

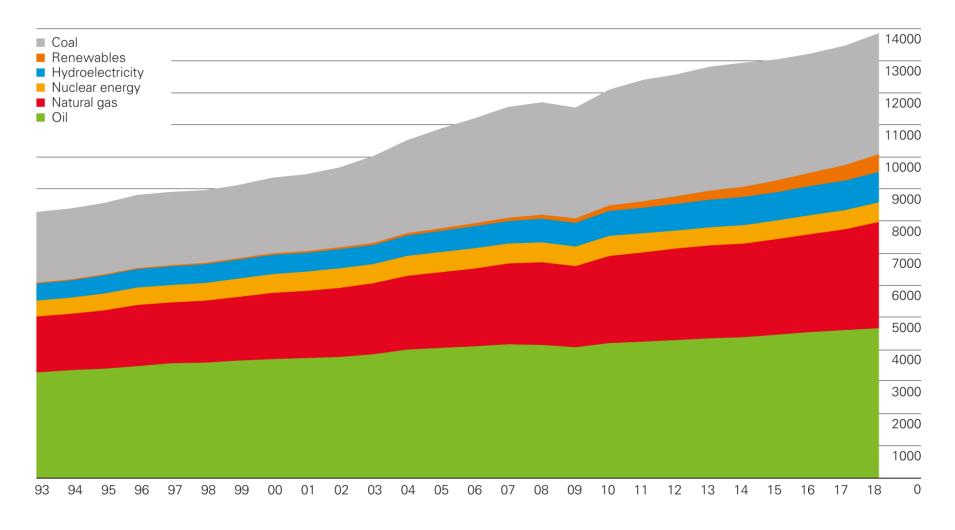


## Primary energy

#### Primary energy world consumption

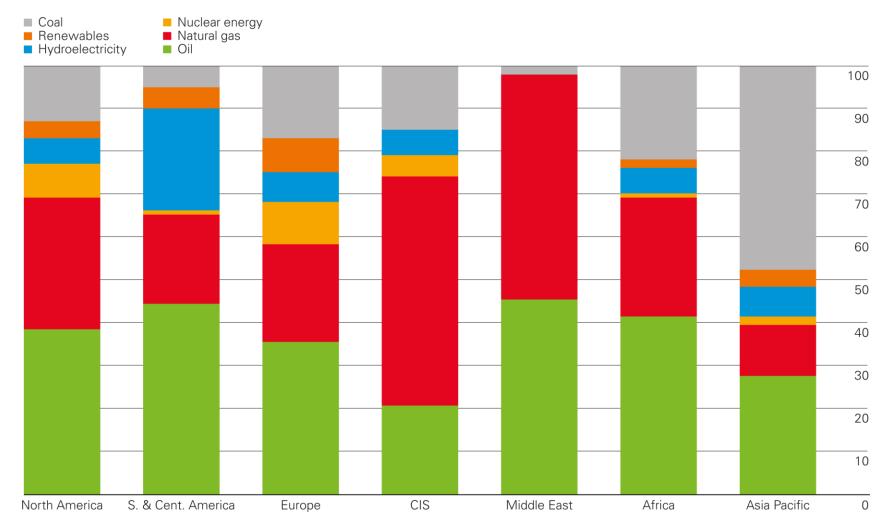
#### Million tonnes oil equivalent





# Primary energy regional consumption by fuel 2018 Percentage

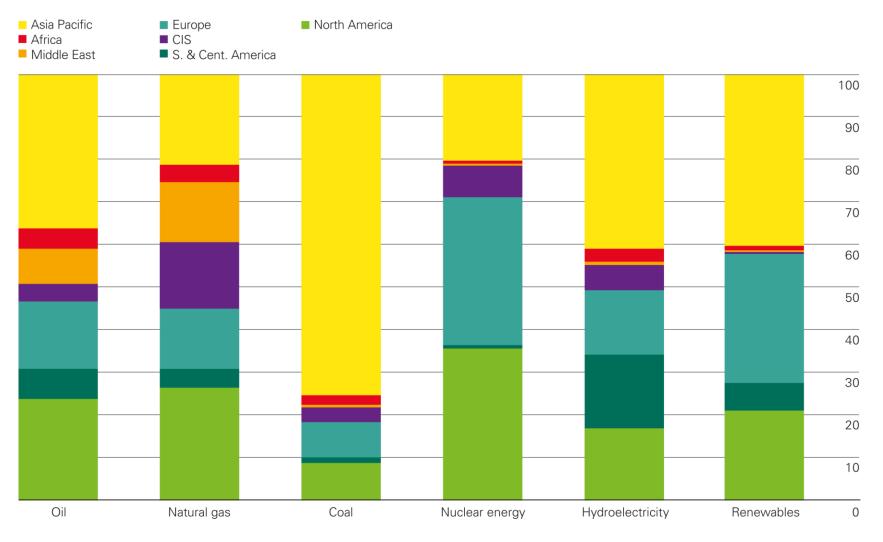




## Fuel consumption by region 2018

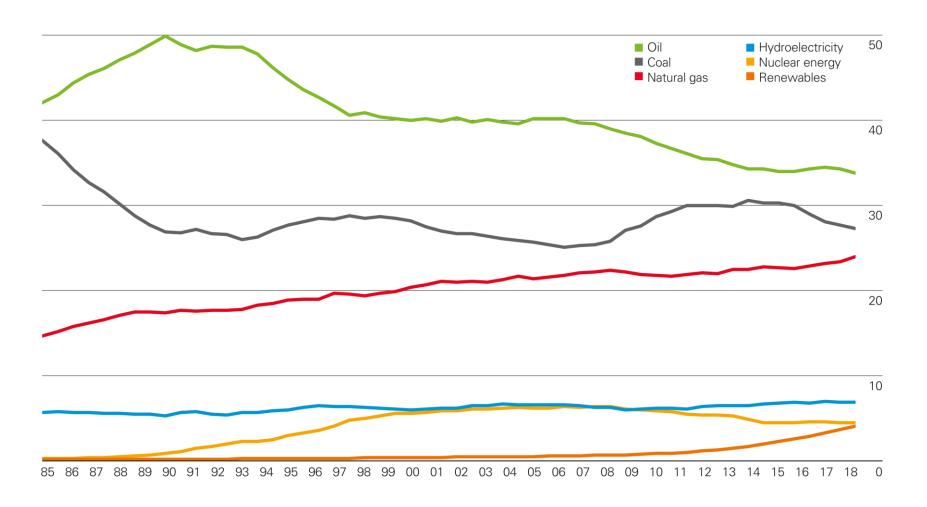
# bp

#### Percentage



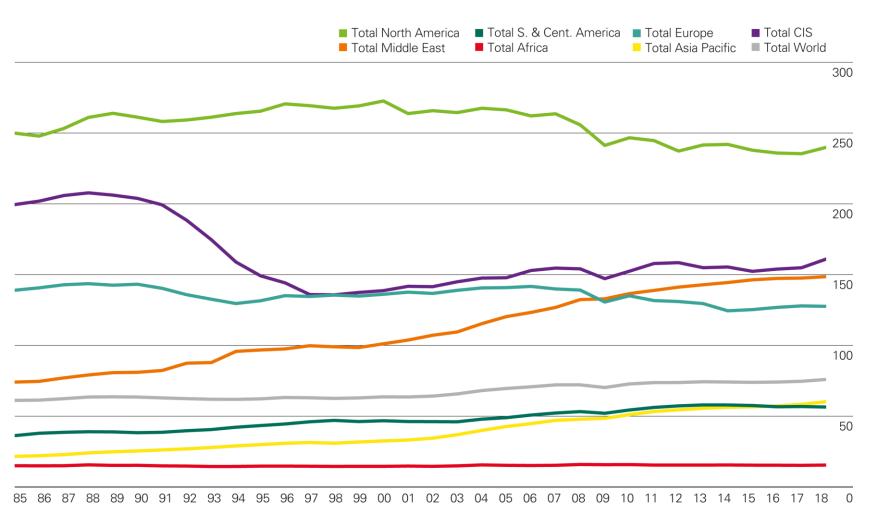
# Shares of global primary energy consumption Percentage





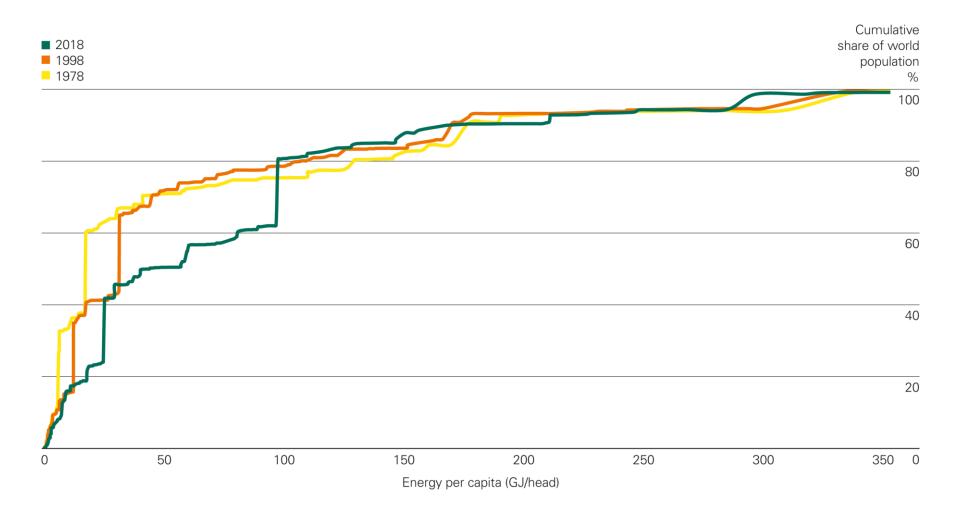
# Energy per capita by region Gigajoules per head





### Energy per capita: distribution across countries





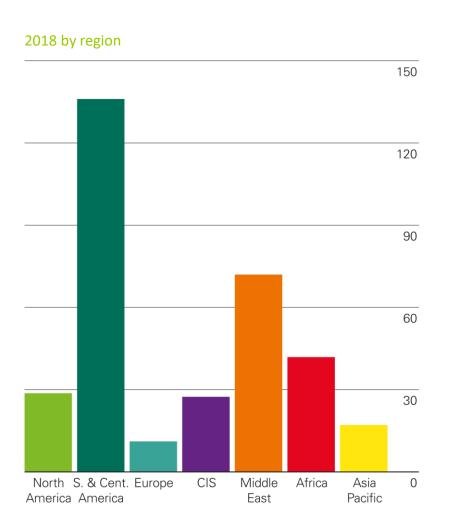


#### Oil

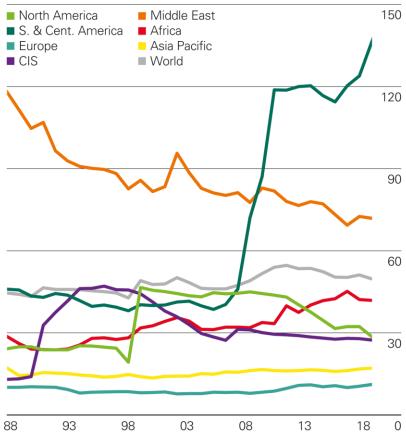
## Oil reserves-to-production (R/P) ratios



## Years



## History

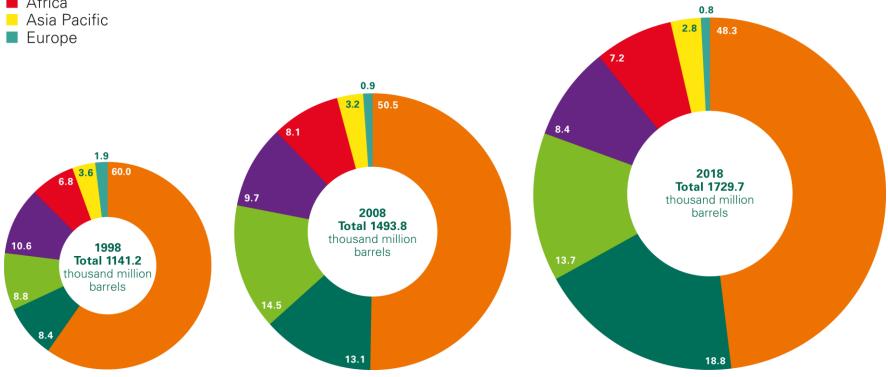


## Distribution of proved oil reserves: 1997, 2007 and 2018



#### Percentage

- Middle East
- S. & Cent. America
- North America
- CIS
- Africa

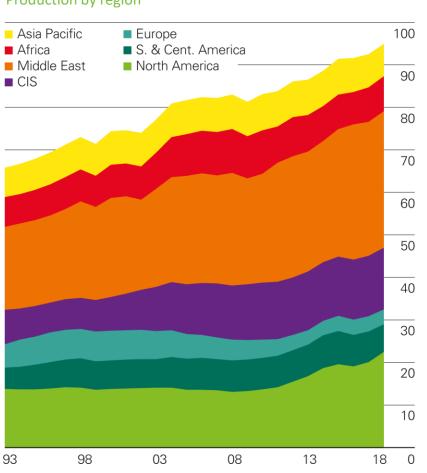


## Oil production/consumption by region

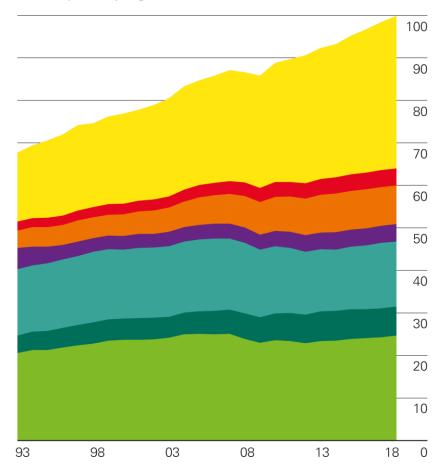
#### Million barrels daily



#### Production by region



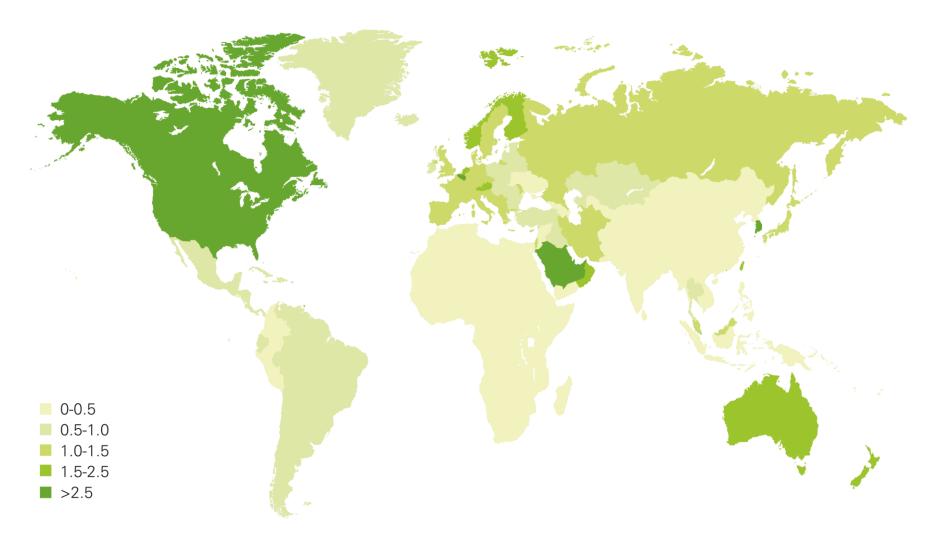
#### Consumption by region



## Oil consumption per capita 2018

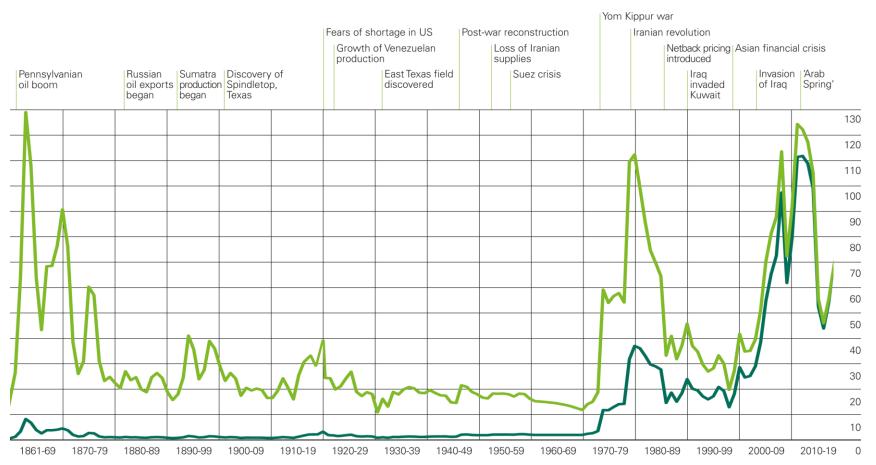
#### **Tonnes**





#### Crude oil prices 1861-2018 US dollars per barrel, world events





■ \$ 2018 (deflated using the Consumer Price Index for the US)

■ \$ money of the day

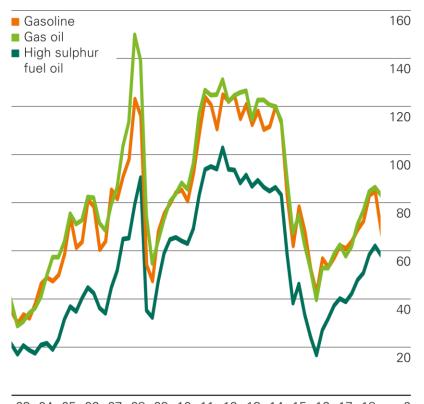
1861-1944 US average. 1945-1983 Arabian Light posted at Ras Tanura.

1984-2018 Brent dated.

# Rotterdam product prices and differentials to crude US dollars per barrel

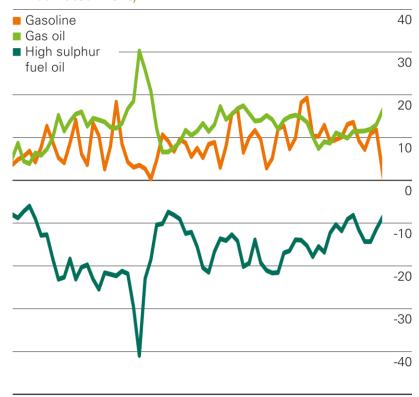


#### Oil product prices (Rotterdam)



03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 0 Source: S&P Global Platts, © 2019, S&P Global Inc.

## Product differentials to crude (Rotterdam products minus Dated Brent)

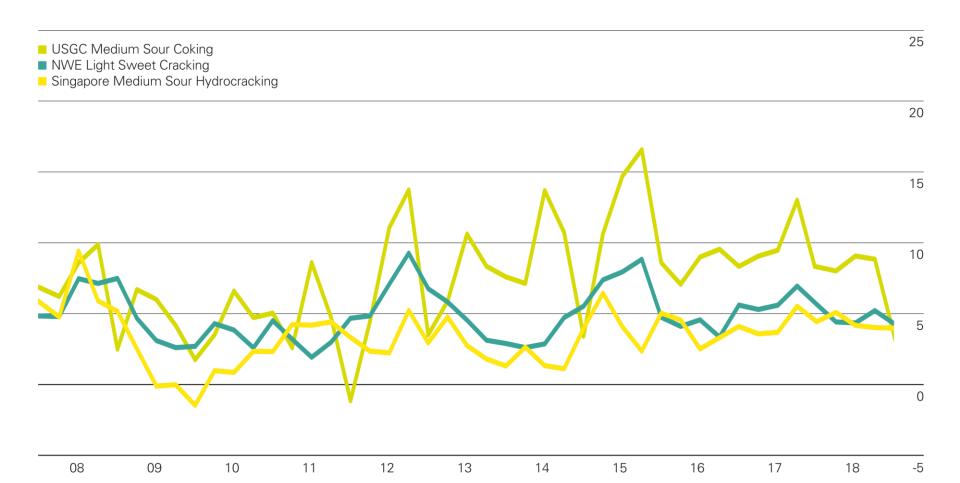


03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 -50

Source: S&P Global Platts, © 2019, S&P Global Inc.

# Regional refining margins US dollars per barrel

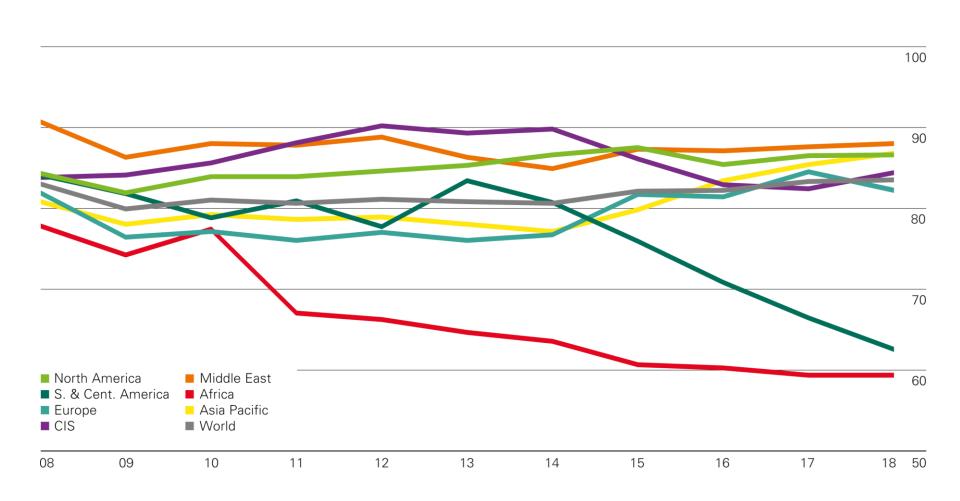




#### Refinery utilization



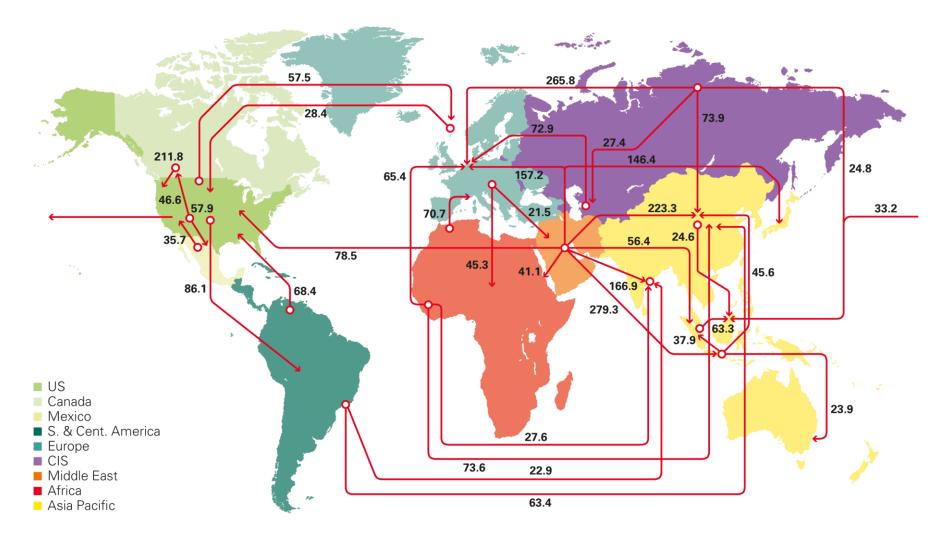
Percentage (based on average annual capacity)



### Major oil trade movements 2018

Trade flows worldwide (million tonnes)



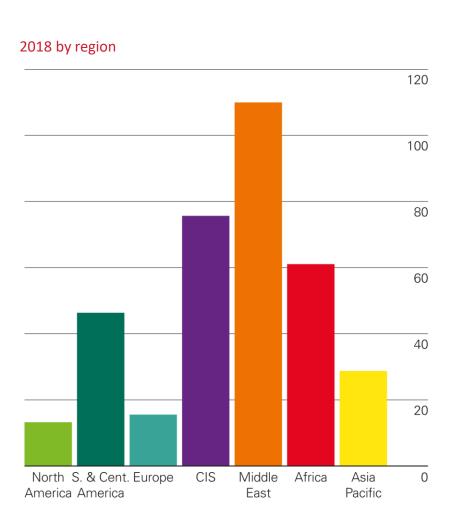


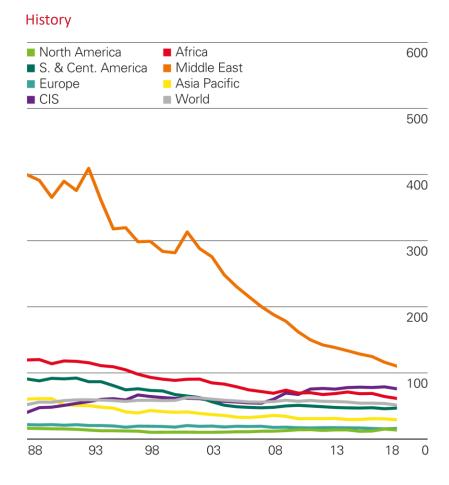


## Natural gas

## Gas reserves-to-production (R/P) ratios Years





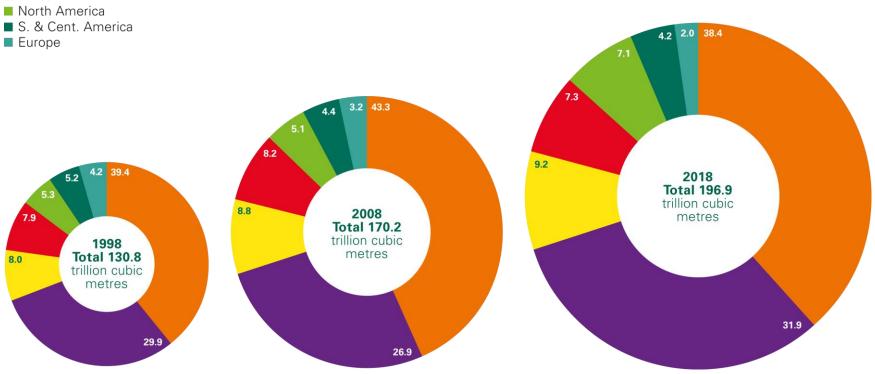


# Distribution of proved gas reserves: 1998, 2008 and 2018 Percentage





- CIS
- Asia Pacific
- Africa

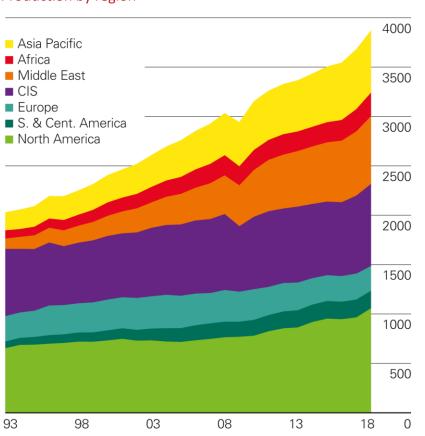


## Gas production/consumption by region

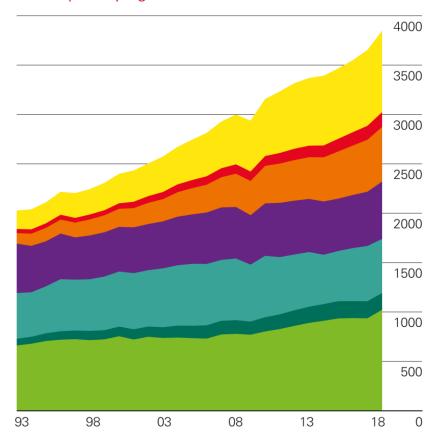
# bp

#### Billion cubic metres

#### Production by region



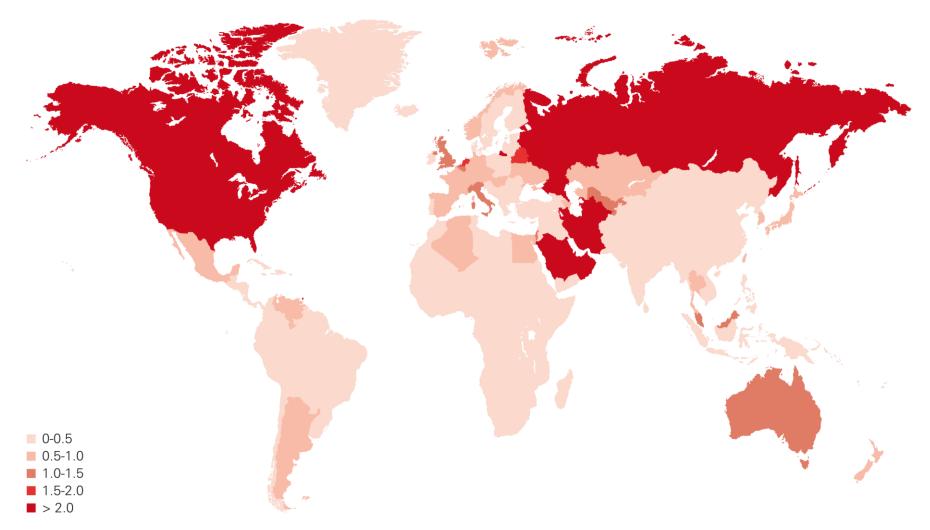
#### Consumption by region



### Gas consumption per capita 2018

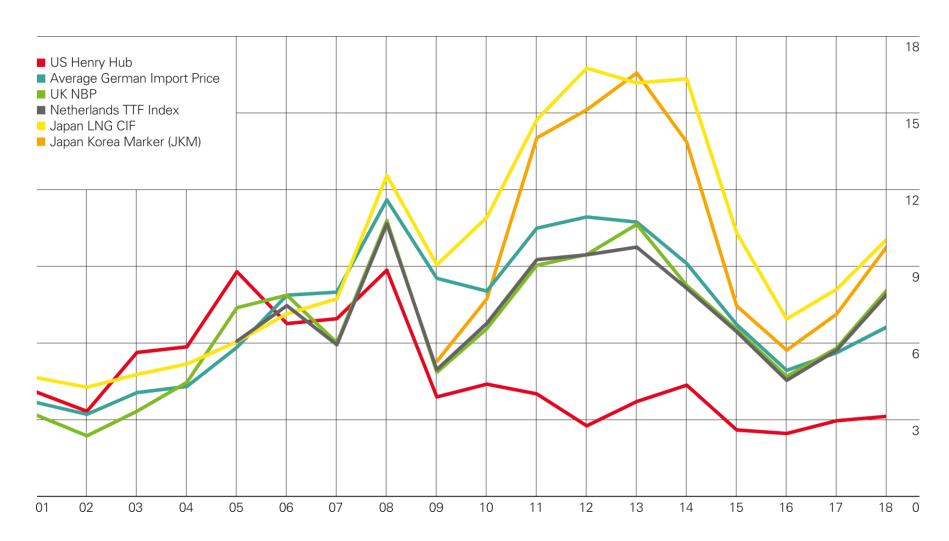
#### Million tonnes oil equivalent





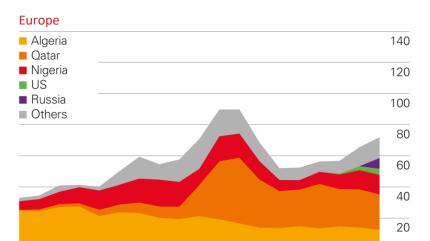
# Gas prices \$/mmBtu





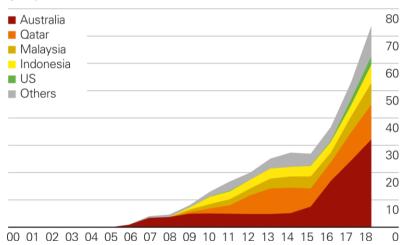
#### LNG imports by source

#### Billion cubic metres

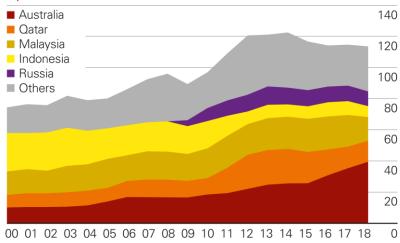




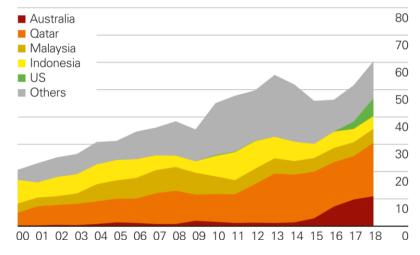
#### China



#### Japan



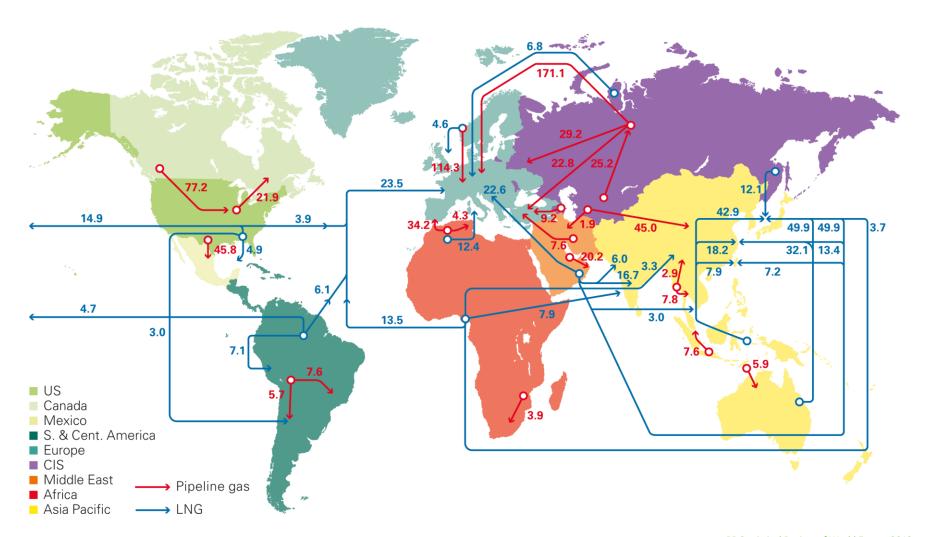
#### South Korea



#### Major gas trade movements 2018

Trade flows worldwide (billion cubic metres)





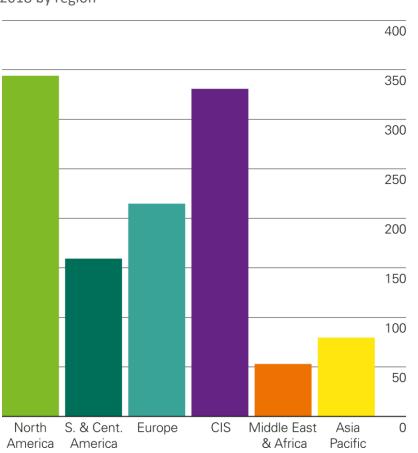


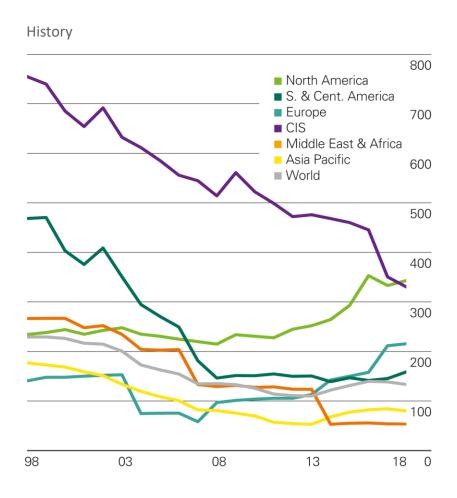
#### Coal

## Coal reserves-to-production (R/P) ratios



# Years 2018 by region

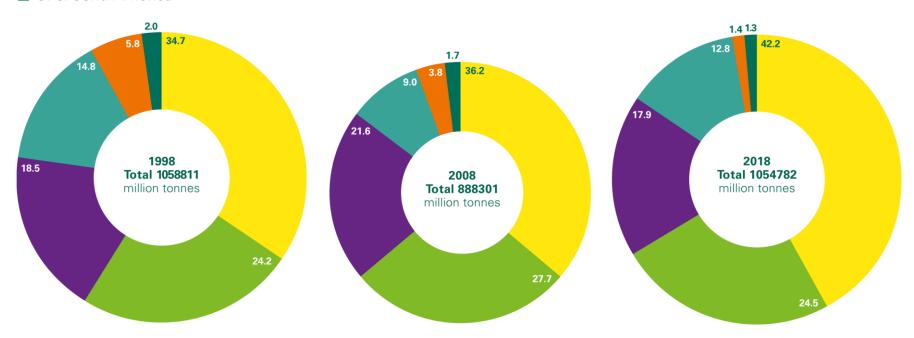




# Distribution of proved coal reserves: 1998, 2008 and 2018 Percentage



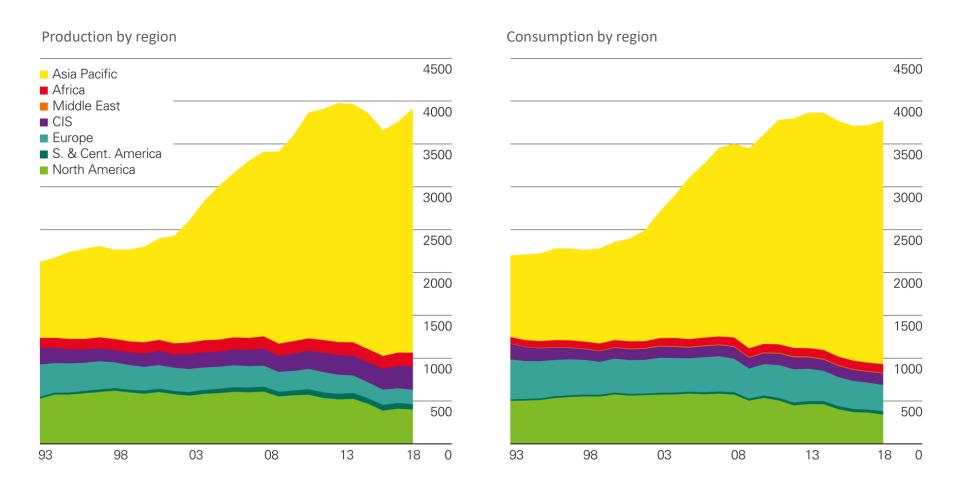
- Asia Pacific
- North America
- CIS
- Europe
- Middle East & Africa
- S. & Cent. America



## Coal production/consumption by region

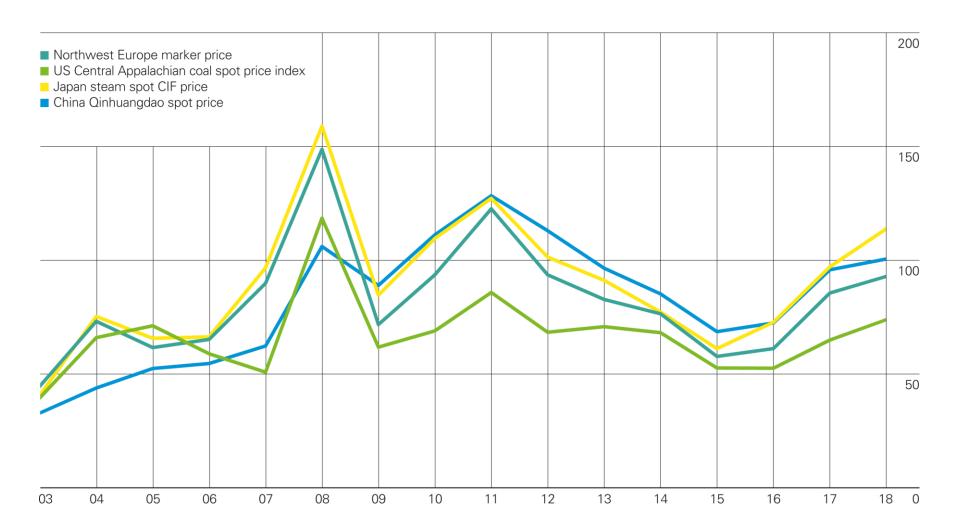
#### Million tonnes oil equivalent





# Coal prices US dollars per tonne





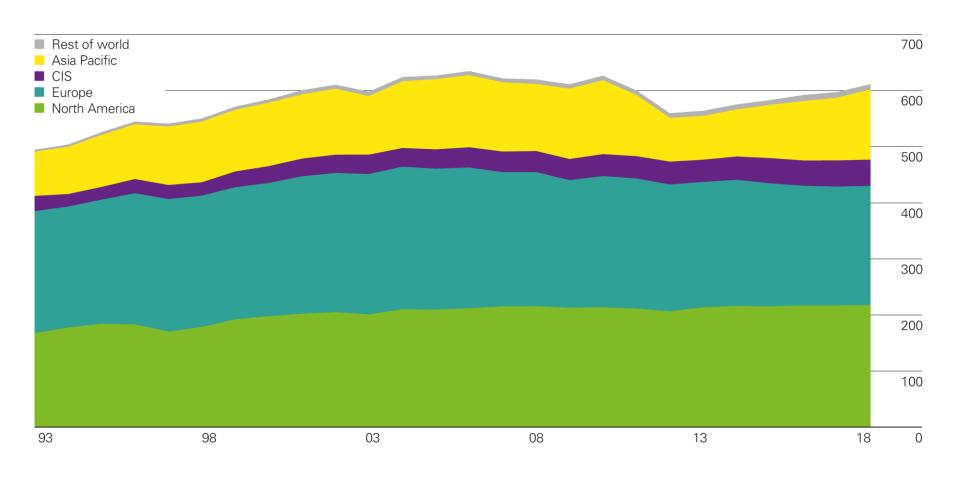


## Nuclear energy

## Nuclear energy consumption by region





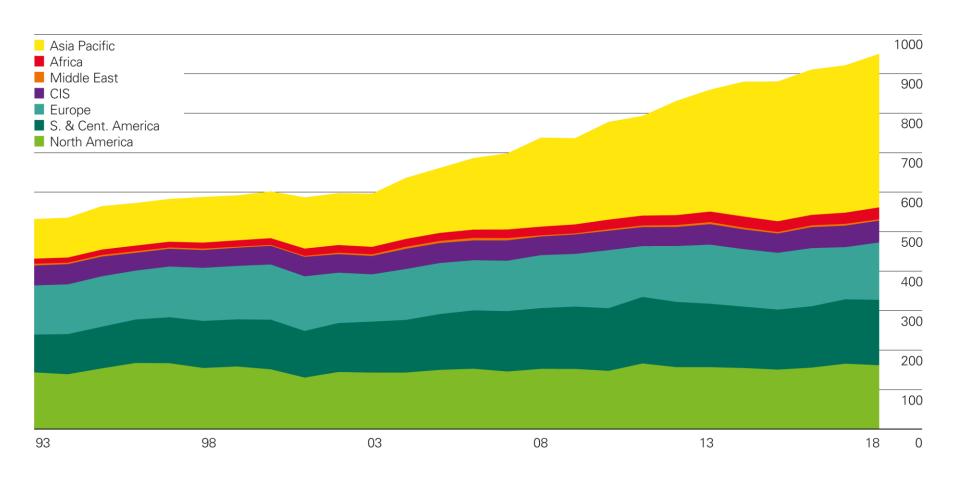




## Hydroelectricity

# Hydroelectricity consumption by region Million tonnes oil equivalent







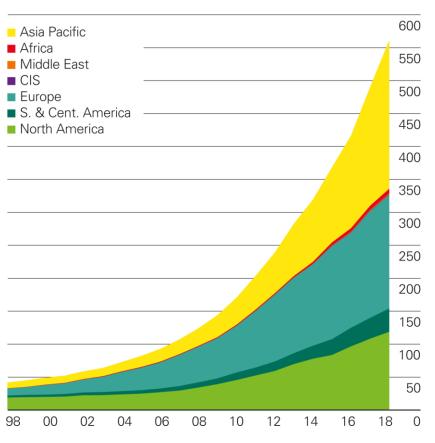
## Renewable energy

#### Renewable energy consumption by region/ generation by source

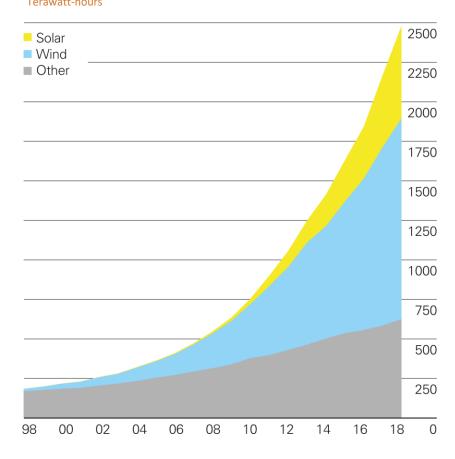


#### Renewables consumption by region

Million tonnes oil equivalent



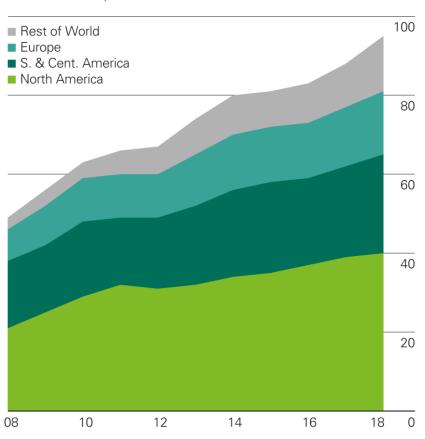
#### Renewables generation by source Terawatt-hours

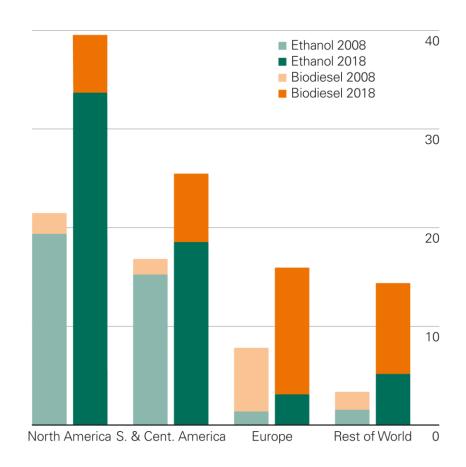


# Biofuels production by region Million tonnes oil equivalent



#### World biofuels production



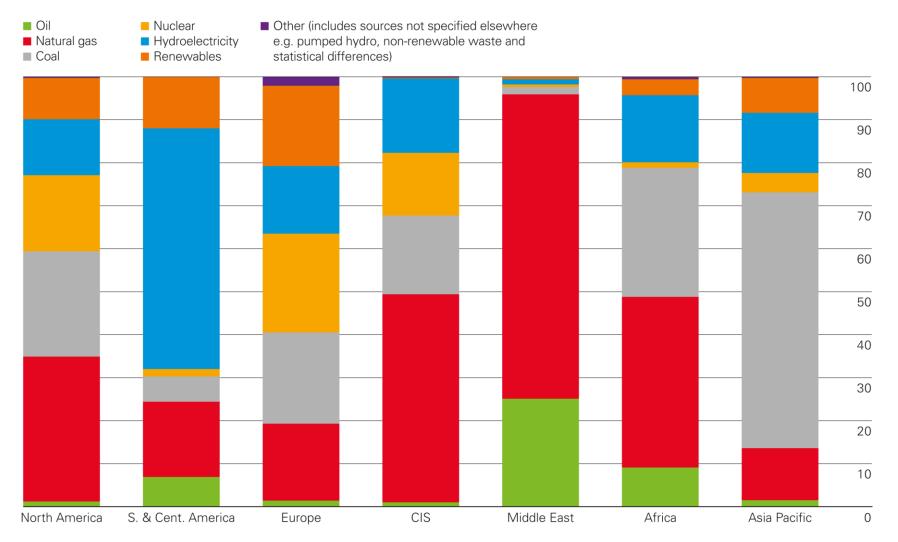




## **Electricity**

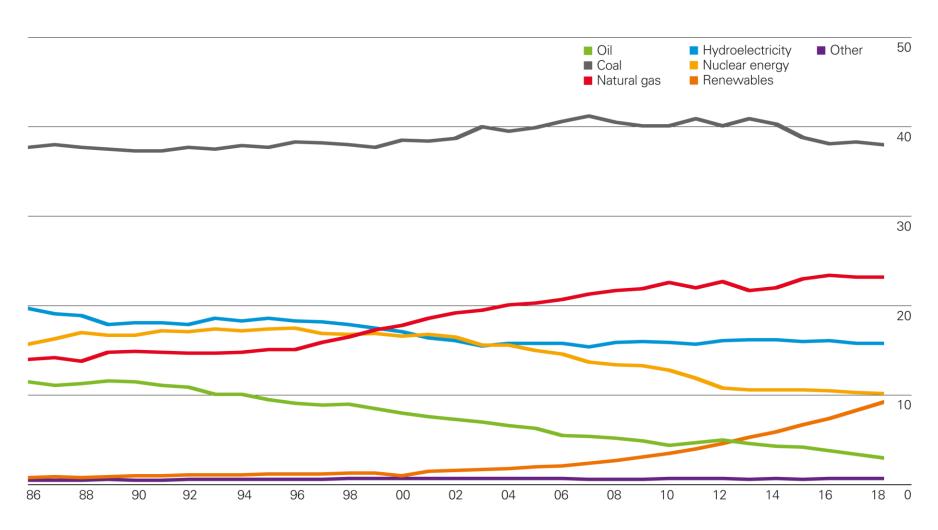
# Regional electricity generation by fuel 2018 Percentage





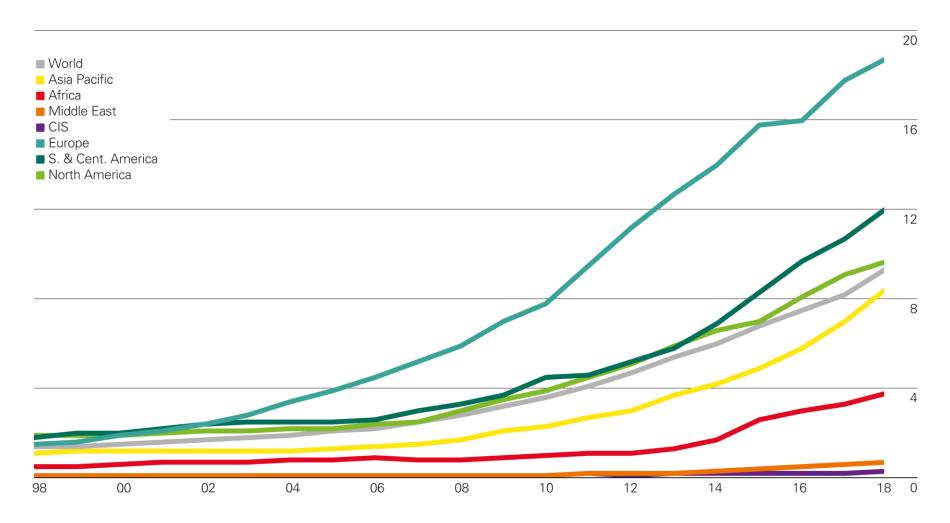
# Share of global electricity generation by fuel Percentage





# Renewables share of power generation by region Percentage







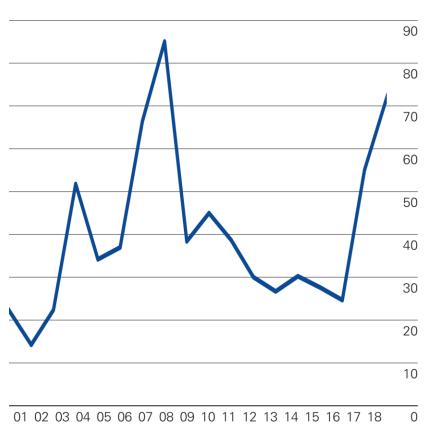
## Key minerals for the changing energy system

### Key minerals prices



#### Cobalt prices

Thousands of US dollars per tonne



#### Lithium carbonate prices

Thousands of US dollars per tonne

