



Coal World Market Developments

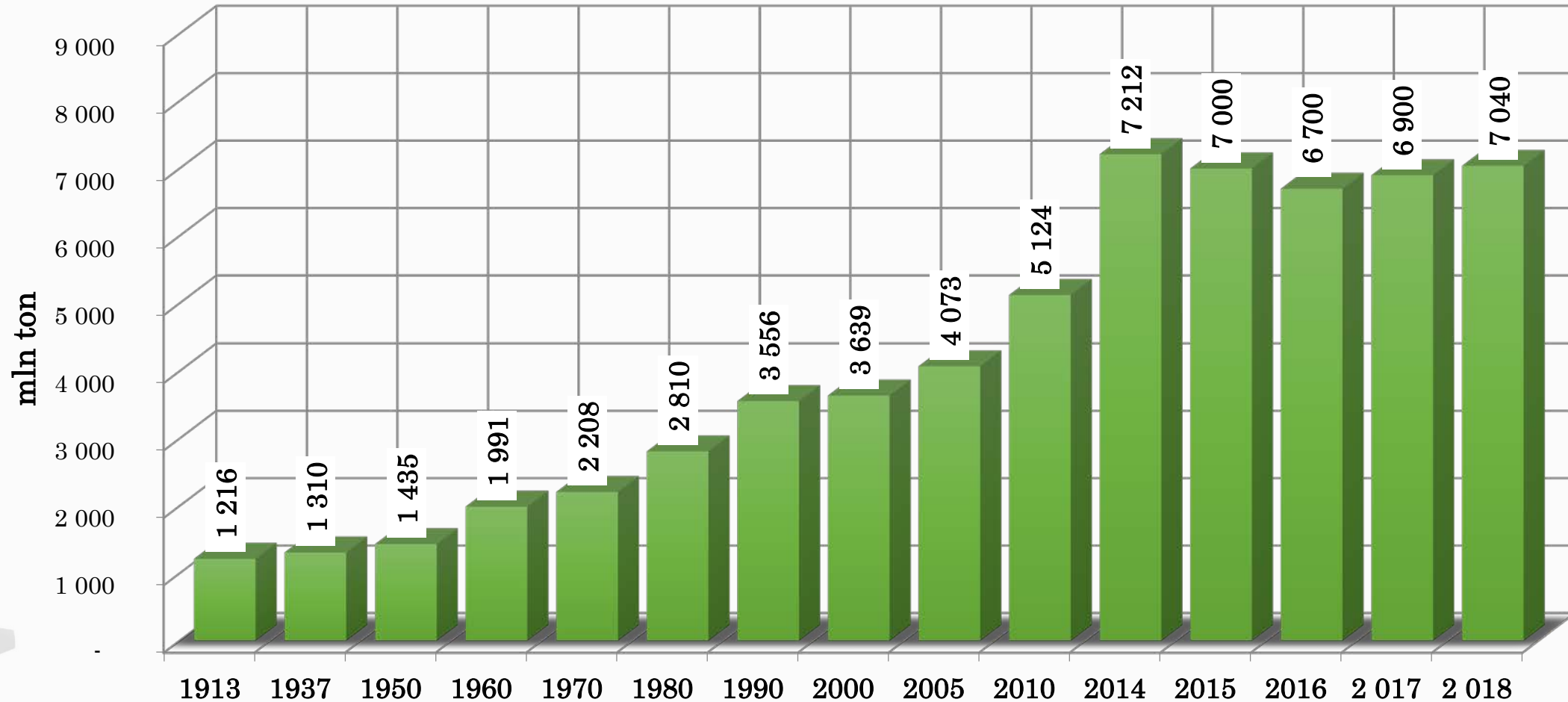
Janusz Olszowski

President

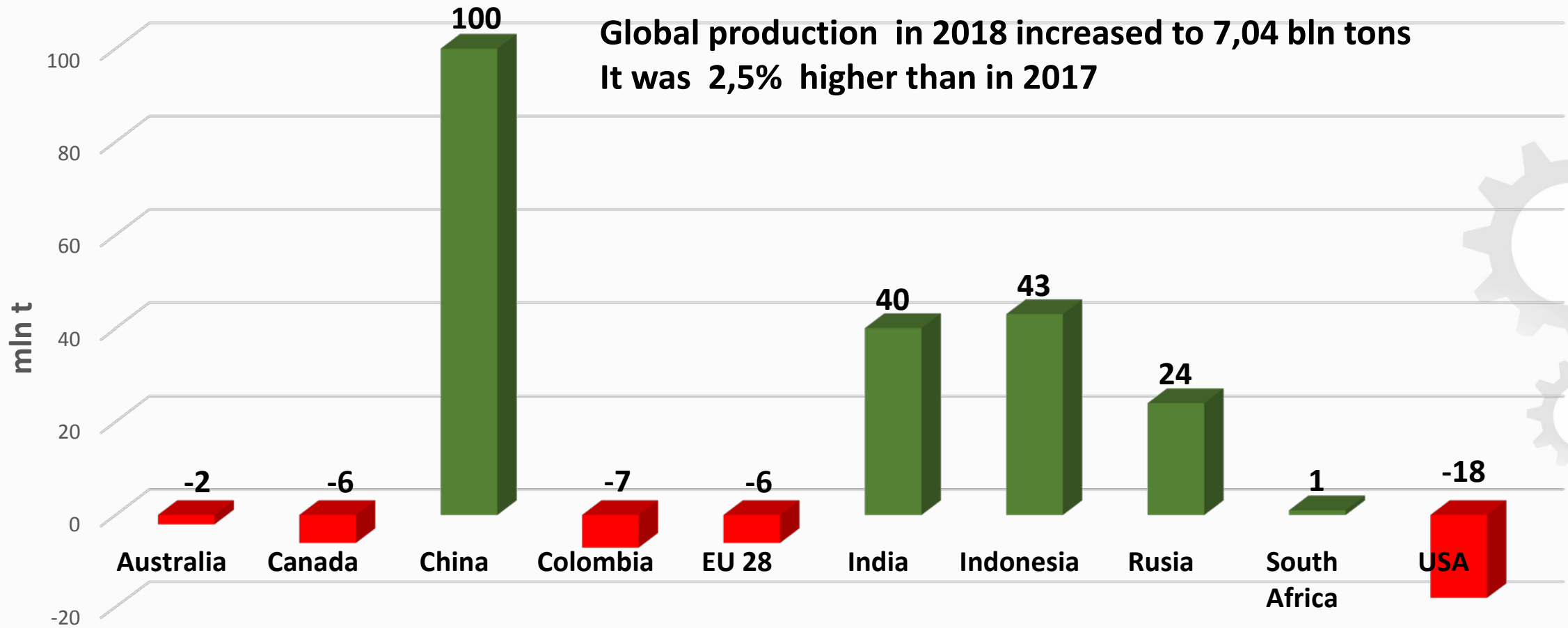
Polish Mining Chamber of Industry and Commerce

Hard coal production in the World

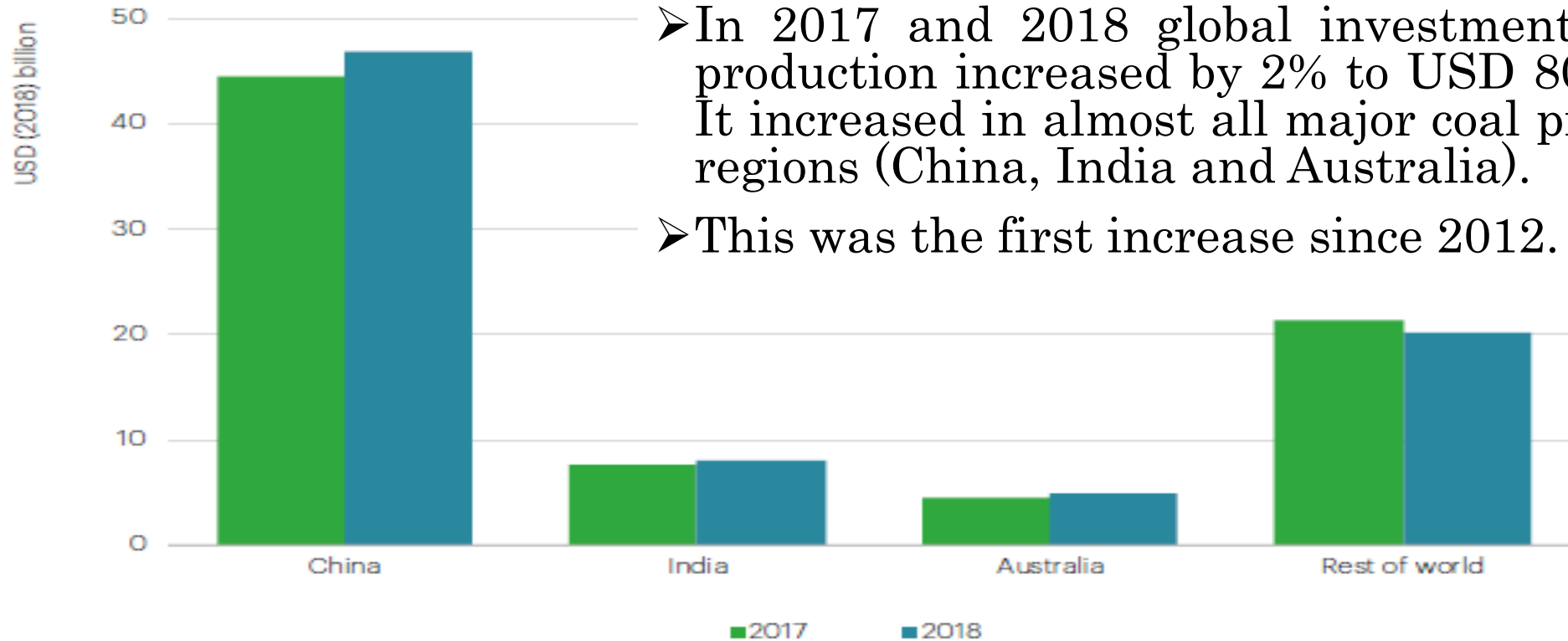
/mln t/



Change of hard coal production by country in 2018 as compared to 2017 /mln t/



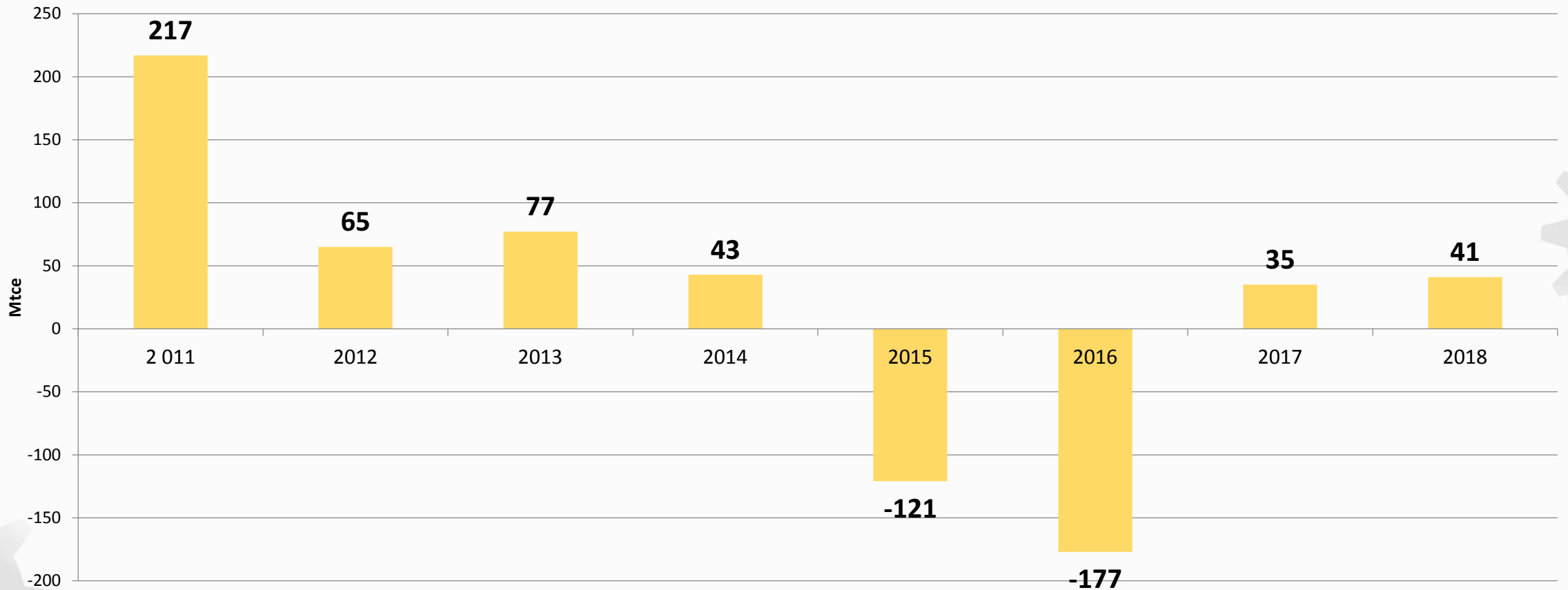
Coal production investment in 2017 and 2018



- In 2017 and 2018 global investment in coal production increased by 2% to USD 80 billion. It increased in almost all major coal producing regions (China, India and Australia).
- This was the first increase since 2012.

Annual change in coal demand

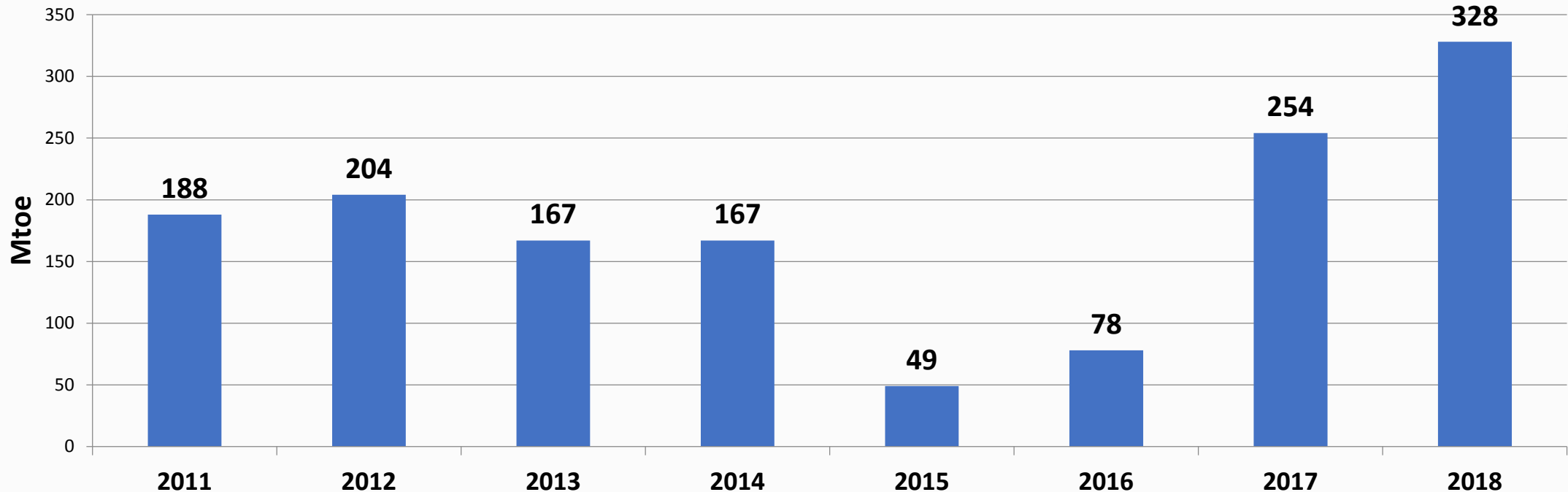
/Mtce/



Source: Based on information from Global Energy & CO2 Status Report –IEA, 2018

Annual change in global primary energy demand /Mtoe/

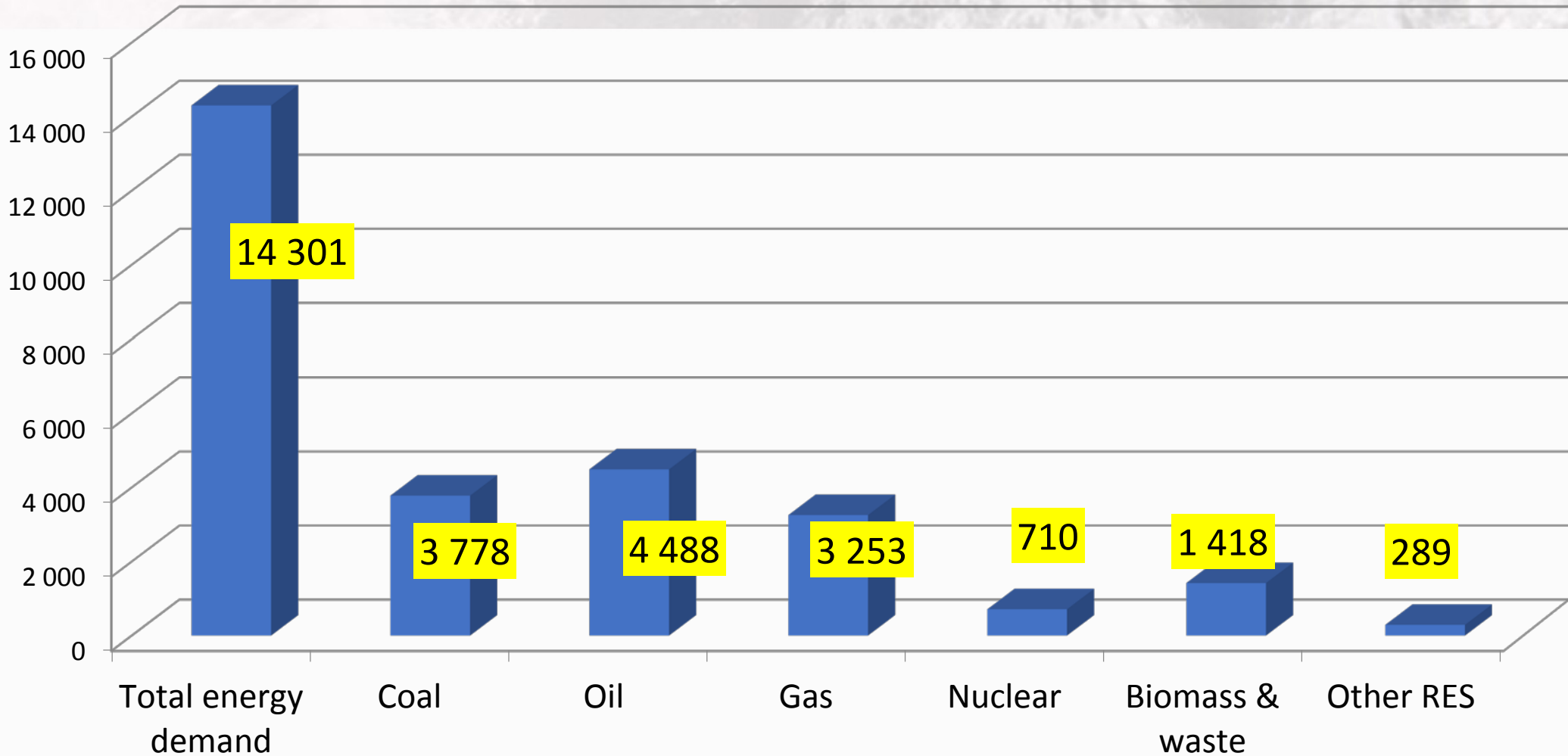
- In 2018 increase of demand for primary energy was almost 700% higher than in 2015.
- Demand increased for all fuels and the fossil fuels share in this increase was almost 70 %.



Source: Based on information from Global Energy & CO2 Status Report –IEA, 2018

Global primary energy demand by fuels in 2018

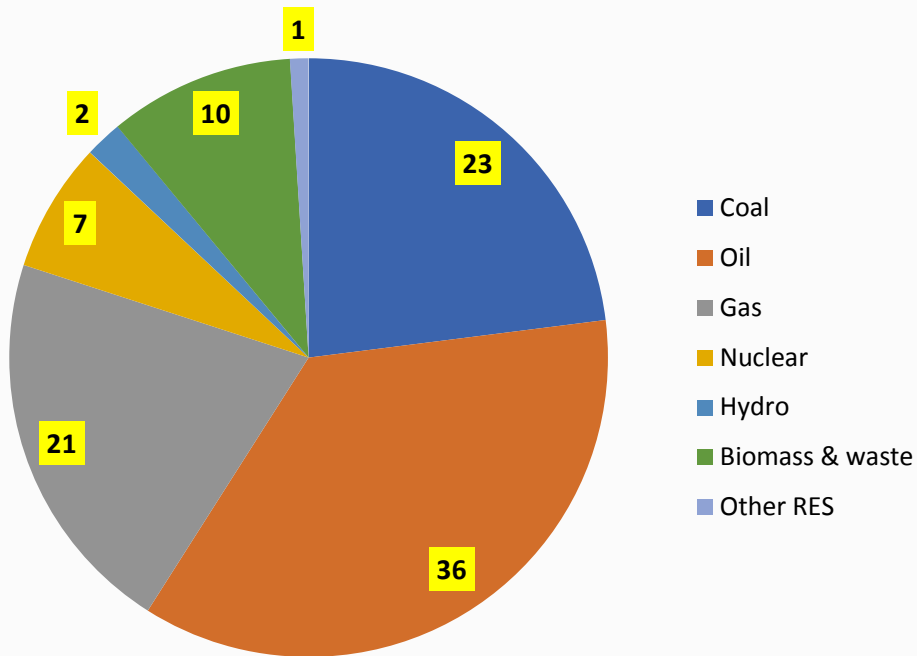
/ Mtoe/



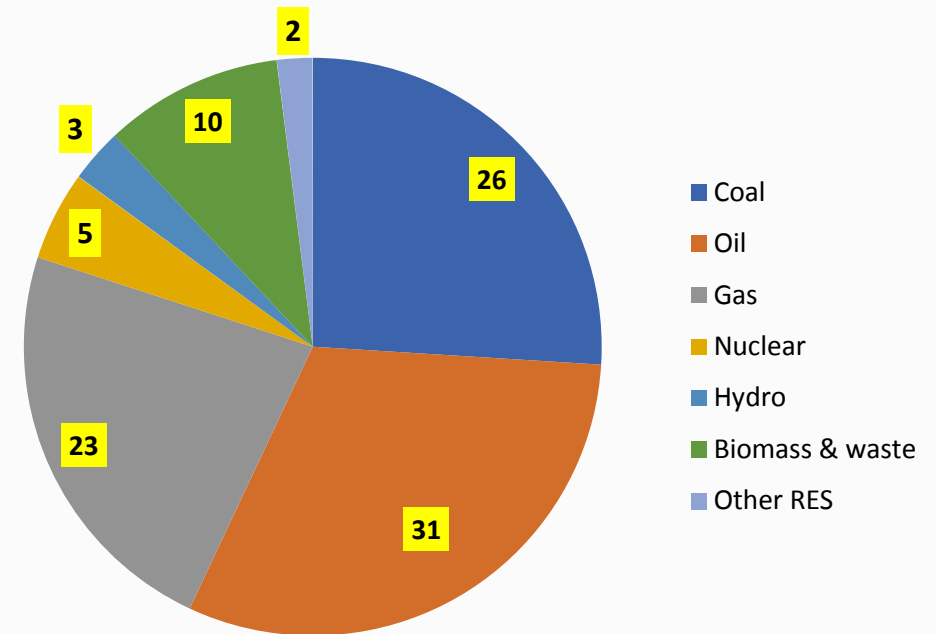
Source: Global energy demand / IEA- March 2019

Comparison of % share of individual fuels in global primary energy demand in 2000 and 2018

% share of fuels in global energy demand in 2000

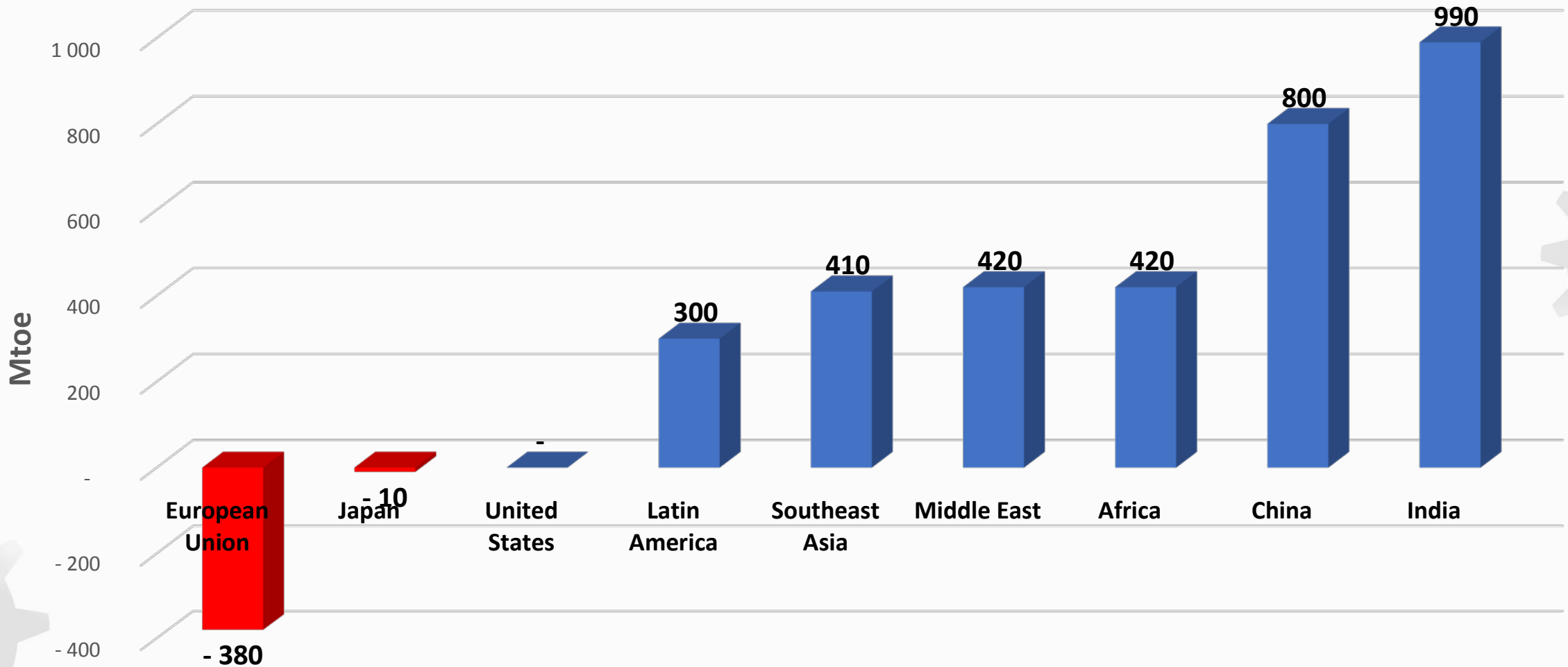


% share of fuels in global energy demand in 2018



Source: Global energy demand / IEA- March 2019

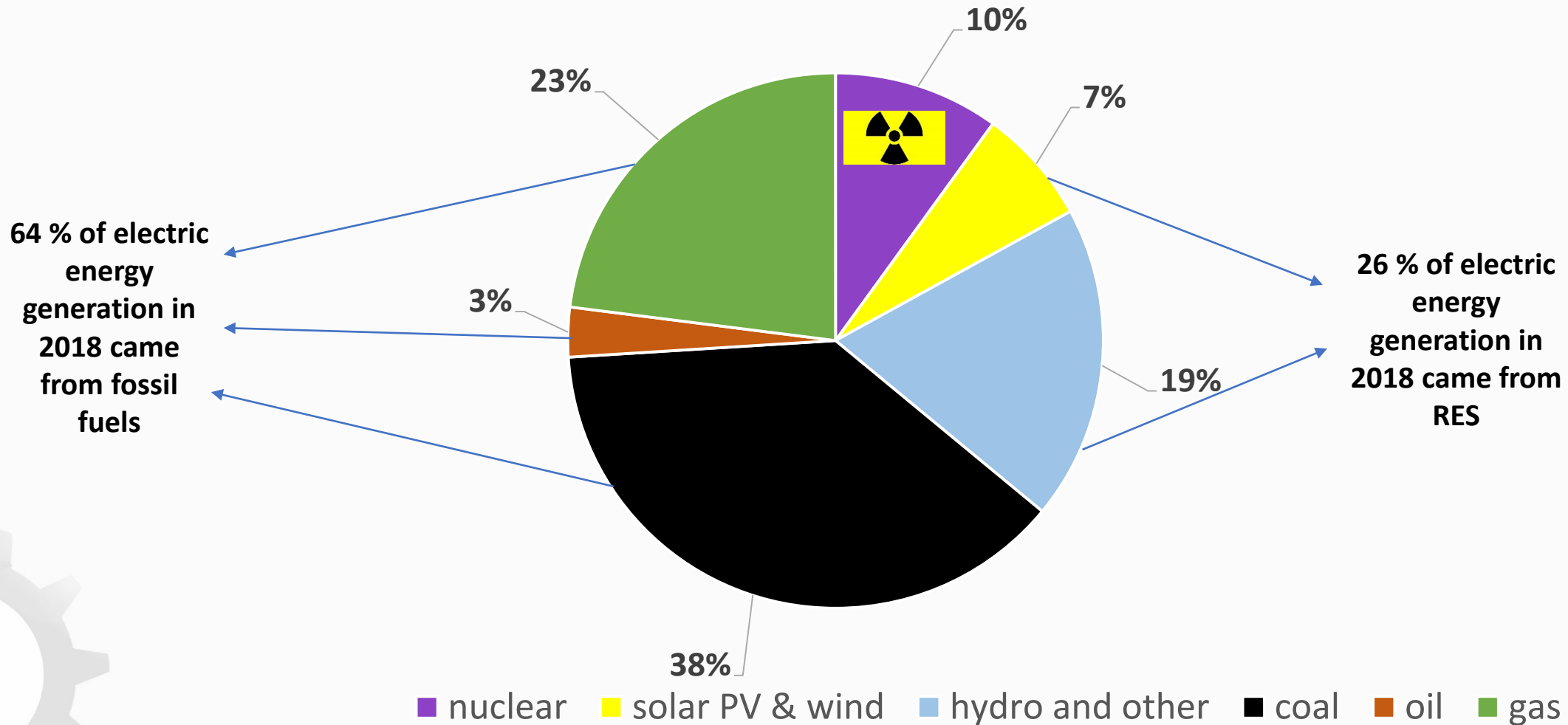
Change in total primary energy demand between 2017 and 2040 in selected regions



Source: World Energy Investments 2019 - IEA

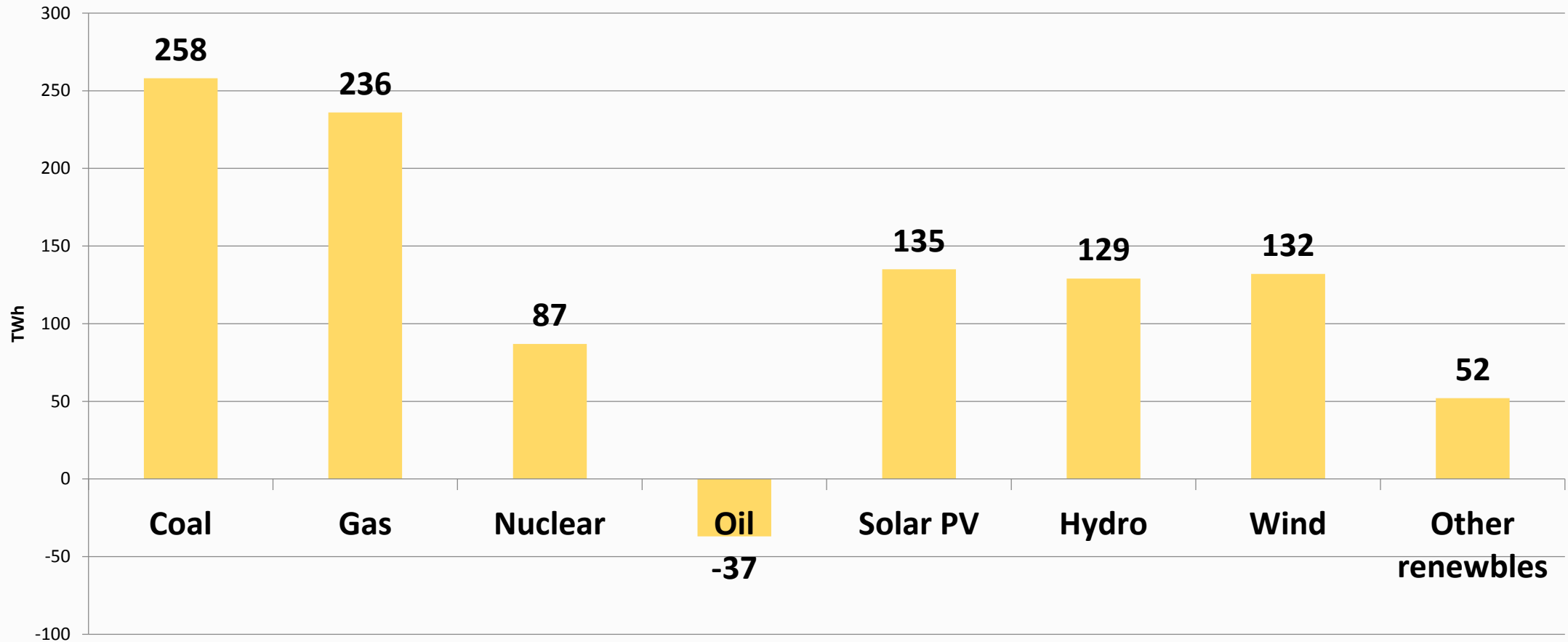
Global electricity generation mix 2018

/% share/



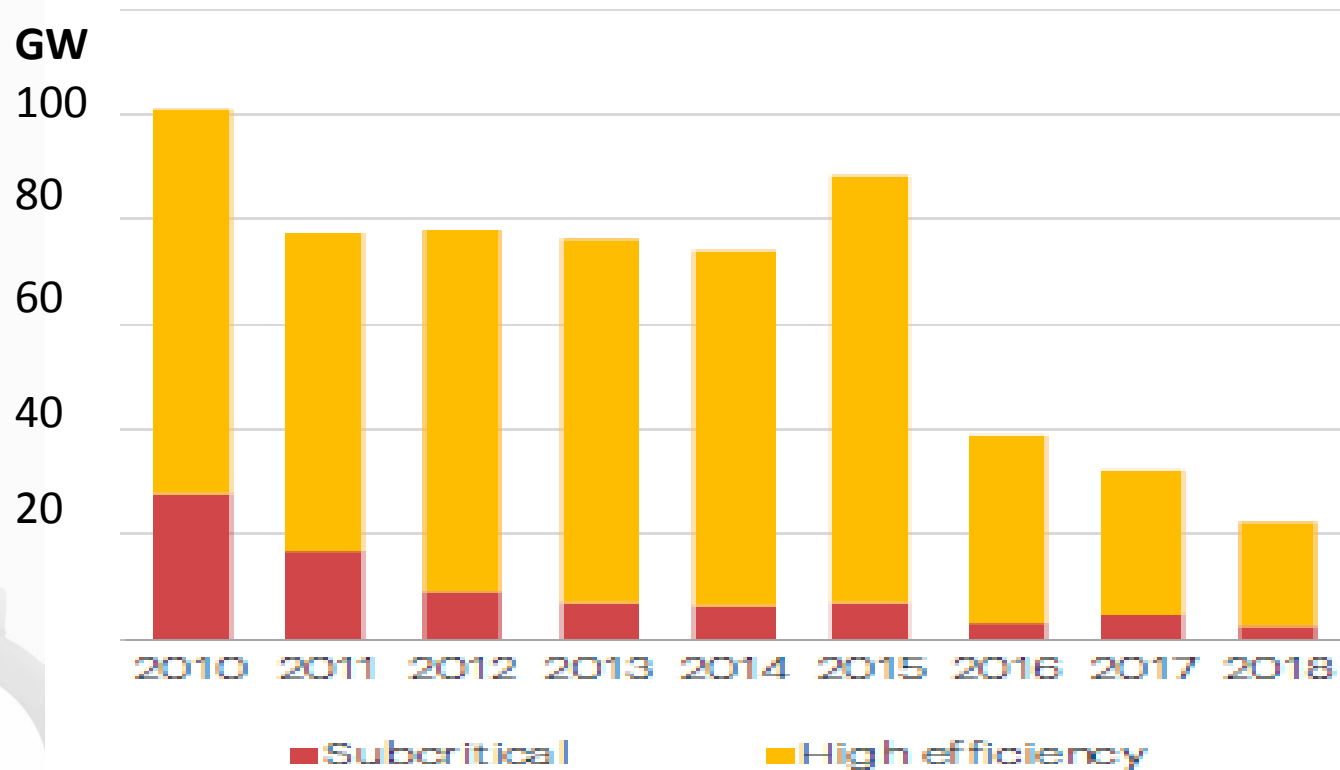
Source: Own elaboration based on Global Energy & CO2 Status Report by IEA

Change in electricity generation by source in 2018 as compared to 2017 /TWh/



Source: Own elaboration based on Global Energy & CO2 Status Report by IEA

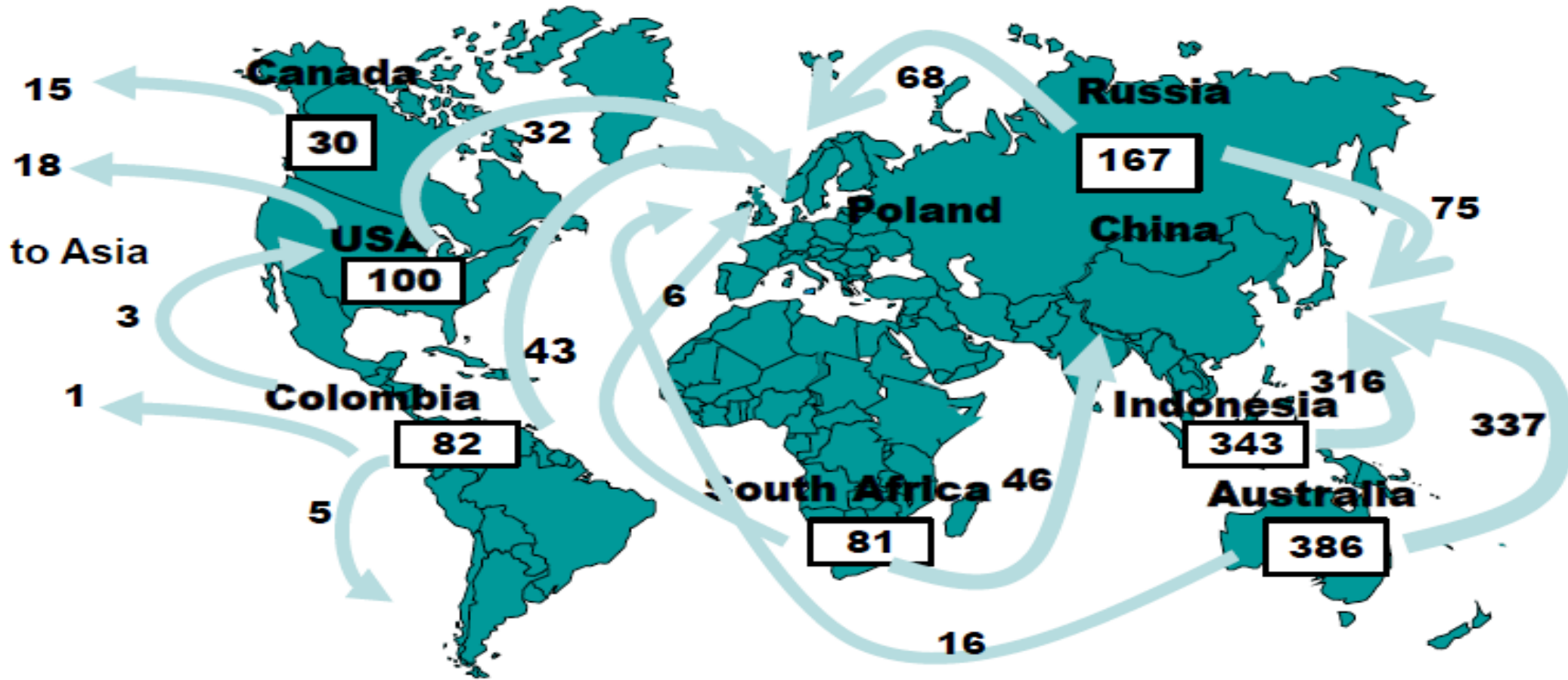
Investment in new coal power plants



- Many of the largest coal consumer in the World do not intend to resign from coal.
- That the share of supercritical /high efficiency/ technology plants is increasing. This is a reduction in emissions from coal-fired power plants.

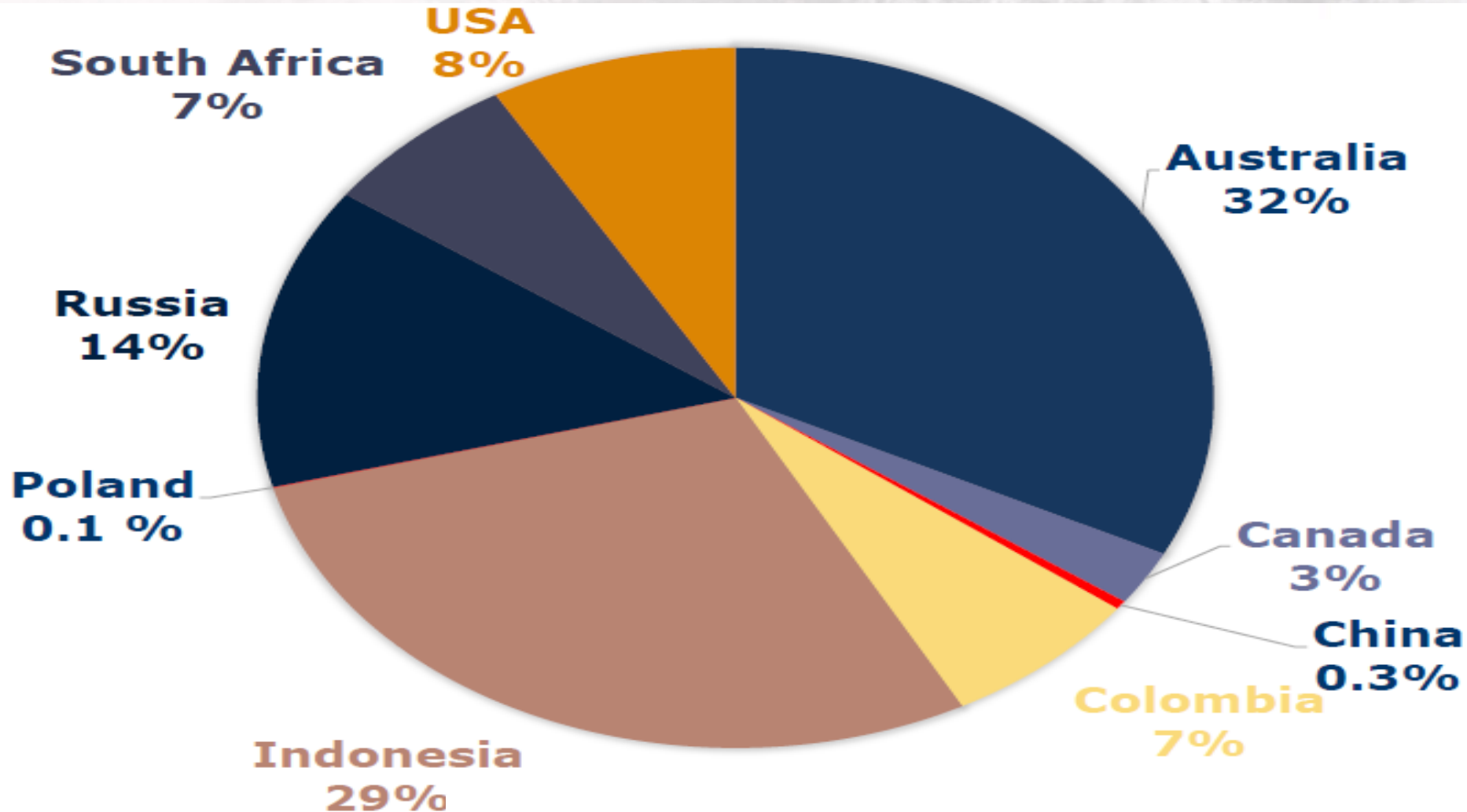
Global seaborne hard coal trade 2018

Main trade flows 2018, Preliminary estimate 1.2 BT (+4.6%)



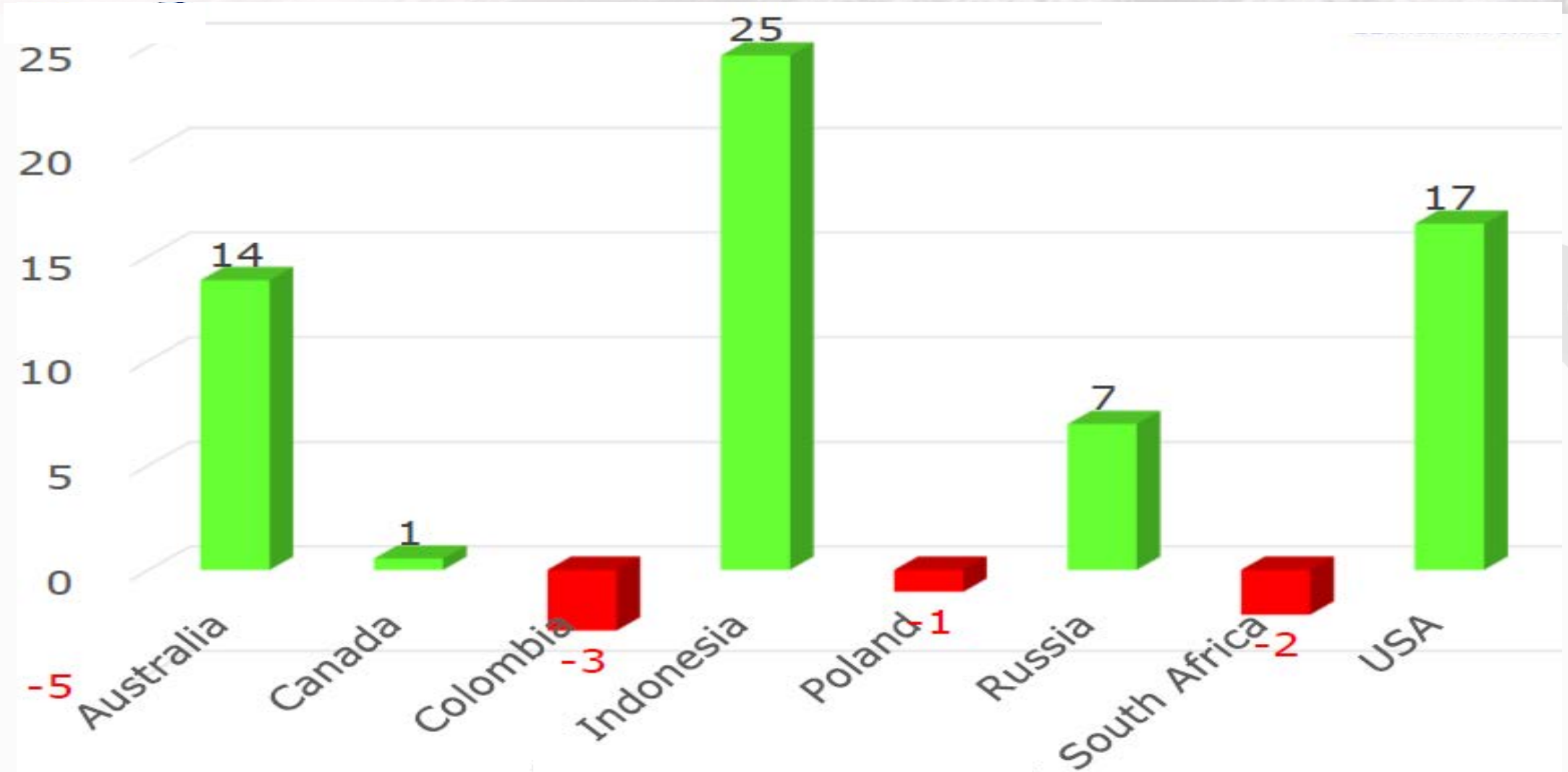
Source: VDKI/Association of German Coal Importers

Global seaborne hard coal trade 2018 by country



Source: VDKI/Association of German Coal Importers

Change of seaborne hard coal trade 2018 by country /mln t/



Source: VDKI/Association of German Coal Importers

Conclusions

- Between 2000 and 2018 hard coal production in the World grew from 3 639 mln t to 7 040 mln ton. In the same period global generation of power from coal was increasing from 1066 TWh to 2024 TWh.
- The reduction of coal use by the USA and Western Europe was compensated by the increase of coal use in China, India and South East Asia.
- Coal generates almost 40% of the world's electricity. There are now 78 countries using coal for power generation, up from 66 in 2000. Another 16 countries plan to join this group.

Conclusions (cont.)

- In 2018 global investments in coal production increased by 2% to USD 80 bln as compared to 2017.
- The review of the current situation as well as forecasts by all major coal related institutions indicate that coal during following decades will remain an important source of energy.
- Decarbonisation policy of the European Union is of no meaning in the Global scale.



Thank you

Janusz Olszowski

President

Polish Mining Chamber of Industry and Commerce