

Austria

Czech Republic

Hungary

The Netherlands

Slovakia

Belgium

France

Italy

Poland

Spain

Bosnia-Herzegovina

Germany

Macedonia

Portugal

Switzerland

Croatia

Greece

Luxembourg

Slovenia

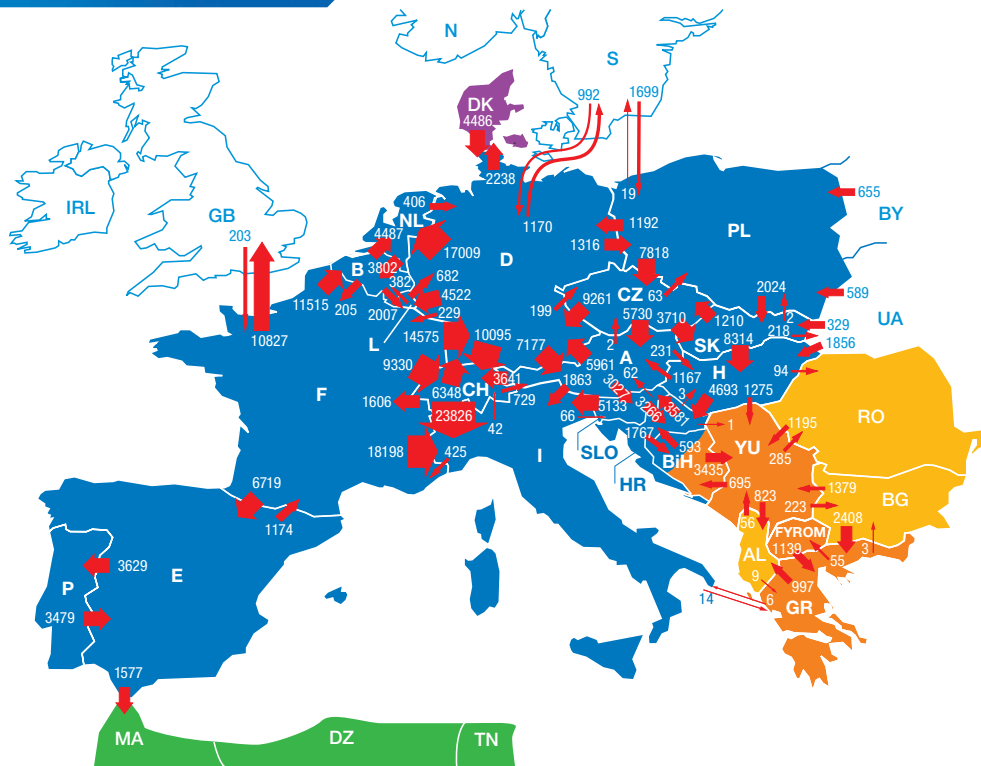
Yugoslavia



provisional values as of 31.03.2002

## Memo 2001

union for the co-ordination of transmission of electricity



- 1st synchronous UCTE region
- Synchronous Operation with 1st UCTE region
- 2nd synchronous UCTE region
- Synchronous Operation with 2nd UCTE region
- Associated members of UCTE

Values in GWh

	Import	Export
B	15699	6699
D	43903	43955
E	10198	6380
F	3842	71164
GR	3570	1061
I	48933	556
SLO	6674	8461
HR	8544	5352
BiH	2462	4028
YU	7396	3165
L	6529	1064
NL	21496	4208
A	14865	14725
P	3629	3479
CH	23108	32509
CZ	9229	18764
H	10404	7229
PL <sup>1</sup>	4306	11035
SK	6063	9744
UCTE	250850	253578

Values in GWh

Exchange balance

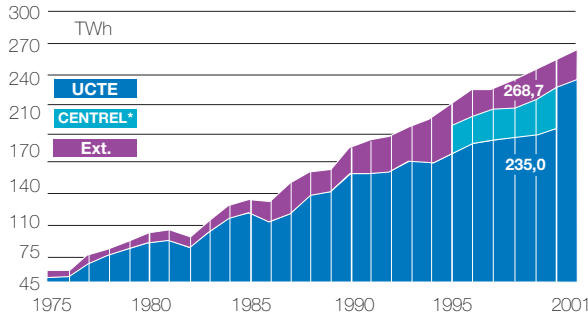
	B	D	E	F	GR	I	SLO	HR	BiH	YU	L	NL	A	P	CH	CZ	H	PL <sup>1</sup>	SK	UCTE
2001	9000	-52	3818	-67322	2509	48377	-1787	3192	-1566	4231	5465	17288	140	150	-9401	-9535	3175	-6729	-3681	-2728
2000	4207	1558	4767	-68843	-11	44347	-1349	4037	-1605	3110	5671	18919	-1575	832	-5722	-10018	3439	-6518	-2671	-7425

Values in GWh

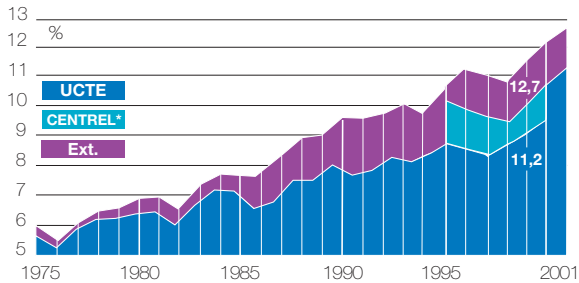
The above values have been harmonized between the countries concerned and may therefore differ from the official national statistics

<sup>1</sup> With exchange Belarus in the year 2001

Sum of electricity exchanges of the UCTE in TWh

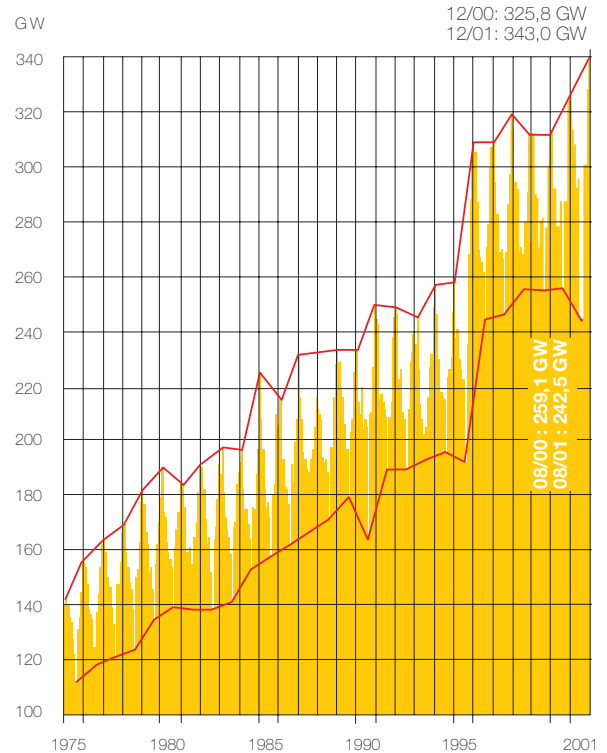


Part of exchanges in the consumption in %



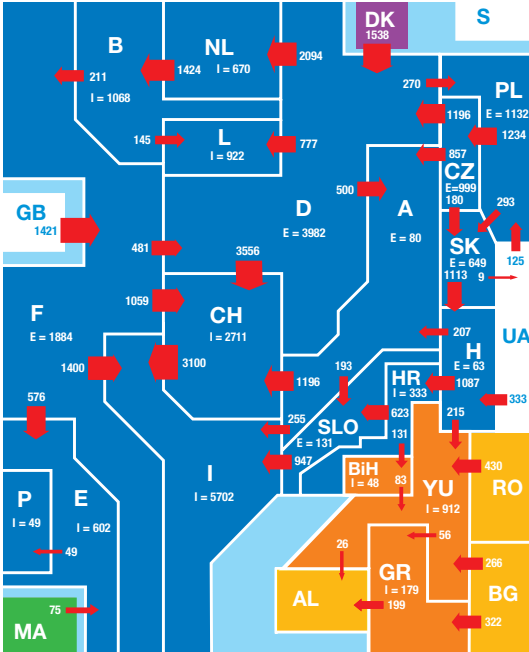
UCTE = Sum of exchanges between the UCTE countries  
 CENTREL = Sum of exchanges between the UCTE countries and CENTREL  
 Ext. = Exchanges with third countries

\* CENTREL = CZ + H + PL + SK



\* With CENTREL-countries from 10/1995 on and Denmark from 01/1990 on

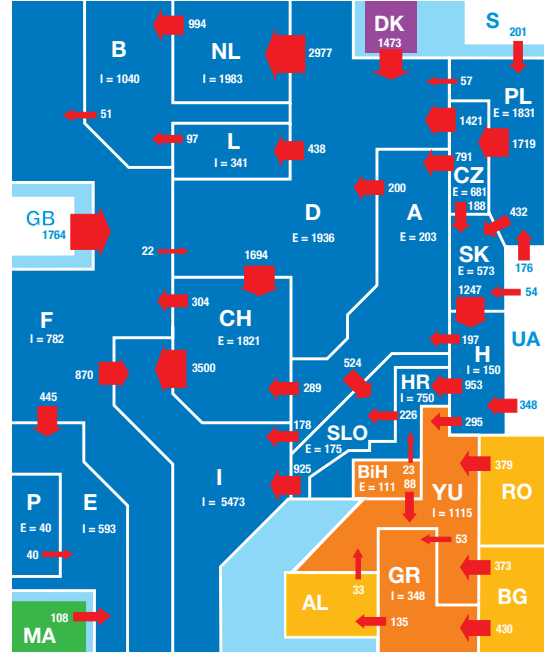
■ 1st synchronous UCTE region  
■ Synchronous Operation with 1st UCTE region  
■ 2nd synchronous UCTE region



**Sum of load flows:** UCTE = 25508 MW  
 Total = 30252 MW

Values in MW

■ Synchronous Operation with 2nd UCTE region  
■ Associated members of UCTE



**Sum of load flows:** UCTE = 21238 MW  
 Total = 26712 MW

Values in MW

Countries		B	D	E	F	GR	I	SLO	HR	JIEL	L	NL	A	P	CH	CZ	H	PL <sup>3</sup>	SK	UCTE
Net production																				
Hydropower	TWh	1.6	23.4	43.9	74.9	2.7	54.2	3.3	6.6	13.2	0.9	0.0	40.5	14.3	42.3	2.5	0.2	4.1	4.9	331.1
Thermal nuclear	TWh	44.0	161.2	60.7	401.3	0.0	0.0	5.1	0.0	0.0	0.0	3.7	0.0	0.0	25.3	13.8	13.4	0.0	15.7	744.2
Thermal conventional	TWh	30.4	316.9	101.7	35.6	41.8	212.3	4.2	4.7	28.5	0.6	86.1	14.2	26.0	2.6	52.5	19.9	140.5	9.1	1127.8
Total	TWh	76.0	501.5	206.3	511.8	44.5	266.5	12.6	11.3	41.7	1.5	89.9	54.6	40.3	70.1	68.8	33.4	144.6	29.7	2205.1
Representativity <sup>2</sup>	%	100	93	94	97	91	100	95	100	96	98	100	88	91	100	100	100	100	100	96
Consumption																				
Consumption	TWh	83.6	495.4	205.7	437.0	46.1	305.4	10.8	14.4	44.9	5.9	107.1	52.8	40.0	57.9	58.7	36.6	135.2	25.8	2163.4
Representativity <sup>2</sup>	%	100	93	94	97	91	100	95	100	96	99	100	87	91	100	100	100	100	100	96
$\Delta\%$ <sup>1</sup>	%	0.9	0.3	5.5	2.2	7.8	2.6	-3.5	4.2	3.3	1.8	2.3	3.3	6.6	2.7	3.0	2.0	-0.4	0.6	2.3
Peak load on 3rd Wednesday of December 2001																				
Peak load	MW	12281	74300	35186	74952	7735	51277	1789	2713	8297	857	13755	7918	7020	9396	9235	5796	21996	4264	341447
Representativity <sup>2</sup>	%	100	91	94	97	91	100	95	100	96	99	90	82	87	100	100	100	100	100	-
$\Delta\%$ <sup>1</sup>	%	-0.1	0.0	8.5	16.3	4.4	4.6	5.4	17.8	11.1	-1.9	-1.0	-4.2	20.6	3.3	5.9	4.6	1.1	2.8	6.5
Energy capability factor		-	1.21	-	1.05	0.49	1.20	0.92	1.08	0.93	-	-	1.11	1.19	1.17	-	-	-	1.10	1.10
Maximum output capacity as of 31.12.2001																				
Hydropower	MW	1403	8500	17955	24300	3060	20346	778	2076	3893	1128	37	11160	4408	13285	1945	46	2185	2427	118932
Thermal nuclear	MW	5738	20700	7816	63200	0	0	670	0	0	0	449	0	3200	1637	1772	0	2640	107822	
Thermal conventional	MW	8248	68000	25046	23700	6297	54440	1241	1631	6753	460	17342	5620	5065	295	9588	5608	31189	2294	272817
Renewable energy sources	MW	199	3500	3894	-	155	1117	-	-	-	20	876	80	203	288	1	0	13	-	10346
Not unambiguously identified energy sources	MW	63	-	-	-	-	-	-	-	-	-	700	-	-	242	-	398	-	696	2099
Total	MW	15651	100700	54711	111200	9512	75903	2689	3707	10646	1608	19404	16860	9676	17310	13171	7824	33387	8057	512016
Representativity of the values	%	99	91	94	97	91	100	100	100	96	99	100	91	91	100	100	100	100	100	96

## Number of 220 kV and 380 kV circuits on cross-frontier transmission lines on 31.12.2001

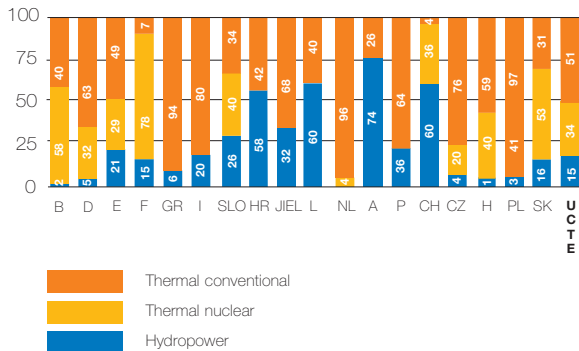
	F	I	SLO	HR	JIEL	L	NL	A	P	CH	CZ	H	PL	SK
B	2/2					2/-	-/4							
D	2/4					8/-	-/6	11/3		5/8	-/4		2/2	
E	2/2								3/2					
F	3/3									5/5				
GR					-/1									
I		1/1						1/-		6/2				
SLO			2/3					1/2						
HR				7/3										
JIEL													-/1	
A									1/2	2/1				
CZ													2/2	2/3
H														-/2
PL														-/2

## 220 kV / 380 kV

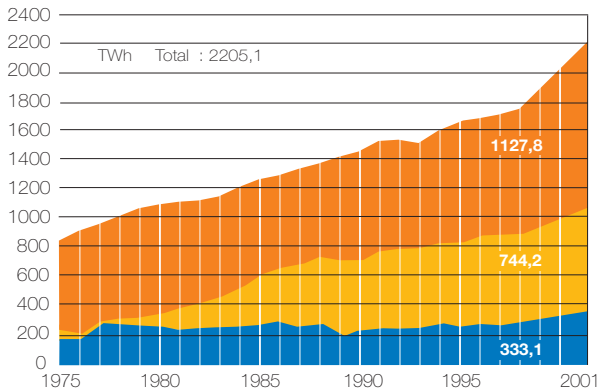
- 1 As compared to last year and representativity 100 %
- 2 Percentage as referred to total values in %
- 3 Gross values

# Production

Structure of production in each country in %



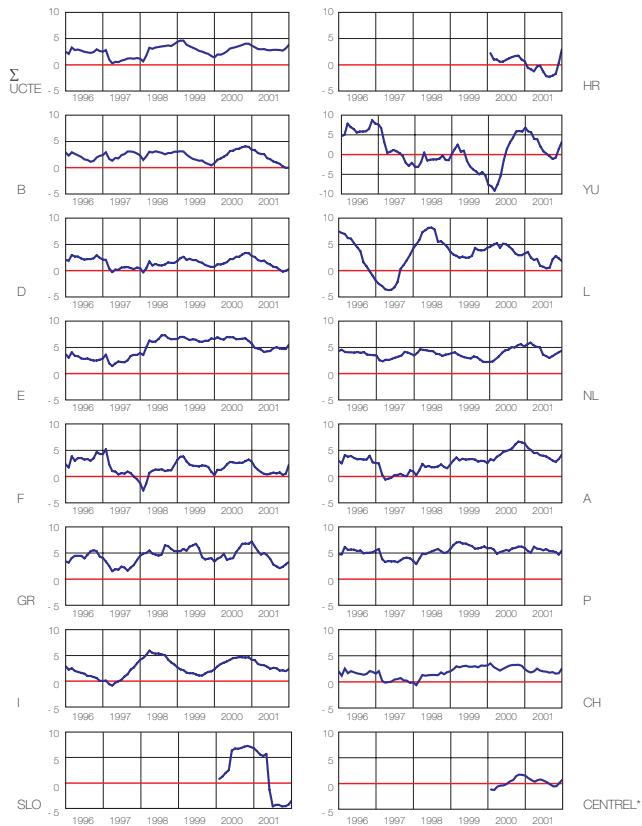
Net production in TWh \*



\* As of 1999 incl. CENTREL

# Consumption

Variation of the last 12 months' consumption



\* CENTREL = CZ + H + PL + SK

Austria	VERBUND APG TIWAG VKW	Verbund – Austrian Power Grid GmbH Tiroler Wasserkraftwerke AG Vorarlberger Kraftwerke AG
Belgium	Elia	Elia SA/NV
Bosnia-Herzegovina	JPOC	Joint Power Coordination Center
Croatia	HEP	Hrvatska Elektroprivreda d. d.
Czech Republic	CEPS a.s.	CEPS
France	EDF-RTE	EdF Gestionnaire du Réseau de Transport d'Electricité
FRY	EPCG EPS	Elektroprivreda Crne Gore Elektroprivreda Srbije
FYROM	ESM	Elektrotopastvo na Makedonija
Germany	Bewag EnBW E.ON Netz HEW RWE Net VEAG DVG *	Bewag AG Energie Baden Württemberg AG E.ON Netz GmbH Hamburgische Electricitäts-Werke AG RWE Net AG Vereingte Energiewerke AG Deutsche Verbundgesellschaft e.V.
Greece	HTSO / DESME	Hellenic Transmission System Operator / Diachristis Elinikou Sistimatos Metaforas Ilectrikis Energias
Hungary	MVM Rt.	Magyar Villamos Művek Rt.
Italy	GRTN	Gestore della Rete di Trasmissione Nazionale
Luxembourg	CEGEDEL	Compagnie Grand Ducale d'Electricité du Luxembourg
The Netherlands	TENNET	TenneT bv
Poland	PSE	Polskie Sieci Elektroenergetyczne SA
Portugal	REN	Rede Eléctrica Nacional, S.A.
Slovak Republic	SE a.s.	Slovenské Elektrárne, a.s., Prenosova sústava
Slovenia	ELES	Elektro Slovenija
Spain	REE	Red Eléctrica de España S.A.
Switzerland	ATEL BKW FMB Energie  EGL Grid EOS ETRANS NOK	Aare-Tessin Ltd. for Electricity BKW FMB Energie AG / BKW FMB Energie S.A.  EGL Grid AG Energie Ouest Suisse Etrans Ltd. Nordostschweizerische Kraftwerke AG
Denmark	ELTRA *	Eltra

## Assembly

Representatives  
of 35 TSO in 21 Countries

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- SC Chairman
- Vice-President
- Secretary General

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*System Development*  
Convenor: Georges de Montravel

*Statistics*  
Convenor: Jacek Ratz

*Communication Policy*  
Convenor: Carlo Crea

Provisional values as of 31.03.2002

Publisher: Secretariat of UCTE, Boulevard Saint-Michel 15, B-1040 Brussels  
Managing Editor: Olivier Feix, ifsc gmbh Berlin  
Design: Oswald und Martin Werbeagentur, Berlin  
Printed by: Druckerei Humberg, Berlin

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The »Union for the Co-ordination of Transmission of Electricity« (UCTE) is an association of transmission system operators in continental Europe, providing a reliable market base by efficient and secure electrical »power highways«. The interconnected system ensures the technical condition for the reliable operation, and provides benefit for all market participants because they guarantee market access.

For more than fifty years UCTE has been coordinating by a variety of technical rules and recommendations the international operation of high voltage grids that all work with one »heart beat«: the 50 Hz UCTE frequency. UCTE is committed to the development of the system to meet all new market requirements, but without losses in terms of reliability for the existing system. The UCTE network brings a safe electricity supply for some 400 million people. Therefore UCTE handles one of the biggest electrical synchronous interconnections worldwide. This technical solution provides the possibility of the free market operation.

The members of UCTE are the companies responsible for synchronous frequency system interconnection in *Belgium, Germany, Spain, France, Greece, Italy, Slovenia, Croatia, the Federal Republic of Yugoslavia, Bosnia-Herzegovina, the FYROM, Luxembourg, The Netherlands, Austria, Portugal, Switzerland, Poland, the Slovak Republic, the Czech Republic and Hungary*. Since October 2001, the system operator of *Denmark* has been associated member of the UCTE.



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