provisional values as of 30.03.2005
union for the co-ordination of transmission of electricity
Memo 2004
The above values have been harmonized between the countries concerned
B D E F GR I SLO HR BiH FYROM SCG L NL A P CH CZ H PL SK RO BG

Physical energy flows

and may therefore differ from the official national statistics

Exchange balance

Power produced by UCTE members

Max. 12 / 04 : 368,2 GW  Min. 08 / 04 : 288,8 GW
Sum of physical power flows : UCTE = 36 858 MW

Load flows
15 December 2004, 3.00 h
15 December 2004, 11.00 h
15 December 2004, 13.00 h

For more information please contact: info@ucte.org
UCTE
91 Avenue Victor Hugo
75116 Paris, France
www.ucte.org

www.ucte.org

Synchronous Operation

former 2nd synchronous UCTE region,
from November 2004 on synchronous
with 1st UCTE region

1st UCTE region

1st synchronous UCTE region

Load flows
night 15 December 2004, 3.00 h
Load flows
day 15 December 2004, 11.00h

sum of electricity exchanges of the UCTE in TWh

part of exchanges in the consumption in %

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### Physical energy flows

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>6318</td>
<td>8065</td>
<td>1667</td>
<td>64536</td>
<td>2156</td>
</tr>
<tr>
<td>2004</td>
<td>7808</td>
<td>7305</td>
<td>2535</td>
<td>60387</td>
<td>2819</td>
</tr>
</tbody>
</table>

### Development of exchanges

#### Power produced by UCTE members

#### Load flows

- **Night**: 15 December 2004, 3:00am
- **Day**: 15 December 2004, 11:00am

### Memo 2004

- Physical energy flows
- Development of exchanges
- Power produced by UCTE members
- Load flows
- Synchronous Operation

### Values in MW

#### External exchanges (Ext. = exchanges with third countries)

#### Sum of exchanges include RO and BG

#### Load flows

#### 1st synchronous

#### Former 2nd synchronous UCTE region

#### UCTE region

#### Day

#### Total

*A Total includes various UCTE regions.*
The Union for the Co-ordination of Transmission of Electricity (UCTE) is an organization of transmission system operators from European Union countries to ensure the efficient and secure exchange of power, and in doing so, has been committed to developing the system to meet the reliable operation needs and provide benefits for all market participants. The UCTE network provides a safe electricity supply for some 450 million people.

## UCTE in Figures

### 2004

#### Production

<table>
<thead>
<tr>
<th>Country</th>
<th>Thermal Conventional</th>
<th>Thermal Nuclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>349.3 TWh</td>
<td>24.8 TWh</td>
</tr>
<tr>
<td>DE</td>
<td>20.9 TWh</td>
<td>25.4 TWh</td>
</tr>
<tr>
<td>AT</td>
<td>133.4 TWh</td>
<td>11.2 TWh</td>
</tr>
</tbody>
</table>

#### Consumption

<table>
<thead>
<tr>
<th>Country</th>
<th>Total MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>107,458</td>
</tr>
<tr>
<td>DE</td>
<td>10,652</td>
</tr>
<tr>
<td>AT</td>
<td>62,794</td>
</tr>
</tbody>
</table>

### Structure of production in each country in %

<table>
<thead>
<tr>
<th>Country</th>
<th>Total production in MW</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>370,176</td>
</tr>
<tr>
<td>DE</td>
<td>133,348</td>
</tr>
<tr>
<td>AT</td>
<td>11,271</td>
</tr>
</tbody>
</table>

### Variation of the last 12 months' consumption in %

<table>
<thead>
<tr>
<th>Country</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>1.74%</td>
</tr>
<tr>
<td>DE</td>
<td>1.85%</td>
</tr>
<tr>
<td>AT</td>
<td>2.80%</td>
</tr>
</tbody>
</table>

## Members of UCTE and Representatives

<table>
<thead>
<tr>
<th>Country</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>Energie Ouest Suisse</td>
</tr>
<tr>
<td>DE</td>
<td>Tiroler Regelzone AG</td>
</tr>
<tr>
<td>AT</td>
<td>Eltra</td>
</tr>
<tr>
<td>CH</td>
<td>Elektrizitäts-Gesellschaft Laufenburg</td>
</tr>
</tbody>
</table>

## Structures

- Assembly:
  - 1 Representative per Country
- Liaison Advisory Group:
  - 1 Liaison per Country
- Working Groups:
  - Operations and Security
  - Network Planning
  - Security
- Statistics:
  - Convenor: Jacek Ratz
- Working Committee:
  - Convenor: Luigi de Francisci
- Steering Committee:
  - Chairman: Gerard Maas
- Convenors:
  - Operations and Security: Marcel Bial
  - Liaison Advisory: Andrea Lepre
- Members:
  - Austria: VERBUND – APG
  - Belgium: Elia System Operator
  - Cyprus: Energie Ouest Suisse
  - France: Red Eléctrica de España S.A.
  - Germany: Vattenfall Europe Transmission GmbH
  - Greece: Hellenic Transmission System Operator
  - Hungary: Magyar Villamosenergia-ipari Rendszerirányító Rt.
  - Italy: ENEL – TXTL
  - Luxembourg: Energie Ouest Suisse
  - Netherland: TenneT bv
  - Poland: Elko
  - Portugal: Rede Eléctrica Nacional, S.A.
  - Romania: Transelectrica S.A.
  - Serbia and Montenegro: Elektroprivreda Crne Gore
  - Slovenia: Elektrovagon
  - Spain: Red Eléctrica de España S.A.
  - Switzerland: ATEL
The Union for the Co-ordination of Transmission of Electricity (UCTE) is an association of transmission system operators in continental Europe. Its primary task is to ensure the reliable operation of the European power system.

The members of UCTE are the companies responsible for synchronous frequency. UCTE is committed to the development of the system to meet all new market requirements keeping a high reliability of the system. The UCTE network brings a safe electricity supply for some 450 million people in the 27 countries of EU plus Austria, Switzerland, Liechtenstein, and Norway.

The number of UCTE are the countries connected by their transmission systems which are interconnected with UCTE.

The following diagrams and tables deliver information about the Union for the Co-ordination of Transmission of Electricity (UCTE) in 2004.
The UCTE is the Co-ordinator of Transmission of Electricity. UCTE is an intergovernmental organisation responsible for providing a synchronously-operated electricity market area. The companies responsible for UCTE network bring a safe electricity supply for some 450 million people. Therefore UCTE handles one of the biggest electrical synchro

For more than fifty years UCTE has been coordinating by a variety of technical rules and recommendations the international operation of national high voltage grids that all work with one “heart beat”: the 50 Hz UCTE frequency. As compared to last year and representativity 100

UCTE in figures

UCTE in figures

2004

Production

Consumption

UCTE in figures

Members of UCTE and representatives

Contact

Telephone: +32 (0)2 217 19 00
Fax: +32 (0)2 217 19 90
Web: www.ucte.org

2004

Structures

Year

Paper (AF)

Country

President

Assembly

Operations and Security

Convenor: Luigi de Francisci

Working Groups

Convenor: Klaus Kleinekorte

Representatives on Country

Country

Name

Assembly

Working Groups

President

Operations and Security

Representatives on Country

Country

Name

Assembly

Working Groups

Convenor: Luigi de Francisci

Operations and Security

Convenor: Klaus Kleinekorte

Representatives on Country
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 TSOs 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 keeping a high reliability of the system. The UCTE network brings a safe electricity supply for some 450 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, Serbia and Montenegro, Bosnia Herzegovina, the FYROM, Luxembourg, The Netherlands, Austria, Portugal, Switzerland, Poland, the Slovak Republic, the Czech Republic, Hungary, Romania and Bulgaria. Since October 2001, the system operator of Denmark has been associated member of the UCTE.