

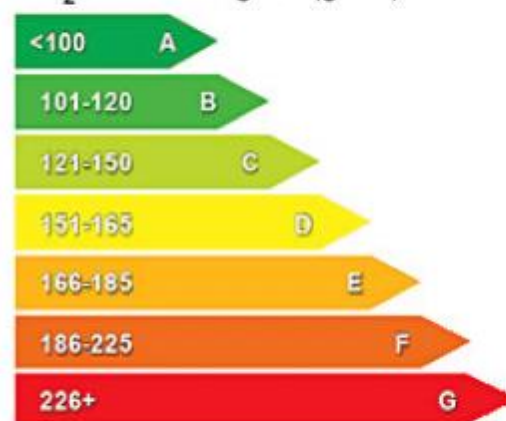


# CONTRIBUTION OF AUTOMOTIVE INDUSTRY ON INDONESIA LOW CARBON ECONOMIC GROWTH

Faisal Basri

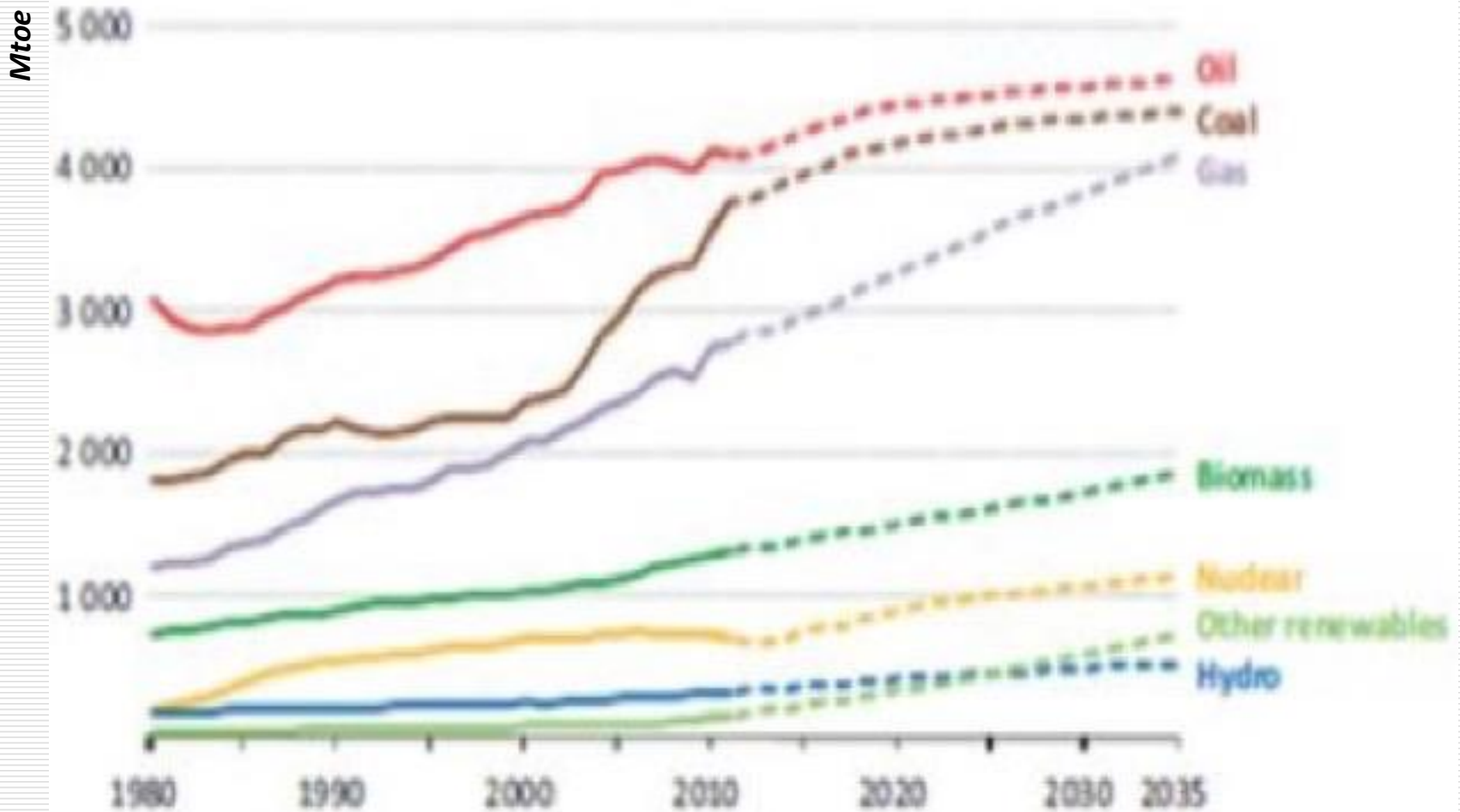
24 July 2019

CO<sub>2</sub> emission figure (g/km)



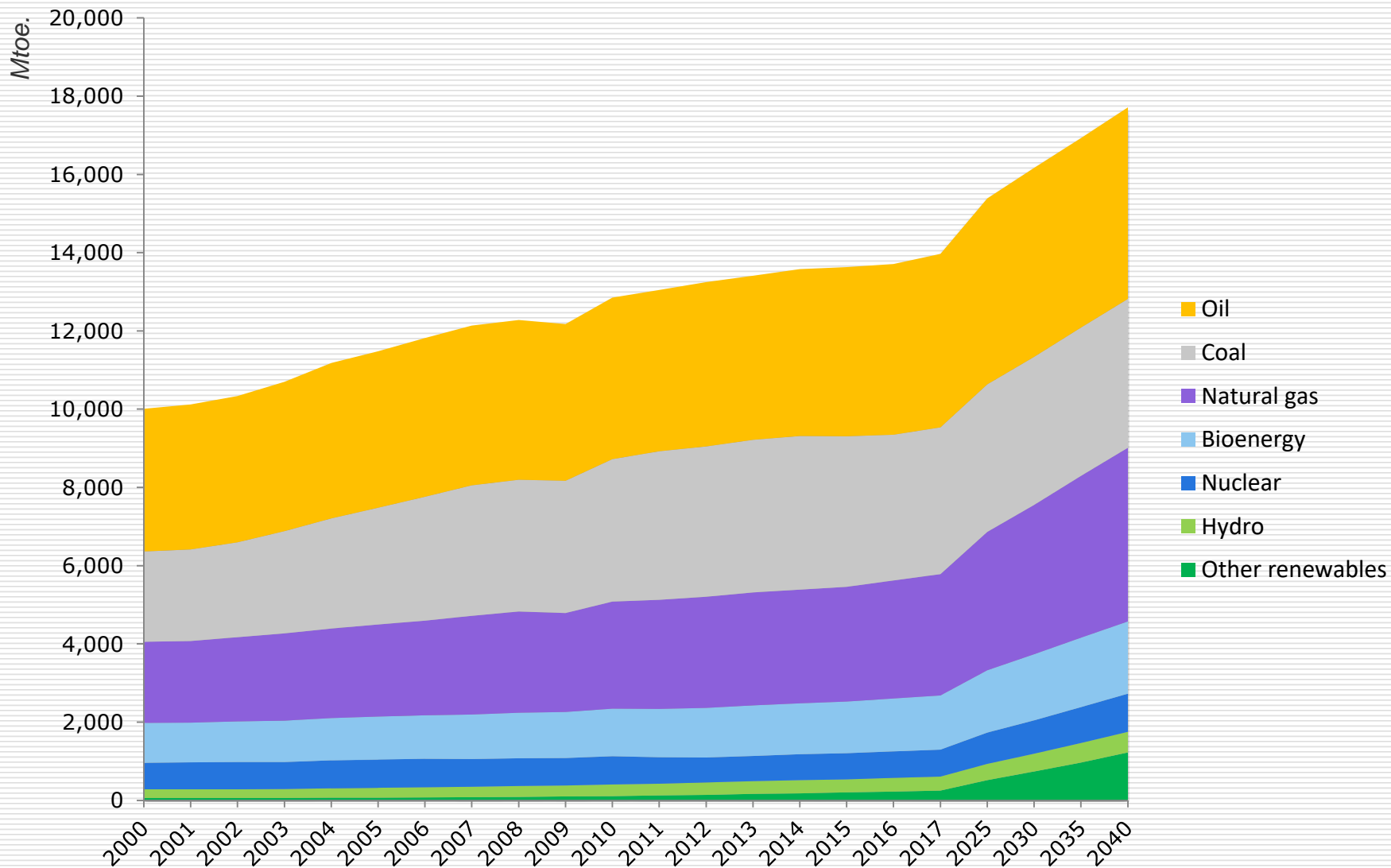
# Increasing primary energy demand

World primary energy demand by fuel in the new policies scenario



Source: OECD, *The Ocean Economy in 2030*, December 2016.

# World total primary energy demand



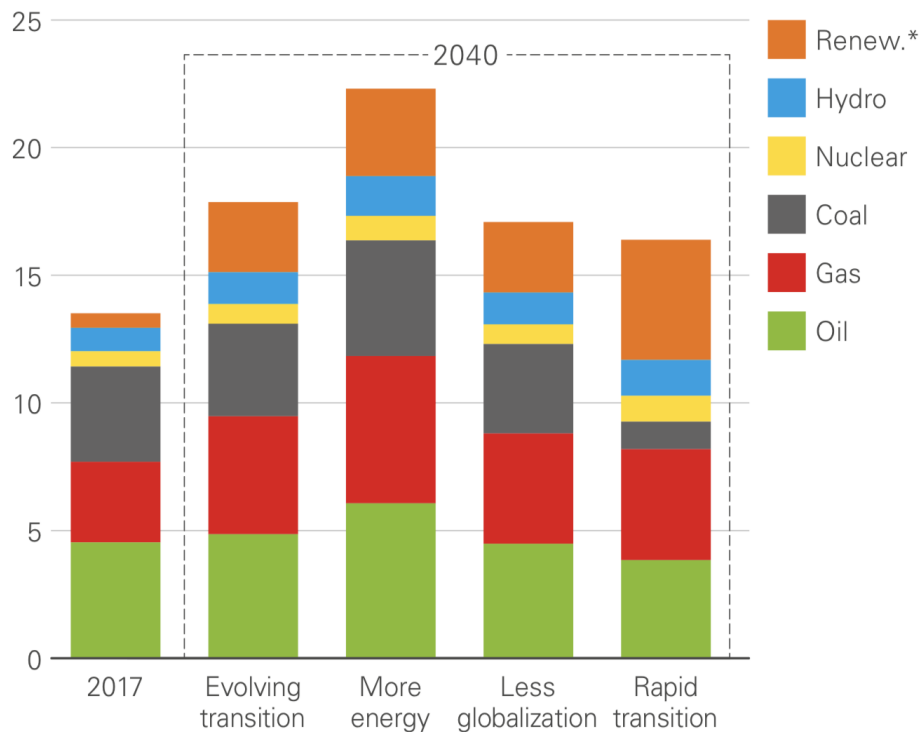
Source: The International Energy Agency (IEA), *World Energy Outlook 2018*.

# BP Energy outlook

The *Energy Outlook* considers a range of scenarios to explore different aspects of the energy transition

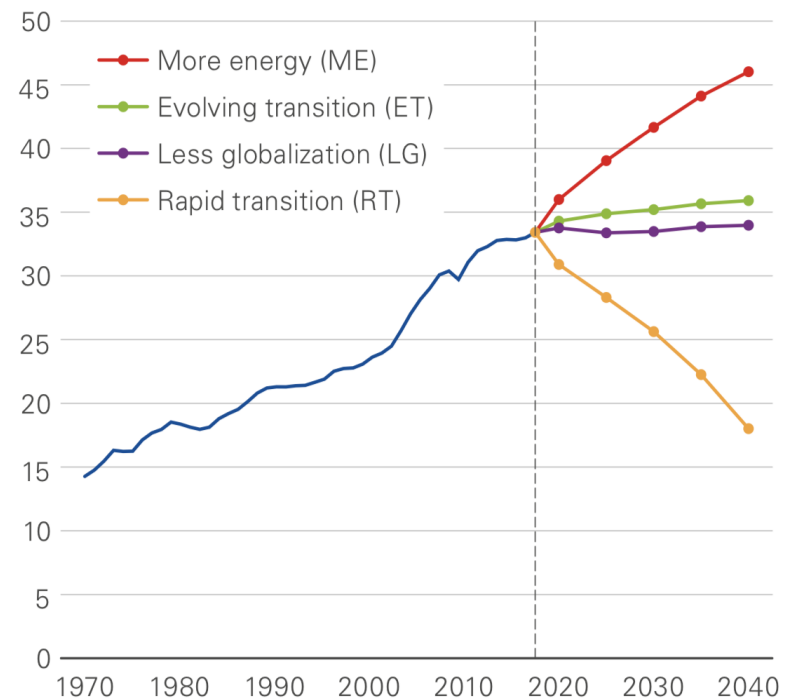
Primary energy consumption by fuel

Billion toe



CO<sub>2</sub> emissions

Gt of CO<sub>2</sub>



\*Renewables includes wind, solar, geothermal, biomass, and biofuels. For full list of data definitions see p138

# ... SDGs: 17 goals to transform our world

Adopted by 193 nations in 2015 under the auspices of the United Nations





# Indonesia lags behind in achieving SDGS targets

## Ranking in SDG Index 2019

From the report by the Sustainable Development Solutions Network and the Bertelsmann Stiftung



Thailand moves up 19 places from 2018 and comes in first among ASEAN countries in 2019.

The issues on which Thailand receives high scores:

- Poverty eradication
- Water management and sanitation services
- Decent work and economic growth
- Low unemployment rates

Major challenges remain: 2, 3, 6, 9, 10, 15, 16, 17

Significant challenges remain: 1, 5, 7, 8, 11, 14

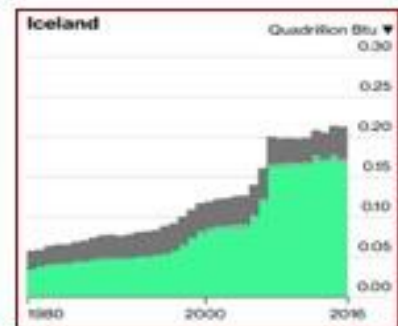
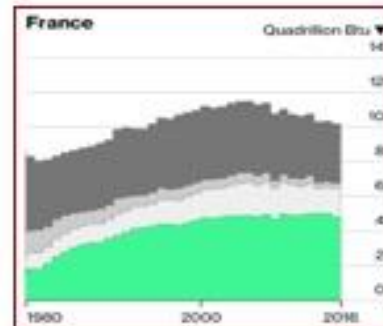
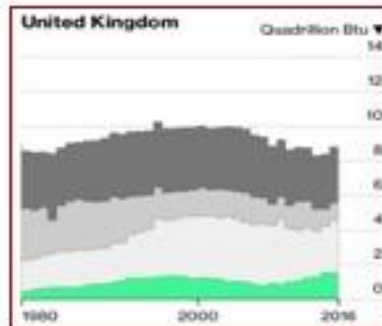
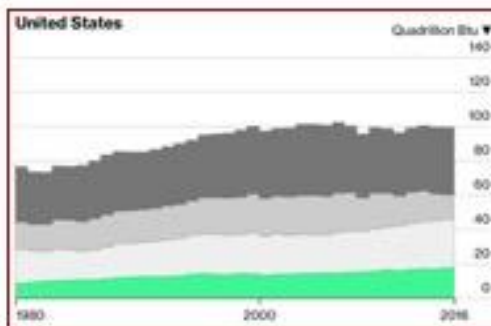
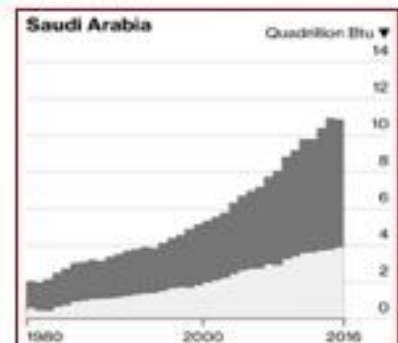
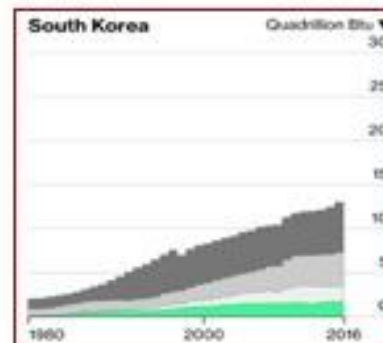
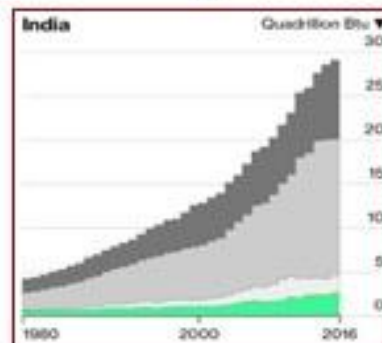
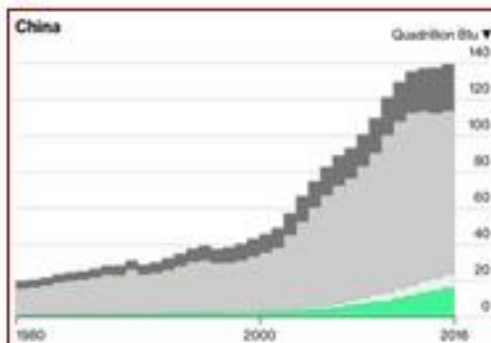
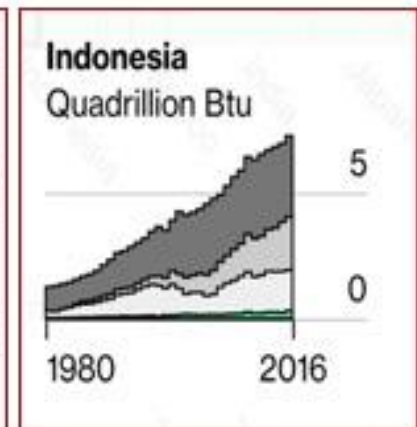
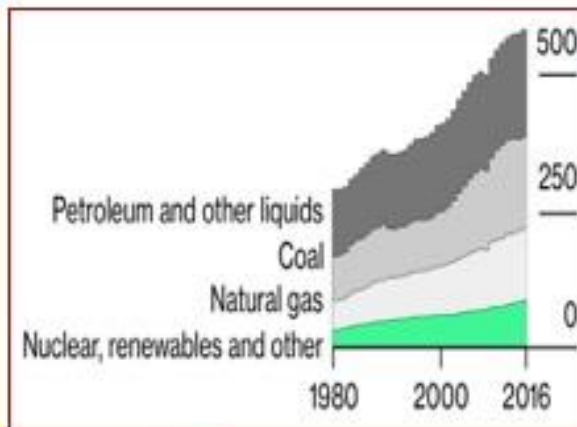
Challenges remain: 4, 12, 13

SDG achievement: -

Source: 2019 Sustainable Development Report.

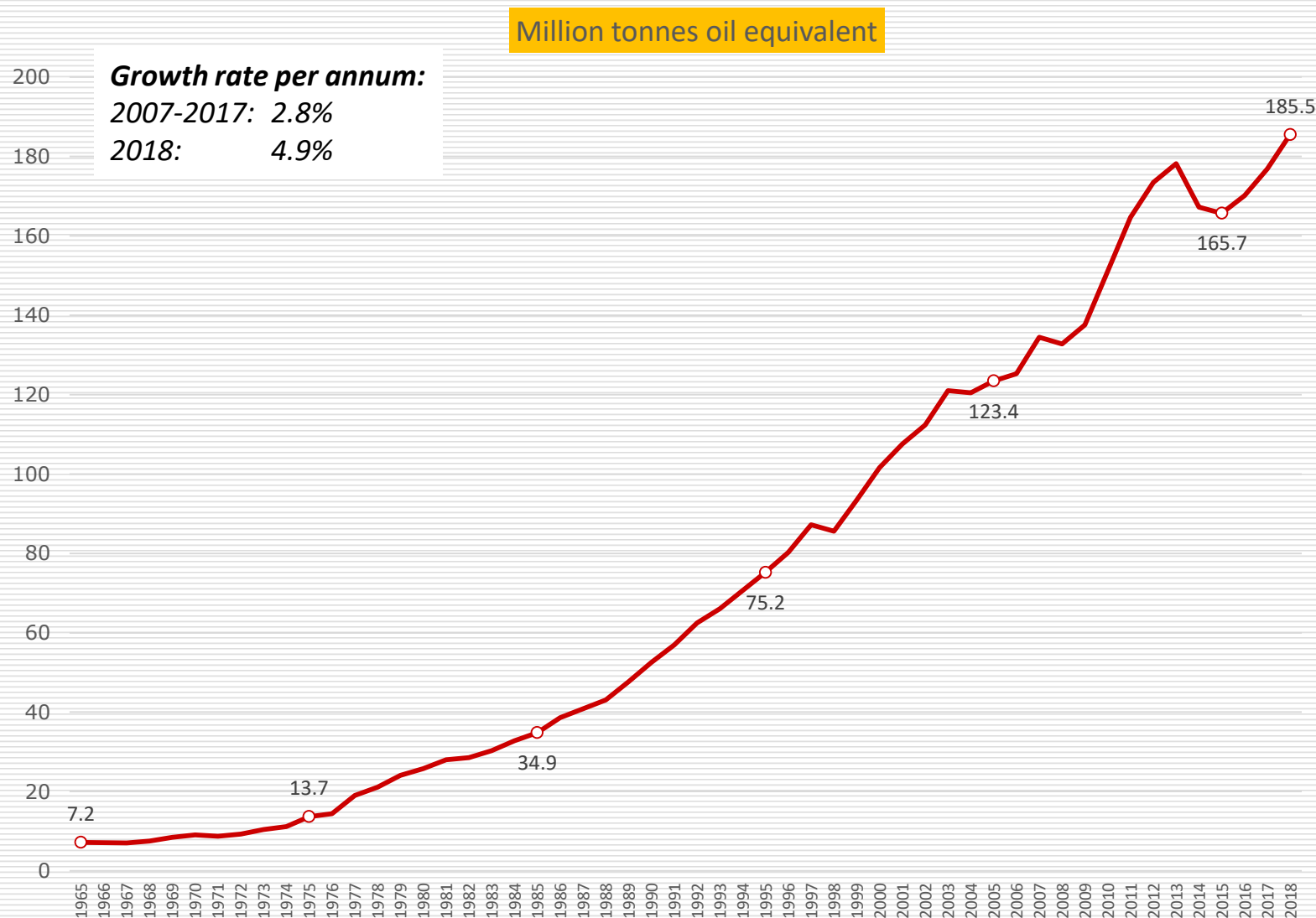
# World energy consumption, quadrillion Btu

The global balance of energy demand has shifted dramatically since 1980. Today, it's China that uses the most. (The U.S. is still a close second.) Other large, emerging economies like India and **Indonesia** are consuming four, five, and in some cases, even six times the primary energy they did in 1980—most of it coming from fossil fuels spewing the carbon-dioxide emissions now threatening the earth's climate.



Source: Bloomberg, "How Each Country Contributed to the Explosion in Energy Consumption," July 9, 2019, based on U.S. Energy Information Agency.

# Indonesia: primary energy consumption

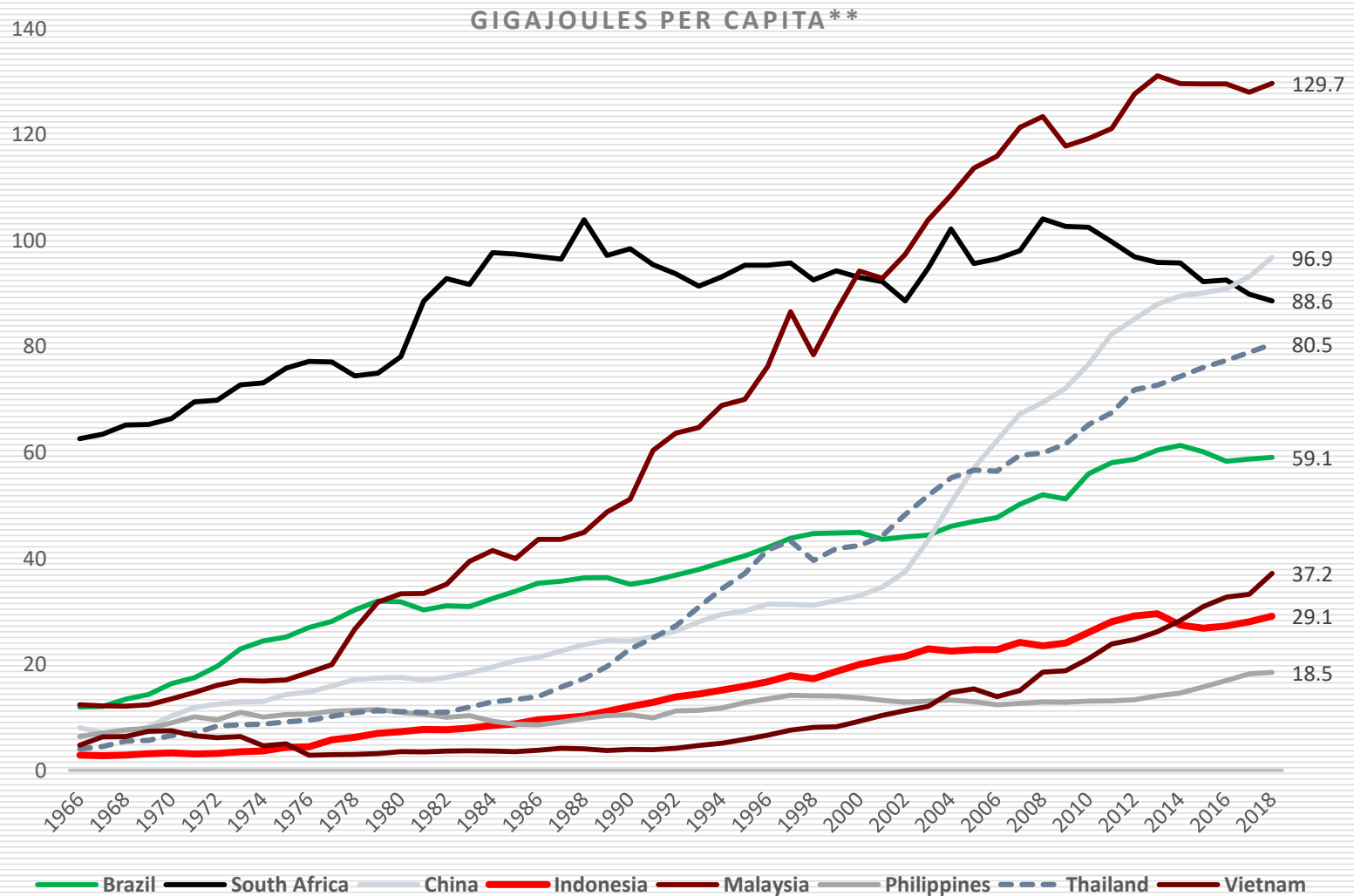


\* Primary energy comprises commercially-traded fuels, including modern renewables used to generate electricity.

Source: BP Statistical Review of World Energy, 68<sup>th</sup> edition, 2019.



# Primary energy consumption per capita\*

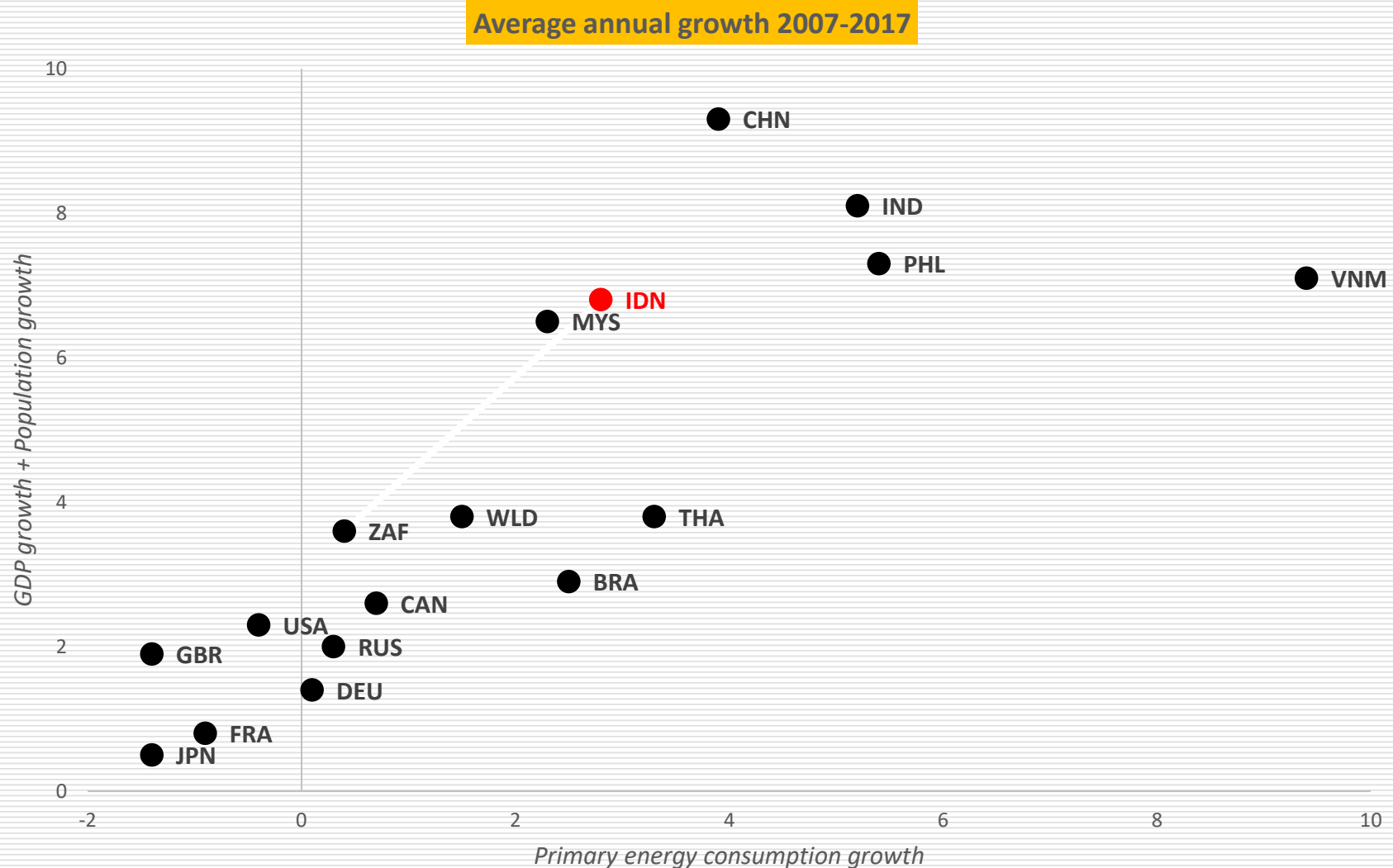


\* Primary energy comprises commercially-traded fuels, including modern renewables used to generate electricity.

\*\* The energy content of a 30 litre tank of gasoline is about one gigajoule.

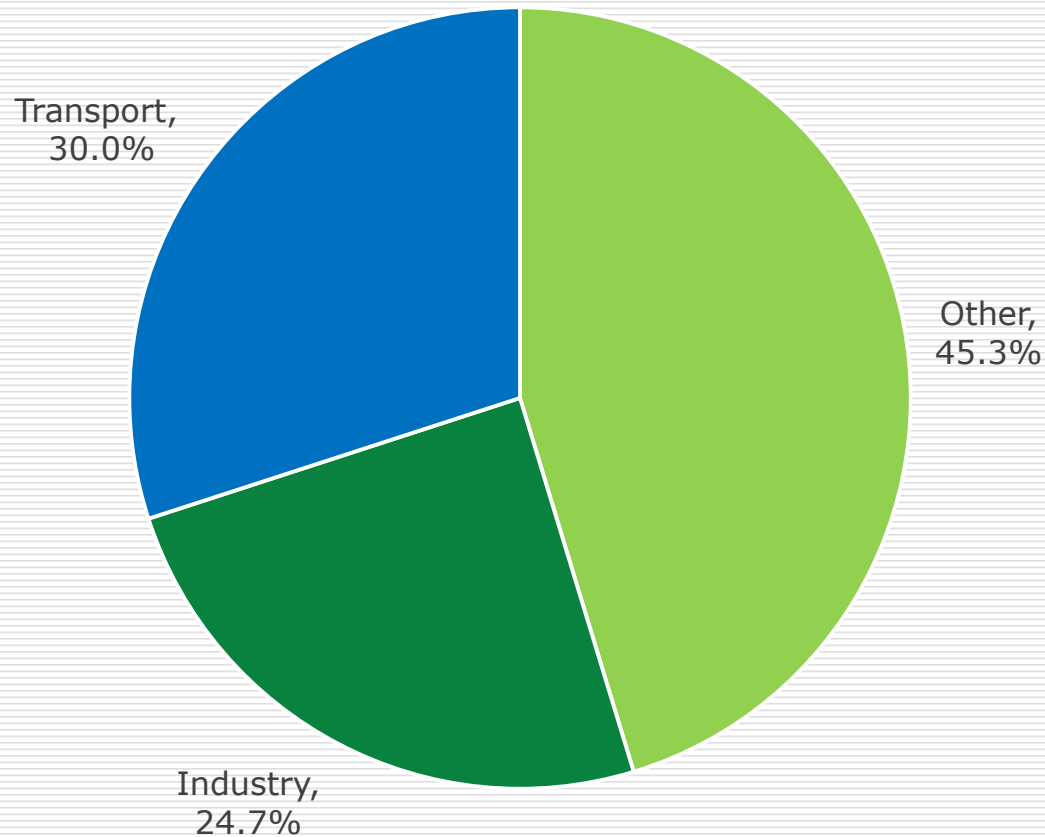
Source: BP Statistical Review of World Energy, 68<sup>th</sup> edition, 2019.

# Economic growth and population growth spurred primary energy growth



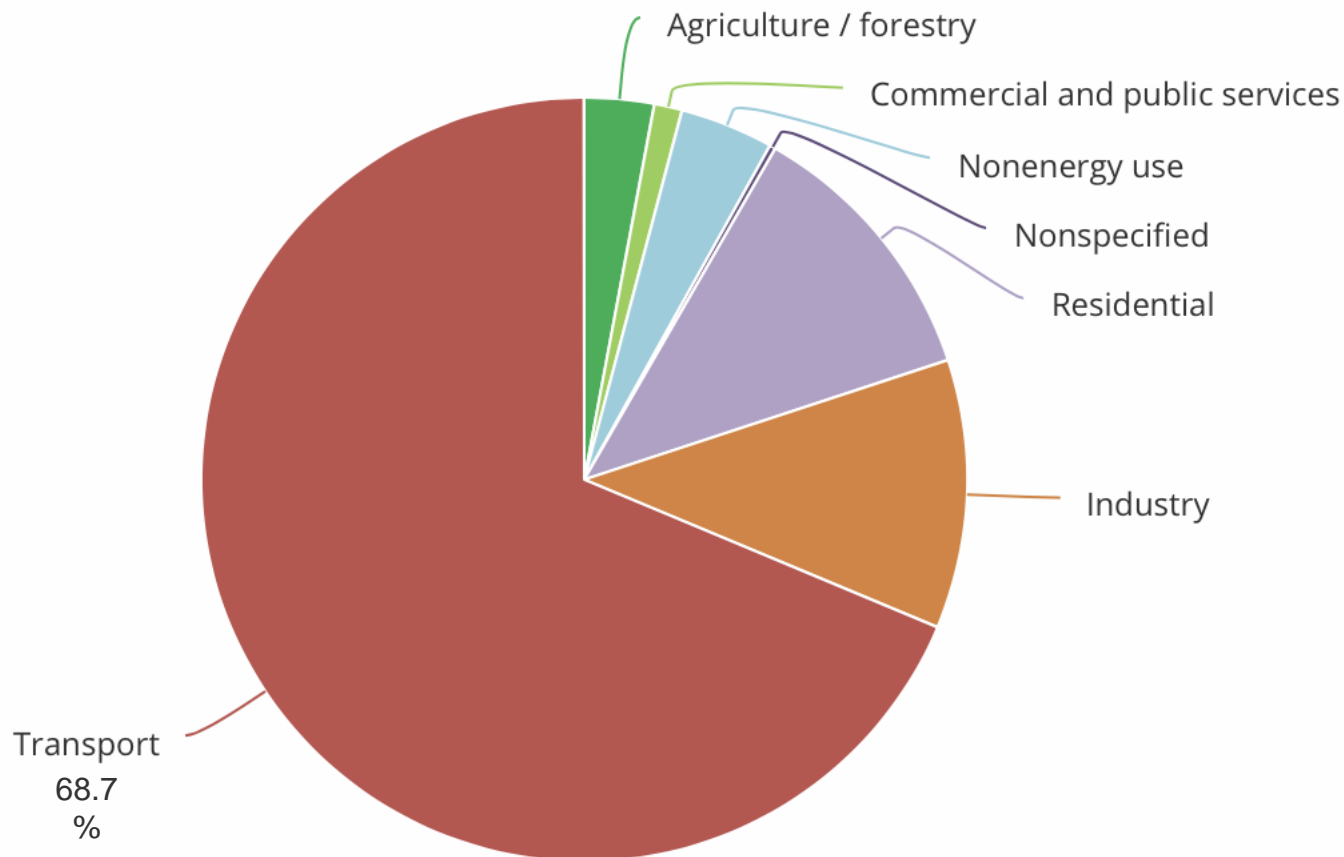
Source: BP, *Statistical Review of World Energy*; and World Bank, *World Development Indicators* database.

# Indonesia: share of total final consumption of energy by sector



Source: The International Energy Agency (IEA), *World Energy Outlook 2018*.

# Indonesia: Share of oil products final consumption by sector, 2016

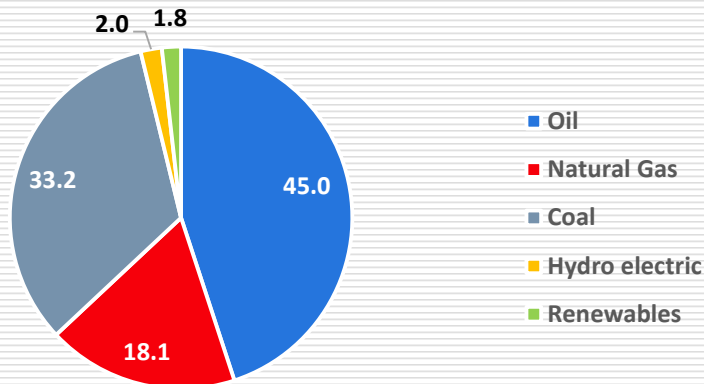


Source: The International Energy Agency (IEA), *World Energy Outlook 2018*.

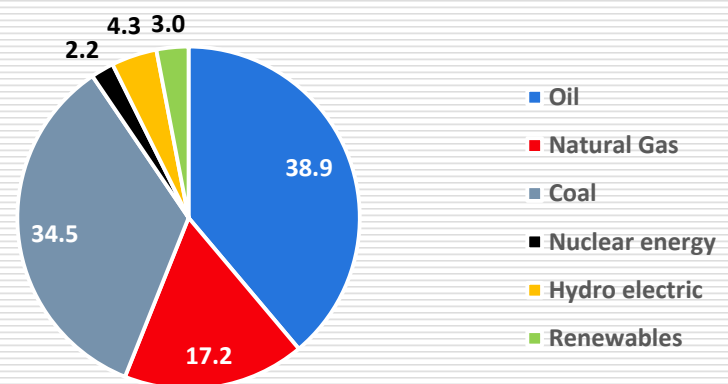


# Primary energy—consumption by fuel\*

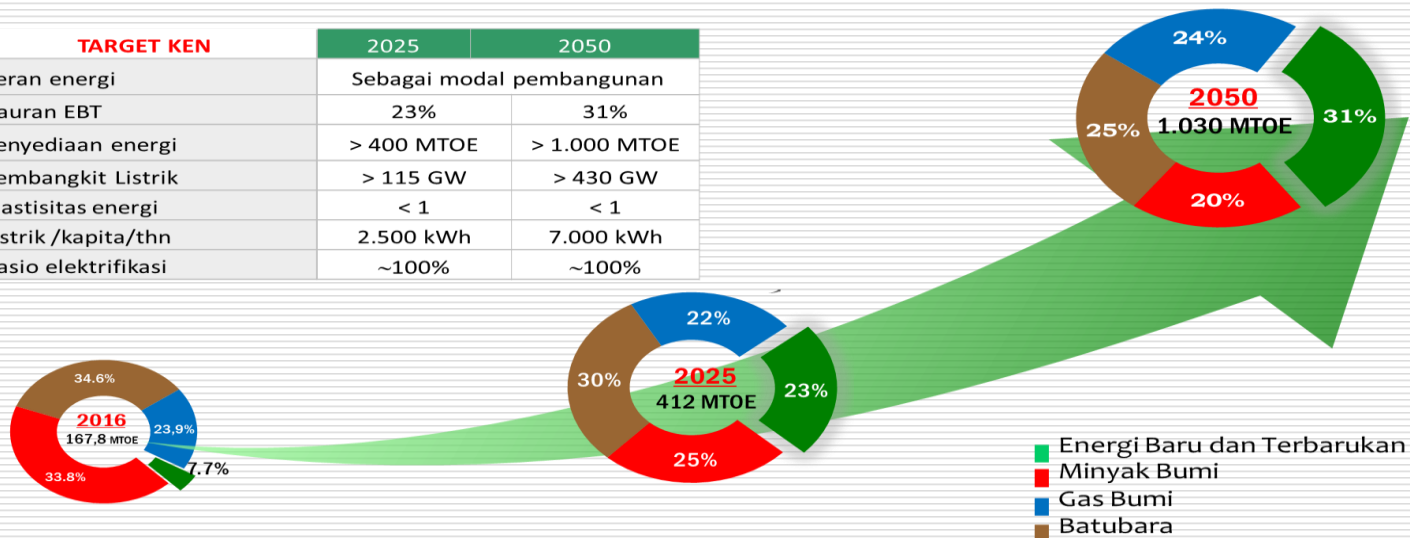
Indonesia, 2018



Asia Pacific, excl. China, 2018



TARGET KEN	2025	2050
Peran energi	Sebagai modal pembangunan	
Bauran EBT	23%	31%
Penyediaan energi	> 400 MTOE	> 1.000 MTOE
Pembangkit Listrik	> 115 GW	> 430 GW
Elastisitas energi	< 1	< 1
Listrik /kapita/thn	2.500 kWh	7.000 kWh
Rasio elektrifikasi	~100%	~100%

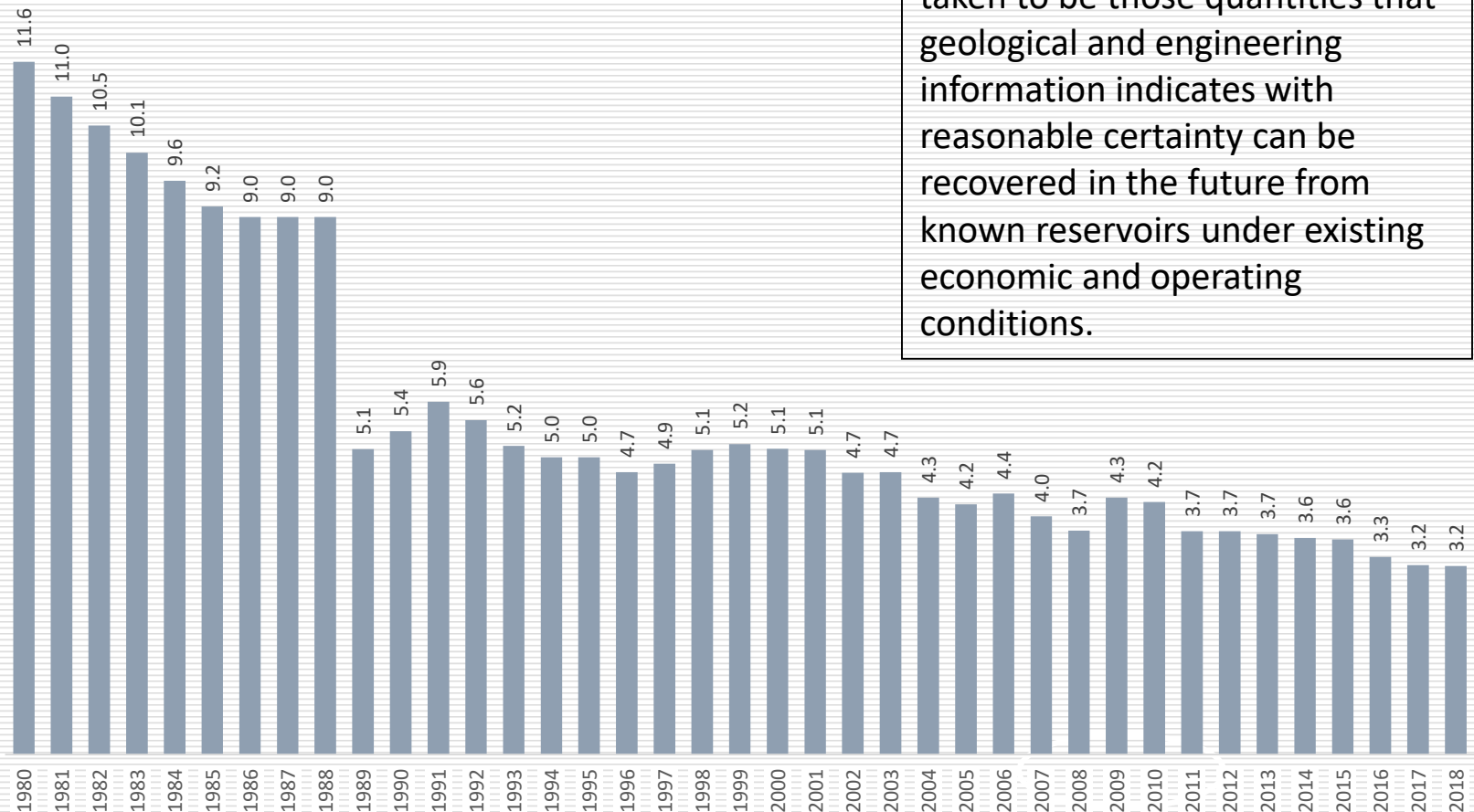


\* Primary energy comprises commercially traded fuels, including modern renewables used to generate electricity.

Source: BP Statistical Review of World Energy, 68<sup>th</sup> edition, 2019.

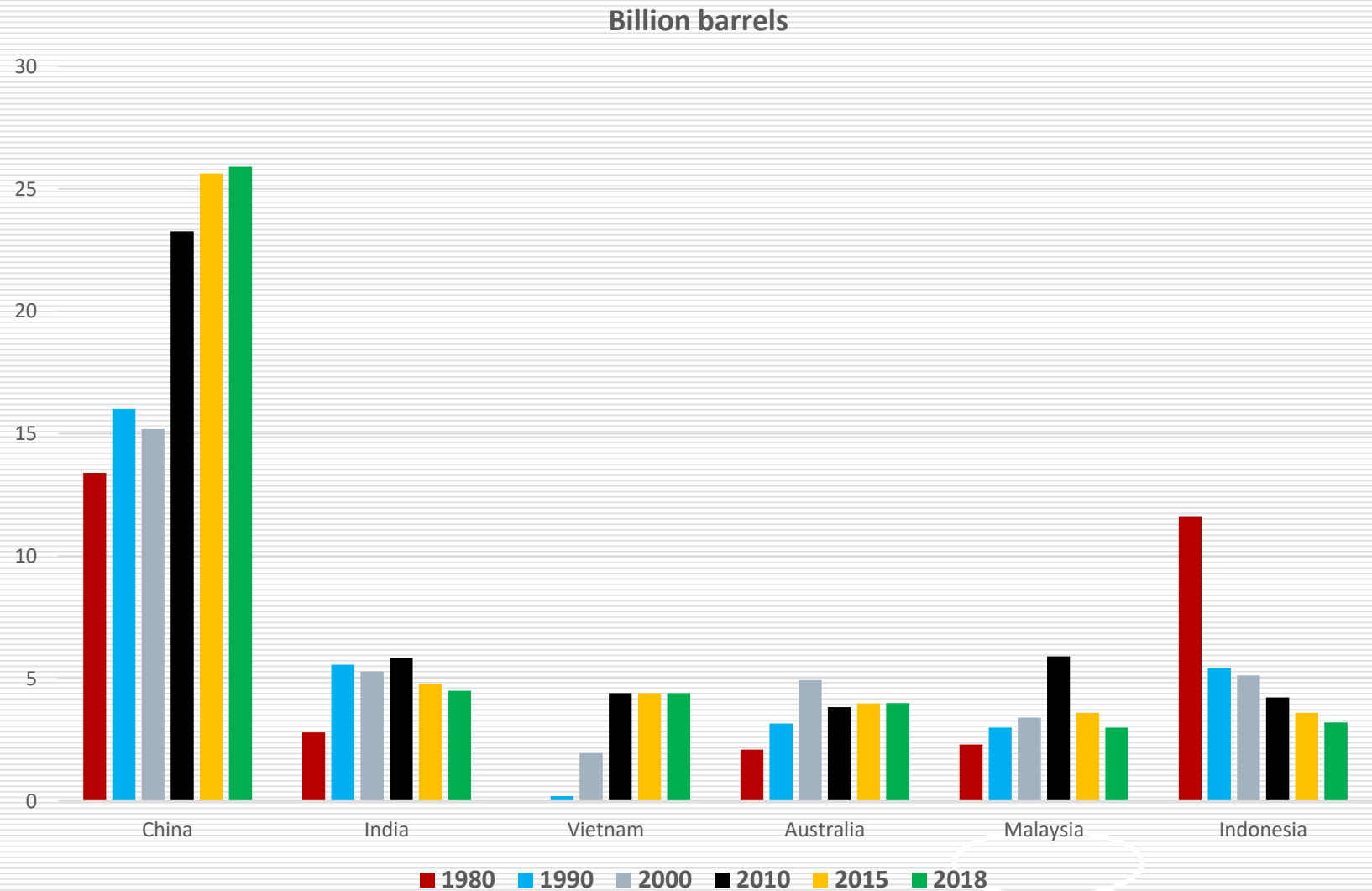
# Indonesia: oil proved reserves

Billion barrels



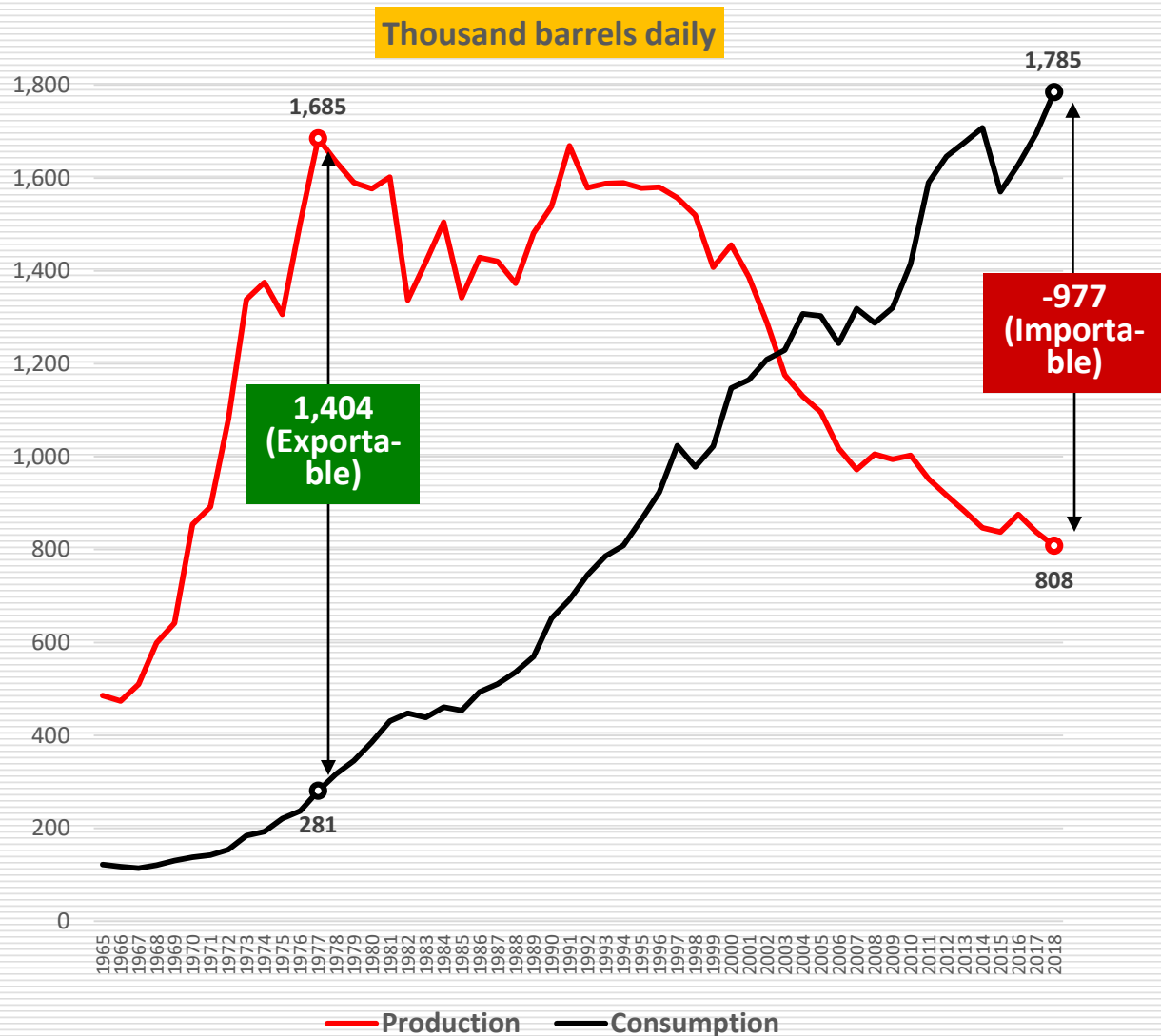
**Proved reserves of oil** - Generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions.

# Oil proved reserves in selected Asia Pacific countries



Source: BP Statistical Review of World Energy.

# Skyrocketing fuel consumption, the production slump, making imports increasingly undermined the economy



Source: BP Statistical Review of World Energy, 68<sup>th</sup> edition, 2019.

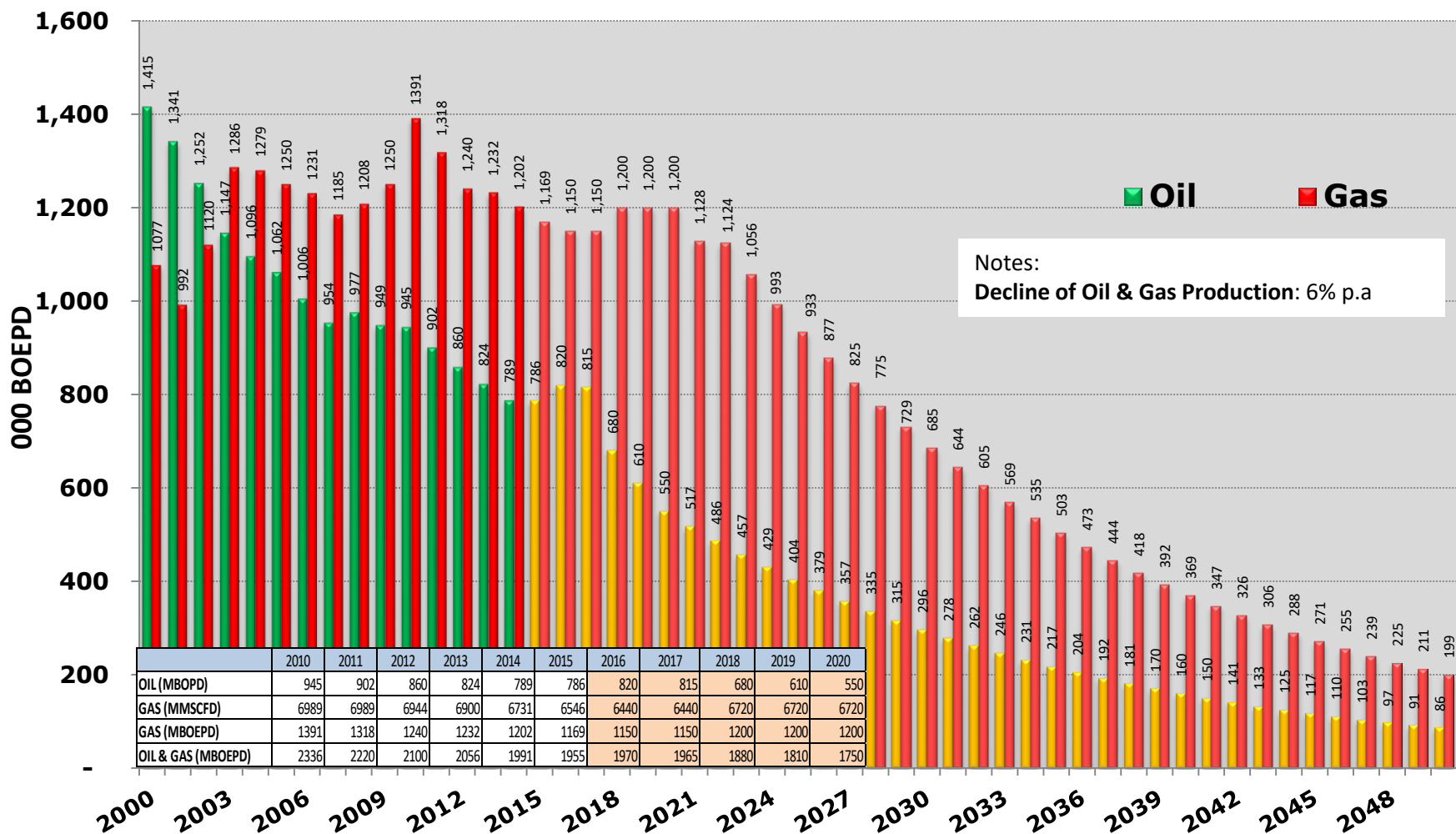
**Oil production:** A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities.

**Oil consumption:** Inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of biogasoline (such as ethanol), biodiesel and derivatives of coal and natural gas are also included.



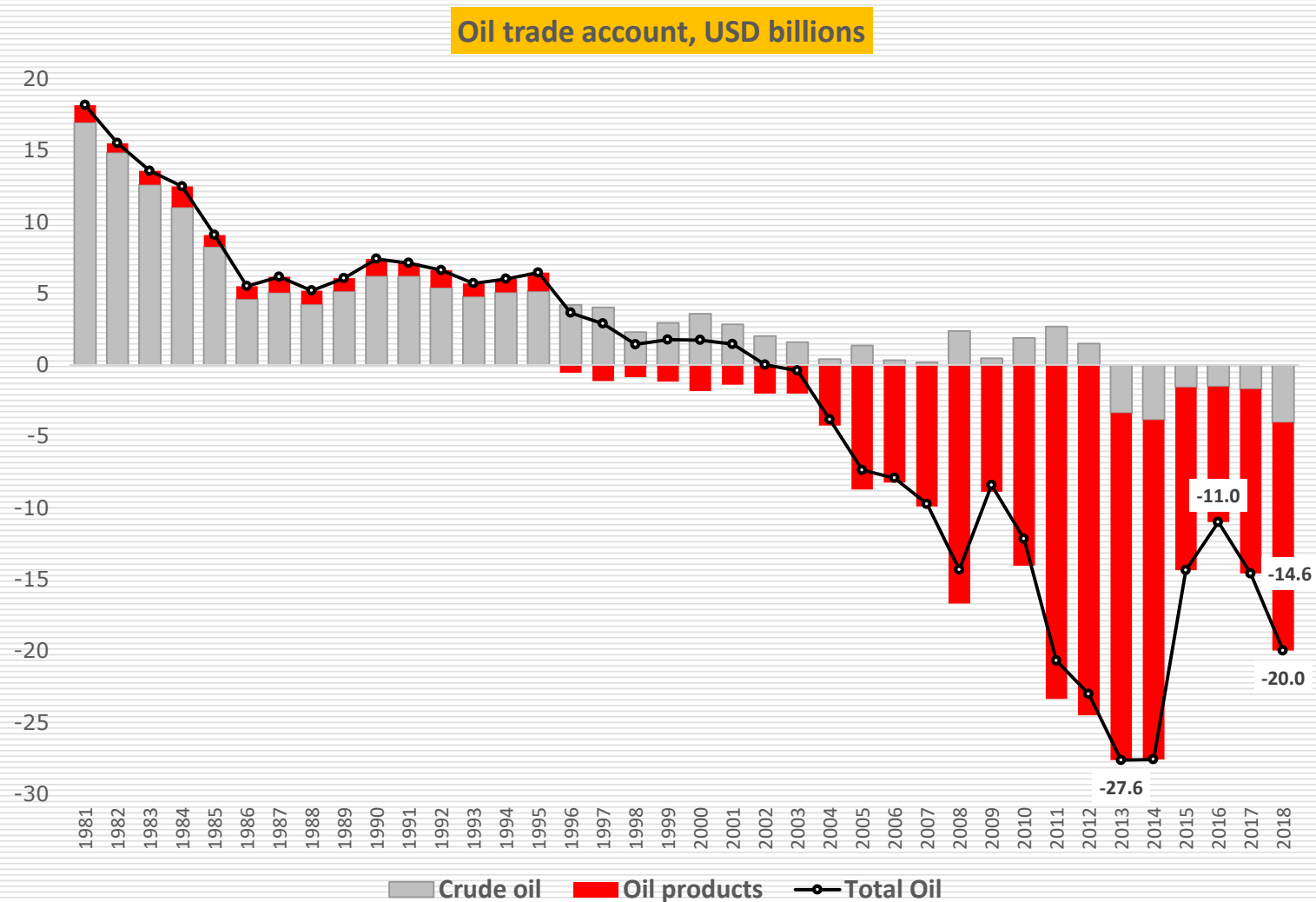
# Indonesia: energy consumption by fuel, 2017

New reserves through massive exploration and continuous Investment are required to increase or maintain long term production profile



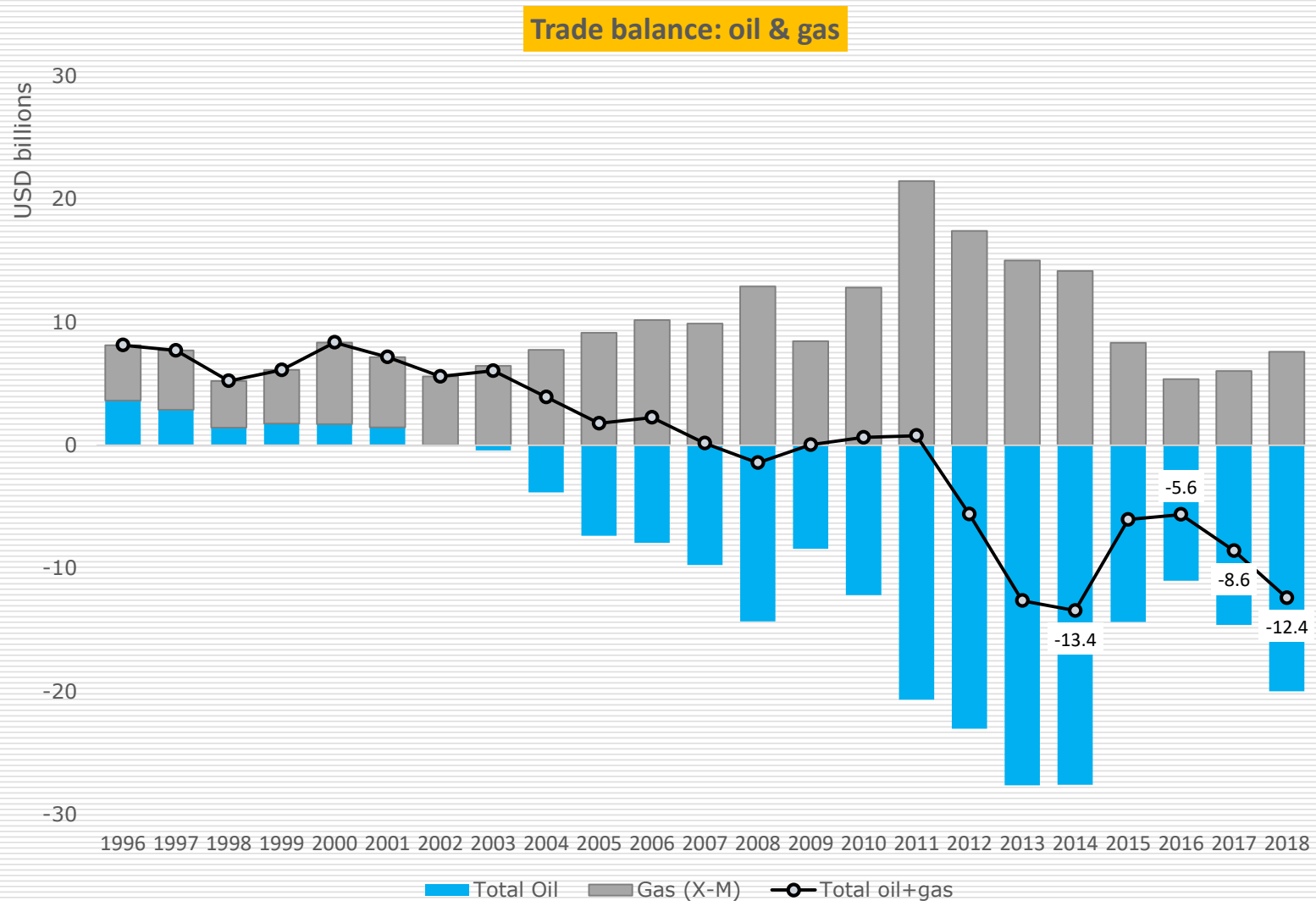
Source: SKK Migas, October 2016.

# Oil trade deficit increased sharply in 2017-18



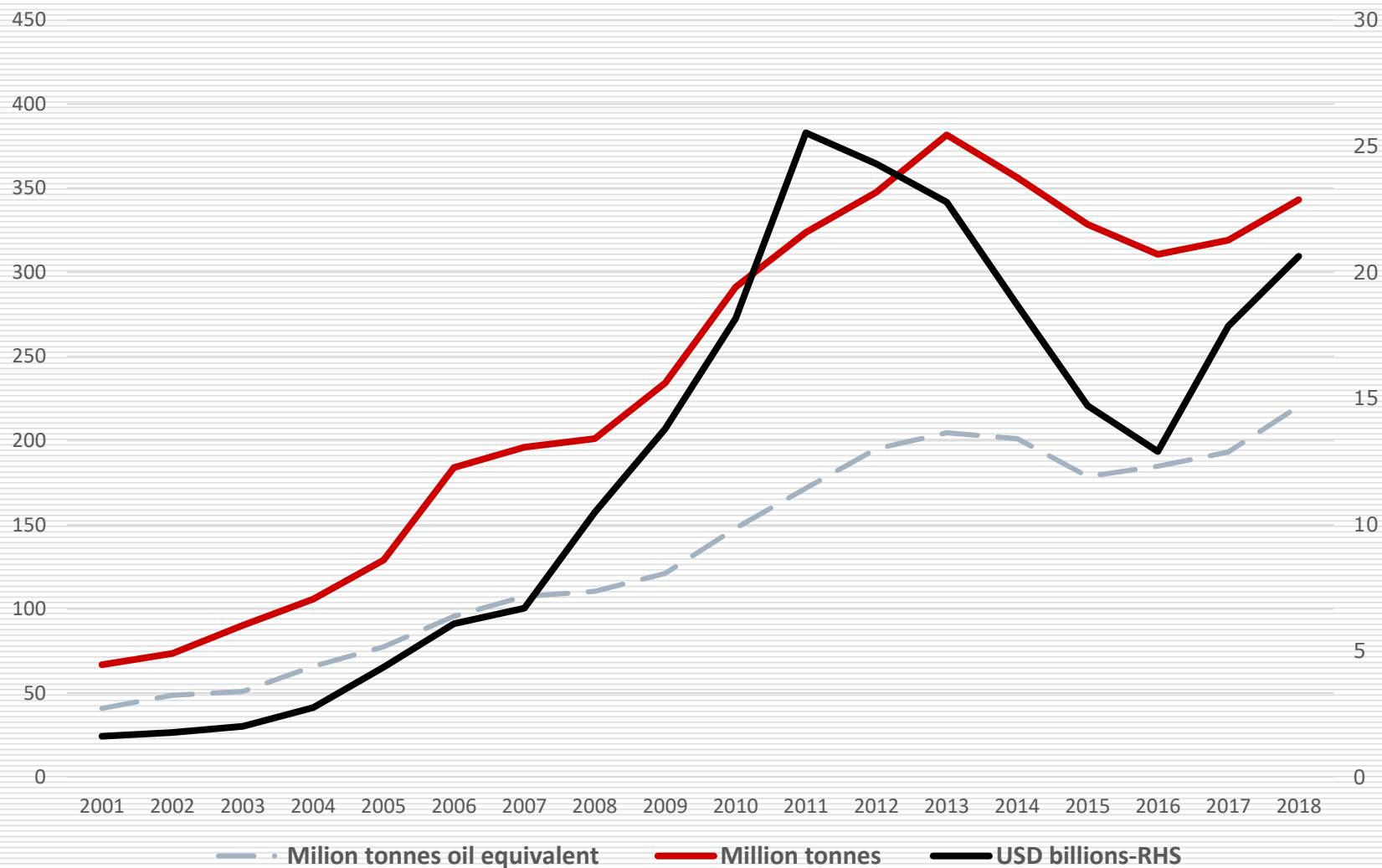
Source: BPS-Statistics Indonesia.

# Oil and gas trade deficit increased sharply in 2017-18



Source: BPS-Statistics Indonesia.

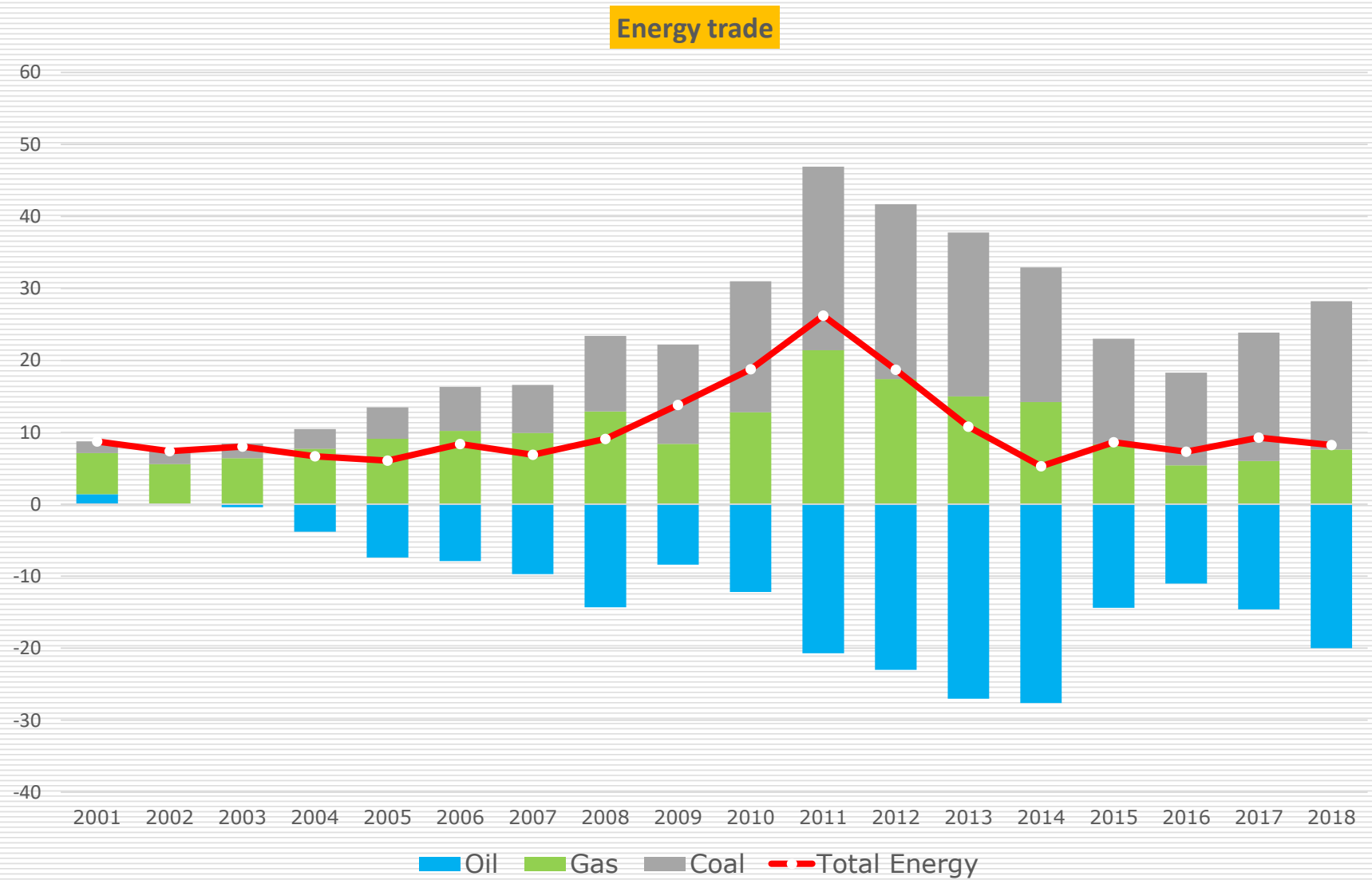
# Indonesia: export of coal (HS code: 2701)



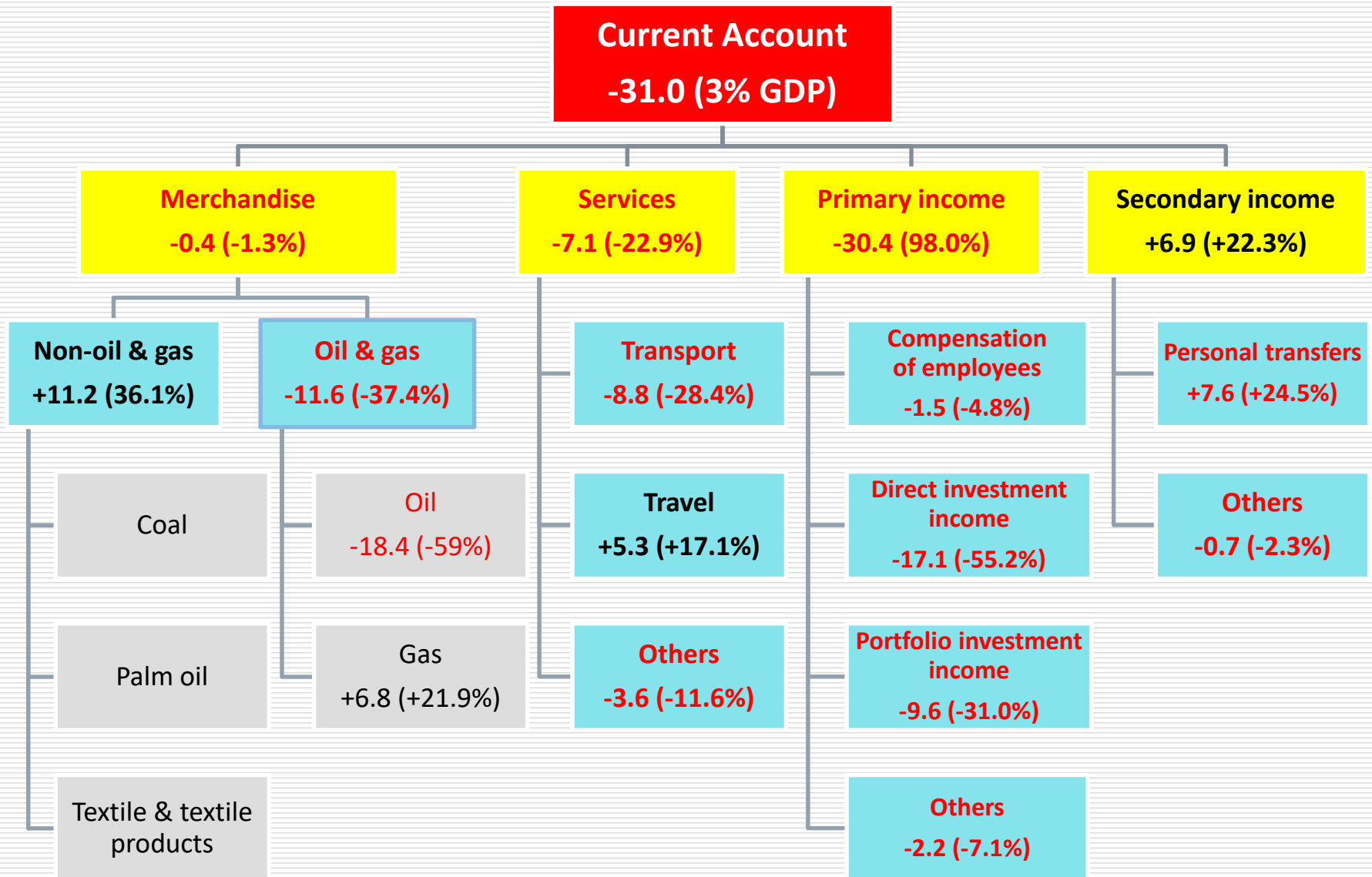
Source: BP Statistical Review of World Energy, 68<sup>th</sup> edition, 2019 for volume (million tonnes oil equivalent); and International Trade Center, International Trade Statistics for Volume (million tonnes) and value (USD billions).



# Energy trade



# Structure of current account, 2018 (US\$ billions)



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