ENERGY STATISTICS

Key World Energy Statistics

Energy Training Week

Paris, April 4-5, 2011

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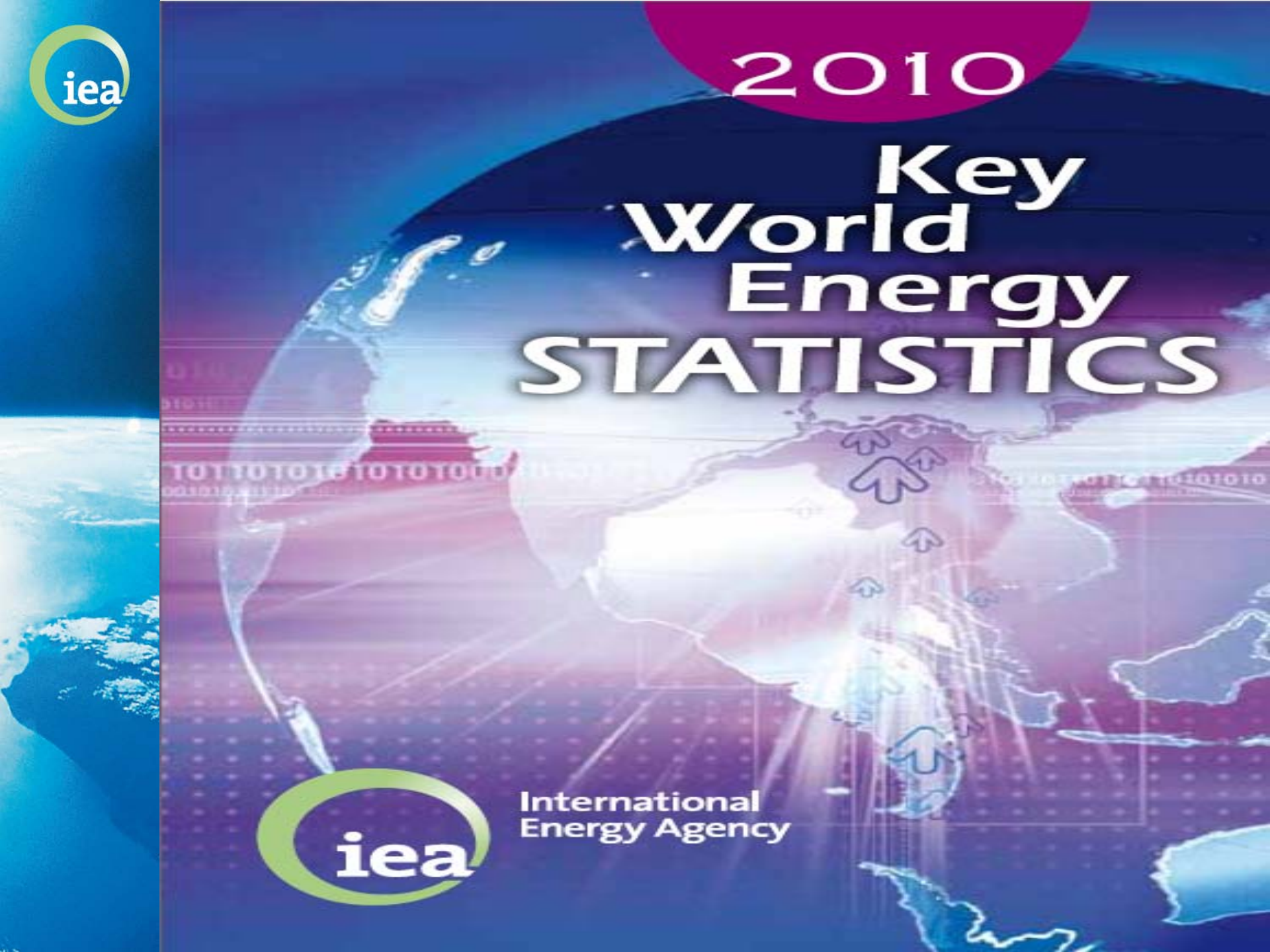
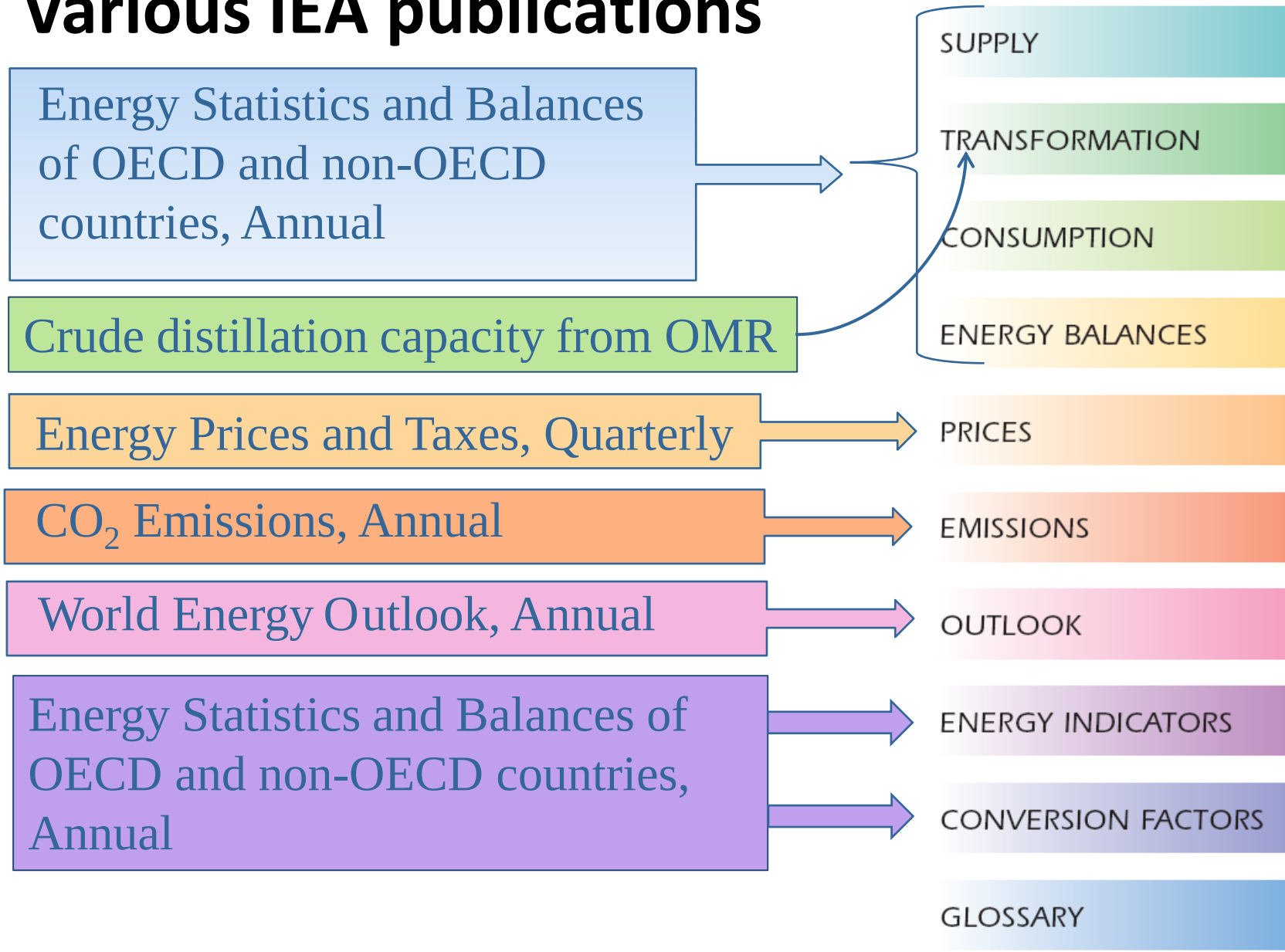
Energy Statistics Division

International Energy Agency


2010
Key World Energy STATISTICS
iea
International Energy Agency

Compilation of the main Statistics from various IEA publications



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SUPPLY

- TPES and Production of main primary fuels
- Fuel and regional shares
- Top producers, net exporters, net importers
- Nuclear and Hydro capacities

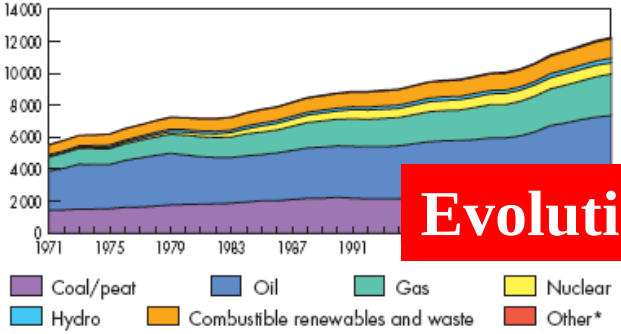
SUPPLY

SUPPLY

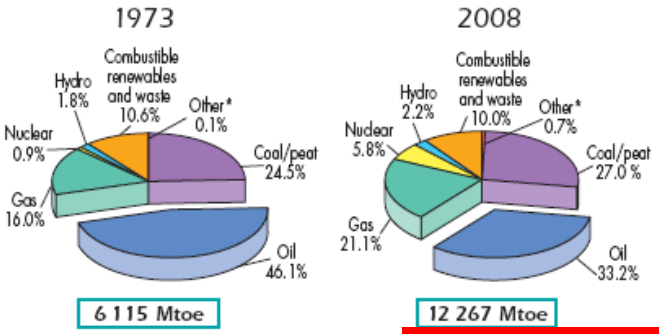
TOTAL PRIMARY ENERGY SUPPLY

World

Evolution from 1971 to 2008 of world total primary energy supply by fuel (Mtoe)



1973 and 2008 fuel shares of TPES

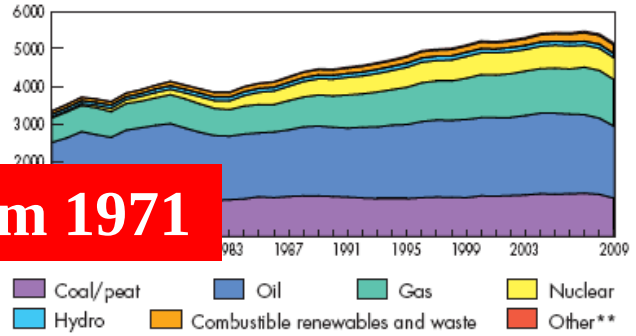


*Other includes geothermal, solar, wir

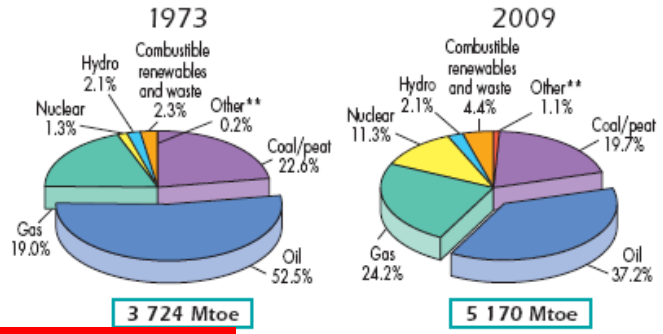
BY FUEL

OECD

Evolution from 1971 to 2009 of OECD total primary energy supply* by fuel (Mtoe)



1973 and 2009 fuel shares of TPES*



*Excludes electricity trade.
ncludes geothermal, solar, wind, heat, etc.

Evolution from 1971

Fuel shares of TPES

SUPPLY

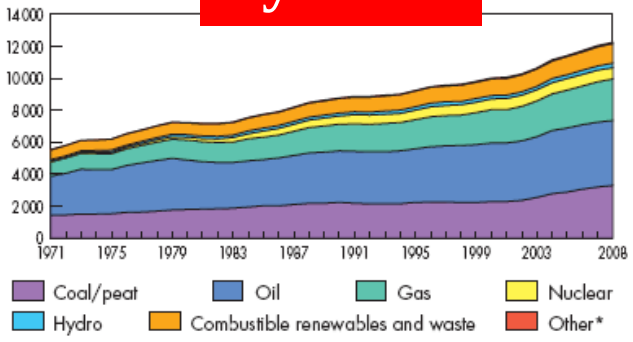
SUPPLY

TOTAL PRIMARY ENERGY SUPPLY

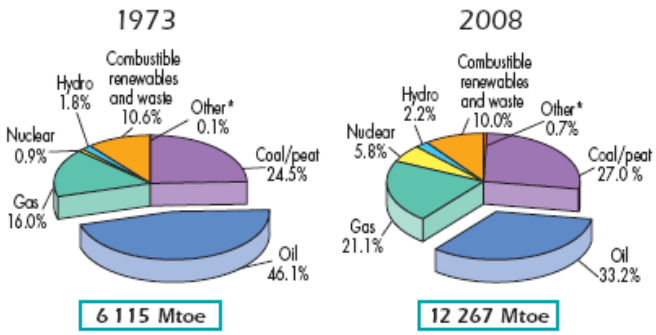
World

Evolution from 1971 energ

By Fuel



1973 and 2008 fuel shares of TPES



*Other includes geothermal, solar, wind, heat, etc.

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SUPPLY

TOTAL PRIMARY ENERGY SUPPLY

World

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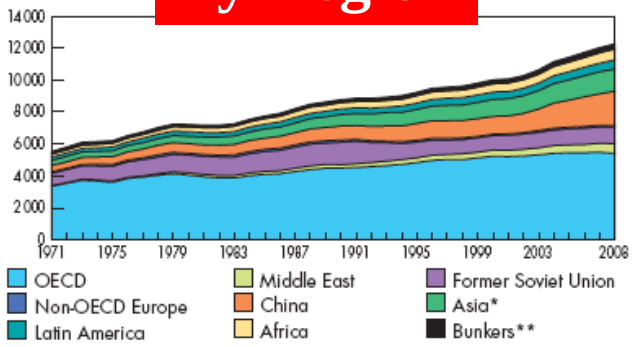
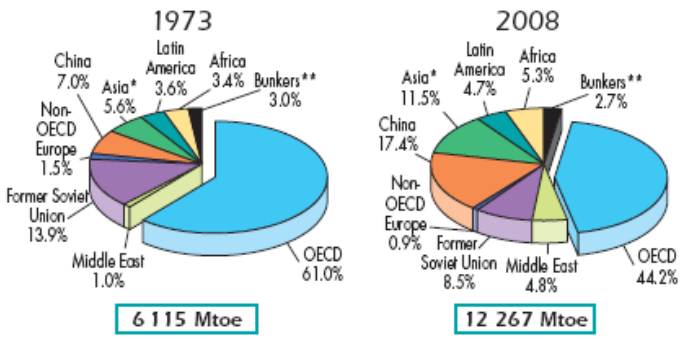
By Region



1973 and 2008 regional shares of TPES



*Asia excludes China.
**Includes international aviation and international marine bunkers.

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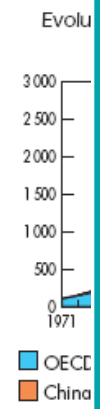
SUPPLY



Producers	TWh	% of world total
United States	838	30.7
France	439	16.1
Japan	258	9.4
Russian Federation	163	6.0
Korea	151	5.5
Germany	148	5.4
Canada	94	3.4
Ukraine	90	3.3
People's Rep. of China	68	2.5
Sweden	64	2.3
Rest of the world	418	15.4
World	**2 731**	**100.0**

2008 data

Installed capacity	GW
United States	101
France	63
Japan	48
Russian Federation	23
Germany	20
Korea	18
Canada	13
Ukraine	13
United Kingdom	11
Sweden	9
Rest of the world	53
World	**372**

2008 data
Sources: IEA, Commissariat à l'Énergie Atomique (France).

Country (top-ten producers)	% of nuclear in total domestic electricity generation
France	77.1
Ukraine	46.7
Sweden	42.6
Korea	34.0
Japan	24.0
Germany	23.5
United States	19.3
Russian Federation	15.7
Canada	14.4
People's Rep. of China	2.0
Rest of the world*	11.9
World	**13.5**

2008 data

*Excludes countries with no nuclear production.

TRANSFORMATION

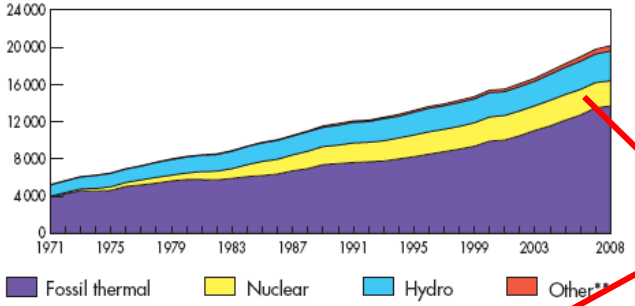
- Refining
  - by product
  - by region
- Electricity Generation
  - by fuel
  - by region

TRANSFORMATION

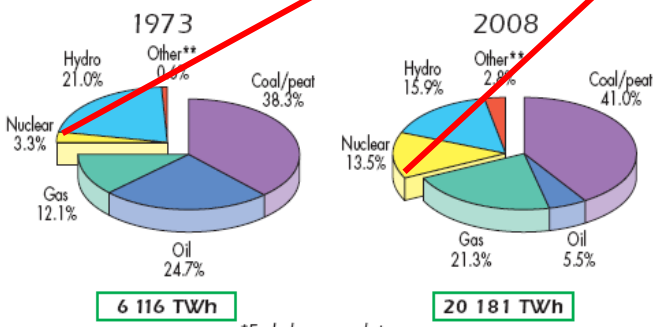
TRANSFORMATION

Electricity Generation by Fuel

Evolution from 1971 to 2008 of world electricity generation* by fuel (TWh)



1973 and 2008 fuel shares of electricity generation*



*Excludes pumped storage.

**Other includes geothermal, solar, wind, combustible renewables and waste, and heat.

The share of nuclear has increased a lot since 1973…

… but has been quite stable over the past few years

TOTAL FINAL CONSUMPTION

- By fuel:
  - Coal/Peat
  - Oil
  - Gas
  - Electricity
  - Biofuels
  - Other (including Solar, Wind, Geothermal, Heat, etc.)
- By region
- By sector:
  - Industry
  - Transport
  - Other (agriculture, commercial and public services residential etc)
  - Non-energy use

ENERGY BALANCES

World

2008

(Mtoe)

SUPPLY AND CONSUMPTION	Coal/ peat	Crude oil	Oil products	Gas	Nuclear	Hydro	Combustible renewables & waste	Other[a]	Total
Production	3 415.66	4 041.34	–	2 608.17	712.18	275.88	1 225.49	90.24	12 368.95
Imports	591.76	2 332.71	995.62	782.77	–	–	8.49	52.84	4 764.20
Exports	–631.03	–2 200.43	–1 074.56	–777.77	–	–	–9.32	–53.00	–4 746.11
Stock changes	–62.21	–28.78	–6.72	–22.10	–	–	0.15	–	–119.66
TPES	**3 314.18**	**4 144.84**	**–85.65**	**2 591.07**	**712.18**	**275.88**	**1 224.81**	**90.08**	**12 267.38**
Transfers	–	–133.75	133.95	–	–	–	0.06	–	20.26
Statistical diff.	–6.00	–23.21	–13.25	–3.22	–	–	–0.02	0.46	–45.25
Electricity plants	–1 891.00	–24.29	–213.08	–630.36	–705.66	–275.88	–50.19	1 491.11	–2 299.34
Heat plants	–96.27	–0.73	–11.52	–88.83	–	–	–7.78	170.14	–34.99
Blast furnaces	–157.09	–	–1.21	–0.11	–	–	–	–	–158.41
Gas works	–12.85	–	–3.28	9.03	–	–	–0.01	–	–7.12
Coke ovens[b]	–43.46	–	–2.01	–0.04	–	–	–0.00	–	–45.52
Oil refineries	–	–3 967.04	3 929.15	–0.57	–	–	–	–	–38.47
Liquefaction plants	–19.93	9.01	–	–6.73	–	–	–	–	–17.64
Other transf.	0.00	0.19	–0.92	–2.05	–	–	–54.17	–0.33	–57.28
Energy ind. own use	–81.30	–10.89	–217.66	–232.59	–	–	–13.70	–182.82	–738.95
Industry	645.80	5.74	326.18	460.24	–	–	190.76	716.34	2 345.07
Transport[c]	3.45	0.02	2 149.82	77.41	–	–	45.45	23.22	2 299.37
Other	136.42	0.23	452.87	633.44	–	–	834.05	979.91	3 036.92
Non-energy use	37.42	14.11	553.19	142.32	–	–	–	–	747.05

SUPPLY

TRANSFORMATION

PRICES

- Key crude oil spot prices
- Rotterdam oil product spot prices
- Steam coal import costs
- Natural gas import prices
- Retail prices in selected countries

EMISSIONS

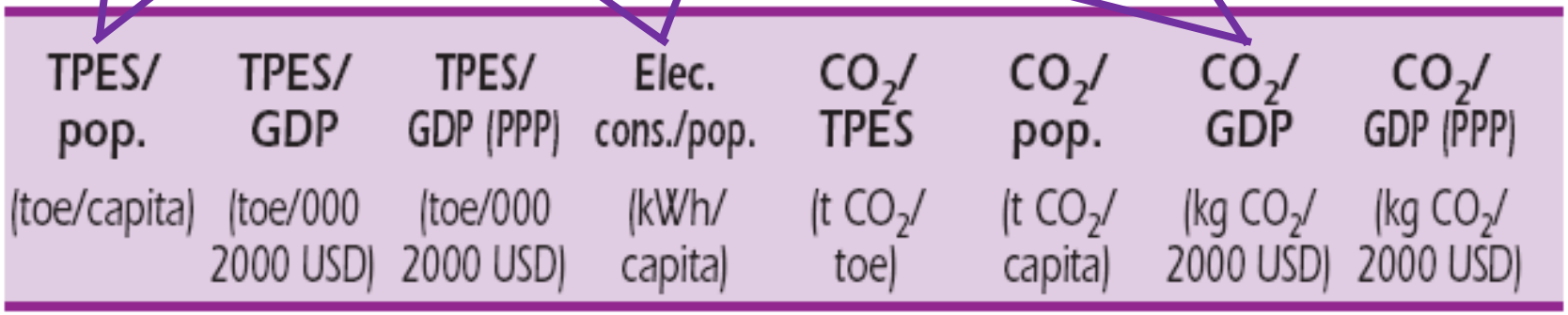
- CO_2 emissions calculated using the IEA's energy balances and the revised 1996 IPCC Guidelines
- CO_2 emissions from fuel combustion only
- By fuel
- By region

OUTLOOK

- Outlook for World TPES to 2030
- Reference Scenario Vs 450 Policy Scenario
- Fuel and Regional shares of TPES in 2030

ENERGY INDICATORS

- **Energy statistics**
  - Energy Prod.
  - Net Imports
  - TPES
  - Elec. Cons.
  - CO_2 Emissions
- **Economy statistics**
  - Population
  - GDP
  - GDP (PPP)



CONVERSION FACTORS

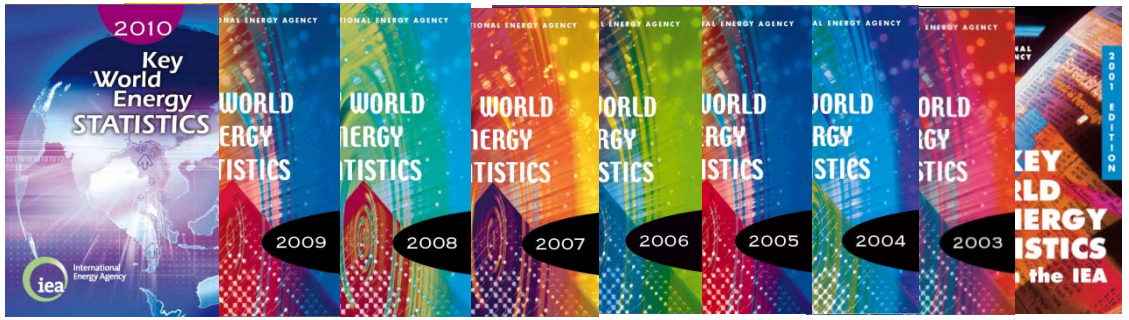
- General conversion factors for energy
- Conversion factors for mass
- Conversion factors for volume
- Selected country-specific CVs
- Default NCVs by region

GLOSSARY

- Definitions of products and flows
- Unit abbreviations
- Geographical coverage

Different formats

- Booklet



- Online PDF

- Iphone App

Availability

- The KWES is available in September after the publication of all the books
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THANK YOU!!

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