Economic and Social Commission for Western Asia





ESCWA Country Profiles 2014

Key Energy Statistics

Economic and Social Commission for Western Asia

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Acknowledgments

This publication presents main indicators for the region and for each of the 17 member States of the Economic and Social Commission for Western Asia (ESCWA) on flows of energy in the latest year available, mostly 2013, primarily on reserves, production, consumption and trade of crude oil and natural gas; on electricity generation by type; and on total and per capita energy consumption.

The Statistics Division of ESCWA benefited from the Development Account project on energy statistics and energy balance, which, from 2011 to 2014, helped to build the capacity of countries in energy statistics and balance and enabled the compilation of these regional and country profiles.

Wassim Hammoud, Therese El Gemayel, Sadim Sbeity, Raja Sabra and Rawan Nassar all worked under the supervision of Wafa Aboul Hosn, Chief of the Economic Statistics Section, to compile this booklet.

Table of Contents

- P.3 Acknowledgments
- P.5 Symbols and abbreviations

P.7 Introduction

- P.8 Total energy production
- P.8 Electricity generation by type, 2013
- P.9 Energy consumption per capita
- P.9 Energy use per \$1,000 GDP, constant 2005 PPP \$
- P.10 Electricity consumption per capita
- P.10 CO, emissions per capita, 2010
- P.11 Total energy flows in the ESCWA region
- P.11 Total energy flows in the GCC subregion
- P.11 Total energy flows in the rest of the ESCWA region

P.13 Country Profiles

- P.14 Bahrain
- P.15 Egypt
- P.16 Iraq
- P.17 Jordan
- P.18 Kuwait
- P.19 Lebanon
- P.20 Libya
- P.21 Morocco
- P.22 Oman
- P.23 Palestine
- P.24 Qatar
- P.25 Saudi Arabia
- P.26 Sudan
- P.27 Syrian Arab Republic
- P.28 Tunisia
- P.29 United Arab Emirates
- P.30 Yemen

P.31 Definitions

P.36 Sources

Symbols and Abbreviations

- CO₂ carbon dioxide
 m³ cubic metre
 data not available
 GDP gross domestic product
 GWh gigawatt-hour
 KOE kilogram oil equivalent
 KWh kilowatt-hour
 MW megawatt
 negligible or zero
 % per cent
 *C degree celsius
 PPP purchasing power parity
 *000 thousand
- TOE ton of oil equivalent
- US\$ United States dollar



Introduction

The Economic and Social Commission for Western Asia (ESCWA) aims to support economic and social development in the countries of the region. Current priorities of the Commission focus on the following areas: equitable growth and sustainability, regional integration and good governance and resilience.

ESCWA Country Profiles is a recurrent publication that provides readers with a statistical portrait of the region through main economic, demographic, social and environmental indicators. The 2014 issue focuses on energy, a crucial sector of the region's economy. It provides an overview of the most recent and pertinent data on energy resources and flows and related economic and environmental indicators. The first part contains regional profiles on energy production and use and CO₂ emissions; the second part presents the energy profile of each of the 17 ESCWA member countries. The data presented originate from various national sources as well as from United Nations, International Energy Agency and Organization of Arab Petroleum Exporting Countries databases. They were extracted from more detailed information contained in various publications issued by ESCWA.

This publication has been prepared as an indicative source of information that highlights the energy situation of ESCWA member countries. We invite readers to consult more comprehensive statistical information prepared and published by ESCWA (escwastat.org).



Total energy production (millions of TOE)

Electricity generation by type, 2013 (GWh)



Energy consumption per capita (KOE)



Energy use per 1,000\$ GDP, constant 2005 PPP \$ (KOE)





Electricity consumption per capita (KWh)

CO₂ emissions per capita, 2010 (metric tons)





Total energy flows in the ESCWA region ('000 TOE)

Total energy flows in the GCC subregion ('000 TOE)

Total energy flows in the rest of the ESCWA region ('000 TOE)





Country Profiles*

Bahrain	C Libya	Sudan
ی Egypt	Morocco	★ ★ Syrian Arab Republic
الله الکیر Iraq	Oman	E Tunisia
* Jordan	Palestine	United Arab Emirates
Kuwait	Qatar	Yemen
لebanon	Saudi Arabia	

* Member States are listed according to the English alphabetical order.

Bahrain

19.2

Total population, 2012	1318 000
Surface area (square kilometres)	770
GDP at current prices, 2012	
(million US\$)	30 362
GDP at constant prices, 2012	
(base year 2000, million US\$)	150 656
Oil reserves, 2013 (million barrels)	125
Natural gas reserves, 2013 (billion m ³)	191
Total energy production, 2013 ('000 TOE)	16 661
Crude oil	2 441

Hydro	
Crude oil reserve life, 2013 (year	rs)

Total Energy Production

Natural gas



Electricity Generation by Type

Peak load/capacity, 2013



Per capita carbon dioxide emissions, 2010 (metric tons per year)

(metric tons per year)	13.2
Total energy consumption, 2012	
('000 TOE)	14 163
Oil products	2 099
Natural gas	12 065
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	183
Per capita energy consumption, 2012 (KOE)	10 746

Total Energy Consumption

14 220

74.15%

7.13



11303 17550 14163 16661 Total imports, 2012 ('000 TOE) Total energy consumption, 2012 ('000 TOE) Total energy production, 2013 ('000 TOE)

Egypt



2.5

Total population, 2012	80 722 000
Surface area (square kilometres)	1 009 450
GDP at current prices, 2012	
(million US\$)	256 669
GDP at constant prices, 2012	
(base year 2000, million US\$)	166 573
Oil reserves, 2013 (million barrels)	3 900
Natural gas reserves, 2013 (billion m ³)	1 846

Total energy production, 2013 ('000 TOE)	79 969
Crude oil	26 255
Natural gas	50 490
Hydro	3 224
Crude oil reserve life, 2013 (years)	20.79

Total Energy Production



Total electricity generation, 2013 (GWh)	164 628
Thermal	
Steam turbine	76 393
Gas turbine	14 011
Combined cycle	59 366
Diesel	240
Hydro	13 121
Other renewables	1 497
Coal and others	
Others	
Capacity, 2013 (MW)	31 039
Peak load, 2013 (MW)	27 000
Peak load/capacity, 2013	86.99%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2013	
('000 TOE)	85 523
Oil products	34 538
Natural gas	46 287
Hydro	3 224
Coal	1 474
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	92
Per capita energy consumption, 2013 (KOE)	1 059

Total Energy Consumption





Total energy production, 2013 ('000 TOE)

Iraq



Total population, 2012	32 778 000
Surface area (square kilometres)	435 244
GDP at current prices, 2012	
(million US\$)	139 286
GDP at constant prices, 2012	
(base year 2000, million US\$)	26 293
Oil reserves, 2013 (million barrels)	150 000
Natural gas reserves, 2013 (billion m ³)	3 588
Total energy production, 2013 ('000 TOE)	154 587

Total energy production, 2013 ('000 TOE)	154 587
Crude oil	152 625
Natural gas	540
Hydro	1 423
Crude oil reserve life, 2013 (years)	135.32

Total Energy Production



Total electricity generation, 2013 (GWh)	73 556
Thermal	
Steam turbine	17 708
Gas turbine	40 128
Combined cycle	
Diesel	9 930
Hydro	5 790
Other renewables	
Coal and others	
Others	
Capacity, 2013 (MW)	27 110
Peak load, 2013 (MW)	14 527
Peak load/capacity, 2013	53.59%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010

(metric tons per year)	3.6
Total energy consumption, 2012	
('000 TOE)	41 794
Oil products	33 763
Natural gas	6 699
Hydro	1 333
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	93
Per capita energy consumption, 2012 (KOE)	1 275

Total Energy Consumption





Jordan



Total population, 2012	7 009 000
Surface area (square kilometres)	88 778
GDP at current prices, 2012	
(million US\$)	31 015
GDP at constant prices, 2012	
(base year 2000, million US\$)	15 000
Oil reserves, 2013 (million barrels)	1
Natural gas reserves, 2013 (billion m ³)	6
Total energy production, 2013 ('000 TOE)	126
Crude oil	1
Natural gas	111
Hydro	14
Crude oil reserve life, 2013 (years)	136.99

Total Energy Production



Thermal Steam turbine	 5 628
Steam turbine	
Gas turbine	964
Combined cycle	10 625
Diesel	6
Hydro	55
Other renewables	3
Coal and others	
Others	6
Capacity, 2013 (MW)	3 333
Peak load, 2013 (MW)	2 995
Peak load/capacity, 2013	89.86%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year) 3.4 Total energy consumption, 2012 5 663 ('000 TOE) Oil products 4 973 Natural gas 675 Hvdro 15 Coal ---Energy use per \$1,000 GDP, constant 2005 PPP, 2011 (KOE) 101 Per capita energy consumption, 2012 (KOE) 808

Total Energy Consumption



126



5663

- Total imports, 2012 ('000 TOE)
- Total energy consumption, 2012 ('000 TOE)
- Total energy production, 2013 ('000 TOE)

Kuwait

11 856



Total population, 2012	3 250 000
Surface area (square kilometres)	17 818
GDP at current prices, 2012	
(million US\$)	183 236
GDP at constant prices, 2012	
(base year 2000, million US\$)	70 435
Oil reserves, 2013 (million barrels)	101 500
Natural gas reserves, 2013 (billion m ³)	1 784
Total energy production, 2013 ('000 TOE)	159 389
Crude oil	145 349
Natural gas	14 040
Hydro	

Total Energy Production

Crude oil reserve life, 2013 (years)



Peak load, 2013 (MW) Peak load/capacity, 2013

Capacity, 2013 (MW)

Electricity Generation by Type



Total Energy Consumption

98.54

15 719

12 060

76.72%

Per capita energy consumption, 2013 (KOE)



2175



Lebanon



Total population, 2012	4 647 000
Surface area (square kilometres)	10 452
GDP at current prices, 2012	
(million US\$)	48 033
GDP at constant prices, 2012	
(base year 2000, million US\$)	29 307
Oil reserves, 2013 (million barrels)	-
Natural gas reserves, 2013 (billion m ³)	
Total energy production, 2013 ('000 TOE)	254
Crude oil	
Natural gas	
Hydro	254
Crude oil reserve life, 2013 (years)	

Total Energy Production



Electricity Generation by Type

Peak load/capacity, 2013



121.52%

Per capita carbon dioxide emissions, 2010	
(metric tons per year)	4.8
Total energy consumption, 2013	
('000 TOE)	5 018
Oil products	4 762
Natural gas	3
Hydro	254
Coal	-
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	88
Per capita energy consumption, 2013 (KOE)	1 080

Total Energy Consumption







Libya

93



Total population, 2012	6155 000
Surface area (square kilometres)	1759 540
GDP at current prices, 2012	
(million US\$)	93 104
GDP at constant prices, 2012	
(base year 2000, million US\$)	43 161
Oil reserves, 2013 (million barrels)	48 472
Natural gas reserves, 2013 (billion m ³)	1 549
Total energy production, 2013 ('000 TOE)	57 432
Crude oil	46 632
Natural gas	10 800
Hydro	
Crude oil reserve life, 2013 (years)	143.10

Total Energy Production



Total electricity generation, 2013 (GWh)	39 522
Thermal	
Steam turbine	3 608
Gas turbine	16 487
Combined cycle	16 563
Diesel	1 613
Hydro	
Other renewables	
Coal and others	
Others	1 251
Capacity, 2013 (MW)	9 455
Peak load, 2013 (MW)	6 520
Peak load/capacity, 2013	68.96%

Electricity Generation by type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2012	
('000 TOE)	24 017
Oil products	20 904
Natural gas	13 112
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	192
Per capita energy consumption, 2012 (KOE)	3 902

Total Energy Consumption





Morocco



Total population, 2012	32 521 000
Surface area (square kilometres)	710 850
GDP at current prices, 2012	
(million US\$)	93 769
GDP at constant prices, 2012	
(base year 2000, million US\$)	62 671
Oil reserves, 2013 (million barrels)	1
Natural gas reserves, 2013 (billion m ³)	1.43
Total energy production, 2013 ('000 TOE)	759
Crude oil	24
Natural gas	
Hydro	735
Crude oil reserve life, 2013 (years)	5.48

Total Energy Production



Total electricity generation, 2013 (GWh)	26 686
Thermal	
Steam turbine	3 100
Gas turbine	982
Combined cycle	5 823
Diesel	548
Hydro	2 990
Other renewables	1 213
Coal and others	12 030
Others	
Capacity, 2013 (MW)	7 342
Peak load, 2013 (MW)	5 580
Peak load/capacity, 2013	76.00%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)	1.6
Total energy consumption, 2013	<u> </u>
('000 TOE)	10 287
Oil products	9 553
Natural gas	
Hydro	735
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	79
Per capita energy consumption, 2013 (KOE)	316

Total Energy Consumption





11453

Oman

20.6



Total Energy Production



Total electricity generation, 2013 (GWh)	20 316
Thermal	
Steam turbine	591
Gas turbine	10 587
Combined cycle	9 129
Diesel	9
Hydro	
Other renewables	
Coal and others	
Others	
Capacity, 2013 (MW)	4 938
Peak load, 2013 (MW)	
Peak load/capacity, 2013	

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2012	
('000 TOE)	22 063
Oil products	6 616
Natural gas	15 448
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	180
Per capita energy consumption, 2012 (KOE)	6 658

Total Energy Consumption





- Total energy consumption, 2012 ('000 TOE)
- Total energy production, 2013 ('000 TOE)

Palestine



Total population, 2012	4 219 000
Surface area (square kilometres)	6 020
GDP at current prices, 2012	
(million US\$)	93 769
GDP at constant prices, 2012	
(base year 2000, million US\$)	62 671
Oil reserves, 2013 (million barrels)	-
Natural gas reserves, 2013 (billion m ³)	
Total energy production, 2013 ('000 TOE)	
Crude oil	

(coo (coo) coo	
Crude oil	
Natural gas	
Hydro	
Crude oil reserve life, 2013 (years)	

Total Energy Production



Data not available

Total electricity generation, 2013 (GWh)	394
Thermal	
Steam turbine	
Gas turbine	
Combined cycle	393
Diesel	-
Hydro	
Other renewables	1
Coal and others	
Others	
Capacity, 2013 (MW)	126
Peak load, 2013 (MW)	1 082
Peak load/capacity, 2013	858.73%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year) 0.6 Total energy consumption, 2012 ('000 TOE) 625 Oil products 625 . Natural gas ---Hydro ---Coal ---Energy use per \$1,000 GDP, (constant 2005 PPP), 2009 162 148 Per capita energy consumption, 2012 (KOE)

Total Energy Consumption



Total electricity consumption, 2013 (GWh)	4 950
Industrial	520
Residential	2 950
Commercial	990
Other	490
Per capita electricity consumption, 2013 (KWh)	1 173
Total exports, 2012 ('000 TOE)	
Crude oil	
Oil products	
Natural gas	
Coal and coal products	
Total imports, 2012 ('000 TOE)	
Crude oil	
Oil products	
Natural gas	
Coal and coal products	



Qatar

40.1

Total population, 2012	2 051 000
Surface area (square kilometres)	11 607
GDP at current prices, 2012	
(million US\$)	192 402
GDP at constant prices, 2012	
(base year 2000, million US\$)	72 601
Oil reserves, 2013 (million barrels)	25 063
Natural gas reserves, 2013 (billion m ³)	24 678
Total energy production, 2013 ('000 TOE)	179 129
Crude oil	36 479
Natural gas	142 650
Hydro	
Crude oil reserve life, 2013 (years)	93.81

Total Energy Production



Thermal	
Steam turbine	
Gas turbine	23 362
Combined cycle	8 862
Diesel	
Hydro	
Other renewables	
Coal and others	
Others	
Capacity, 2013 (MW)	8 755
Peak load, 2013 (MW)	6 000
Peak load/capacity, 2013	68.53%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010

(metric tons per year)	40.1
Total energy consumption, 2013	
('000 TOE)	35 447
Oil products	12 182
Natural gas	23 265
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	129
Per capita energy consumption, 2013 (KOE)	17 283

Total Energy Consumption





Total energy production, 2013 ('000 TOE)

Saudi Arabia



16.9

Total population, 2012	28 288 000
Surface area (square kilometres)	2 206 714
GDP at current prices, 2012	
(million US\$)	711 050
GDP at constant prices, 2012	
(base year 2000, million US\$)	363 086
Oil reserves, 2013 (million barrels)	265 850
Natural gas reserves, 2013 (billion m ³)	8 234
Total energy production, 2013 ('000 TOE)	578 237
Crude oil	485 537
Natural gas	92 700
Hydro	
Crude oil reserve life, 2013 (years)	76

Total Energy Production



Total electricity generation, 2013 (GWh)	284 001
Thermal	
Steam turbine	88 270
Gas turbine	81 688
Combined cycle	28 467
Diesel	4 937
Hydro	
Other renewables	
Coal and others	
Others	80 638
Capacity, 2013 (MW)	58 462
Peak load, 2013 (MW)	53 864
Peak load/capacity, 2013	92.14%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2013	
('000 TOE)	233 006
Oil products	140 297
Natural gas	92 709
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	137
Per capita energy consumption, 2013 (KOE)	8 237

Total Energy Consumption

40%	 Oil products Natural gas
Total electricity consumption, 2	256 688 256 688
Industrial	51 080
Residential	125 678
Commercial	39 500
Other	40 430
Per capita electricity consumpt	ion, 2013 (KWh) 9 074
Total exports, 2012 ('000 TOE)	422 180
Crude oil	382 847
Oil products	39 333
Natural gas	
Coal and coal products	
Total imports, 2012 ('000 TOE)	-
Crude oil	
Oil products	-
Natural gas	
Coal and coal products	



Sudan



Total population, 2012	37 195 000
Surface area (square kilometres)	2 505 813
GDP at current prices, 2012	
(million US\$)	70 888
GDP at constant prices, 2012	
(base year 2000, million US\$)	23 065
Oil reserves, 2013 (million barrels)	1 500
Natural gas reserves, 2013 (billion m ³)	84
Total energy production, 2013 ('000 TOE)	14 618
Crude oil	12 572
Natural gas	3

Total Energy Production

Crude oil reserve life, 2013 (years)

Hydro



Total electricity generation, 2013 (GWh)	10 284
Thermal	
Steam turbine	1 204
Gas turbine	-
Combined cycle	582
Diesel	183
Hydro	8 315
Other renewables	
Coal and others	
Others	
Capacity, 2013 (MW)	3 136
Peak load, 2013 (MW)	2 011
Peak load/capacity, 2013	64.13%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010	
(metric tons per year)	0.3
Total energy consumption, 2013	
('000 TOE)	6 356
Oil products	4 312
Natural gas	-
Hydro	2 043
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	119
Per capita energy consumption, 2013 (KOE)	171

Total Energy Consumption

2 043

16.64





Syrian Arab Republic



3.0

Total population, 2012	21 890 000
Surface area (square kilometres)	185 180
GDP at current prices, 2012	
(million US\$)	47 418
GDP at constant prices, 2012	
(base year 2005, million US\$)	21 163
Oil reserves, 2013 (million barrels)	2 500
Natural gas reserves, 2013 (billion m ³)	285
Total energy production, 2013 ('000 TOE)	7 703
Crude oil	2 916
Natural gas	4 050
Hydro	737
Crude oil reserve life, 2013 (years)	118

Total Energy Production



Total electricity generation, 2013 (GWh)	29 763
Thermal	
Steam turbine	10 545
Gas turbine	1 873
Combined cycle	14 345
Diesel	
Hydro	3 000
Other renewables	
Coal and others	
Others	
Capacity, 2013 (MW)	9 879
Peak load, 2013 (MW)	7 703
Peak load/capacity, 2013	77.97%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2012	
('000 TOE)	19 657
Oil products	11 771
Natural gas	7 149
Hydro	737
Coal	
Energy use per \$1,000 GDP,	
(constant 2005 PPP), 2009	240
Per capita energy consumption, 2012 (KOE)	898

Total Energy Consumption



9280



Total energy production, 2013 ('000 TOE)



25



Total population, 2012	10 875 000
Surface area (square kilometres)	162 155
GDP at current prices, 2012	
(million US\$)	44 748
GDP at constant prices, 2012	
(base year 2000, million US\$)	33 447
Oil reserves, 2013 (million barrels)	425
Natural gas reserves, 2013 (billion m ³)	-
Total energy production, 2013 ('000 TOE)	5 468

Total energy production, 2013 ('000 TOE)	5 468
Crude oil	2 933
Natural gas	2 520
Hydro	15
Crude oil reserve life, 2013 (years)	18.78

Total Energy Production



Total electricity generation, 2013 (GWh)	16 996
Thermal	
Steam turbine	5 436
Gas turbine	2 870
Combined cycle	8 269
Diesel	3
Hydro	60
Other renewables	358
Coal and others	
Others	
Capacity, 2013 (MW)	4 274
Peak load, 2013 (MW)	3 144
Peak load/capacity, 2013	73.56%

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010

(metric tons per year)	2.0
Total energy consumption, 2012	
('000 TOE)	7 353
Oil products	4 061
Natural gas	3 265
Hydro	27
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	86
Per capita energy consumption, 2012 (KOE)	676

Total Energy Consumption



4538



United Arab Emirates

Total population, 2012	9 206 000
Surface area (square kilometres)	83 600
GDP at current prices, 2012	
(million US\$)	383 799
GDP at constant prices, 2012	
(base year 2000, million US\$)	174 157
Oil reserves, 2013 (million barrels)	97 800
Natural gas reserves, 2013 (billion m ³)	6 091
Total energy production, 2013 ('000 TOE)	191 896
Crude oil	141 496
Natural gas	50 400
Hydro	
Crude oil reserve life, 2013 (years)	97.75

Total Energy Production



Total electricity generation, 2013 (GWh)	106 221
Thermal	
Steam turbine	5 370
Gas turbine	7 729
Combined cycle	86 035
Diesel	3
Hydro	
Other renewables	7 084
Coal and others	
Others	
Capacity, 2013 (MW)	27 280
Peak load, 2013 (MW)	
Peak load/capacity, 2013	

Electricity Generation by Type



Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2013	
('000 TOE)	96 747
Oil products	35 268
Natural gas	61 479
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	131
Per capita energy consumption, 2013 (KOE)	10 509

22.3

Total Energy Consumption





Yemen

0.9



Total population, 2012	23 852 000
Surface area (square kilometres)	527 968
GDP at current prices, 2012	
(million US\$)	32 831
GDP at constant prices, 2012	
(base year 2000, million US\$)	13 581
Oil reserves, 2013 (million barrels)	3 000
Natural gas reserves, 2013 (billion m ³)	479
Total energy production, 2013 ('000 TOE)	6 444
Crude oil	6 444
Natural gas	
Hydro	
Crude oil reserve life, 2013 (years)	63.71

Per capita carbon dioxide emissions, 2010 (metric tons per year)

Total energy consumption, 2013	
('000 TOE)	6 587
Oil products	6 587
Natural gas	
Hydro	
Coal	
Energy use per \$1,000 GDP,	
constant 2005 PPP, 2011 (KOE)	76
Per capita energy consumption, 2013 (KOE)	276

Total Energy Production



Total Energy Consumption

100% Oil products

Total electricity consumption, 2013 (GWh)	4 976
Industrial	203
Residential	3 133
Commercial	732
Other	908
Per capita electricity consumption, 2013 (KWh)	209
Total exports, 2012 ('000 TOE)	6 300
Crude oil	-
Oil products	-
Natural gas	6 300
Coal and coal products	
Total imports, 2012 ('000 TOE)	-
Crude oil	
Oil products	-
Natural gas	
Coal and coal products	

Electricity Generation by Type





Total energy production, 2013 ('000 TOE)

Definitions

Total population

The de facto population in a country, area or region as of 1 July of the year indicated.

Surface area

The land area plus inland water.

GDP at current prices

An aggregate measure of production equal to the sum of the gross values added of all resident institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs).

GDP at constant prices

The volume level of GDP. Constant price estimates of GDP are obtained by expressing values in terms of a base period.

Crude oil

A mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities, such as sulphur. It exists in the liquid phase under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable. This category includes field or lease condensate recovered from associated and non-associated gas where it is commingled with the commercial crude oil stream.

Oil reserves

The estimated quantities of proven reserves of all liquids statistically defined as crude oil. They consist of those quantities of crude oil which by analysis of geoscience and engineering data can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operating methods and government regulations.

Natural gas

Gases, occurring in underground deposits, whether liquefied or

gaseous, consisting mainly of methane. National gas includes both "non-associated" gas originating from fields producing only hydrocarbons in gaseous form, and "associated" gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas).

Natural gas reserves

The estimated quantities of proven reserves of all hydrocarbons statistically defined as natural gas. They consist of those quantities of natural gas (associated and non-associated) which by analysis of geoscience and engineering data can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under defined economic conditions, operation methods and government regulations.

Total energy production

The production covers indigenous production and the manufacture of sencondary fuel products. Indigenous production is the extraction of primary fuels from fossil reserves and biofuels sources as well as the capture of renewable energy from water, wind, sunlight, etc.

Crude oil production

The production of crude oil that is extracted from the ambiant environment. Production is calculated after removal of impurities.

Natural gas production

The production of natural gas that is extracted from the ambiant environment. Production is calculated after removal of impurities.

Hydro production

The production of hydropower that is extracted from the ambiant environment. Production is calculated after removal of impurities.

Reserve life

The reserve life is calculated by dividing the reserve (in barrels) over production (in barrels).

Total electricity generation

The process of producing electric energy or the amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatt-hours (KWh) or megawatt-hours (MWh).

Thermal

Thermal energy is the portion of the thermodynamic or internal energy of a system that is responsible for the temperature of the system. There are four basic types of thermal storage systems: ice storage; water storage; storage in rock, soil or other types of solid thermal mass; and storage in other materials, such as glycol (antifreeze).

Steam turbine

A device that converts high-pressure steam, produced in a boiler, into mechanical energy that can then be used to produce electricity by forcing blades in a cylinder to rotate and turn a generator shaft.

Gas turbine

The turbine consists typically of an axial-flow air compressor and one or more combustion chambers where liquid or gaseous fuel is burned and the hot gases are passed to the turbine, and where the hot gases expand to drive the generator and are then used to run the compressor.

Combined cycle

An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for utilization by a steam turbine in the production of electricity.

Diesel

Primarily a medium distillate distilling between 180°C and 380°C. Several grades are available depending on uses.

Hydro

Hydropower is electricity generation using the power of falling water.

Other renewables

Other types of energy resources that are naturally replenishing but flow-limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time.

Coal and others

Coal is a family name for a variety of solid organic fuels and refers

to a whole range of combustible sedimentary rock materials spanning a continuous quality range.

Others

Others refers to other types of electricity generation not listed.

Capacity

The maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for ambient conditions.

Peak load

The maximum load during a specified period of time. Load is an end-use device or customer that receives power from the electric system.

Per capita carbon dioxide emission

Carbon emissions per capita are measured as the total amount of carbon dioxide emitted by the country as a consequence of all relevant human (production and consumption) activities, divided by the population of the country.

Total energy consumption

Energy consumption covers the delivery of commodities to consumers for activities other than fuel conversion or transformation activities. Energy commodities are considered consumed rather than transformed.

Oil products consumption

The use of oil products (gasoline, kerosene, fuel oil, distillates and others) as a source of heat or power or as a raw material input to a manufacturing process.

Natural gas consumption

The use of natural gas as a source of heat or power or as a raw material input to a manufacturing process.

Hydro consumption

The use of hydropower as a source of heat or power or as a raw material input to a manufacturing process.

Coal consumption

The use of coal as a source of heat or power or as a raw material input to a manufacturing process.

Energy use per \$1,000 GDP (KOE)

Energy use per GDP (constant 2005 PPP \$) is the kilogram of oil equivalent of energy use per gross domestic product converted to 2005 constant international dollars using purchasing power parity rates. Energy use refers to use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport.

Per capita energy consumption

Per capita energy consumption is calculated as the total amount of energy consumed by the country, divided by the population of the country.

Total electricity consumption

The amount of kilowatt-hours consumed in a given period of time; usually grouped by classes of service, such as residential, commercial, industrial, and other. "Other" include consumption for public street and highway lighting and other uses by public authorities, and railroads and railways.

Per capita electricity consumption

Per capita electricity consumption is calculated as the total amount of electricity consumed by the country, divided by the population of the country.

Oil exports

Oil ('000 TOE) leaving the statistical territory of a country.

Oil imports

Oil ('000TOE) adding to the stock of oil of a country by entering its statistical territory.

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