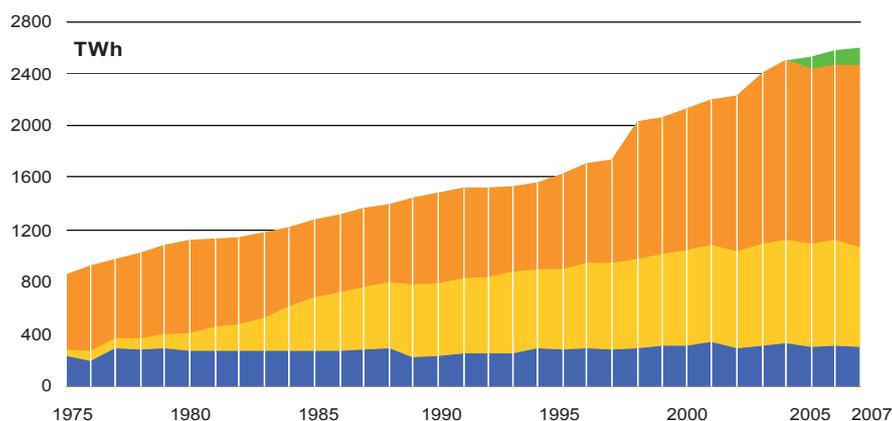
<sup>2</sup> Including deliveries from industry

<sup>3</sup> The reported figures are best estimates based on actual measurements and extrapolations.

<sup>4</sup> Calculated values

<sup>5</sup> The values for Greece refer to the interconnected system and not to the whole country.

<sup>6</sup> Including DK\_W values from June 2007 on.



Year	Hydro power	Thermal nuclear	Thermal conventional	Other sources <sup>2</sup>	Total TWh
	TWh	TWh	TWh	TWh	
1975	222,9	50,0	585,4		858,3
1976	191,2	69,5	669,1		929,8
1977	276,2	82,2	610,4		968,8
1978	266,1	97,4	659,9		1023,4
1979	275,4	110,6	691,3		1077,3
1980	263,4	133,9	712,1		1109,4
1981	256,4	191,0	678,4		1125,8
1982	258,0	211,2	665,5		1134,7
1983	255,9	258,8	653,3		1168,0
1984	257,0	348,5	617,3		1222,8
1985	255,2	426,3	597,3		1278,8
1986	253,3	464,4	593,6		1311,3
1987	264,9	483,0	607,7		1442,1
1988	282,9	514,6	597,0		1483,5
1989	216,2	551,6	669,2		1528,7
1990	222,8	558,5	690,6		1565,9
1991	246,2	579,6	701,7		1625,0
1992	240,2	591,2	689,5		1618,0
1993	251,2	616,9	664,9		1630,0
1994	278,8	606,1	674,7		1657,5
1995 <sup>3</sup>	265,8	627,7	732,8		1740,2
1996	284,6	657,2	770,1		1841,4
1997	272,0	665,2	792,1		1861,3
1998 <sup>4</sup>	284,4	689,5	1057,7		2172,3
1999	302,0	705,5	1053,0		2165,4
2000	305,1	733,8	1093,4		2246,4
2001	331,6	744,4	1129,8		2291,0
2002	276,1	757,6	1187,6		2303,8
2003 <sup>5</sup>	307,4	787,4	1305,7		2484,6
2004	319,8	798,6	1386,3		2525,2
2005	292,4	792,6	1349,1	98,2	2540,4
2006	305,4	801,9	1354,3	115,8	2584,9
2007 <sup>6</sup>	294,2	759,4	1402,2	143,3	2607,1

<sup>1</sup> Values of detailed production are national values; total net production values are calculated to represent 100% of the national values.

<sup>2</sup> Before 2005, the information on other renewable energy sources was collected in a different manner. Some countries added them to thermal conventional, some considered them as the part of not represented in the figures (through the factor "representativity").

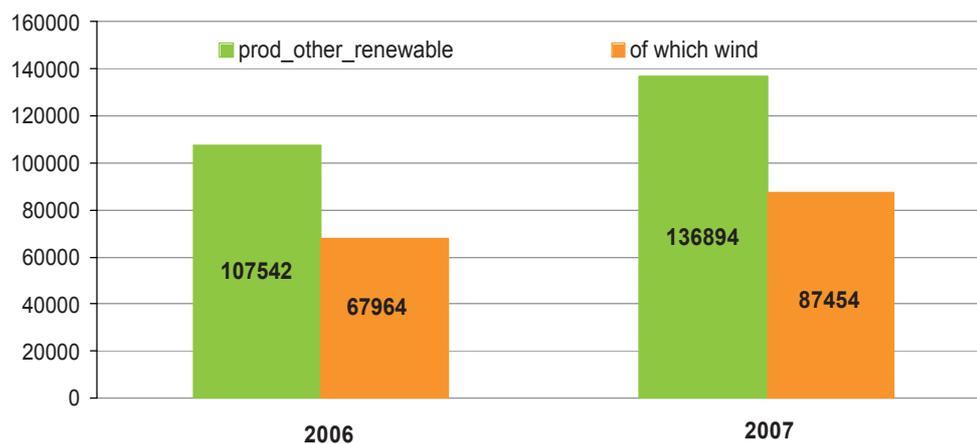
<sup>3</sup> As of September 1995 total German values

<sup>4</sup> Including values of CZ, HU, PL, SK as of 1998

<sup>5</sup> Including values of RO, BG as of 2003

<sup>6</sup> Including values of DK\_W as of June 2007

UCTE Production renewable energy sources including wind power  
in the year 2006 and 2007 in GWh



month	other renew	of which wind	other renew	of which wind	
January	9143	6082	15254	11579	
February	8029	5095	11348	7815	
March	9996	6727	13084	9158	
April	8215	5068	8567	4774	
May	8857	5693	10409	6441	
June	6462	3181	9088	5031	
July	5916	2834	11142	6759	
August	8536	5212	10429	5961	
September	7797	4553	11237	6887	
October	10621	6859	9292	4904	
November	11834	8198	13670	9182	
December	12136	8462	13373	8963	
<b>sum 2006</b>	<b>107542</b>	<b>67964</b>	<b>sum 2007</b>	<b>136894</b>	<b>87454</b>

<sup>1</sup> All values are calculated to represent 100% of the national values. The percentage as referred to the national values are specified on page 10 and page 11 of this yearbook.

## National electricity consumption

Country	GWh	Δ % <sup>1</sup>	repr % <sup>2</sup>	Country	GWh	Δ % <sup>1</sup>	repr % <sup>2</sup>
AT	67439	1,4	100	HU	41289	1,6	100
BA	11171	0,6	100	IT	339928	0,7	100
BE	89915	-0,5	100	LU	6777	2,4	100
BG	33126	-7,1	100	ME	4654	n.a.	100
CH <sup>3</sup>	63060	-0,3	100	MK	8566	2,3	100
CZ	64663	0,6	100	NL	116955	0,7	100
DE	555899	-0,6	100	PL	142206	4,2	100
DK_W	21794	0,3	100	PT	51584	1,7	97
ES	267799	3,2	98	RO	54119	2,1	100
FR	480308	0,4	100	RS	37839	n.a.	100
GR <sup>4</sup>	55688	3,2	100	SI	13448	0,9	95
HR	17380	3,4	100	SK	27581	1,4	100
UCTE <sup>5</sup>	<b>2563964</b>	<b>2,1</b>		UA_W	4271	-1,3	100

National annual maximum load in each country<sup>6</sup>

Country	Date	Day	Time	MW	Δ % <sup>1</sup>
AT	17 December	Monday	05:30 p.m.	9438	-0,5
BA	31 December	Monday	06:00 p.m.	2078	2,9
BE	17 December	Monday	06:00 p.m.	14205	2,1
BG	31 December	Monday	06:00 p.m.	6888	-0,6
CH	19 December	Wednesday	06:15 p.m.	9953	-2,6
CZ	29 November	Thursday	05:00 p.m.	10174	-3,0
DE	03 December	Monday	06:00 p.m.	78500	0,9
DK_W <sup>7</sup>	17 December	Monday	06:00 p.m.	3767	0,3
ES	17 December	Monday	08:00 p.m.	44876	6,5
FR	17 December	Monday	06:58 p.m.	88960	3,1
GR <sup>4</sup>	23 July	Monday	01:00 p.m.	10414	5,3
HR	17 December	Monday	06:00 p.m.	3098	2,0
HU	29 November	Thursday	05:00 p.m.	6180	1,7
IT	18 December	Tuesday	05:00 p.m.	56822	2,2
LU	10 December	Monday	06:00 p.m.	1061	2,5
ME	23 December	Sunday	06:00 p.m.	744	n.a.
MK	23 December	Sunday	07:00 p.m.	1664	6,3
NL	20 December	Thursday	05:00 p.m.	15863	-3,8
PL	18 December	Tuesday	05:00 p.m.	22729	0,2
PT	18 December	Tuesday	07:45 p.m.	9099	3,4
RO	19 December	Wednesday	05:00 p.m.	8681	6,5
RS	31 December	Monday	06:00 p.m.	7305	n.a.
SI	19 December	Wednesday	07:00 p.m.	2087	-1,1
SK	19 December	Wednesday	06:00 p.m.	4418	-0,1
UA_W	27 December	Thursday	07:00 p.m.	1025	-0,3

<sup>1</sup> As compared to the last year.

<sup>2</sup> Percentage as referred to the total values of a country.

(The total values of a country are defined as the synchronously interconnected system plus the areas directly connected via AC or DC to the mainland system.)

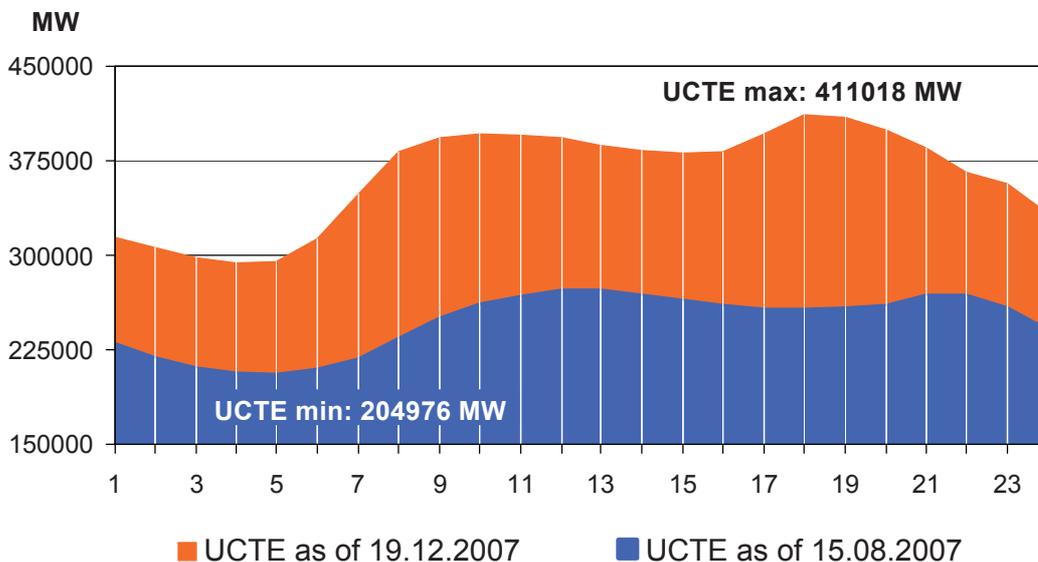
<sup>3</sup> Calculations based on the UCTE database differ from the official values from the Swiss Federal Office of Energy.

<sup>4</sup> The values for Greece refer to the interconnected system and not to the whole country.

<sup>5</sup> From June 2007 including values of DK\_W

<sup>6</sup> The maximum load values of each country are specified in the System Adequacy Retrospect 2007 published on 26 June 2008.

<sup>7</sup> The values of DK\_W are collected as monthly hourly load values and not contained in the SA Retrospect 2007.



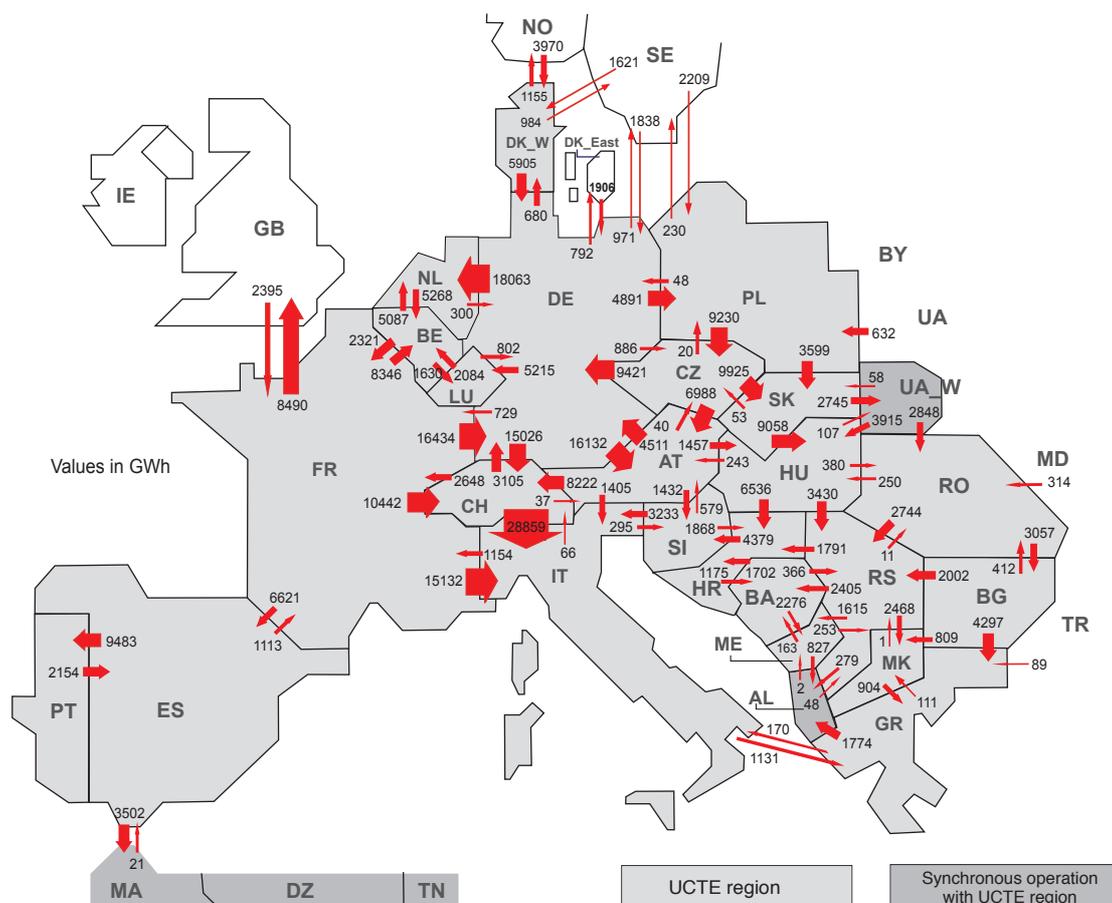
## Highest load 3rd Wednesday of each country

## Lowest load 3rd Wednesday of each country

Country	MW	Date	Time	MW	Date	Time
AT	9265	19 December	06:00 p.m.	4317	15 August	05:00 a.m.
BA	1974	19 December	06:00 p.m.	887	15 August	04:00 a.m.
BE <sup>1</sup>	13789	19 December	07:00 p.m.	7508	15 August	07:00 a.m.
BG	6839	19 December	07:00 p.m.	3066	16 May	05:00 a.m.
CH	9953	19 December	06:00 p.m.	4866	15 August	04:00 a.m.
CZ	10031	19 December	03:00 p.m.	5808	15 August	04:00 a.m.
DE <sup>1</sup>	82787	17 January	07:00 p.m.	47184	15 August	03:00 a.m.
DK_W	3713	19 December	09:00 a.m.	1637	18 July	04:00 a.m.
ES	43352	19 December	06:00 p.m.	20946	15 August	07:00 a.m.
FR	87897	19 December	07:00 p.m.	33821	15 August	07:00 a.m.
GR <sup>2</sup>	9771	18 July	01:00 p.m.	4267	17 October	04:00 a.m.
HR	3036	19 December	06:00 p.m.	1282	16 May	04:00 a.m.
HU	6540	19 December	06:00 p.m.	3871	15 August	05:00 a.m.
IT	55883	18 July	11:00 a.m.	23280	15 August	07:00 a.m.
LU	1022	21 November	06:00 p.m.	512	15 August	05:00 a.m.
ME	695	19 December	07:00 p.m.	360	18 July	03:00 a.m.
MK	1556	19 December	06:00 p.m.	610	16 May	04:00 a.m.
NL	17840	17 January	06:00 p.m.	8829	15 August	04:00 a.m.
PL	22601	19 December	05:00 p.m.	10805	15 August	07:00 a.m.
PT	9132	19 December	08:00 p.m.	4050	15 August	08:00 a.m.
RO	8681	19 December	06:00 p.m.	5015	15 August	03:00 a.m.
RS	6534	19 December	10:00 a.m.	2523	16 May	04:00 a.m.
SI	2173	21 November	06:00 p.m.	1151	15 August	05:00 a.m.
SK	4418	19 December	06:00 p.m.	2598	15 August	04:00 a.m.
<b>UCTE</b>	<b>411018</b>	<b>19 December</b>	<b>06:00 p.m.</b>	<b>204976</b>	<b>15 August</b>	<b>05:00 a.m.</b>
UA_W	917	17 January	06:00 p.m.	401	16 May	04:00 a.m.

<sup>1</sup> The reported figures are best estimated based on actual measurements.

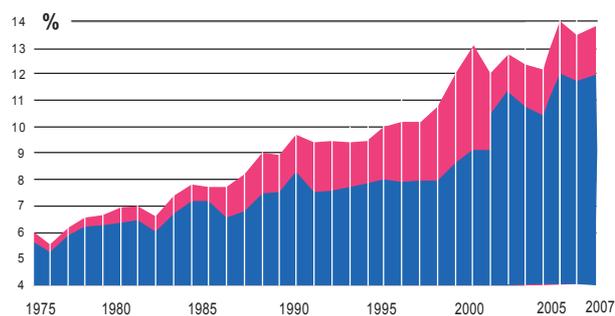
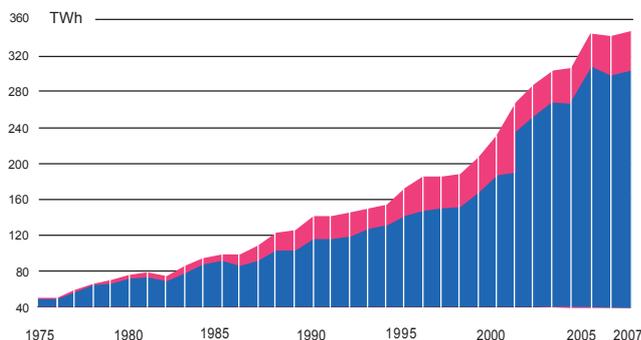
<sup>2</sup> The values for Greece refer to the interconnected system and not to the whole country.



Exporting countries	Importing countries																			Sum export							
	AT	BA	BE	BG	CH	CZ	DE	DK_W	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL		PT	RO	RS	SI	SK	UA_W	Other <sup>1</sup>
AT	-	-	-	-	8222	40	4511	-	-	-	-	1457	1405	-	-	-	-	-	-	-	-	-	1432	-	-	-	17067
BA	-	-	-	-	-	-	-	-	-	-	1702	-	-	-	2276	-	-	-	-	-	-	366	-	-	-	-	4344
BE	-	-	-	-	-	-	-	-	2321	-	-	-	-	1630	-	-	5087	-	-	-	-	-	-	-	-	-	9038
BG	-	-	-	-	-	-	-	-	-	4297	-	-	-	-	-	809	-	-	-	-	-	412	2002	-	-	-	7520
CH	37	-	-	-	-	3105	-	2648	-	-	-	-	28859	-	-	-	-	-	-	-	-	-	-	-	-	34649	
CZ	6868	-	-	-	-	9421	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-	9925	-	26354	
DE	16132	-	-	-	15026	866	-	680	-	729	-	-	-	5215	-	-	18063	4891	-	-	-	-	-	-	-	63385	
DK_W	-	-	-	-	-	5905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8044	
ES	-	-	-	-	-	-	-	-	1113	-	-	-	-	-	-	-	-	-	-	9483	-	-	-	-	-	14098	
FR	-	-	8346	-	10442	-	16434	-	6621	-	-	-	15132	-	-	-	-	-	-	-	-	-	-	-	-	65465	
GR	-	-	-	0	-	-	-	-	-	-	-	-	170	-	-	111	-	-	-	-	-	-	-	-	-	2055	
HR	-	1175	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	4379	-	-	5554	
HU	243	-	-	-	-	-	-	-	-	-	6536	-	-	-	-	-	-	-	-	-	380	3430	0	107	-	10696	
IT	0	-	-	-	66	-	-	-	1154	1131	-	-	-	-	-	-	-	-	-	-	-	-	295	-	-	2646	
LU	-	-	2084	-	-	-	802	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2886	
ME	-	163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	253	-	-	827	1243	
MK	-	-	-	0	-	-	-	-	-	-	904	-	-	-	-	-	-	-	-	-	-	-	1	-	-	905	
NL	-	-	5268	-	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5568	
PL	-	-	-	-	9230	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13107	
PT	-	-	-	-	-	-	-	2154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2154	
RO	-	-	-	3057	-	-	-	-	-	-	-	-	250	-	-	-	-	-	-	-	-	-	-	0	0	6051	
RS	-	2405	-	0	-	-	-	-	-	-	1791	0	-	1615	2468	-	-	-	-	-	11	-	-	-	-	8569	
SI	579	-	-	-	-	-	-	-	-	-	1868	-	3233	-	-	-	-	-	-	-	-	-	-	-	-	5680	
SK	-	-	-	-	53	-	-	-	-	-	-	-	9058	-	-	-	-	-	0	-	-	-	-	-	2745	11856	
UA_W	-	-	-	-	-	-	-	-	-	-	-	3915	-	-	-	-	-	-	-	-	2848	-	58	-	-	6821	
Other <sup>1</sup>	-	-	-	0	-	-	3744	5591	21	2395	89	-	-	-	2	-	-	2841	-	-	314	48	-	-	-	15045	
<b>Sum imp</b>	<b>23979</b>	<b>3743</b>	<b>15698</b>	<b>3057</b>	<b>33756</b>	<b>10209</b>	<b>44270</b>	<b>6271</b>	<b>8796</b>	<b>10360</b>	<b>6421</b>	<b>11897</b>	<b>14680</b>	<b>48799</b>	<b>6845</b>	<b>3893</b>	<b>3388</b>	<b>23150</b>	<b>7752</b>	<b>9483</b>	<b>3965</b>	<b>8844</b>	<b>6106</b>	<b>13682</b>	<b>2852</b>	<b>19004</b>	<b>350800</b>

Sum of physical energy flows between UCTE countries = 304117 GWh Total physical energy flows = 350800 GWh

Other<sup>1</sup>: Albania, Belarus, Denmark East, Great Britain, Morocco, Republic of Moldavia, Norway, Sweden, Republic of Turkey and Ukraina  
 These physical energy flows were measured on the cross-frontier transmission lines ( $\leq 110$  kV) listed in table T9 of this Yearbook.



Year	Sum of electricity exchanges within the UCTE		Sum of electricity exchanges with CENTREL		Volume of exchanges with third countries		Total exchanges	
	TWh	%	TWh	%	TWh	%	TWh	%
1975	48,4	5,7			3,2	0,4	51,6	6,0
1976	48,6	5,3			2,9	0,3	51,5	5,6
1977	56,4	5,9			2,6	0,3	59,0	6,1
1978	62,9	6,2			3,3	0,3	66,2	6,5
1979	66,4	6,2			4,3	0,4	70,8	6,6
1980	70,5	6,4			5,9	0,5	76,4	6,9
1981	72,2	6,5			6,0	0,5	78,3	7,0
1982	67,9	6,0			6,2	0,6	74,2	6,6
1983	77,5	6,7			8,3	0,7	85,7	7,4
1984	87,0	7,2			7,1	0,6	94,1	7,8
1985	90,5	7,2			7,4	0,6	97,9	7,8
1986	85,0	6,6			14,7	1,1	99,7	7,7
1987	90,7	6,8			18,9	1,4	109,5	8,2
1988	102,6	7,5			20,9	1,5	123,5	9,0
1989	103,8	7,5			21,9	1,4	125,7	8,9
1990	115,8	8,0			23,9	1,7	139,7	9,7
1991	117,7	7,8			26,9	1,9	144,6	9,7
1992	117,6	7,8			27,8	1,9	145,4	9,7
1993	124,4	8,3			26,2	1,7	150,6	10,0
1994	129,5	8,1			26,2	1,6	155,7	10,1
1995	137,4	8,4	11,9	0,7	23,1	1,5	172,3	10,8
1996	145,0	8,7	14,1	0,8	26,8	1,6	185,9	11,1
1997	144,7	8,5	13,9	0,8	27,1	1,7	185,7	11,0
1998	148,9	8,4	14,0	0,8	25,4	1,5	204,5	10,7
1999	161,6	8,0	16,5	0,8	29,7	1,7	225,4	11,5
2000	177,5	8,5	22,1	1,1	29,6	1,6	229,2	12,4
2001	235,5	10,5			33,7	1,8	269,2	12,4
2002	250,9	11,1			36,9	1,6	287,8	12,7
2003	263,8	10,8			35,5	1,5	299,3	12,3
2004	255,2	10,3			44,1	1,8	299,3	12,1
2005	298,9	12,0			48,8	2,0	347,7	13,9
2006	296,8	11,7			46,0	1,8	342,8	13,5
2007	304,1	11,9			46,7	1,8	350,8	13,7

<sup>1</sup> As of September 1995 total German values

<sup>3</sup> From year 2003 on sum of exchanges including RO and BG

<sup>2</sup> From year 2001 on sum of exchanges including CZ, HU, PL SK

<sup>4</sup> From June 2007 on sum of exchanges including DK\_W

Control area	2007		January 2007				July 2007			
	Export Programs	Import Programs	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00	Export Programs at 03:00	Import Programs at 03:00	Export Programs at 11:00	Import Programs at 11:00
AT	7938230	11247168	1281	842	1578	1357	1324	826	1874	976
BA	3990178	3382997	141	205	166	210	80	185	167	185
BE	5685951	11874247	0	651	1257	2800	311	612	458	854
BG	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
CH	31955432	31170045	2356	4617	3890	4587	3803	1878	6095	2138
CZ	24951252	8309936	2934	435	3398	978	3189	551	2886	1164
DE	42552055	22817929	4799	2611	5664	2709	2922	2625	2721	4729
DK_W	6288571	7511379	244	0	985	1080	975	1033	1339	1200
ES	15289721	9631457	1955	1400	1351	2499	503	2000	1137	565
FR	82978526	27556107	11840	2306	12239	1878	9711	2293	8060	3469
GR	418115	4771852	45	425	40	60	25	1020	25	849
HR	2350506	8681343	122	629	104	657	354	948	354	1046
HU	10288508	14272932	1730	1832	1503	2003	885	1630	1001	1771
IT	2647482	48798715	328	5466	153	7211	684	5324	497	6259
ME	2466729	4518586	187	563	139	545	95	532	112	587
MK	267031	2837610	40	185	0	193	0	213	29	344
NL	4197433	21764263	1547	1890	71	3058	225	1989	277	2263
PL	7223915	3333031	572	112	1400	805	425	743	600	681
PT	1592042	9084834	0	1600	1299	704	0	800	65	0
FR	4175435	1968126	465	218	560	143	309	166	349	119
RS	6206570	6011887	750	1013	685	1033	634	432	614	557
SI	5725715	6148637	684	660	780	797	609	730	775	695
SK	8816954	9691036	1283	1113	1288	1537	1048	1232	1095	1574
UA_W	4060374	145829	395	0	494	0	589	69	614	68

- Control areas can differ from national borders (i.e. German block which includes parts of AT, LU and DK\_W).

- Values are calculated on an hourly base in MWh.

- This values are not the provisional values entered in the VULCANUS system, but the definitive values after an eventual correction during the actual date.

- Export Programs: Sum of all positive values of every hour of every border as sum year 2007

- Import Programs: Sum of all negative values of every hour of every border as sum year 2007

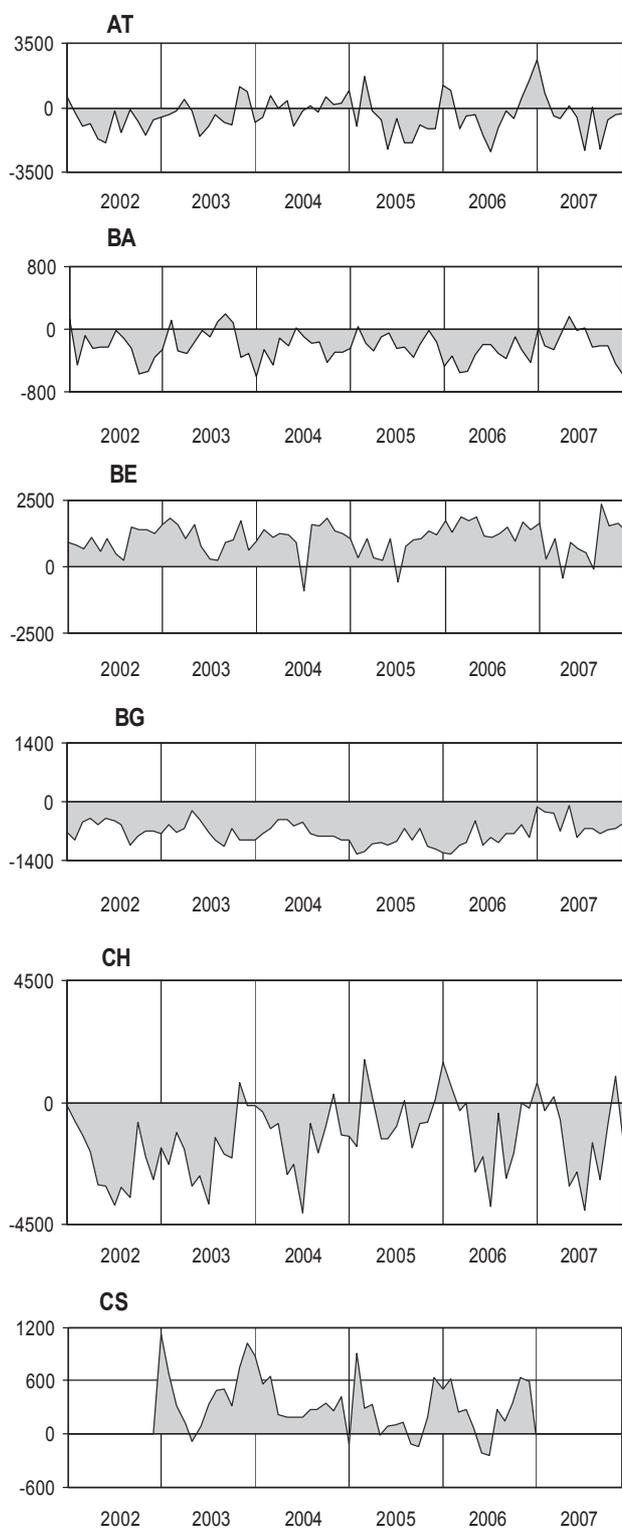
- Export Programs at 03:00: Sum of all positive values the third Wednesday in January and July 2007 from 02:00 to 03:00 a.m.

- Import Programs at 03:00: Sum of all negative values the third Wednesday in January and July 2007 from 02:00 to 03:00 a.m.

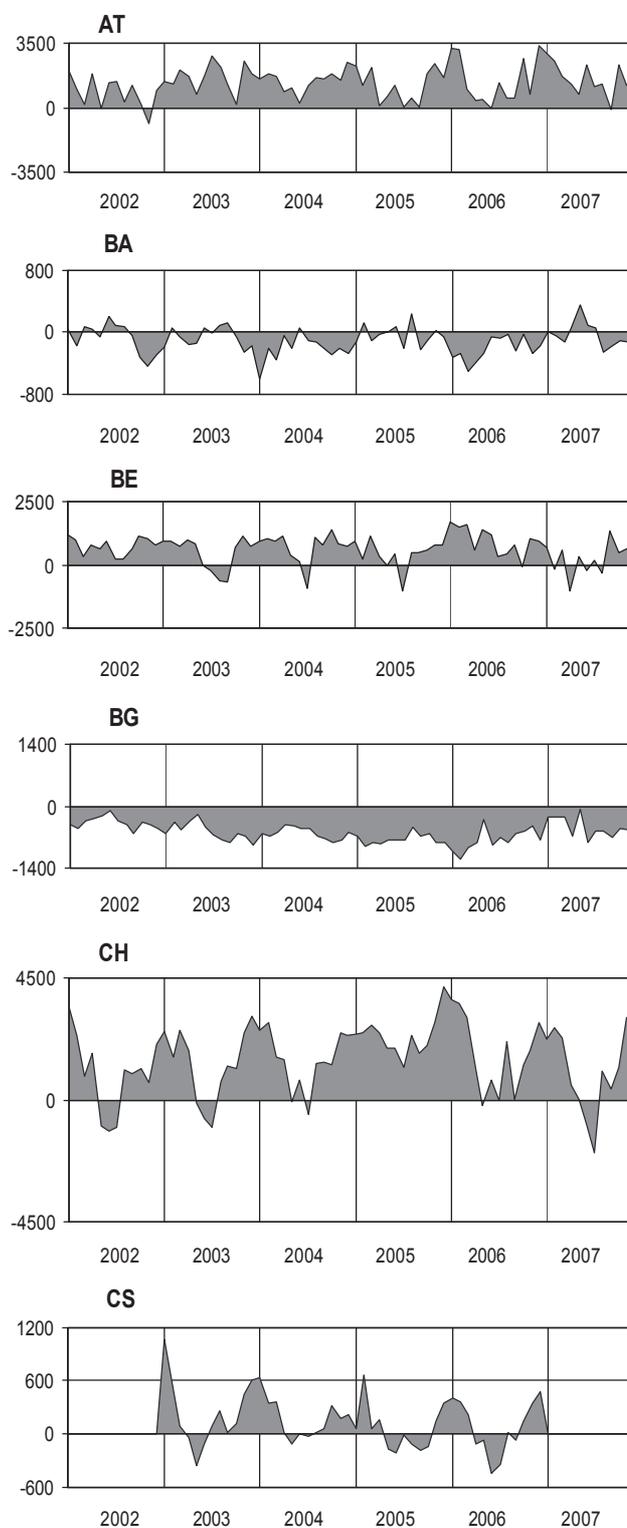
- Export Programs at 11:00: Sum of all positive values the third Wednesday in January and July 2007 from 10:00 to 11:00 a.m.

- Import Programs at 11:00: Sum of all negative values the third Wednesday in January and July 2007 from 10:00 to 11:00 a.m.

11:00

Day load in MW <sup>1</sup>

03:00

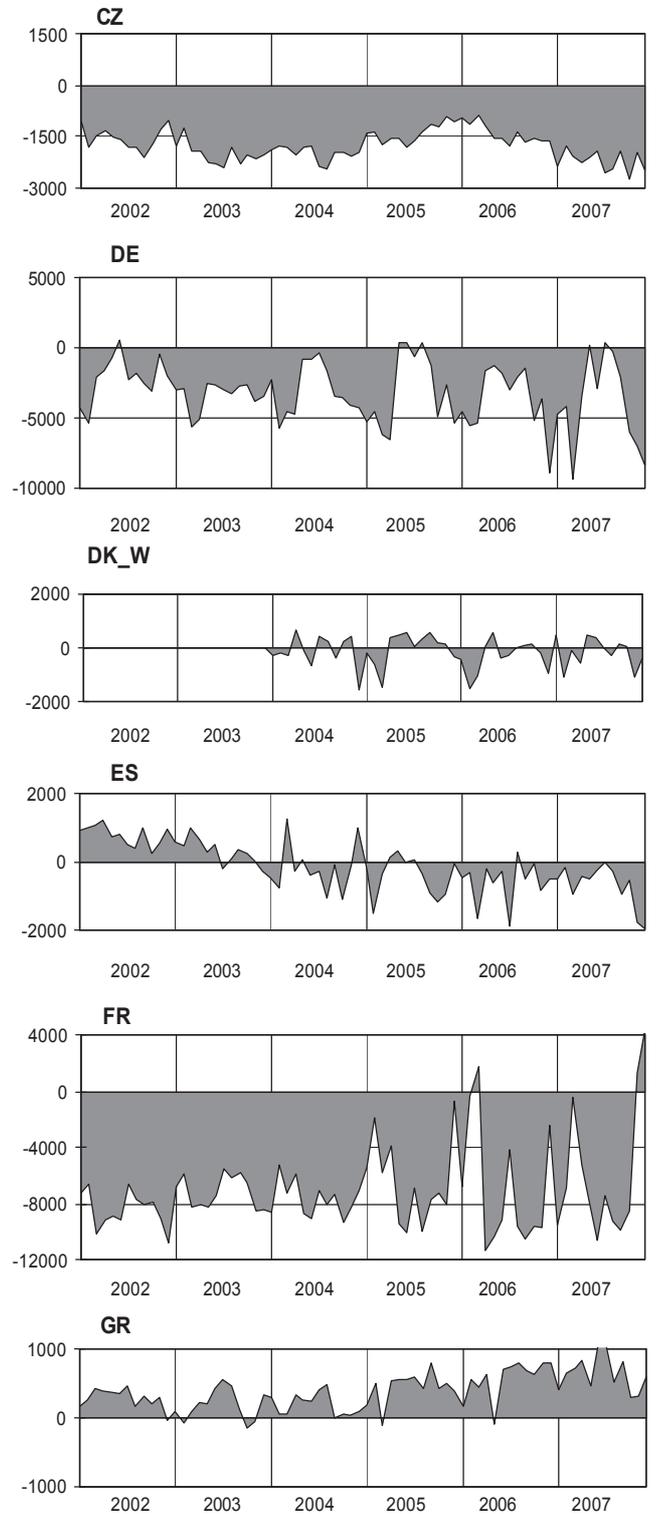
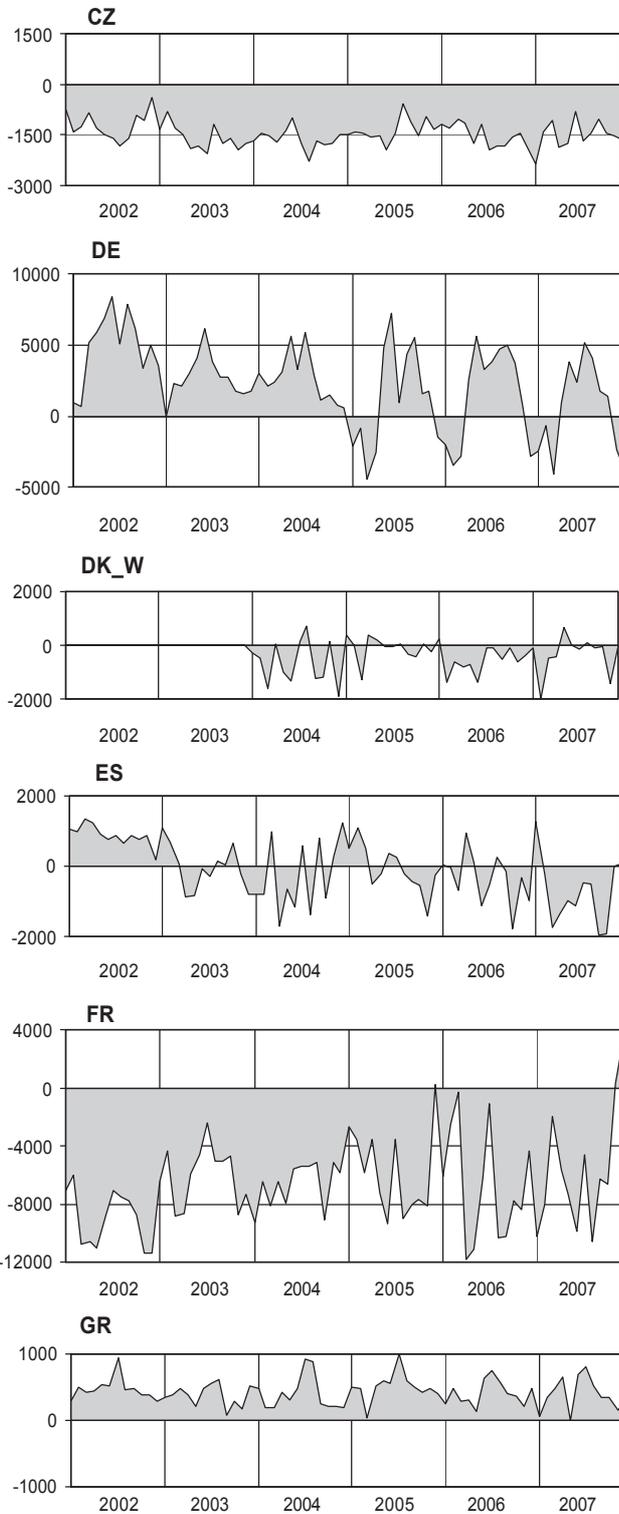
Night load in MW <sup>1</sup><sup>1</sup> Balance of import-export on the 3rd Wednesday of each month

11:00

Day load in MW <sup>1</sup>

03:00

Night load in MW <sup>1</sup>



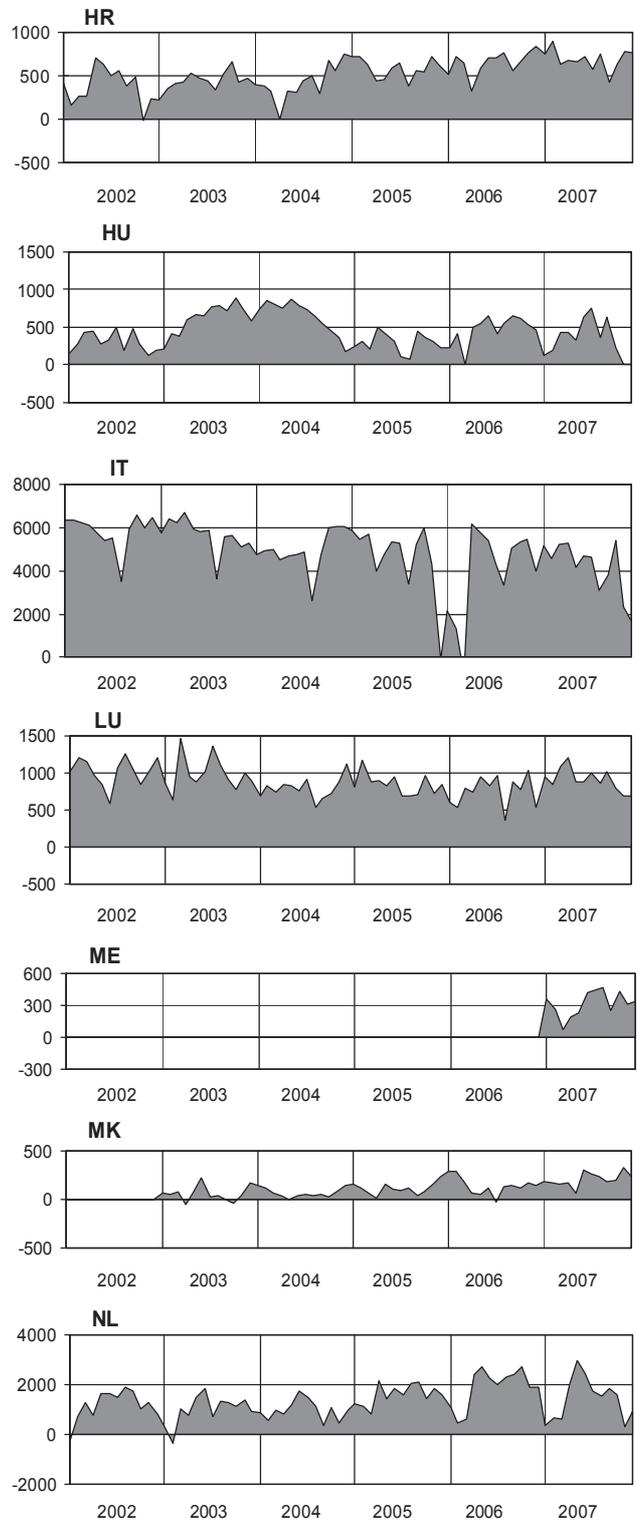
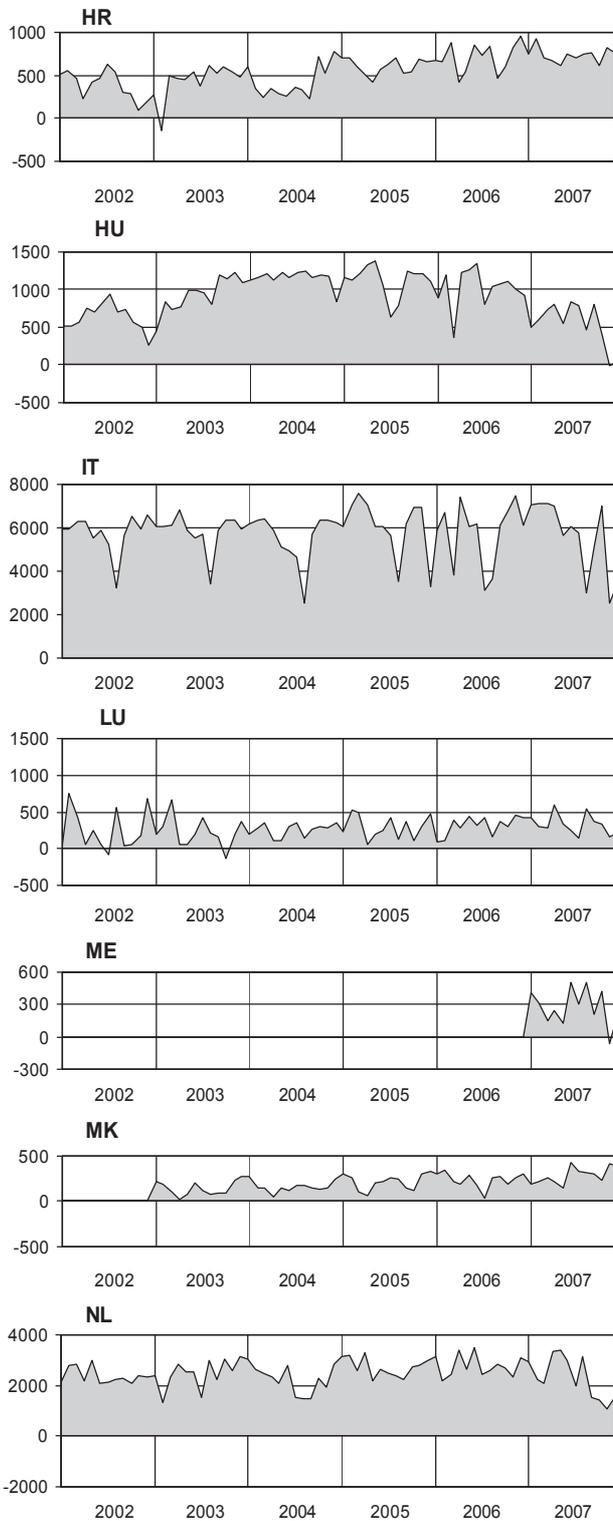
<sup>1</sup> Balance of import-export on the 3rd Wednesday of each month

11:00

Day load in MW <sup>1</sup>

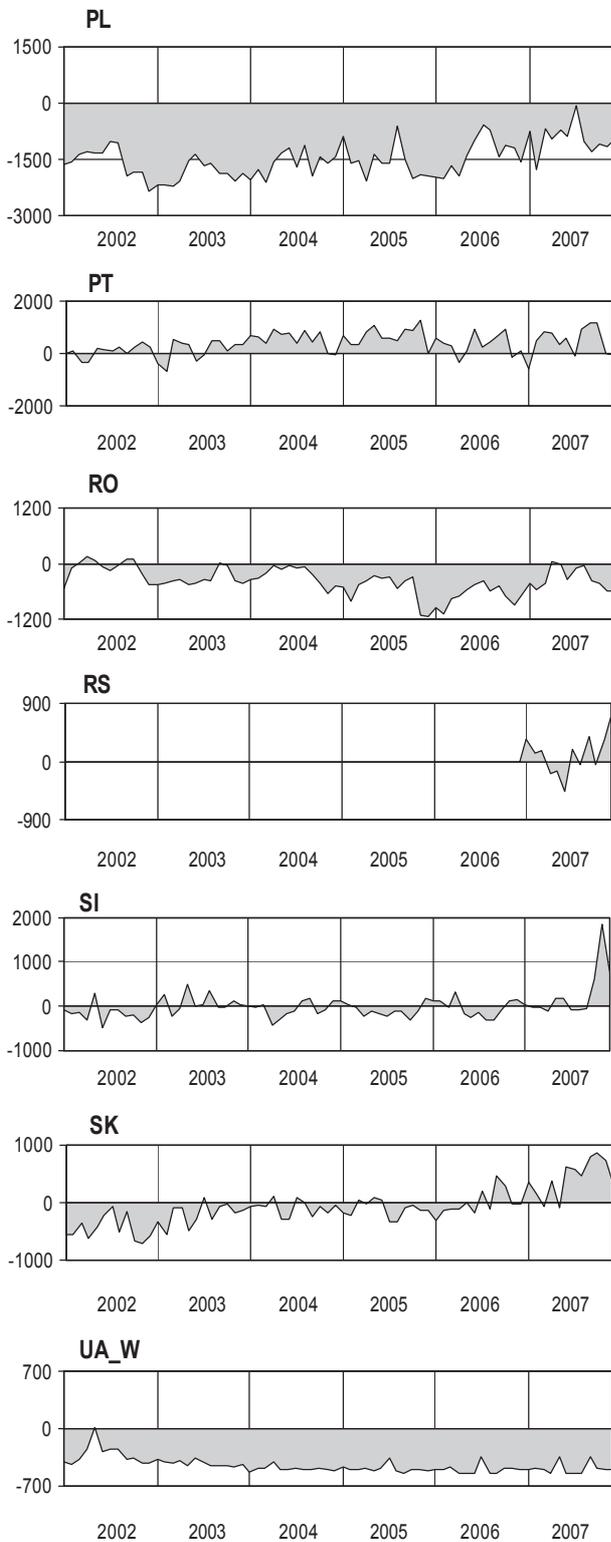
03:00

Night load in MW <sup>1</sup>

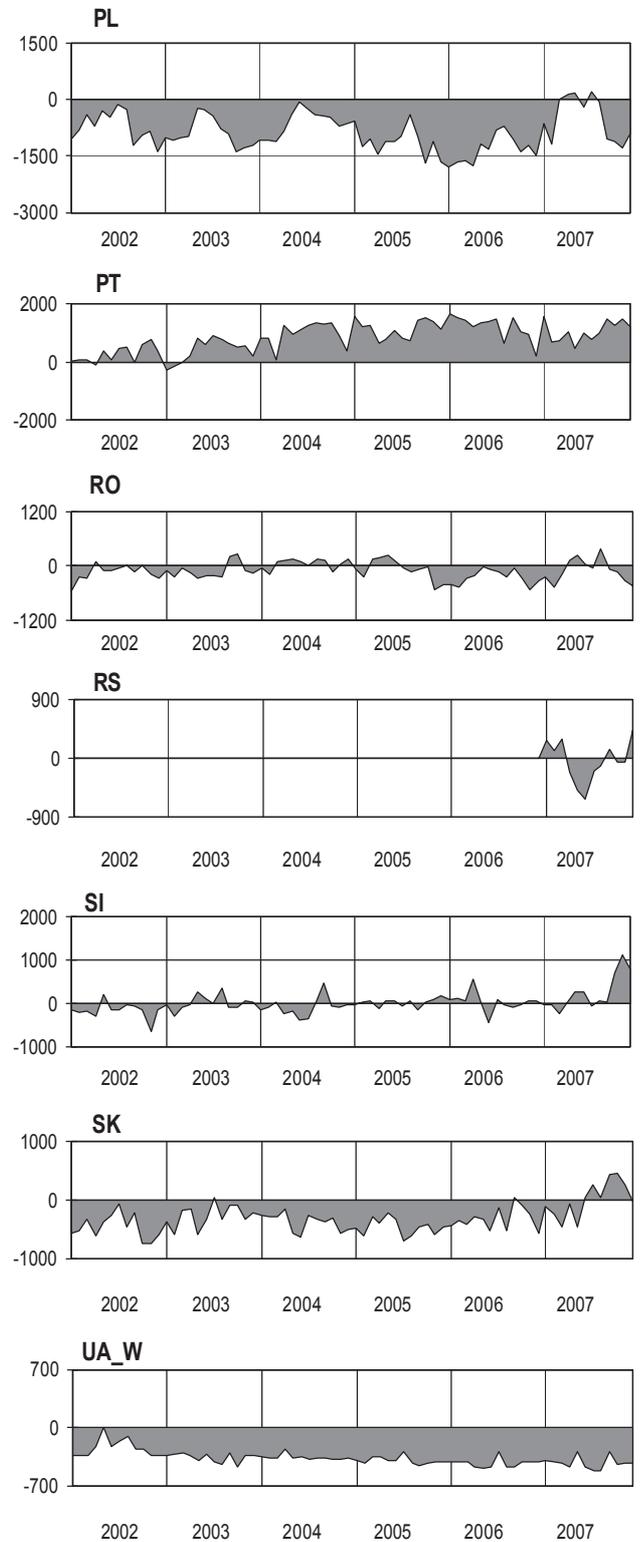


<sup>1</sup> Balance of import-export on the 3rd Wednesday of each month

11:00

Day load in MW <sup>1</sup>

03:00

Night load in MW <sup>1</sup><sup>1</sup> Balance of import-export on the 3rd Wednesday of each month

Date	Night	Day	Date	Night	Day
I.2002	32599	29658	I.2005	37275	33964
II.2002	32064	29798	II.2005	37569	37991
III.2002	27400	30810	III.2005	34802	39231
IV.2002	28886	29676	IV.2005	32930	37448
V.2002	26206	30858	V.2005	29743	31564
VI.2002 <sup>2</sup>	24956	30339	VI.2005	33353	36145
VII.2002	27487	31903	VII.2005	30301	34641
VIII.2002	24449	28729	VIII.2005	29701	30909
IX.2002	29478	28641	IX.2005	30425	32967
X.2002	27592	29120	X.2005	33755	35394
XI.2002	26918	31182	XI.2005	33728	36159
XII.2002	30551	31115	XII.2005	32850	33209
I.2003 <sup>3</sup>	32119	31521	I.2006	33189	39380
II.2003	28830	28596	II.2006	35935	39220
III.2003	32173	31062	III.2006	34048	35330
IV.2003	31075	32458	IV.2006	33833	37349
V.2003	28734	30022	V.2006	30974	33176
VI.2003	29938	32246	VI.2006	31574	34413
VII.2003	28929	28988	VII.2006	27811	30712
VIII.2003	26184	27360	VIII.2006	29425	31511
IX.2003	29103	29350	IX.2006	30387	32741
X.2003	27866	30843	X.2006	35170	35269
XI.2003	31576	35241	XI.2006	34951	38371
XII.2003	31604	33542	XII.2006	36861	37100
I.2004	29256	34182	I.2007	38182	43194
II.2004	29916	32890	II.2007	34926	38297
III.2004	28158	31485	III.2007	37999	38560
IV.2004	26784	29284	IV.2007	30894	34428
V.2004	25067	29647	V.2007	28930	30699
VI.2004	24757	26479	VI.2007	33100	34083
VII.2004	26091	29950	VII.2007	32701	34488
VIII.2004	23333	26840	VIII.2007	29640	32111
IX.2004	28708	30714	IX.2007	31496	32702
X.2004	30693	33706	X.2007	37051	38615
XI.2004	32489	33415	XI.2007	37014	35286
XII.2004	36858	32395	XII.2007	38428	33916

<sup>1</sup> Day load at 11.00 a.m. and night load at 3.00 a.m. on the 3rd Wednesday of each month. The power flows crossing common borders with neighbouring third countries are excluded.

<sup>2</sup> As of June 2001 on the power flows include CZ, HU, PL and SK.

<sup>3</sup> From year 2003 on the power flows include RO and BG.

<sup>4</sup> From June 2007 on the power flows include DK\_W.

## Maximum output capacity on 31 December 2007, 2006 and 2002 in MW

Country	Thermal nuclear MW			Thermal conventional MW			Hydropower MW			Other sources <sup>1</sup> MW			Total MW			Representativity <sup>2</sup> %		
	2007	2006	2002	2007	2006	2002	2007	2006	2002	2007	2006	2002	2007	2006	2002	2007	2006	2002
AT <sup>3</sup>	-	-	-	6254	6254	5900	11811	11811	11700	849	849	260	18914	18914	17860	100	100	100
BA	-	-	-	1957	1957	1957	2064	2064	2034	-	-	-	4021	4021	3991	100	100	99
BE	5825	5825	5761	8226	8175	8226	1411	1411	1403	861	771	223	16323	16182	15623	100	100	99
BG	2000	2880	n.a.	5800	5390	n.a.	2700	2704	n.a.	9	8	n.a.	10509	10102	n.a.	100	100	n.a.
CH	3220	3220	3220	355	340	305	13465	13355	13295	530	525	515	17570	17440	17335	100	100	100
CS	-	-	-	6400	6400	6400	3497	3497	3497	-	-	-	9897	9897	9897	100	100	96
CZ	3537	3537	2587	10542	10585	10503	2175	2175	2123	163	77	6	16417	16374	15219	100	100	100
DE	20300	20300	20700	70500	70400	65000	9100	9100	7800	28400	24500	10900	128300	124300	104400	90	90	90
DK_W	-	-	n.a.	5173	5156	n.a.	10	10	n.a.	2499	2391	n.a.	7682	7556	n.a.	100	100	n.a.
ES	7465	7465	7574	43624	39032	26780	20333	20714	17915	14253	12443	4924	85675	79654	57193	100	100	100
FR	63260	63260	63273	24085	24837	26783	25404	25457	25475	3130	2403	634	115879	115957	116165	100	100	100
GR <sup>4</sup>	-	-	-	8049	8097	6773	3136	3133	3059	784	587	174	11969	11817	10006	100	100	88
HR <sup>3</sup>	-	-	-	1691	1691	1670	2079	2079	2063	10	10	-	3780	3780	3733	100	100	100
HU	1799	1755	1772	5360	5263	5644	46	46	48	1208	1117	553	8413	8171	8017	100	100	100
IT	-	-	-	69022	66200	54614	21117	21070	20514	3459	2536	1448	93598	89806	76576	100	100	100
LU	-	-	-	490	487	466	1128	1128	1128	69	69	20	1687	1684	1614	100	100	99
ME	-	-	-	190	190	190	649	649	649	9	9	-	848	848	848	100	100	100
MK	-	-	-	907	907	1010	503	503	-	-	-	434	1410	1410	1444	100	100	100
NL	485	485	449	18911	19294	17954	37	37	37	2588	2331	1901	22021	22147	20341	100	100	100
PL	-	-	-	29818	29810	31686	2327	2327	2324	318	168	59	32463	32302	33901	100	100	100
PT	-	-	-	6703	6676	5422	4951	4948	4433	2435	1993	299	14089	13617	10154	97	97	91
RO	1300	655	665	8995	9029	10688	5859	5817	5817	7	-	-	16161	15501	17280	100	100	100
RS	-	-	-	5524	5524	5524	2831	2831	2831	-	-	-	8355	8355	8355	100	100	100
SI	696	696	685	1260	1260	1074	873	873	774	-	-	-	2829	2829	2533	100	100	100
SK	2200	2640	2640	2767	2270	2296	2478	2429	2430	63	701	696	7508	8040	8062	100	100	100
<b>UCTE</b>	<b>112087</b>	<b>111838</b>	<b>108661</b>	<b>336203</b>	<b>324344</b>	<b>279453</b>	<b>136487</b>	<b>137324</b>	<b>121894</b>	<b>61644</b>	<b>51097</b>	<b>22612</b>	<b>646421</b>	<b>623945</b>	<b>532620</b>			
<b>UA_W</b>	-	-	-	2347	1501	1705	27	27	27	-	-	10	2374	1528	1742	100	100	68

<sup>1</sup> Values of other sources are the sum of other renewable and not clearly identifiable sources.

<sup>2</sup> Percentage as referred to the total values of a country

<sup>3</sup> The total values of a country are defined as the synchronously interconnected system plus the areas directly connected via AC or DC to the mainland system.

<sup>4</sup> Year 2007 maximum output capacity as of 31 December 2006

<sup>5</sup> The values for Greece refer to the interconnected system and not to the whole country.

**UCTE System Adequacy Retrospect 2007, Power Data**  
**Net values at the reference time 11:00 a.m. on the 3rd Wednesday of each month ( Data published on 26 June 2008 ) Values in GW**

T8a

	31Dec 2006	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	31Dec 2007
<b>Net Generating Capacity per primary source</b>														
1. Nuclear power capacity	112,6	111,4	111,4	111,4	111,4	111,4	111,4	111,4	112,1	112,1	112,1	112,1	112,1	112,1
2. Fossil fuel power capacity	324,7	324,3	324,4	325,2	326,6	328,2	328,6	330,1	330,7	331,7	332,0	333,0	333,8	333,8
of which														
- Lignite sources	61,5	61,6	61,5	61,5	61,5	61,6	61,6	61,6	61,6	61,6	61,6	61,6	61,5	61,5
- Hard coal sources	77,7	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1	77,1
- Gas sources	84,3	84,1	84,1	84,9	85,9	87,3	87,8	89,2	89,7	90,6	91,8	91,8	92,7	92,8
- Oil sources	35,4	35,3	35,3	35,3	35,5	35,6	35,6	35,6	34,7	35,7	35,6	35,8	35,8	35,8
- Mixed fuels	32,2	32,2	32,4	32,4	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5	32,5
- Non attributable fossil fuels	33,6	33,9	33,9	34,0	34,1	34,1	34,1	34,1	34,1	34,1	34,2	34,2	34,3	34,3
3. Renewable energy sources (other than hydro)	50,0	51,7	52,4	53,1	53,4	53,9	54,5	55,0	55,4	55,8	56,2	57,0	57,2	57,8
- of which wind	39,7	40,4	40,9	41,4	41,7	42,2	42,7	43,0	43,6	43,7	44,0	44,6	44,7	45,2
- of which other RES	10,3	11,3	11,5	11,6	11,7	11,7	11,8	12,0	12,1	12,2	12,2	12,4	12,5	12,6
4. Hydropower ( total )	135,5	135,4	135,3	135,3	135,3	135,4	135,4	135,4	135,4	135,4	135,4	135,4	135,4	135,4
of which														
- Storage hydro	62,6	62,7	62,7	62,7	62,7	62,7	62,7	62,7	62,7	62,7	62,7	62,7	62,8	62,8
- Run-of-River hydro	35,0	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,8	34,7
- Pure Pumped storage water	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1	14,1
- Mixed Pumped storage water	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9	14,9
5. Not clearly identifiable energy sources	1,9	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2
<b>6. Net generating capacity</b>	<b>624,7</b>	<b>624,0</b>	<b>624,7</b>	<b>626,2</b>	<b>627,9</b>	<b>630,0</b>	<b>631,2</b>	<b>633,1</b>	<b>634,8</b>	<b>636,2</b>	<b>637,7</b>	<b>638,7</b>	<b>639,8</b>	<b>640,4</b>
(6 = 1+2+3+4+5)														
7. Non-usable capacity	103,5	108,4	108,4	104,5	120,7	114,1	124,5	128,6	131,6	129,6	130,0	121,9	107,0	
8. Maintenance and Overhauls	18,7	22,2	22,2	30,1	47,4	56,8	58,2	52,2	55,7	52,8	45,0	39,0	20,0	
9. Outages	16,9	15,2	15,2	16,3	18,4	14,3	16,6	12,8	14,4	17,6	17,5	18,4	13,5	
10. System services reserve	29,5	29,3	29,3	28,6	29,1	29,6	27,4	27,5	27,3	28,3	28,4	29,2	29,2	
<b>11. Unavailable capacity</b>	<b>168,5</b>	<b>175,1</b>	<b>175,1</b>	<b>179,4</b>	<b>215,6</b>	<b>214,9</b>	<b>226,7</b>	<b>221,1</b>	<b>228,9</b>	<b>228,3</b>	<b>220,8</b>	<b>208,5</b>	<b>169,8</b>	
(11 = 7+8+9+10)														
<b>12. Reliably available capacity</b>	<b>455,5</b>	<b>449,6</b>	<b>449,6</b>	<b>446,8</b>	<b>412,4</b>	<b>415,1</b>	<b>404,4</b>	<b>412,0</b>	<b>405,8</b>	<b>407,8</b>	<b>416,9</b>	<b>430,2</b>	<b>470,0</b>	
(12 = 6-11)														
13. Load	359,6	349,4	349,4	351,4	317,8	318,2	329,5	332,6	269,0	321,4	329,6	358,8	384,0	
<b>14. Remaining capacity</b>	<b>95,9</b>	<b>100,2</b>	<b>100,2</b>	<b>95,4</b>	<b>94,6</b>	<b>96,9</b>	<b>75,0</b>	<b>79,4</b>	<b>136,8</b>	<b>86,4</b>	<b>87,3</b>	<b>71,4</b>	<b>86,0</b>	
(14 = 12-13)														
15. Margin against monthly peak load	40,7	32,9	32,9	19,4	31,7	18,3	15,3	15,2	68,2	24,8	35,1	37,4	31,7	
<b>16. Remaining margin (17=14-15)</b>	<b>55,2</b>	<b>67,2</b>	<b>67,2</b>	<b>76,1</b>	<b>62,9</b>	<b>78,6</b>	<b>59,7</b>	<b>64,2</b>	<b>68,7</b>	<b>61,6</b>	<b>52,2</b>	<b>34,1</b>	<b>54,3</b>	
17. Physical imports	45,4	40,3	40,3	40,6	38,2	33,5	34,0	35,9	32,8	34,9	39,4	36,4	34,4	
18. Physical exports	44,1	40,1	40,1	38,4	35,8	31,7	35,8	33,5	34,7	34,7	37,9	32,3	31,4	
<b>19. Exchanges (19=17-18)</b>	<b>1,3</b>	<b>0,3</b>	<b>0,3</b>	<b>2,2</b>	<b>2,4</b>	<b>1,8</b>	<b>- 1,8</b>	<b>2,4</b>	<b>- 1,9</b>	<b>0,2</b>	<b>1,4</b>	<b>4,1</b>	<b>3,0</b>	

	AT	BA	BE	BG	CH	CZ	DE	ES	FR	GR	HR	HU	IT	LU	ME	MK	NL	PL	PT	RO	RS	SI	SK	UCTE	UA_W
<b>Net generation per primary sources</b>																									
1. Nuclear power	-	-45,8	13,6	26,3	24,6	133,2	52,7	418,6	-	-	13,8	-	-	-	-	-	4,0	-	-	7,0	-	5,4	14,2	75934	-
2. Fossil fuel power of which	21,1	7,8	33,7	22,0	2,1	54,0	372,2	157,5	55,0	47,6	6,8	21,8	253,6	2,9	0,8	5,0	87,8	145,1	26,8	33,7	29,0	4,8	7,1	1406,4	8,1
- Lignite	-	7,8	-	13,0	-	41,6	143,2	20,6	-	31,1	-	4,9	-	-	0,8	4,6	-	47,5	-	18,0	28,5	4,3	1,7	367,7	-
- Hard coal	6,3	-	1,0	6,9	-	7,4	133,2	47,3	23,2	-	2,2	1,6	43,4	-	-	-	-	93,8	11,7	4,4	-	0,4	1,7	384,5	-
- Gas	9,4	-	22,3	-	-	3,8	71,9	84,8	14,5	13,2	1,8	13,9	142,6	2,9	-	-	-	3,8	10,5	10,3	0,5	0,1	1,4	407,6	-
- Oil	1,3	-	0,1	-	-	0,2	7,3	4,5	7,1	3,3	1,2	0,5	24,9	-	-	0,4	-	-	1,1	0,8	-	-	-	52,6	-
- Mixed fuels	-	-	9,0	2,1	-	-	-	-	-	-	1,6	-	23,9	-	-	-	-	-	0,2	-	-	-	-	36,8	-
- Non attributable fossil fuels	4,2	-	1,4	-	2,1	1,0	16,6	0,3	10,2	-	-	0,9	18,8	-	-	-	87,8	-	3,4	0,2	-	-	2,3	157,3	8,1
3. Renewable energy sources (other than hydro) of which	4,2	-	3,6	-	0,1	0,3	64,7	31,0	7,9	1,5	0,07	1,5	9,4	0,2	-	-	6,9	0,6	6,1	0,0	-	-	0,3	139,4	-
- Wind	2,0	-	0,5	-	-	0,1	39,5	26,6	4,0	1,3	0,04	0,1	4,2	0,1	-	-	3,4	0,5	4,0	0,0	-	-	0,0	86,4	-
- Other RES	2,2	-	3,1	-	1,1	0,2	25,2	4,4	3,9	0,2	0,03	1,4	5,2	0,1	-	-	3,5	0,1	2,1	-	-	-	0,3	53,0	-
4. Hydropower of which	34,9	4,0	1,7	3,1	36,4	2,5	27,2	29,9	63,2	3,4	4,4	0,2	38,5	0,9	1,3	1,1	0,1	2,7	10,2	15,6	10,1	2,8	4,5	298,7	0,1
- Storage hydro	11,6	-	-	-	16,6	-	-	16,6	23,3	3,4	2,9	-	10,6	0,05	1,3	1,1	-	-	3,0	4,9	0,8	-	4,3	100,4	-
- Run-of-River	23,3	-	0,4	-	19,8	-	-	7,2	33,3	-	1,4	0,2	27,9	0,05	-	-	-	-	5,9	10,1	8,7	2,8	-	141,2	0,1
- Pure pump-storage water	-	-	1,3	-	-	-	-	2,4	2,8	-	-	-	0,8	-	-	-	-	-	-	0,6	-	-	-	7,8	-
- Mixed pump-storage water	-	-	-	-	-	-	-	3,8	3,8	-	0,2	-	-	-	-	-	-	-	1,4	0,6	-	-	0,2	9,9	-
5. Not clearly identified energy sources	3,5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,5	-
<b>6. Net generated energy (11=6+9-10) of which</b>	<b>63,7</b>	<b>11,8</b>	<b>84,8</b>	<b>38,7</b>	<b>65,9</b>	<b>81,4</b>	<b>597,3</b>	<b>271,1</b>	<b>544,7</b>	<b>52,5</b>	<b>11,3</b>	<b>37,3</b>	<b>301,5</b>	<b>3,9</b>	<b>2,1</b>	<b>6,1</b>	<b>98,8</b>	<b>148,4</b>	<b>43,1</b>	<b>56,4</b>	<b>39,0</b>	<b>13,1</b>	<b>26,1</b>	<b>2607,3</b>	<b>8,2</b>
7. Physical imports	22,1	3,5	15,8	3,0	48,6	10,2	44,3	8,8	10,5	6,4	7,9	14,7	48,6	6,8	4,8	3,4	23,2	7,8	9,6	4,0	8,9	6,1	13,6	335,3	2,8
8. Physical exports	15,5	4,1	9,0	7,5	50,6	26,4	63,3	14,5	67,2	2,1	1,5	10,7	2,6	2,9	2,2	0,9	5,6	13,1	2,1	6,1	8,6	5,7	11,9	340,9	6,8
<b>9. Exchanges (9=7-8)</b>	<b>6,6</b>	<b>-0,6</b>	<b>6,8</b>	<b>-6,5</b>	<b>-2,1</b>	<b>-16,2</b>	<b>-19,0</b>	<b>-5,7</b>	<b>-56,7</b>	<b>4,3</b>	<b>6,4</b>	<b>4,0</b>	<b>46,0</b>	<b>3,9</b>	<b>2,6</b>	<b>2,5</b>	<b>17,6</b>	<b>-5,4</b>	<b>7,5</b>	<b>-2,1</b>	<b>0,3</b>	<b>0,4</b>	<b>1,7</b>	<b>-5,6</b>	<b>-4,0</b>
10. Pumped storage	3,0	-	1,7	0,6	2,1	0,6	9,1	4,4	7,7	1,1	-	7,6	1,1	-	-	-	-	0,9	0,5	0,2	0,9	-	0,2	41,6	-
<b>11. Consumption (11=6+9-10) of which</b>	<b>67,4</b>	<b>11,2</b>	<b>89,9</b>	<b>33,6</b>	<b>61,8</b>	<b>64,7</b>	<b>569,2</b>	<b>261,0</b>	<b>480,3</b>	<b>55,7</b>	<b>17,7</b>	<b>41,3</b>	<b>339,9</b>	<b>6,8</b>	<b>4,7</b>	<b>8,6</b>	<b>116,4</b>	<b>142,2</b>	<b>50,0</b>	<b>54,1</b>	<b>38,4</b>	<b>13,5</b>	<b>27,6</b>	<b>2560,1</b>	<b>4,3</b>
11a. "Summer" consumption	31,5	5,2	42,2	15,1	28,3	29,3	267,5	126,2	207,5	28,7	8,3	20,0	168,2	3,2	2,2	3,5	55,2	66,3	23,8	25,6	19,5	6,6	12,8	1199,0	1,9
11b. "Winter" consumption	35,8	6,0	47,7	18,5	33,5	35,4	301,7	134,8	272,8	27,0	9,4	21,3	171,7	3,6	2,5	5,1	61,2	75,9	26,2	28,5	20,9	6,9	14,8	1361,5	2,4
12. Annual average temp. °C	-	-	-	13,9	9,5	10,1	-	16,6	-	-	-	12,5	16,0	10,4	-	-	11,2	9,5	-	-	13,9	12,1	11,3	11,1	11,1
13. "Summer" average temp. °C	-	-	15,8	21,1	15,1	16,1	15,8	21,0	16,8	-	20,4	19,4	21,2	15,5	23,7	-	15,6	23,2	17,2	20,6	18,7	18,4	17,5	17,5	17,5
14. "Winter" average temp. °C	-	-	7,2	6,8	3,9	4,0	5,3	12,1	8,0	-	7,9	5,6	10,6	5,3	10,9	-	3,4	12,4	3,5	7,1	6,0	4,3	4,7	4,7	

LEGEND

750 kV  
 380/400 kV  
 220 kV  
 150/110 kV

LAUFENBURG Substation  
 15 Frontier point  
 Direct current line  
 UCTE synchronous zone

