



**Asia-Pacific
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Asia Pacific Energy Research Centre Coal Report 2019 - Presentation

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**58th Energy Working Group Meeting
Antofagasta, Chile
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9.c. APERCC Coal Report 2019

The 58th Meeting of APEC Energy Working Group (EWG)
Antofagasta, Chile; 16-17 October 2019

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About the report

- The coal report comprises the second edition of APERC's fossil fuel reports
- Presentation structure:
 1. Historic trends in the APEC coal market
 2. Reducing the use of coal in the power generation sector
 3. Coal price
 4. Coal demand and supply outlook to 2021
 5. Summary of latest policies and market trends related to coal in APEC



1. Historic trends in the APEC coal market

Six of the world's top ten net exporters and importers are APEC economies

Net coal exporters in APEC in 2016:

- Australia
- Indonesia
- Russia
- USA
- Canada
- China

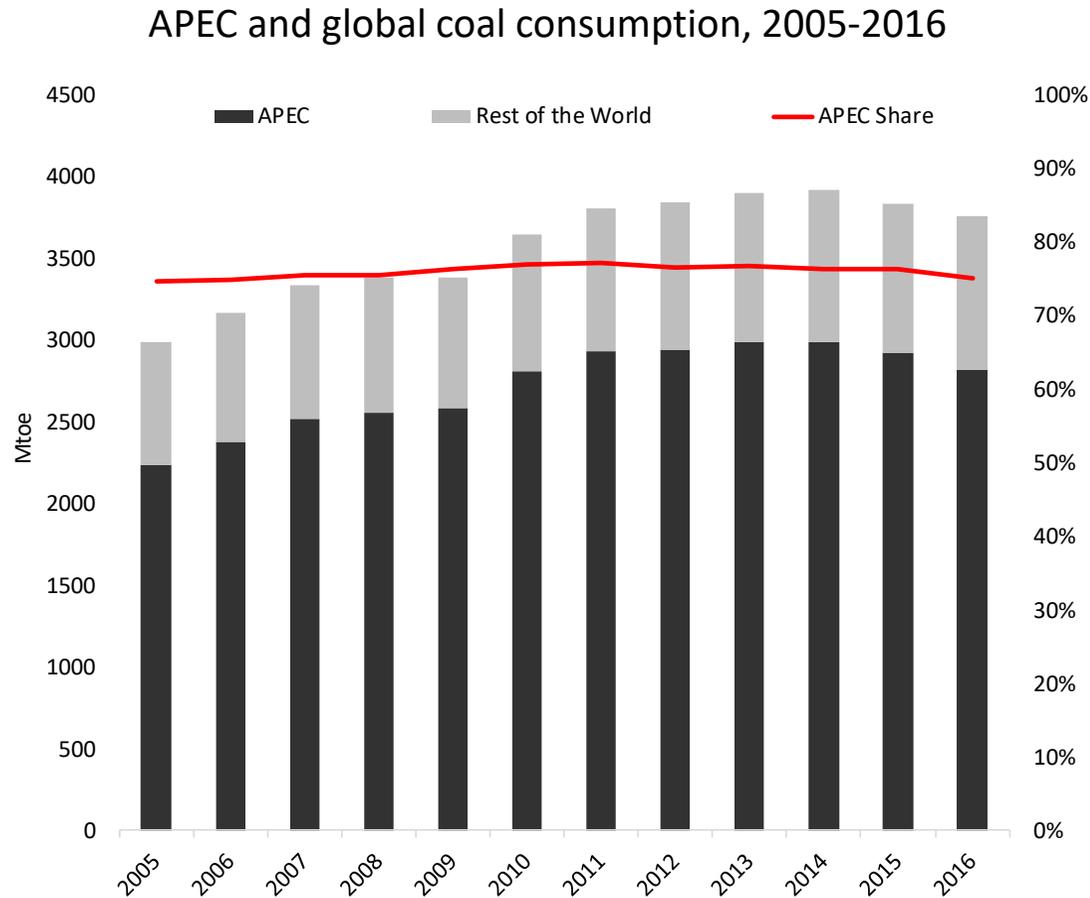


Net coal importers in APEC in 2016:

- China
- Japan
- Korea
- Chinese Taipei
- Malaysia
- Thailand

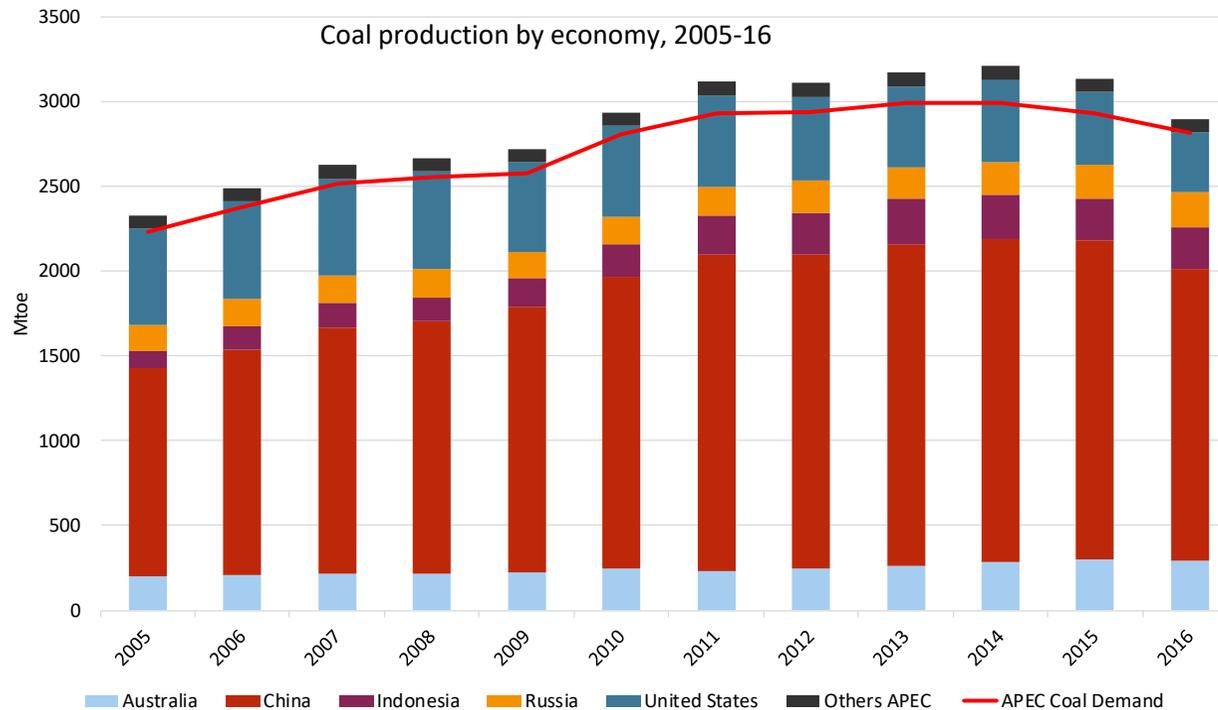
Global coal demand declined 2% during 2015-16. With declining demand, global coal production faced a decline of 5% from 2015-16.

APEC had a 75% share of global coal demand in 2016



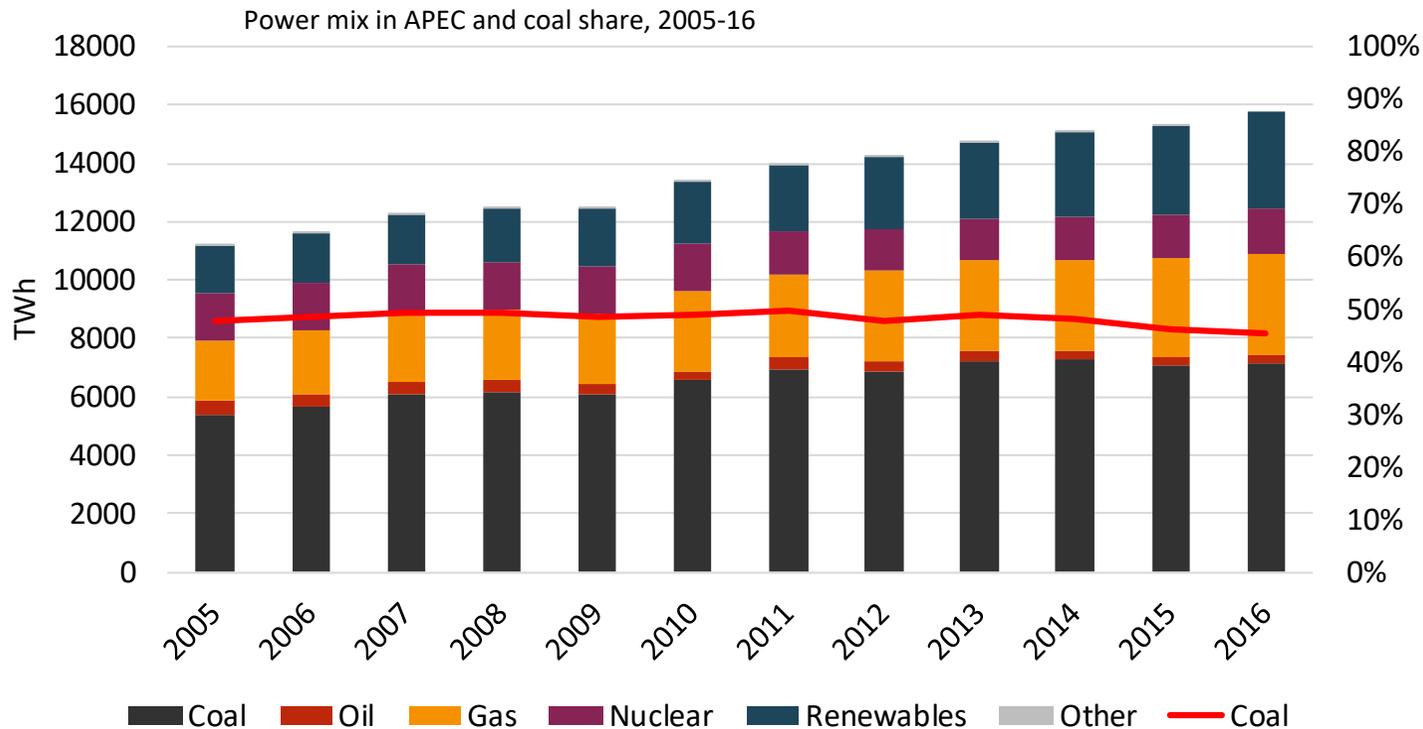
APEC coal demand increased 26% from 2005 to 2016, largely because of growth in China and southeast Asian economies

Coal production increased 24% from 2005–16



- Five economies produced 97% of APEC's coal production in 2016: China (59%), the United States (12%), Australia (10%), Indonesia (8.6%) and Russia (7.2%).
- Nearly 71% of global proved coal reserves are located in APEC economies.
- Reserves are expected to last more than 100 years in Australia and Russia, 47 years in China, and 33 years in USA.

Coal in power sector increased 34% in 2005-16



- The trend varies among economies, e.g. coal generation dropped 37% in the US.
- The share of coal in the power mix in APEC has remained stable between 48% - 50%.



2. Reducing the use of coal in the power generation sector

Challenges for coal in the power sector

Coal-fired plants faced several challenges in the last decade.

- Low natural gas prices
- Declining electricity demand
- Policies aimed at decreasing emissions

These are some of the challenges that the industry is facing. Four major economies have retired coal-fired plants, either through policy goals or market operation. Some of the other economies plan to phase out coal plants after 2021.

Source: APERC 7th Outlook, 2019

Notable coal-related developments in the power sector

Australia

- Coal-fired generation rose by 7% in 2015–16. The rise was most apparent for black coal generation in Queensland and New South Wales. However, this rise may be temporary, with significant coal-fired capacity being retired from the market in 2016 and 2017.
- In 2017, coal generation plants are being retired and not being replaced, removing more than 3 600 megawatts (equivalent to half of South Australia's generation capacity) and leaving a tighter supply-demand balance.

Notable coal-related developments in the power sector

Canada

- In 2015, Alberta announced a new policy to accelerate the phase out of coal-fired power generation. This would result in the retirement of six coal plants or their conversion to natural gas plants by 2030.
- In 2016, the federal government also announced a plan to accelerate the phase-out of coal generation by 2030.
- The Alberta Electricity System Operator (AESO) recommended a capacity market to provide greater revenue certainty for generators, to encourage investment in new generation capacity while maintaining the competitive market structure used to set wholesale prices.

Notable coal-related developments in the power sector

China

- China's 13th FYP (2016-2020) established goals to ensure a cleaner and more efficient use of coal. China's plan is to optimise the development of national comprehensive energy centres and step up efforts to ensure the cleaner and more efficient use of coal.
- China plans to implement an upgraded action plan for energy conservation and emissions reduction in coal-based power generation including:
 - upgrades to ensure average coal consumption per kilowatt-hour is kept below 300-310 grams;
 - using backpressure thermal power units for heating and develop combined multi-source heating, cooling, and power systems;
 - increase the proportion of coal used for power generation.

Notable coal-related developments in the power sector

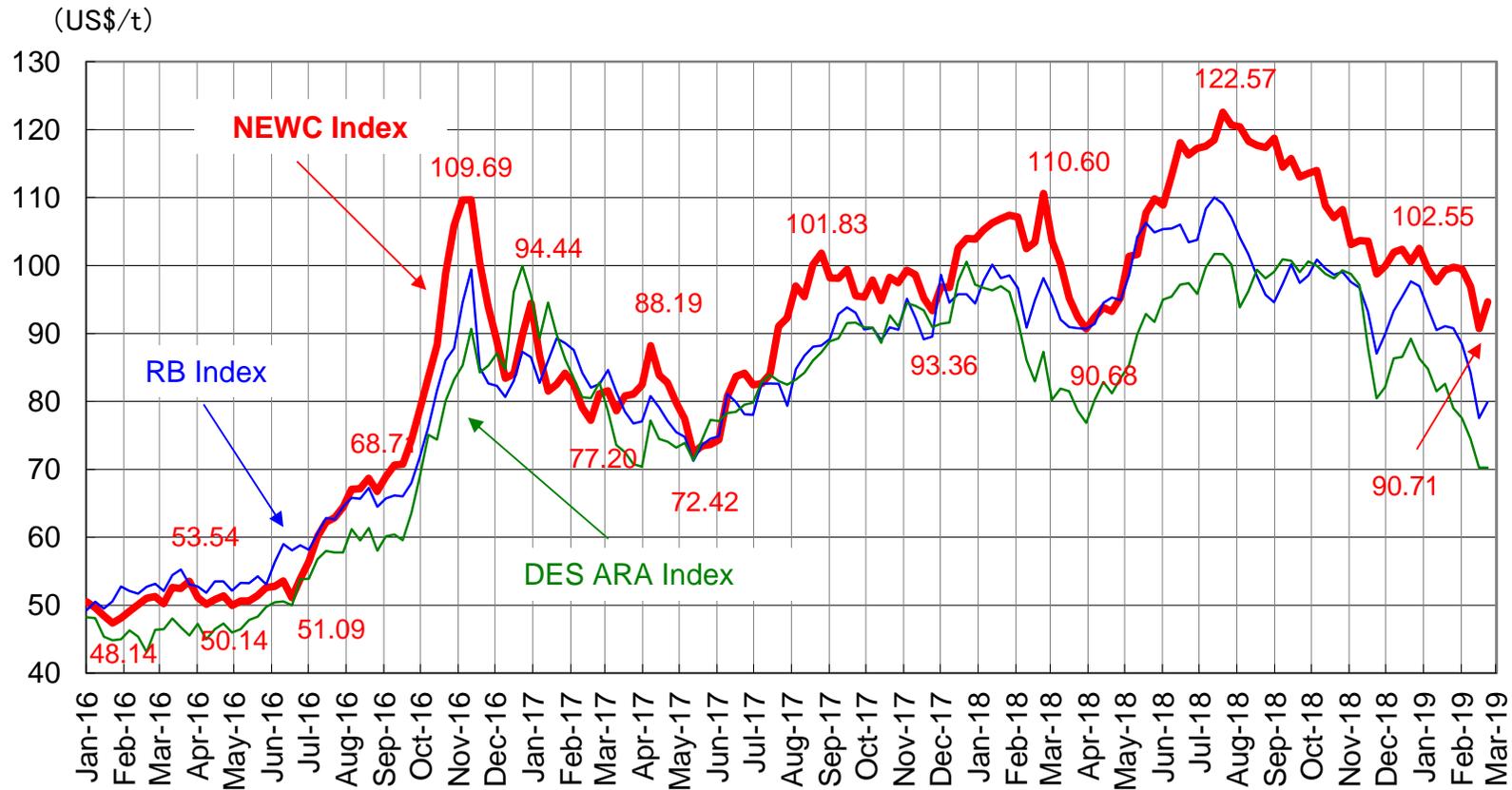
United States

- Coal-fired plants faced several challenges, which drove capacity retirements.
- The drop in natural gas prices made gas competitive, surpassing coal for the first time in 2016.
- Coal-fired power plants are subject to the Mercury and Air Toxics Standards (MATS), which require significant reductions in emissions of mercury, acid gases, and toxic metals. Between January 2015 and April 2016, about 87 GW of coal-fired plants installed mercury controls to meet compliance deadlines and nearly 20 GW of coal-fired capacity was retired for not meeting the standards.



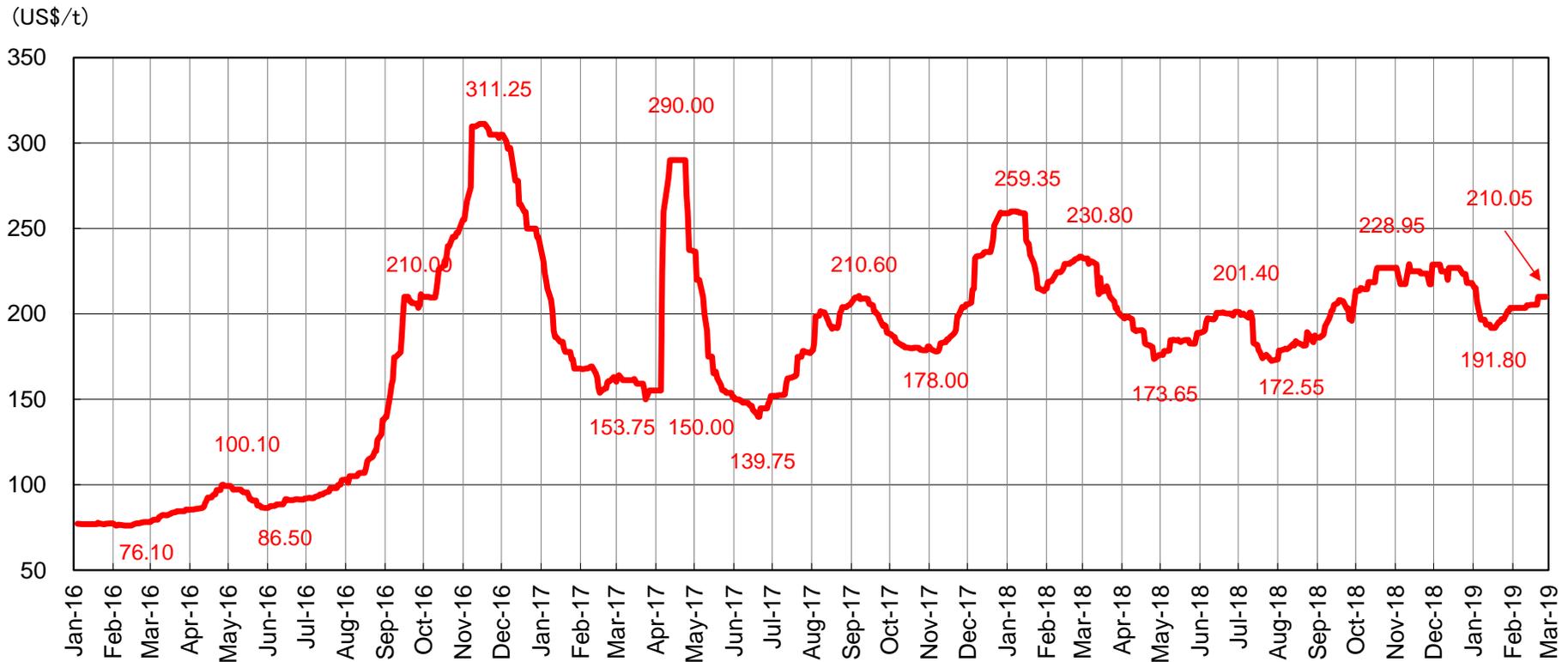
3. Coal price

Thermal coal price were in the range of USD 91-123/tonne in 2018



- In 2018, the spot price broke through and remained above the USD 100/tonne mark from winter procurement.
- Prices retreated to USD 90/tonne in March, 2019, when seasonal demand waned.

Australian premium hard coking spot prices were in the range of USD 259-229/tonne in 2018



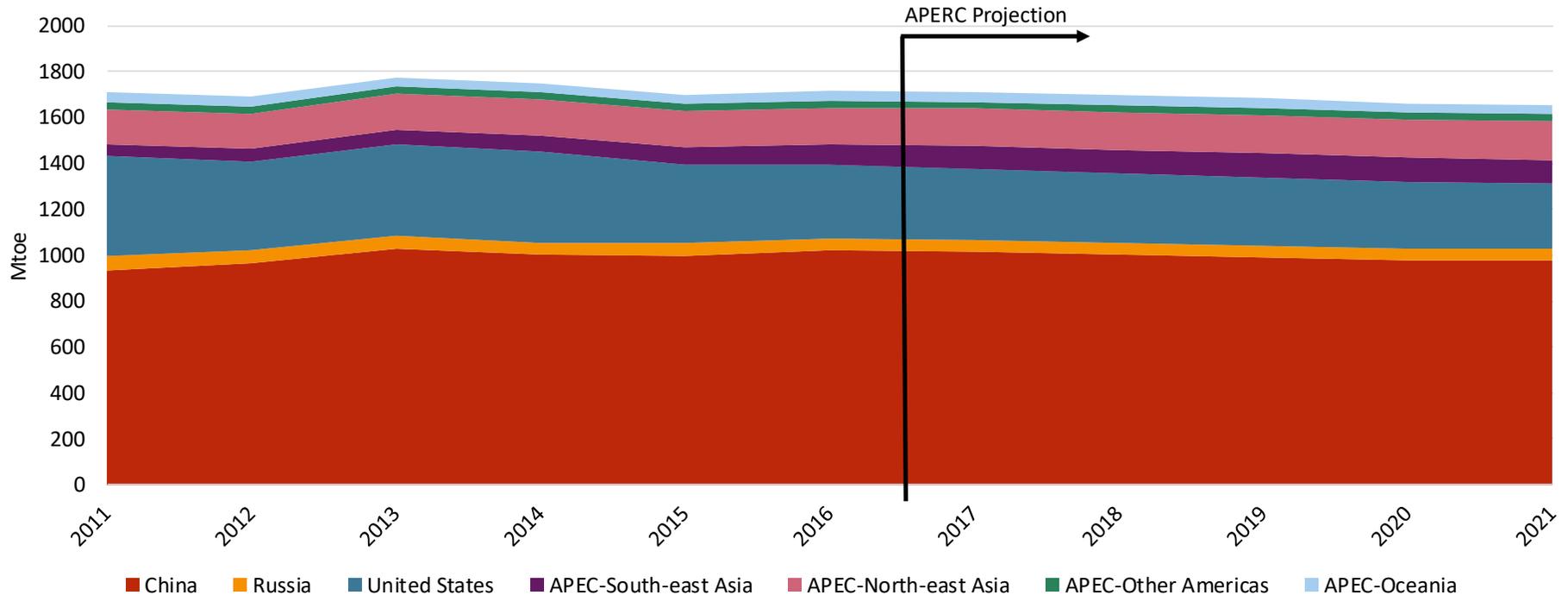
- Metallurgical coal prices have been growing recently but are projected to decrease until supply and demand reach a balanced level.
- After that, the price is expected to level off or increase gradually.



4. Coal demand and supply outlook to 2021

Coal consumption in the electric power sector is expected to decline slightly by 2021

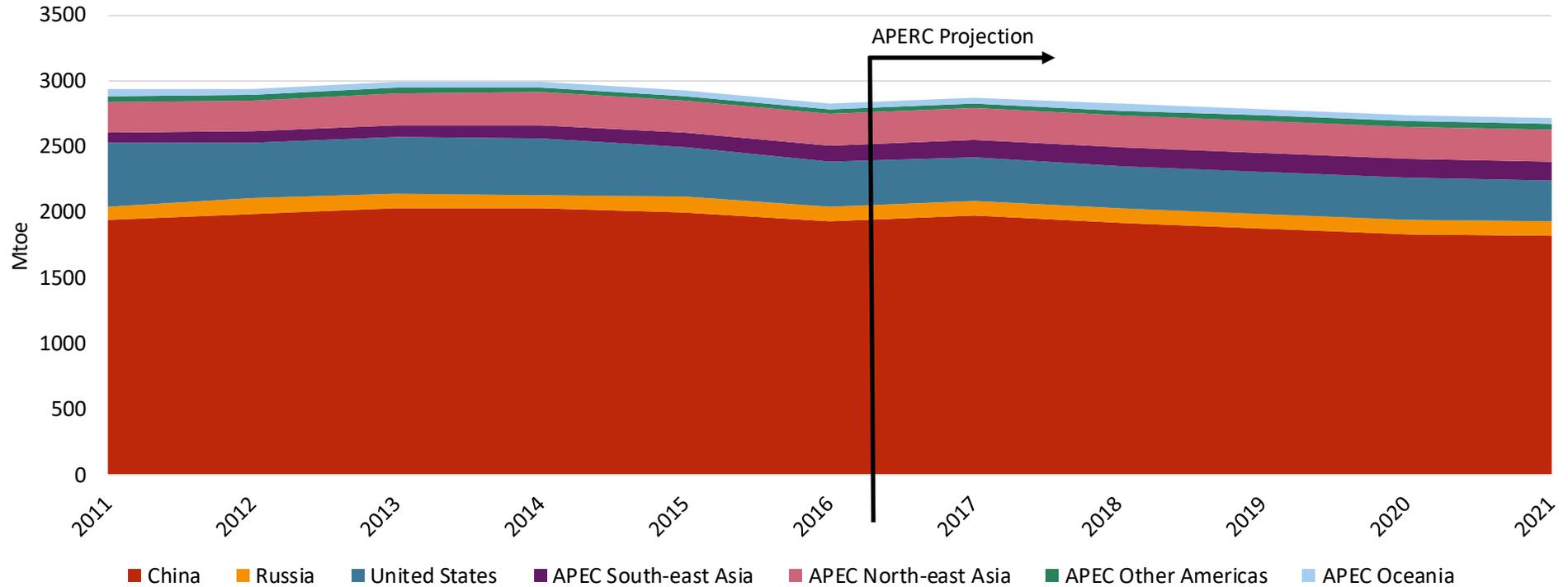
Historic and projected coal consumption in the power sector in APEC, 2011-2021



Other Americas and the USA will lead the reduction of coal in the power sector, with a decrease of 11%.

Coal supply in APEC declines 4% in 2016-21

Historic and projected coal supply in APEC, 2011-2021



However, supply grows 4% in south-east Asia from 122 Mtoe in 2016 to 143 Mtoe in 2021.



5. Summary of latest policies and market trends related to coal in APEC

Notable policies and market trends in APEC

Canada

- The government plans to phase out coal-fired generation sources. Coal-fired power production will be phased out by 2030. Demand is expected to decrease, and be replaced by natural gas. Coal will continue to be used for metallurgical processes.

Chile

- In June 2019, the government presented an important agreement by the Ministry of Energy with the power industry. The agreement announced the shutdown of eight coal-fired power plants in five years and a goal of total withdrawal by 2040.

Korea

- Its energy policy aims to gradually decrease the number of nuclear and coal plants to have a clean and safe portfolio of energy.



Thank you very much!

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