

4-3. APERC Gas Report 2022 (Draft)

APERC Workshop

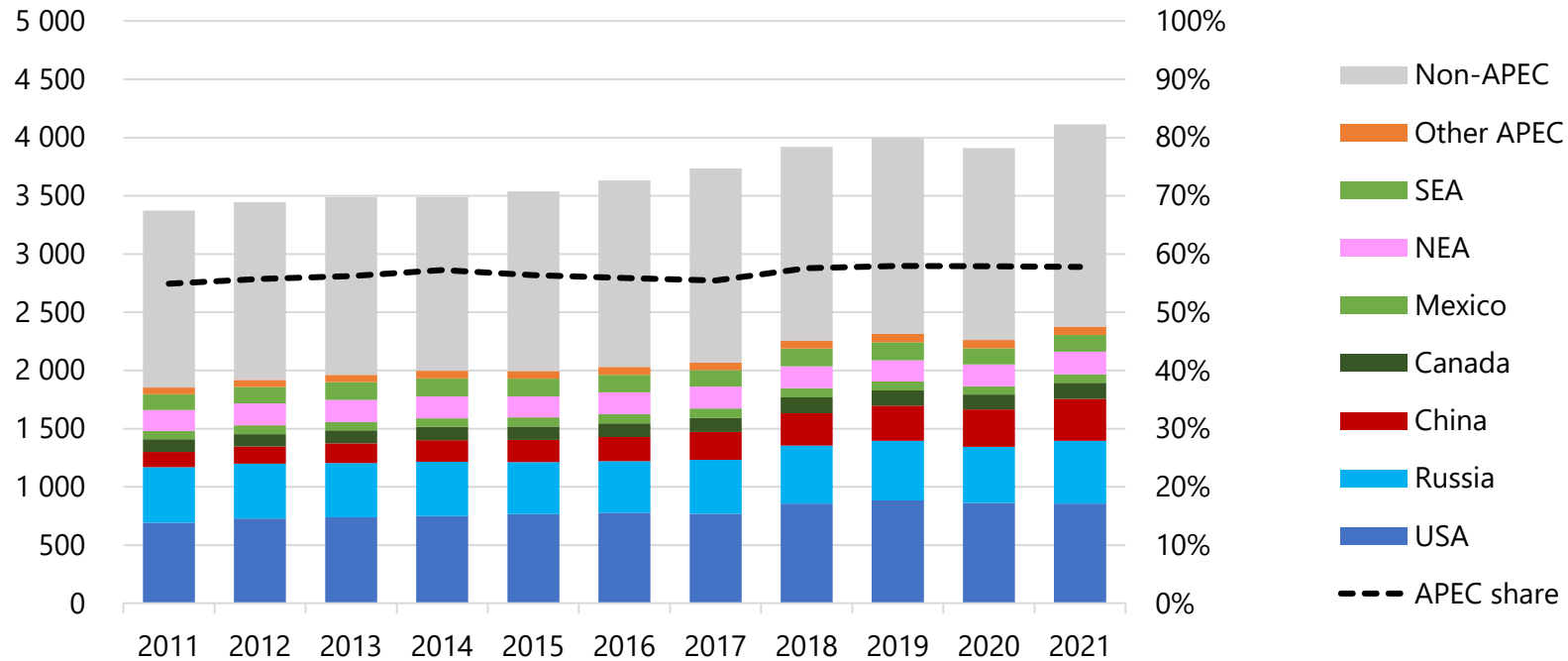
The 64th Meeting of APEC Energy Working Group (EWG64)
31 October 2022 (GMT+8)

Asmayati Ab Manan, Senior Researcher



World and APEC gas demand rebounded in 2021

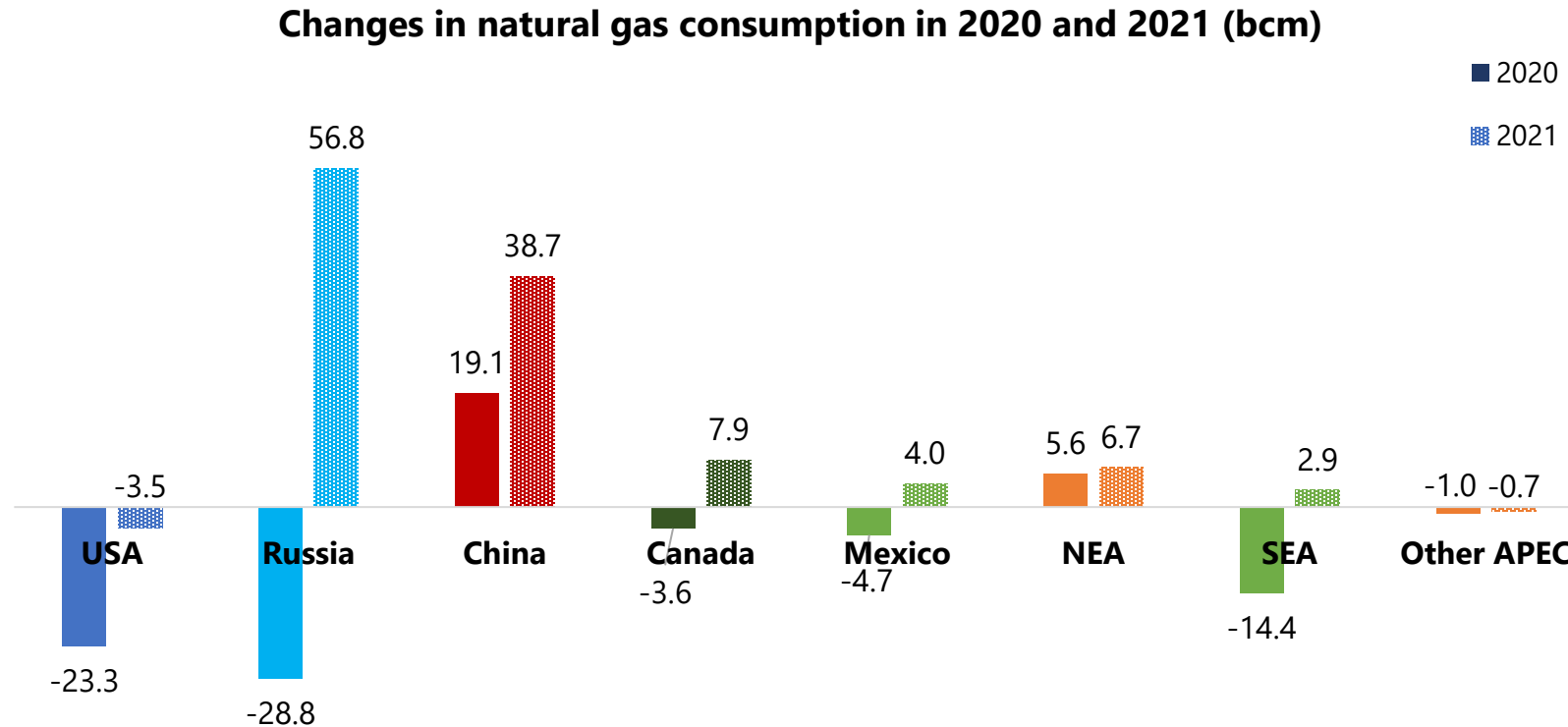
Natural gas consumption in APEC and the world, 2011-2021 (bcm)



Source: IEA, Natural Gas Information 2022; CEDIGAZ

- World gas consumption surpassed 4 000 bcm for the first time in 2021.
- APEC consumption grew 28% for the 2011-2021 period, 14% for non-APEC.
- APEC accounted for about 58% of global gas consumption in 2021.

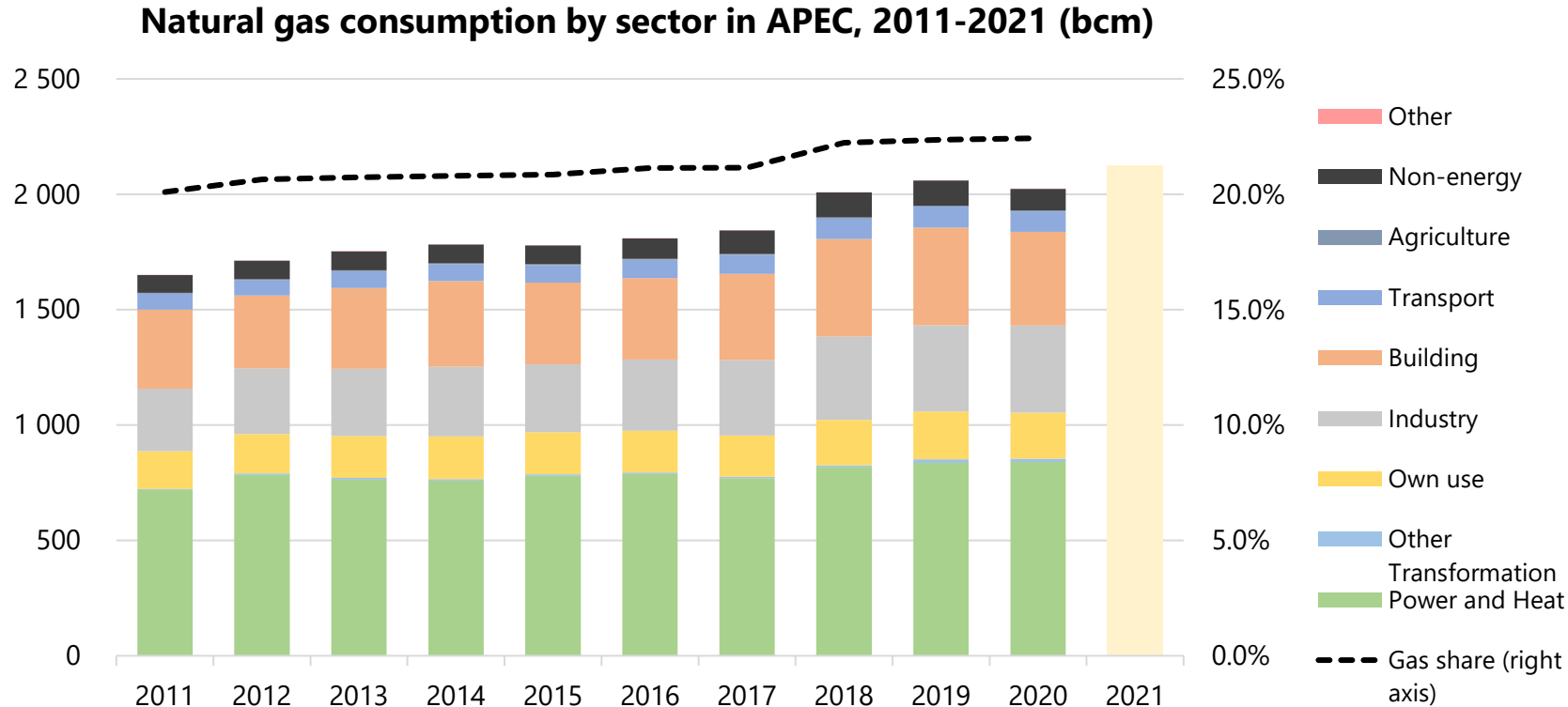
APEC gas consumption recovered in 2021, except in the USA and other APEC



Source: IEA, Natural Gas Information 2022; CEDIGAZ

- Russia and China led consumption growth in 2021, accounting for 85% of the APEC's total increase.
- USA's gas consumption slightly contracted by 0.4% in 2021, mainly due to rising gas prices
- Oceania's gas consumption decreased by 5.4%, due to low economic activity resulting in lower gas-fired electricity generation.

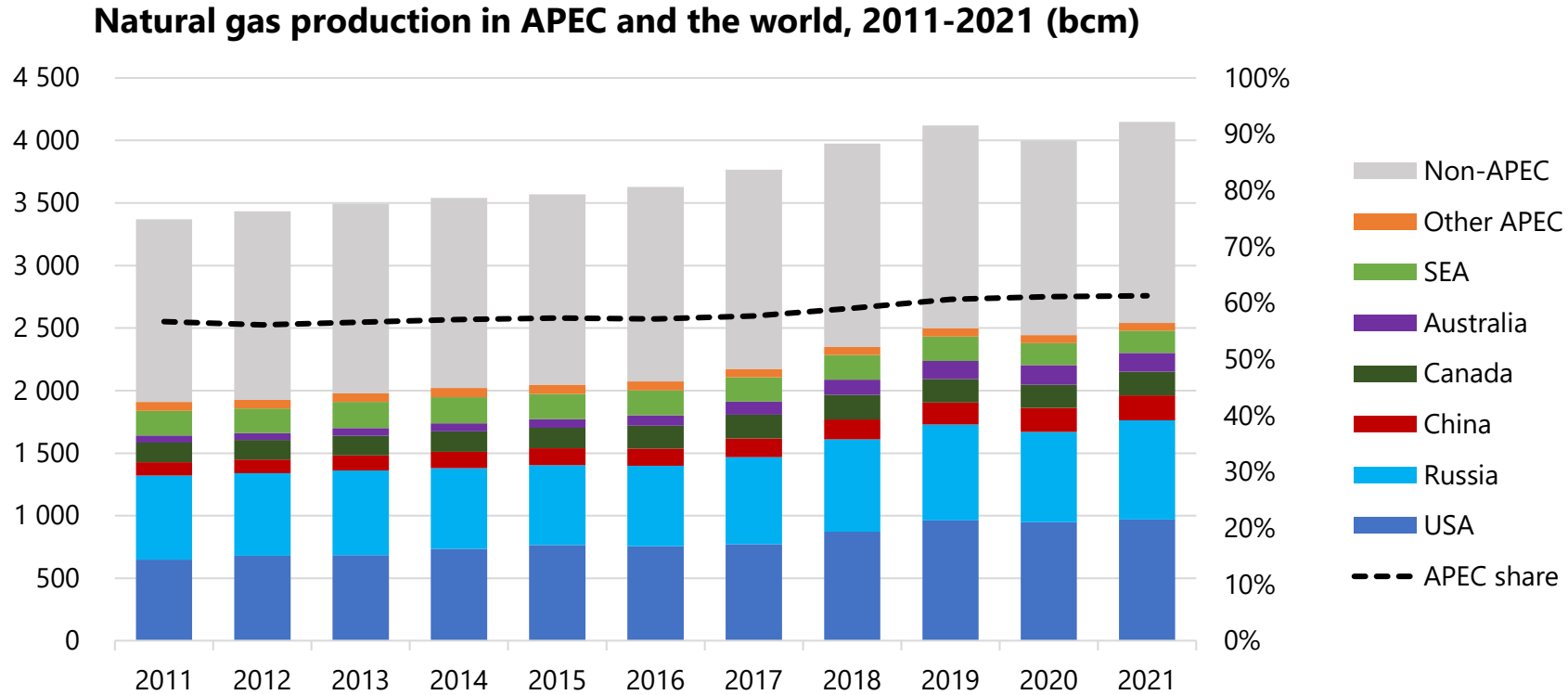
Power and heat remained the largest gas user in APEC, but its share has been flat since 2019



Source: IEA, Natural Gas Information 2022; CEDIGAZ; EGEDA; APERC analysis

- Power and heat sector accounted for about 41% of total consumption since 2017, slowing down due to gas-to-coal switching in electricity generation.
- Power and heat, and industry sectors led the volume growth over 9 years, contributing 60.5% of the growth from 2011 to 2020. USA and China mainly contributed the significant growth in the industry sector.

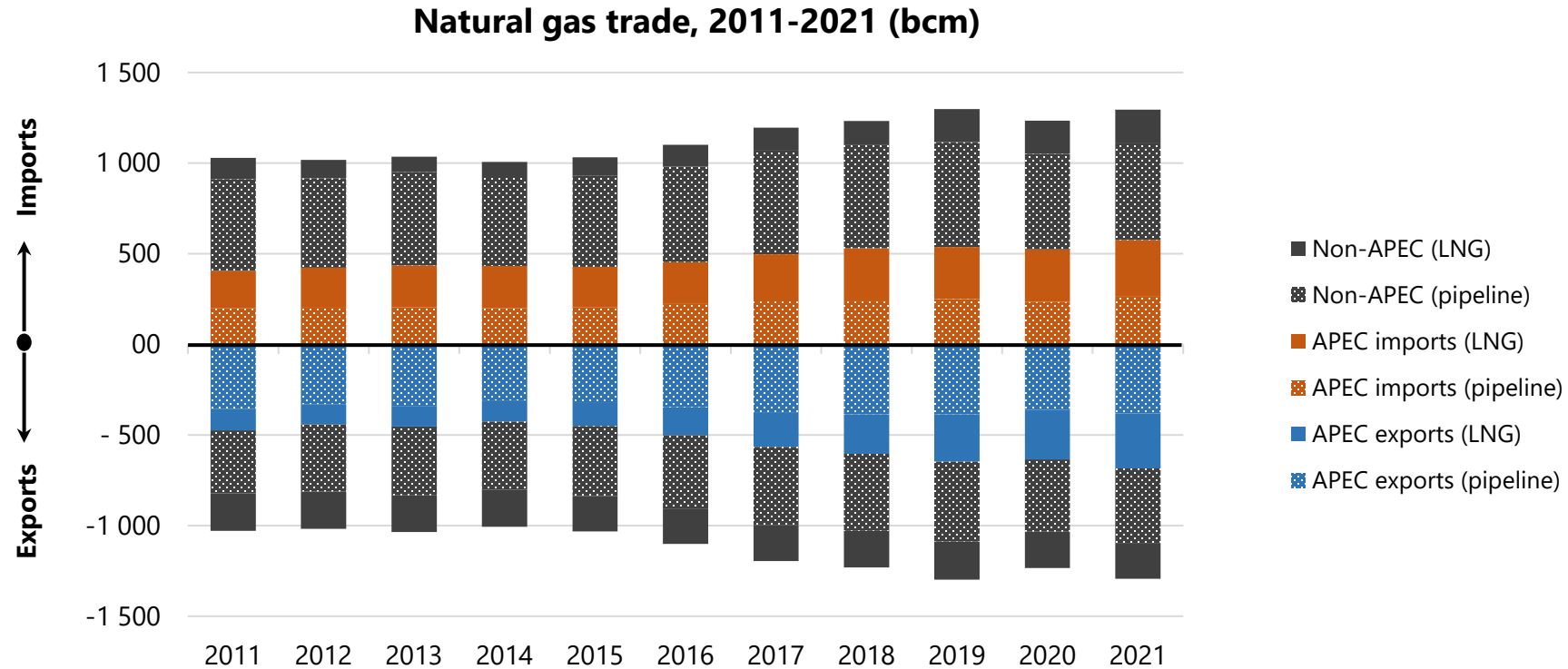
World and APEC gas production increased in 2021 to meet rebounded demand



Source: IEA, Natural Gas Information 2022; CEDIGAZ

- APEC's role grew as its share of global gas production increased from 56% in 2011 to 61% in 2021.
- USA has been the largest gas producer in APEC since 2012, producing more than one-third of APEC gas production in 2021.

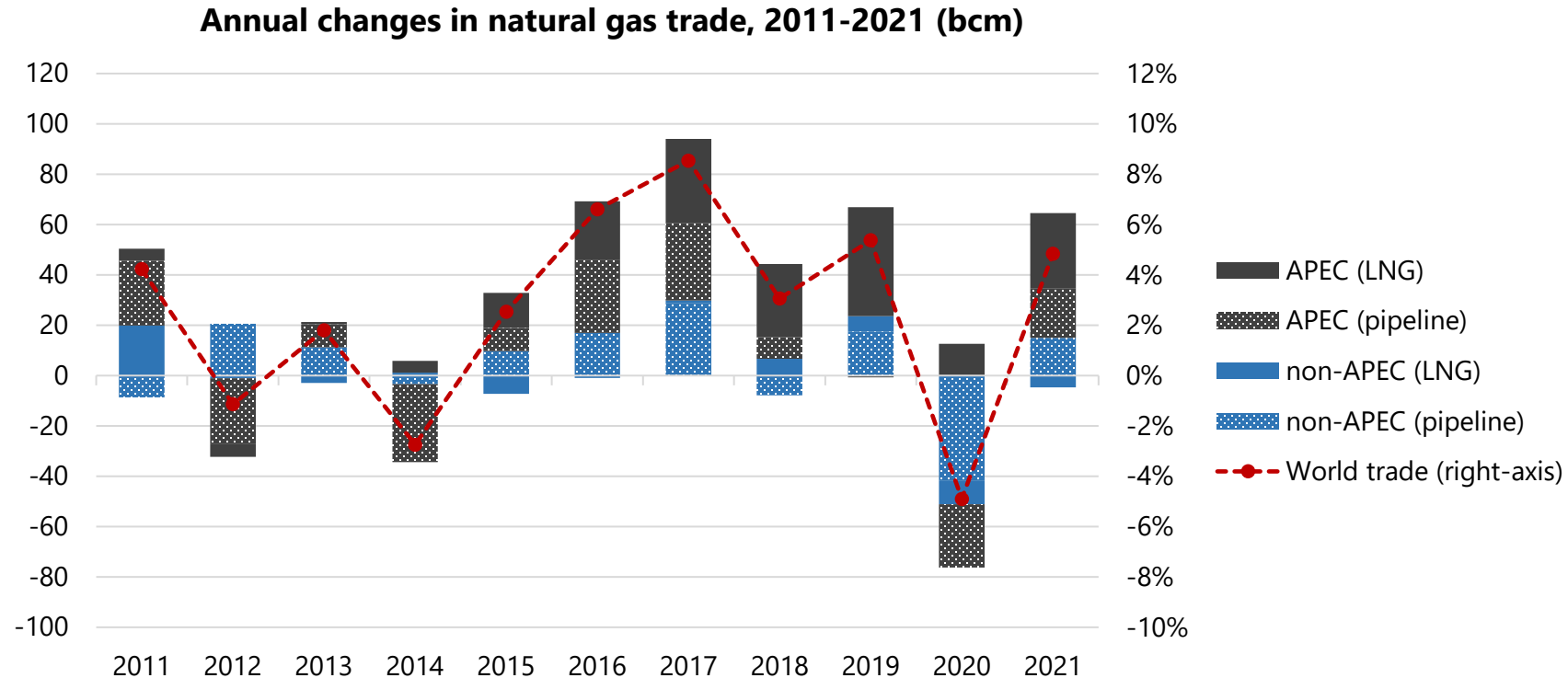
World and APEC gas trade rebounded in 2021



Source: CEDIGAZ

- APEC gas trade grew at 3.7% per annum for the 2011-2021 period, stronger than world trade growth at 2.3%.
- LNG exports from APEC increased more than 2.5 times in 2021 compared to 2011, contributing 94% of world LNG export growth during the same period.
- China replaced Japan as the world's largest LNG importer, while NEA remained APEC's largest LNG importer region in 2021.

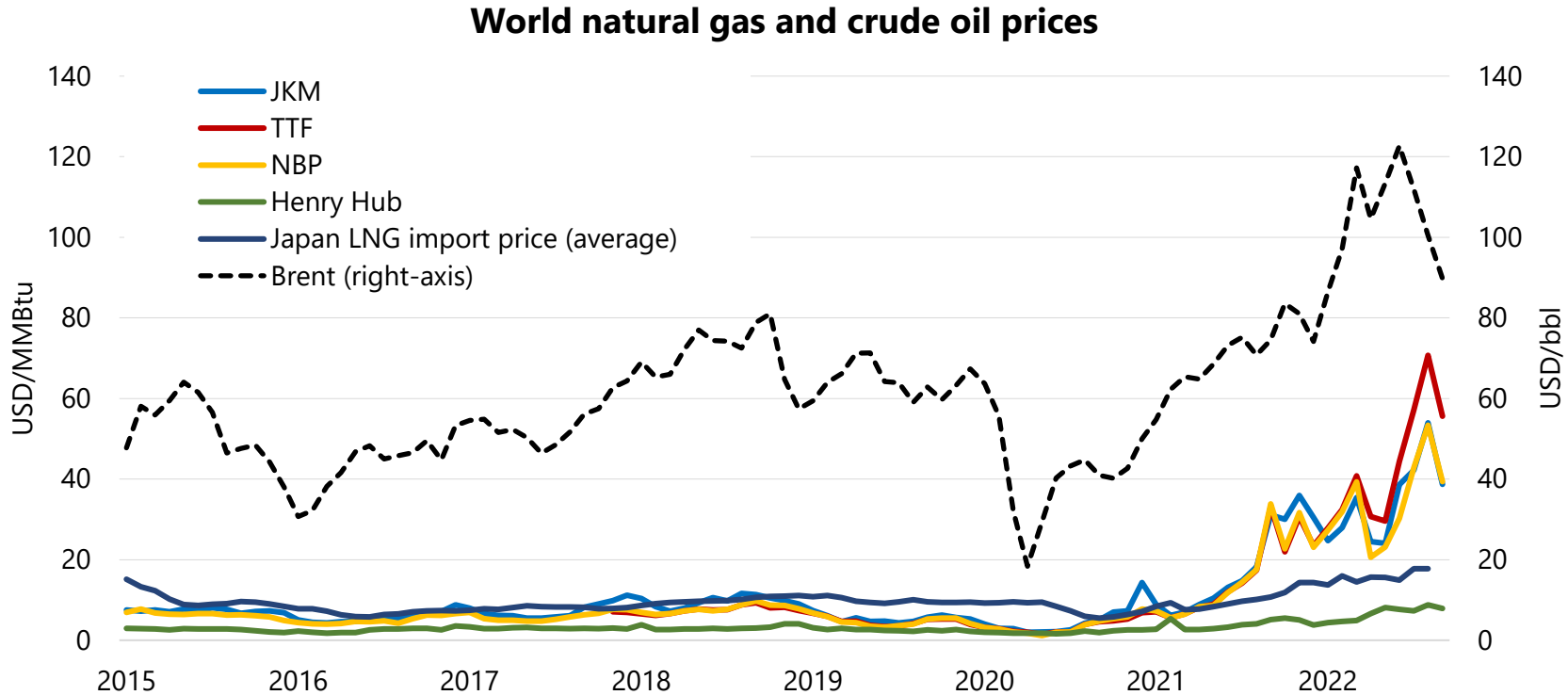
The tight gas supply market in H2 2021 slowed down gas trade growth in 2021



Source: CEDIGAZ

- Gas trade grew 5% in 2021, after declining by 5% in 2020.
- Russian pipeline gas exports increased by 2.5% in 2021. Pipeline exports were lower than the pre-pandemic level, resulting in higher LNG imports into Europe.
- China's LNG import increased five-fold in 2021, compared to 2011.

Gas price rally continues ...



Source: Investing.com; EIA; National Customs Statistic

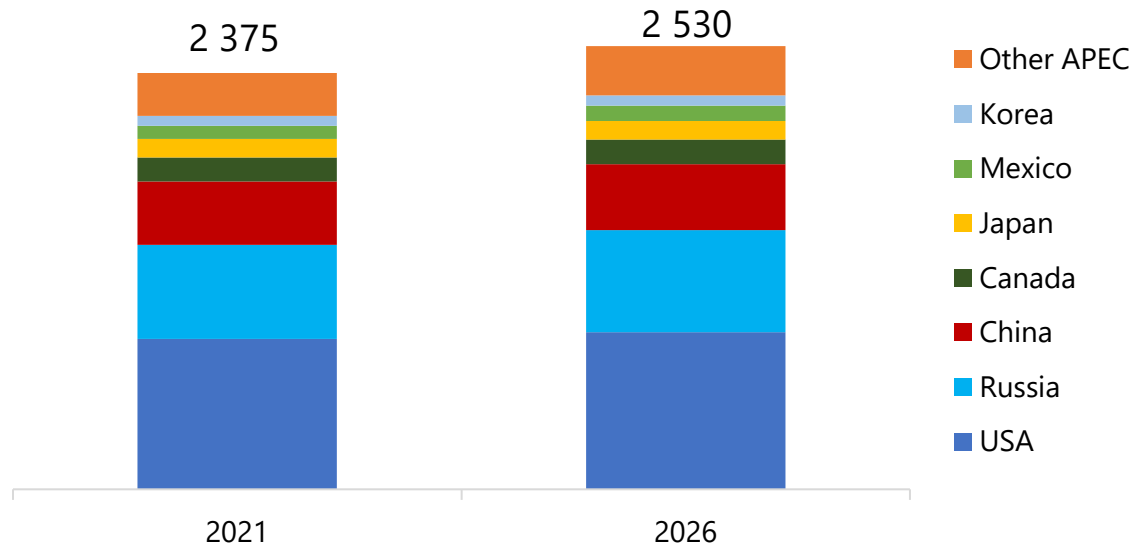
- Spot gas prices in 3 major gas regions recorded the highest level in history in August 2022 due to tight supply market and the Russia-Ukraine crisis.
- European gas prices surpassed Asian prices in early 2022. Average LNG import prices in Asia are still highly correlated with oil prices.

Southeast Asia economies took different approaches to deal with the impact of drastic increases in gas prices.

SEA economies	Domestic Natural Gas prices
Brunei Darussalam	<ul style="list-style-type: none">Natural gas prices for power generation and industry are fixed by the government.
Indonesia	<ul style="list-style-type: none">Natural gas prices for power generation and industry are fixed at about USD6.00/MMBtu for the 2021-2024 period.<ul style="list-style-type: none">Power generation – ranging from USD4.00/MMBtu-USD8.00/MMBtuIndustry - ranging from USD5.39/MMBtu-USD7.65/MMBtu
Malaysia	<ul style="list-style-type: none">Starting January 2022, natural gas prices for industry, commercial and residential users in Peninsular Malaysia have been de-regulated and are determined by market forces.Most of the new contract prices are linked to Malaysia's average LNG export price.
Philippines	<ul style="list-style-type: none">Natural gas prices for power generation are not regulated by the government.
Singapore	<ul style="list-style-type: none">Natural gas prices for end-users in Singapore are not regulated.
Thailand	<ul style="list-style-type: none">Natural gas prices for end-users in Thailand are not regulated.
Viet Nam	<ul style="list-style-type: none">Natural gas prices for end-users in Viet Nam are not regulated.

APEC near-term outlook

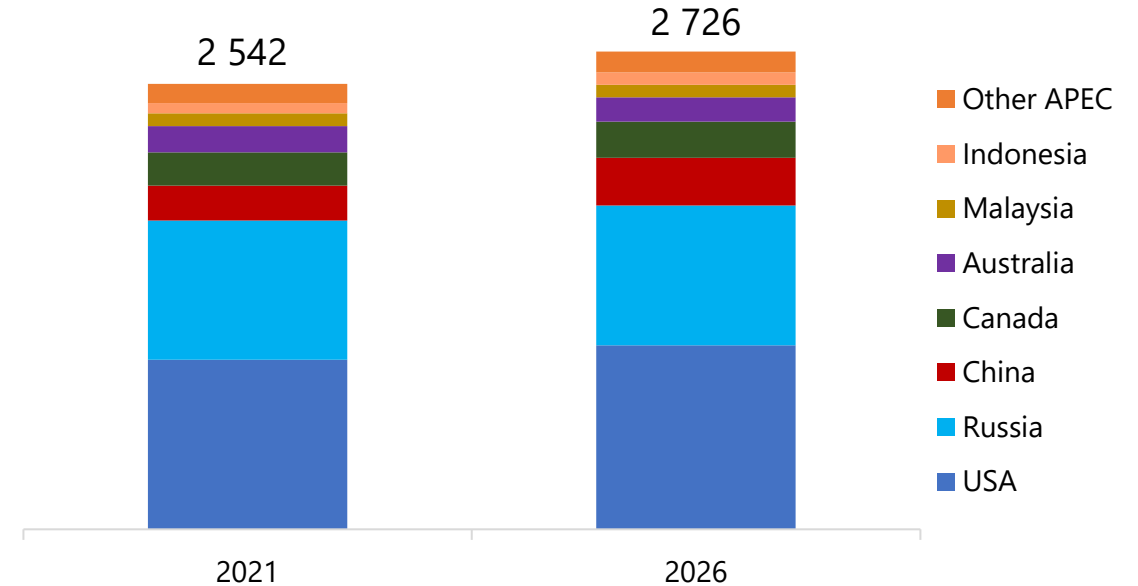
Natural gas demand outlook in APEC economies (bcm)



Source: IEA, CEDIGAZ, Outlook 8th Edition; APERC analysis

- APEC's total demand is expected to increase by 6.5% by 2026, more than 50% of the increase contributed by growing demand in USA and Russia.
- Current high gas prices, tight gas supply, geopolitical issues and a weakening global economy may temper gas demand growth in APEC.

Natural gas production outlook in APEC economies (bcm)

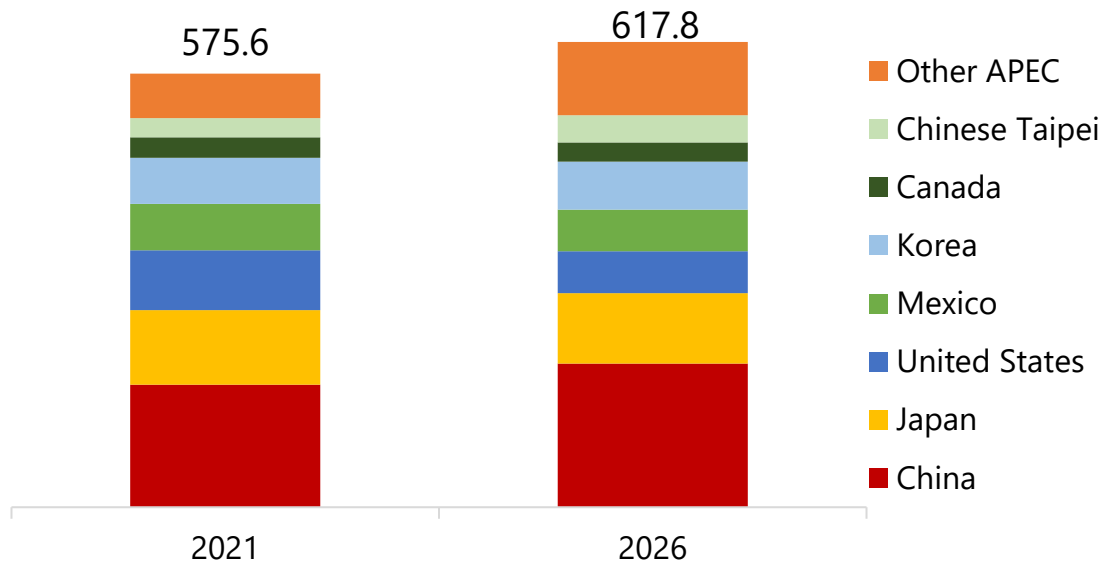


Source: IEA, CEDIGAZ, Outlook 8th Edition

- APEC's gas production is projected to increase by 7.2% by 2026. Almost 45% of the increase is contributed by higher shale gas production in the USA.
- China's gas production is expected to have the highest growth at 36% by 2026, supported by China's strategic plan to reduce import dependence.

APEC near-term outlook (continued)

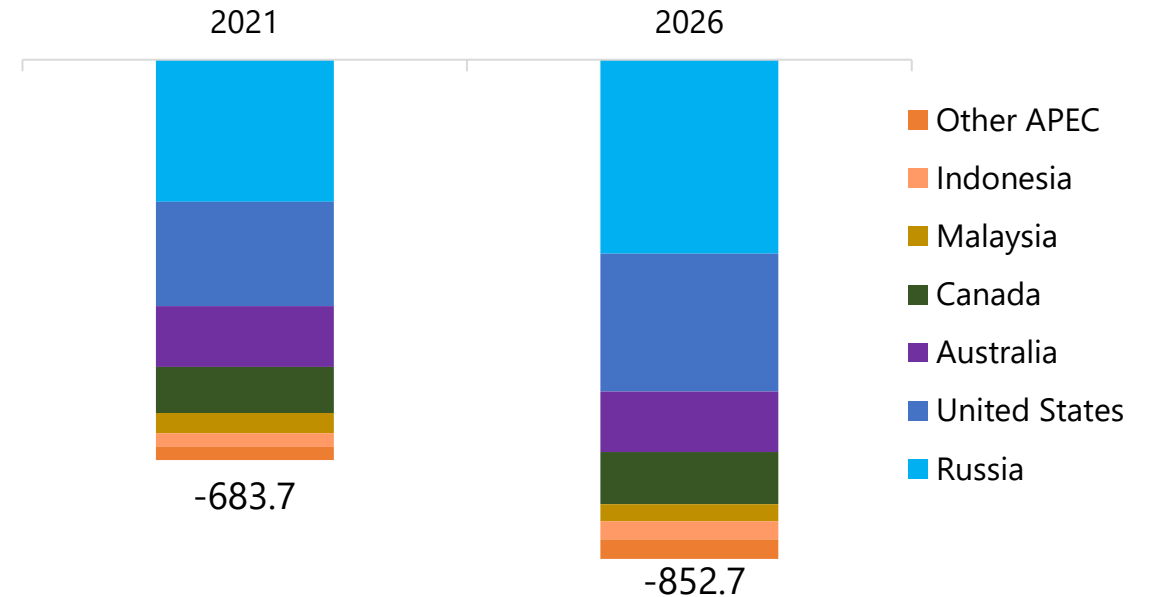
Imports outlook in APEC economies (bcm)



Source: IEA, CEDIGAZ, Outlook 8th Edition

- Import growth will slow in APEC by 2026 due to a 7.4% reduction of imports by 7 economies: the USA (-3.8%), Mexico (-1.0%), Japan (-0.9%), Russia (-0.7%), and others (-0.9%).
- China and Northeast Asia will remain the largest gas importers in APEC in 2026, accounting for 63% of total imports.

Exports outlook in APEC economies (bcm)



Source: IEA, CEDIGAZ, Outlook 8th Edition

- APEC gas exports grow by 25% by 2026, stronger than import growth at 7%.
- Before the Ukrainian crisis, Russia and the USA were expected to lead the export growth in APEC, contributing 87% of the growth between 2021 to 2026.

Thank you.

<https://aperc.or.jp>

