

5. Impact of COVID-19 on Oil & Gas Security (OGSS 2021) (Interim Report)

APERC Workshop

The 61st Meeting of APEC Energy Working Group (EWG)
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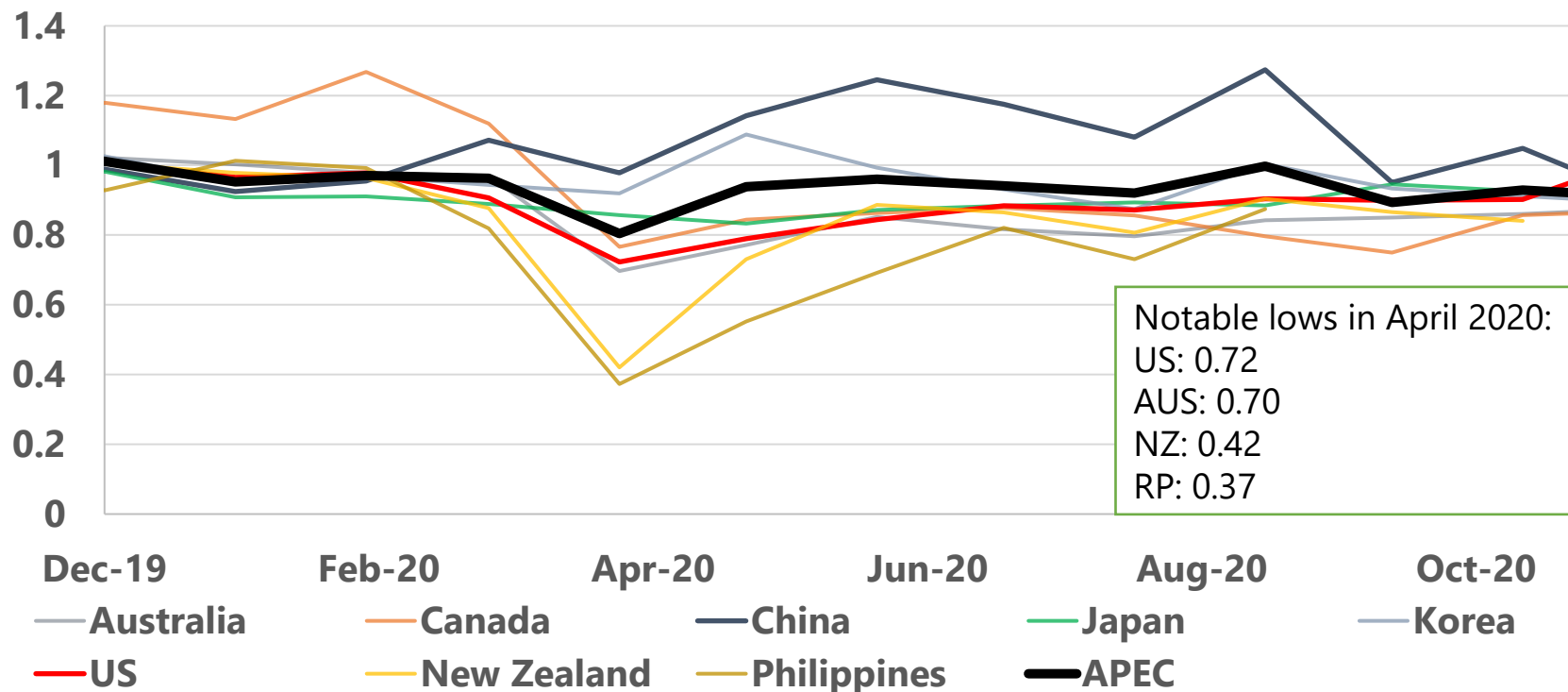


Background: OGSS

- OGSS
 - One of the three overarching pillars of OGS
 - APERC has published 17 OGSS reports since 2015
- Purpose of today's discussion
 - Share the key findings of the interim report

Key Findings: Oil Demand

Monthly oil consumption in 2020 compared same month in 2019

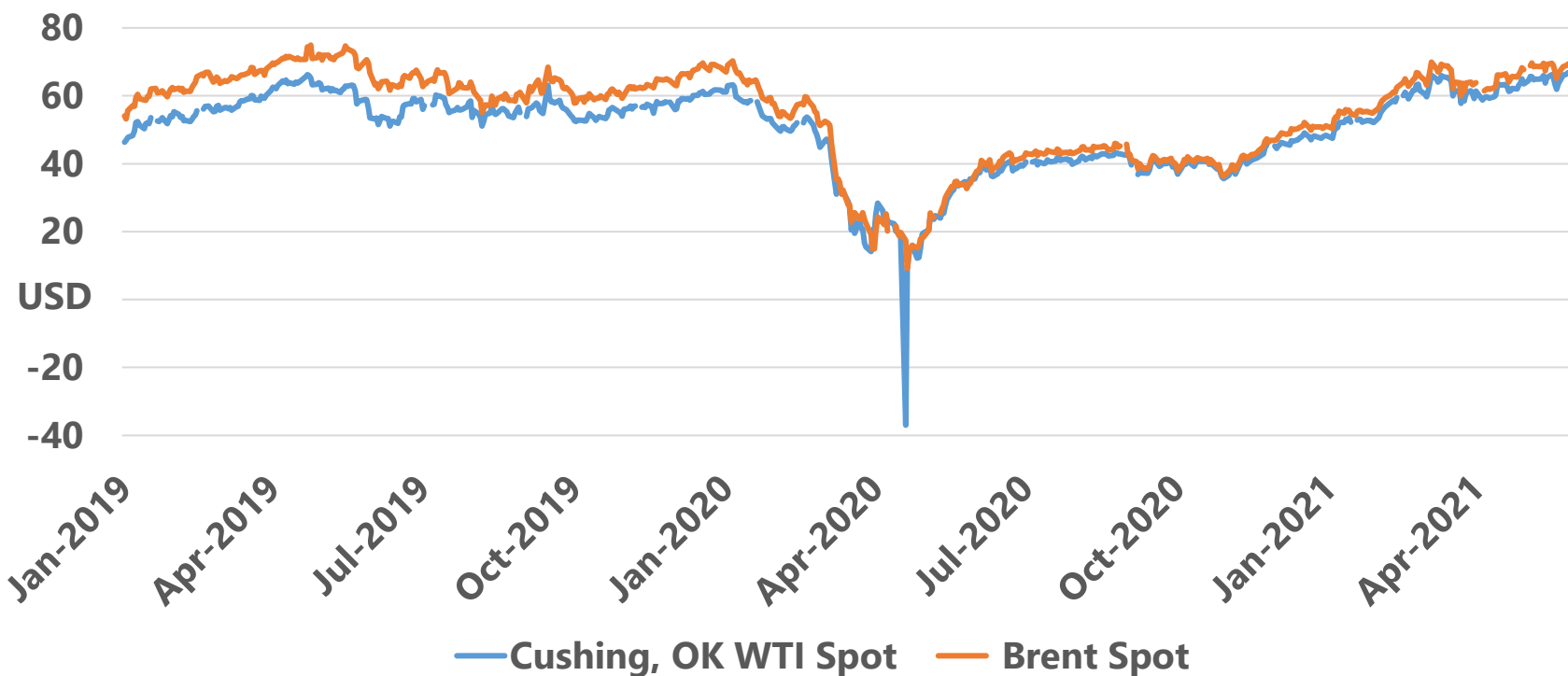


Source: EGEDA (2021)

APEC oil demand is recovering, reverting close to pre-pandemic levels, but it varies throughout economies and across product types.

Key Findings: Oil Prices

Daily Brent, WTI Spot Prices from January 2019 to June 2021

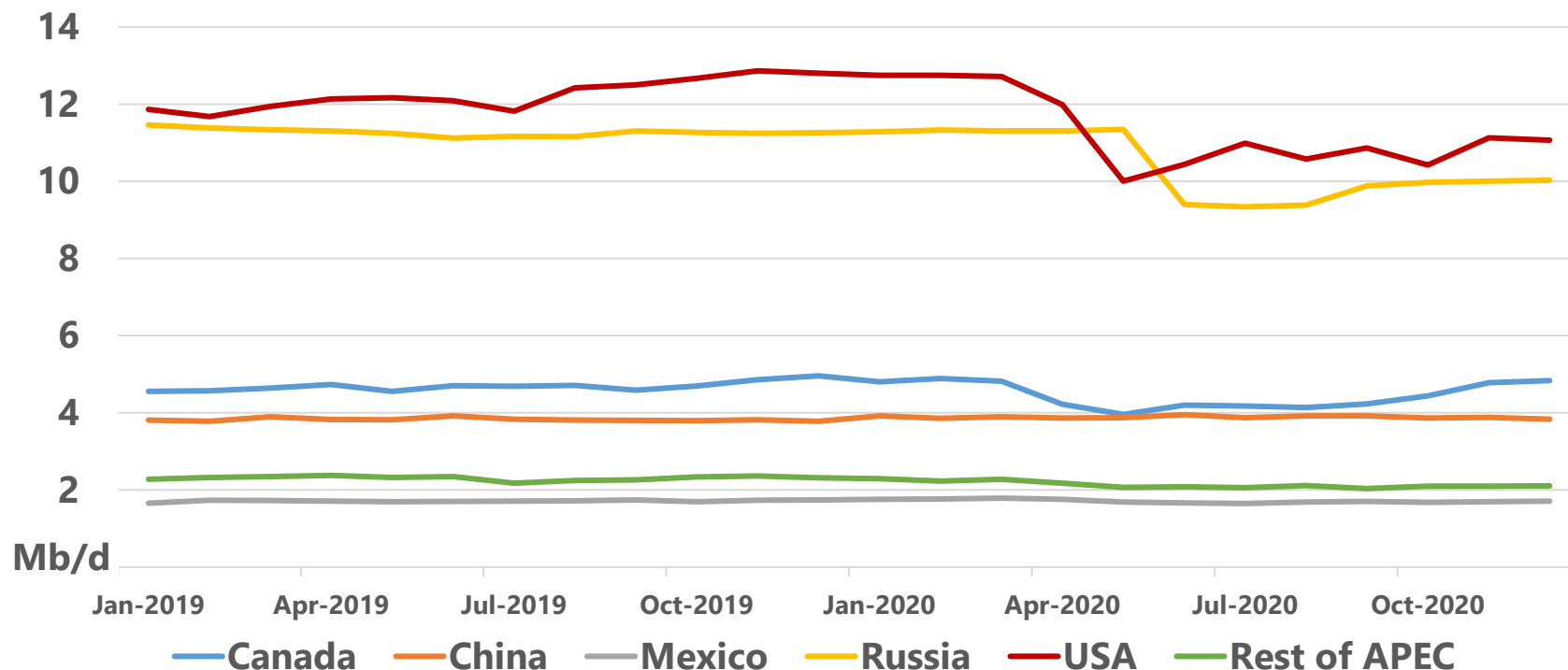


Source: EIA (2021)

Oversupply from the demand drop and volume war led to a significant inventory glut and a precipitous price collapse, but curtailment amongst global producers has helped reduce inventories and buoy prices to pre-pandemic levels.

Key findings: Oil Supply

Monthly Crude Oil Production in APEC, 2019 to 2020

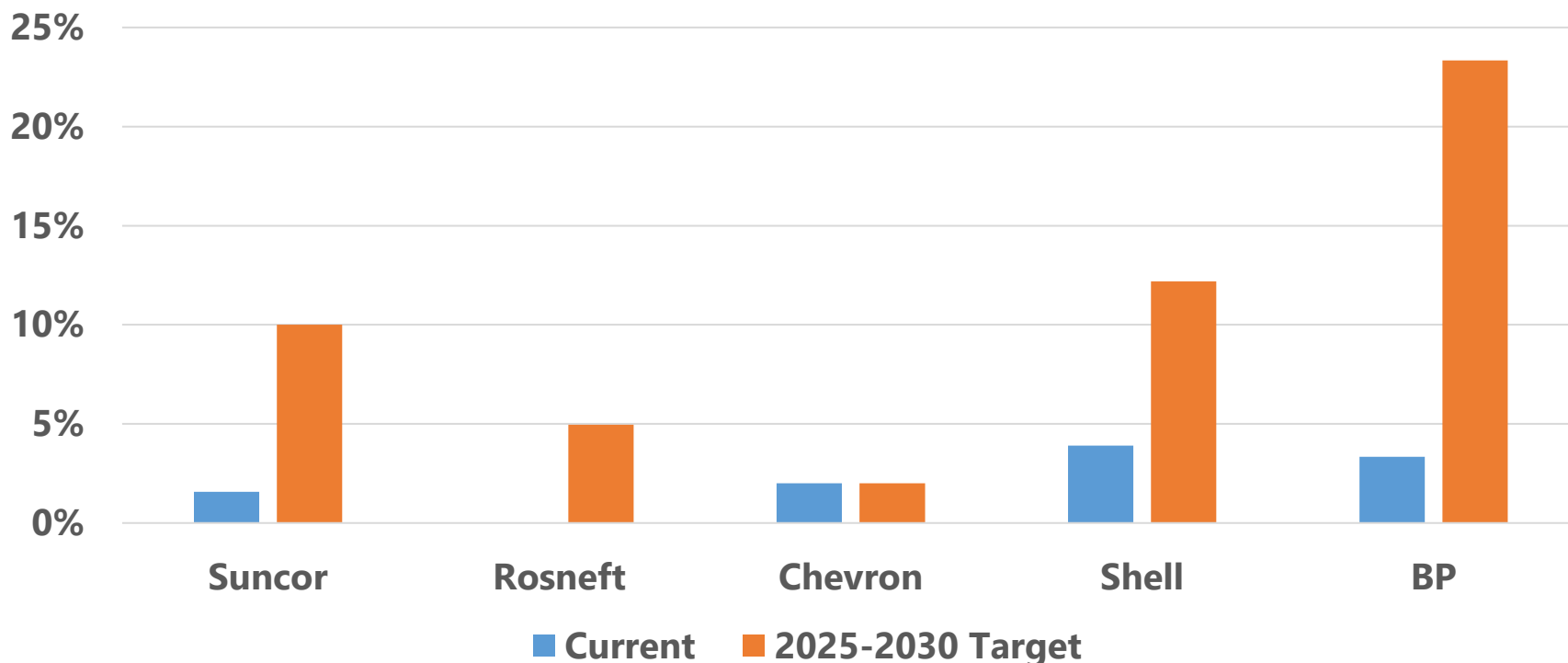


Source: Economy statistics, JODI (2021), EIA (2021), APERC estimations

APEC oil production fell following Russia's OPEC+ curtailment and market-driven reductions in the US and Canada. Production from China and most other APEC NOC-producing economies remains resilient.

Key Findings: Constraints on Supply

Share of Capital Spending on Low-Carbon Energy and Carbon Abatement

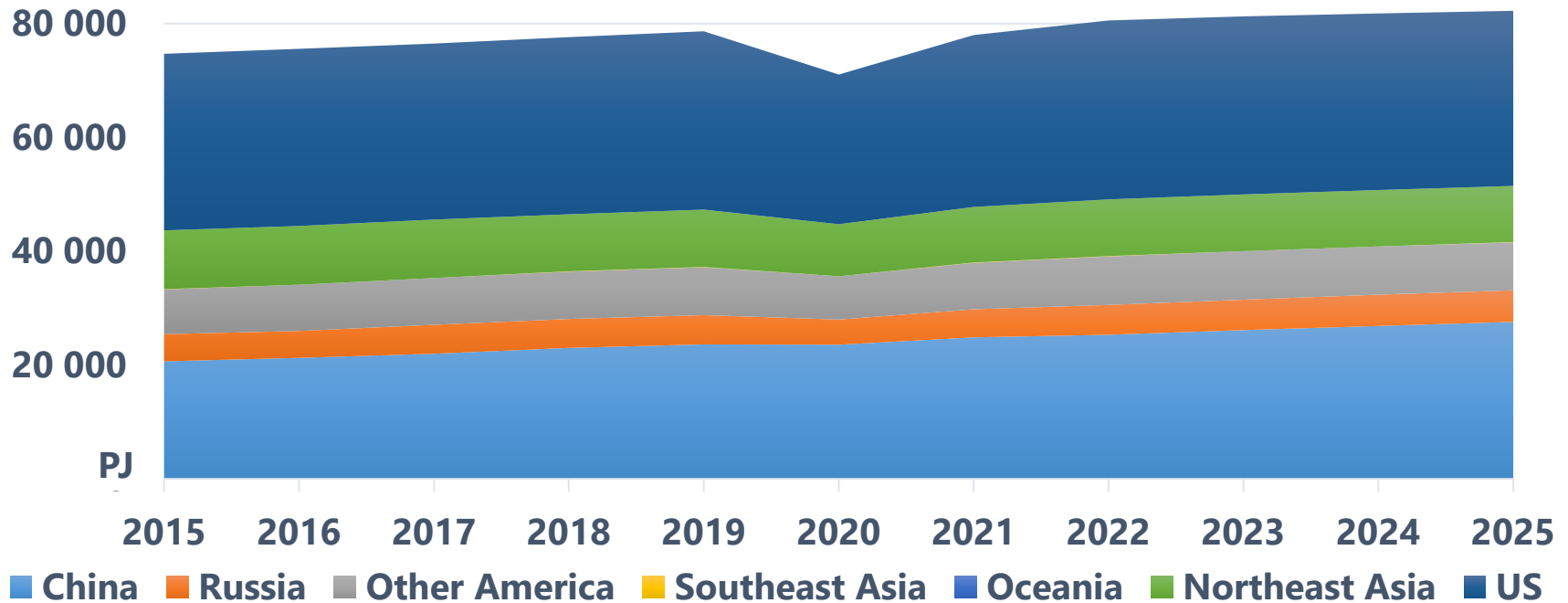


Source: Company Reports, APERC Analysis

Several factors may prevent production from rebounding as quickly as demand, including OPEC+ production constraints, trade sanctions, the rising cost of capital for growing oil and gas production capacity, and the success of the ESG movement in altering the business model of energy companies.

Key Findings: Disruption Potential

APEC Annual Oil Demand by Sub-Region



Source: EGEDA (2021), APERC Analysis

While APEC oil demand is on track to return to pre-pandemic levels and grow an additional 5% by 2025, constraints on global oil supply will increase the vulnerability of the region to potential oil price shocks.

Opportunities: Crude Oil and Product Storage

Crude and Oil product Stocks, Days of Net Imports

Economy	Crude Oil Inventories	Deficit to 90-day Threshold
Australia	68	22
Chile	25	65
China	106	0
Indonesia	19	71
Japan	191	0
Korea	187	0
Malaysia	0	90
New Zealand	87	3
PNG	21	69
Peru	30	60
Philippines	61	29
Singapore	25	65
Chinese Taipei	90	0
Thailand	34	56
United States	3 454	0
Viet Nam	20	70

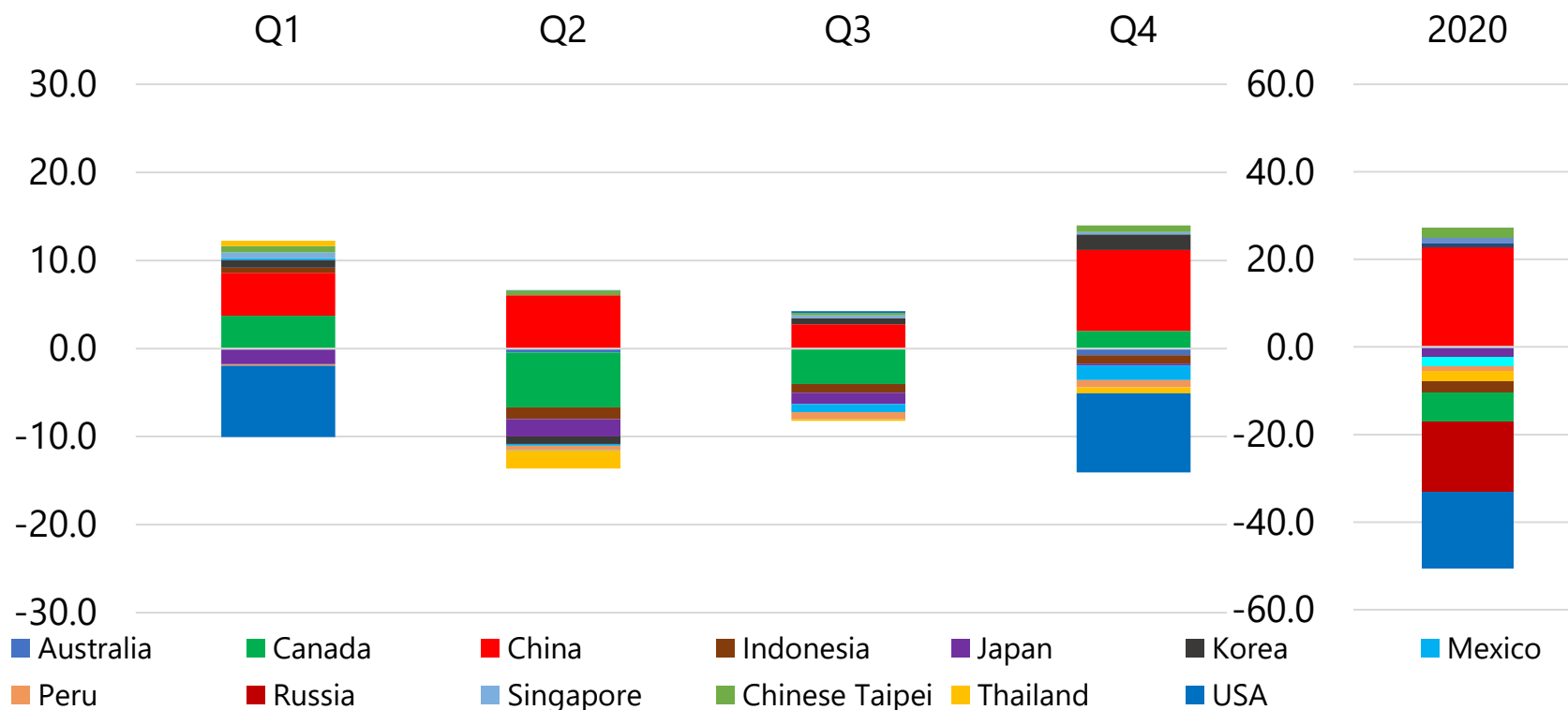
Source: IEA (2021), Government Policy, Government Reports, Media Reports, APERC Analysis

Source: Allens (2020); A{ERC Calculations

Stocks grew significantly in 2020, and spare capacity in high consuming economies could help others comply with a 90-day coverage threshold. Significantly, China and Australia increased their strategic stocks in 2020 while oil prices were low.

Key Findings: Gas Demand

Changes in Quarterly natural gas demand in selected APEC economies, 2020 vs 2019 (bcm)

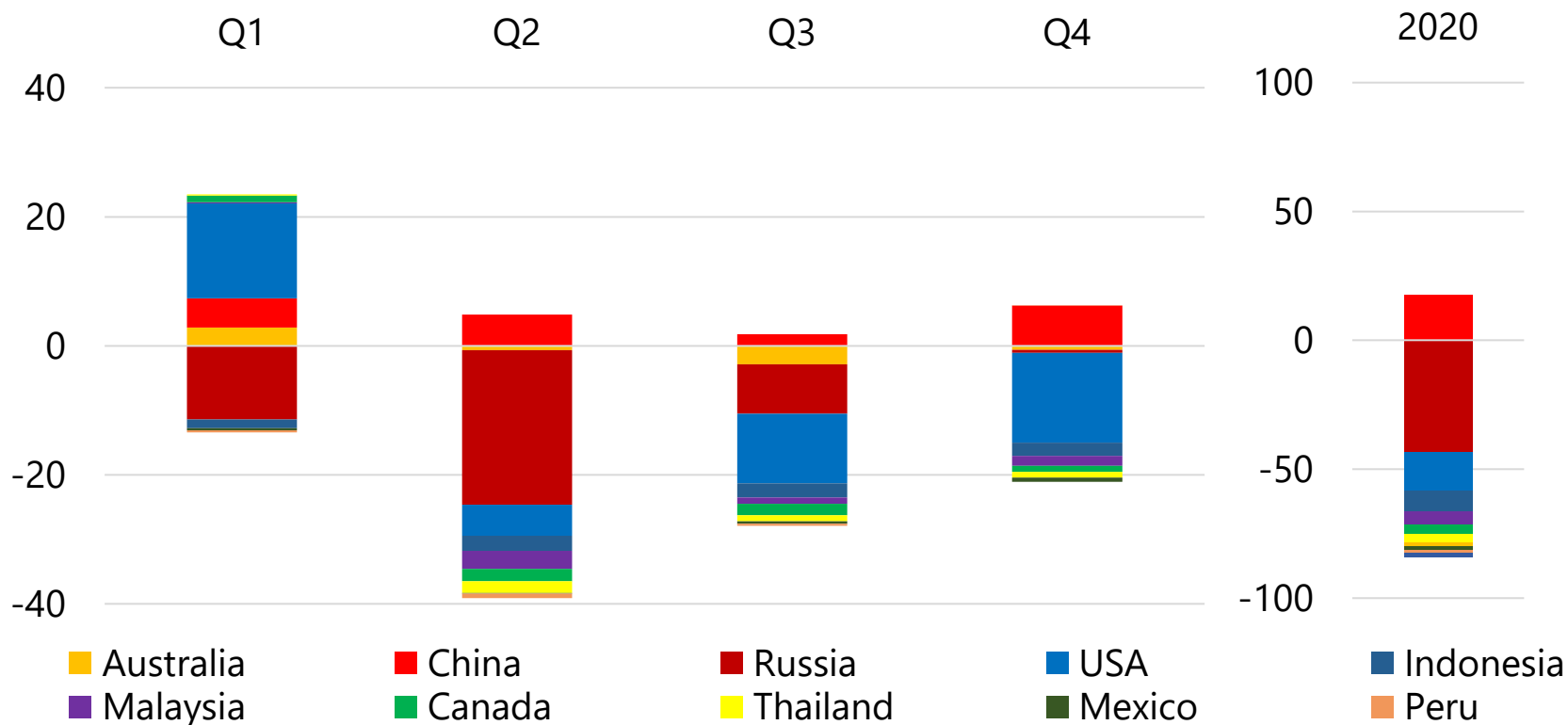


Source: APEC EGEDA Monthly data (2020), IEA Monthly Natural Gas Statistics (2021), Secretaría de Energía (2021), Ministerio de Energía y Minas del Perú (2021).

APEC gas demand is resilient, as buoyant power and industrial activity offset buildings declines in producing economies, limiting declines to about 15 bcm, or 1.0% in 2020, its first annual decline since 2014.

Key Findings: Gas Supply

Changes in Quarterly Natural Gas Production in APEC by economy in 2020 vs 2019 (bcm)

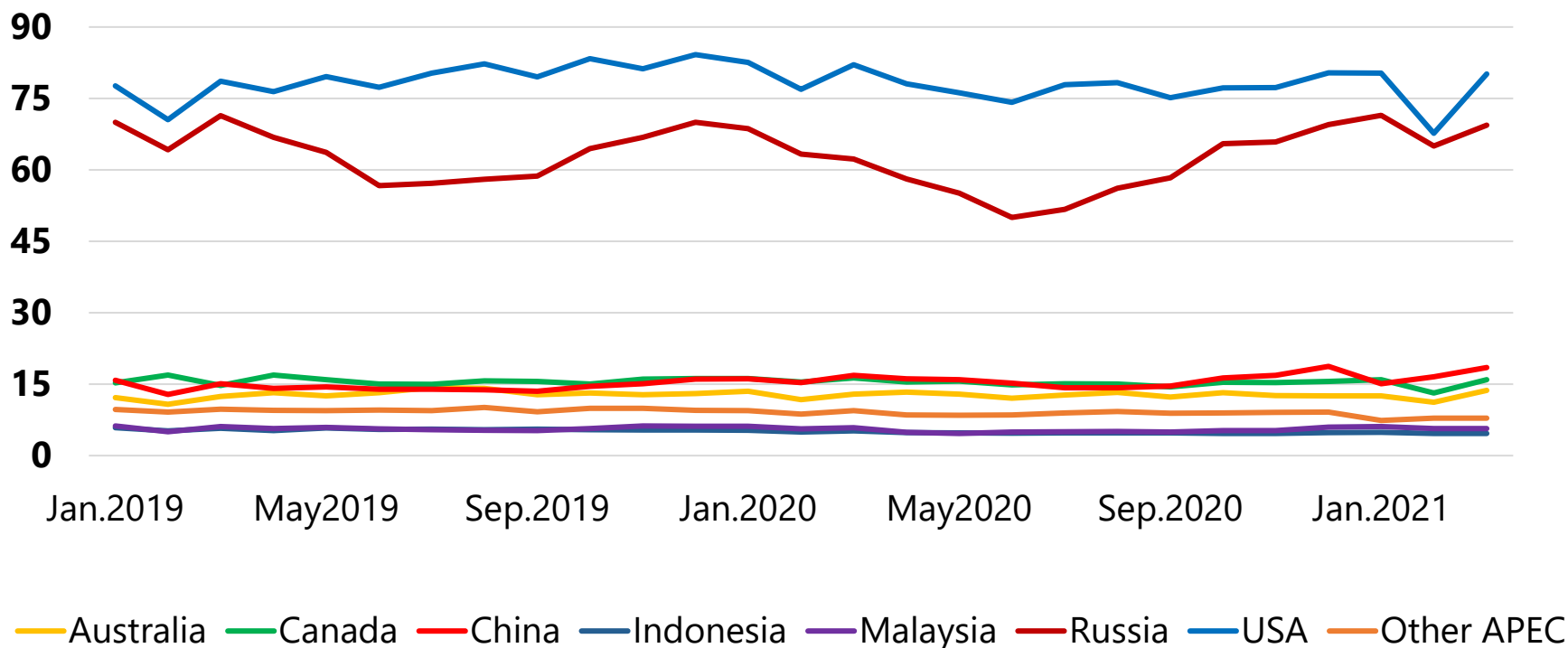


Sources: APEC EGEDA Monthly data (2021), IEA Monthly Natural gas Statistics (2021), CEDIGAZ (2021).

Production declines surpassed consumption, driven mainly by reductions in pipeline exports.

Key Findings: Gas Supply

Changes in Quarterly Natural Gas Production in APEC by economy in 2020 vs 2019 (bcm)

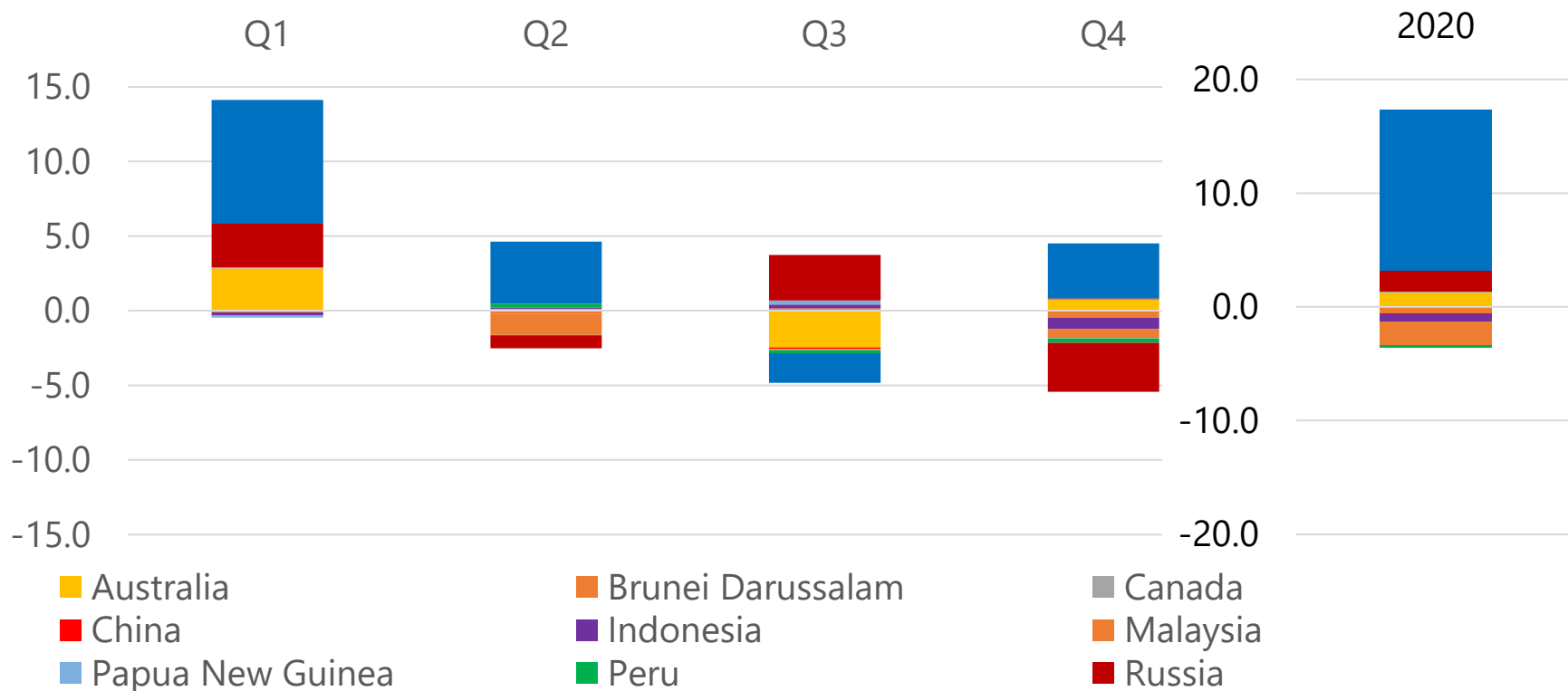


Sources: APEC EGEDA Monthly data (2021), IEA Monthly Natural gas Statistics (2021), CEDIGAZ (2021).

APEC production declines were mostly localized in the US and Russia and is already rebounding and rising above pre-pandemic levels.

Key Findings: LNG Exports

Changes in quarterly LNG Exports by APEC economy in 2020 vs 2019 (bcm)

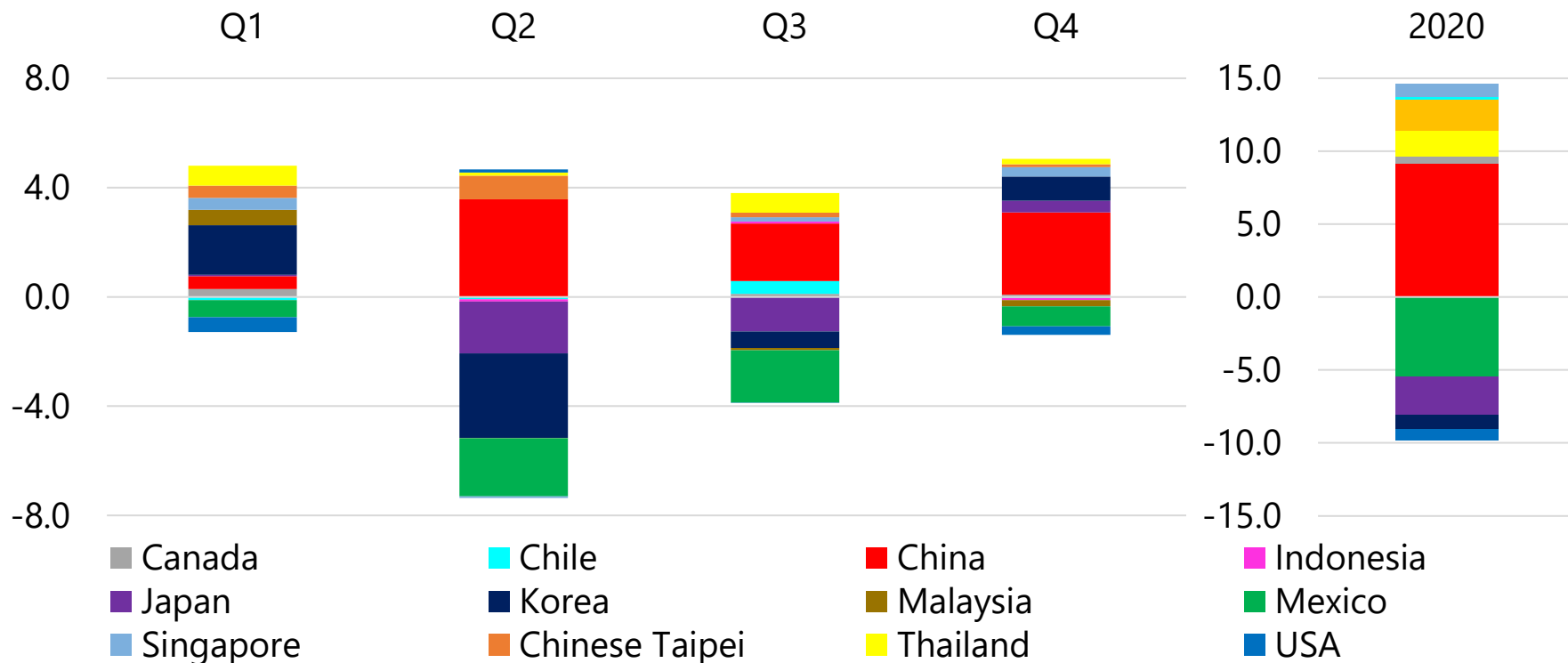


Sources: APEC EGEDA Monthly data (2021), IEA Monthly Natural gas Statistics (2021), CEDIGAZ (2021).

Despite a decline in total gas exports, APEC LNG exports grew.

Key Findings: LNG imports

Changes in quarterly LNG imports in APEC by economy in 2020 vs 2019 (bcm)

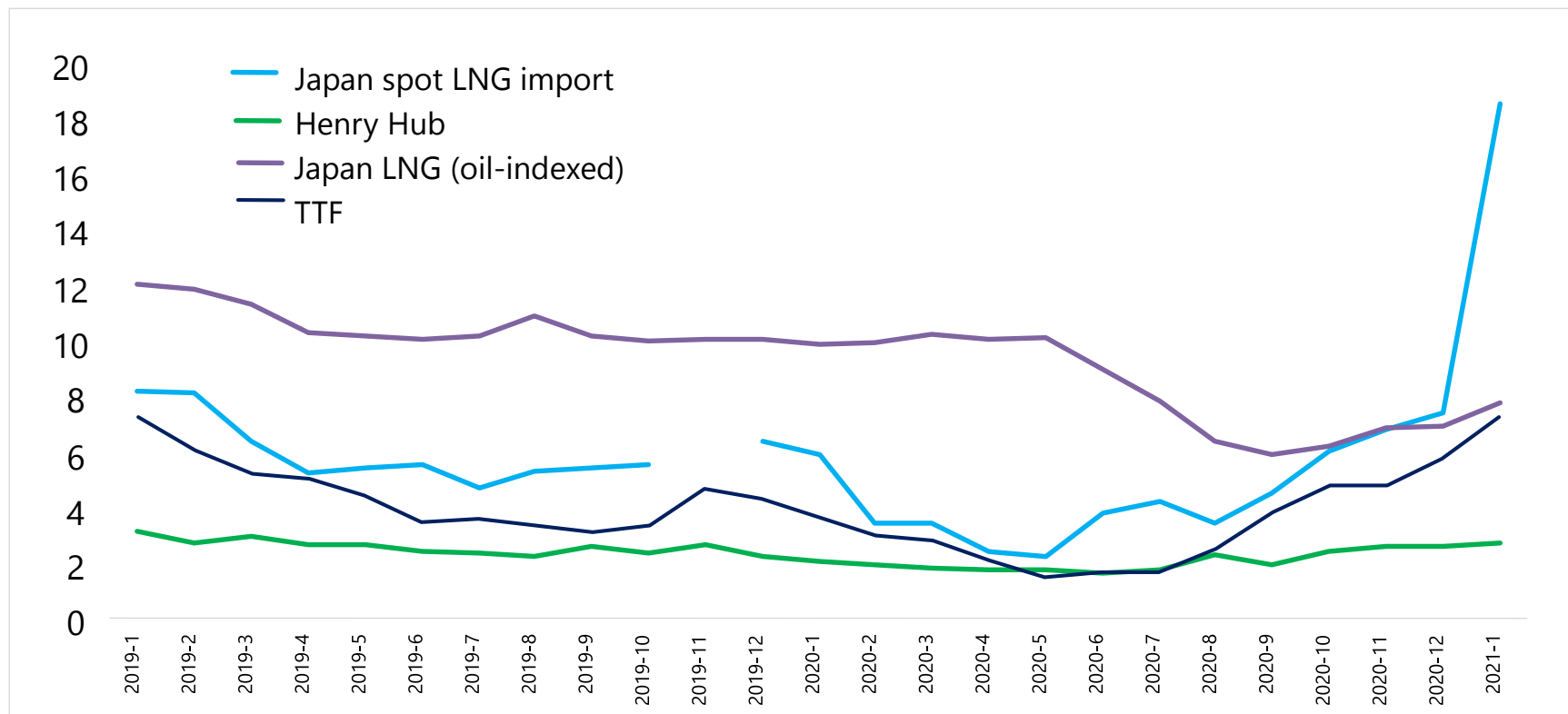


Sources: APEC EGEDA Monthly data (2021), IEA Monthly Natural gas Statistics (2021), CEDIGAZ (2021).

Overall gas imports into APEC fell by 0.9%, with significant pipeline declines being offset by a 2% increase in LNG imports.

Risks and Opportunities: Gas Prices

Natural gas prices in January 2019 through January 2021 (USD/MMBtu)

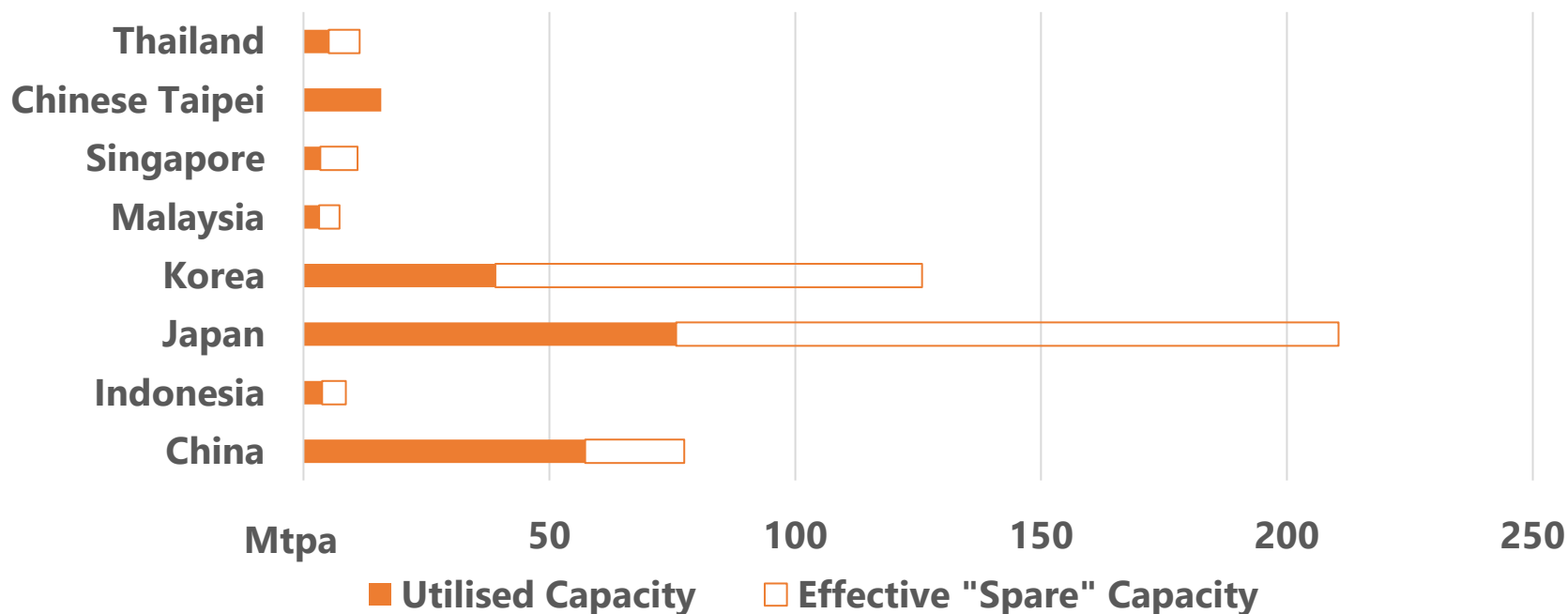


Source: Ministry of Finance of Japan, Agency of Natural Resources of Energy of Japan, U.S. Energy Information Administration, Intercontinental Exchange, 2021.

The 2020-2021 LNG price spike illustrates that infrastructure constraints still pose a gas security risk to the APEC region.

Risks and Opportunities: Gas Storage

Capacity Utilisation of APEC Asian LNG Importers

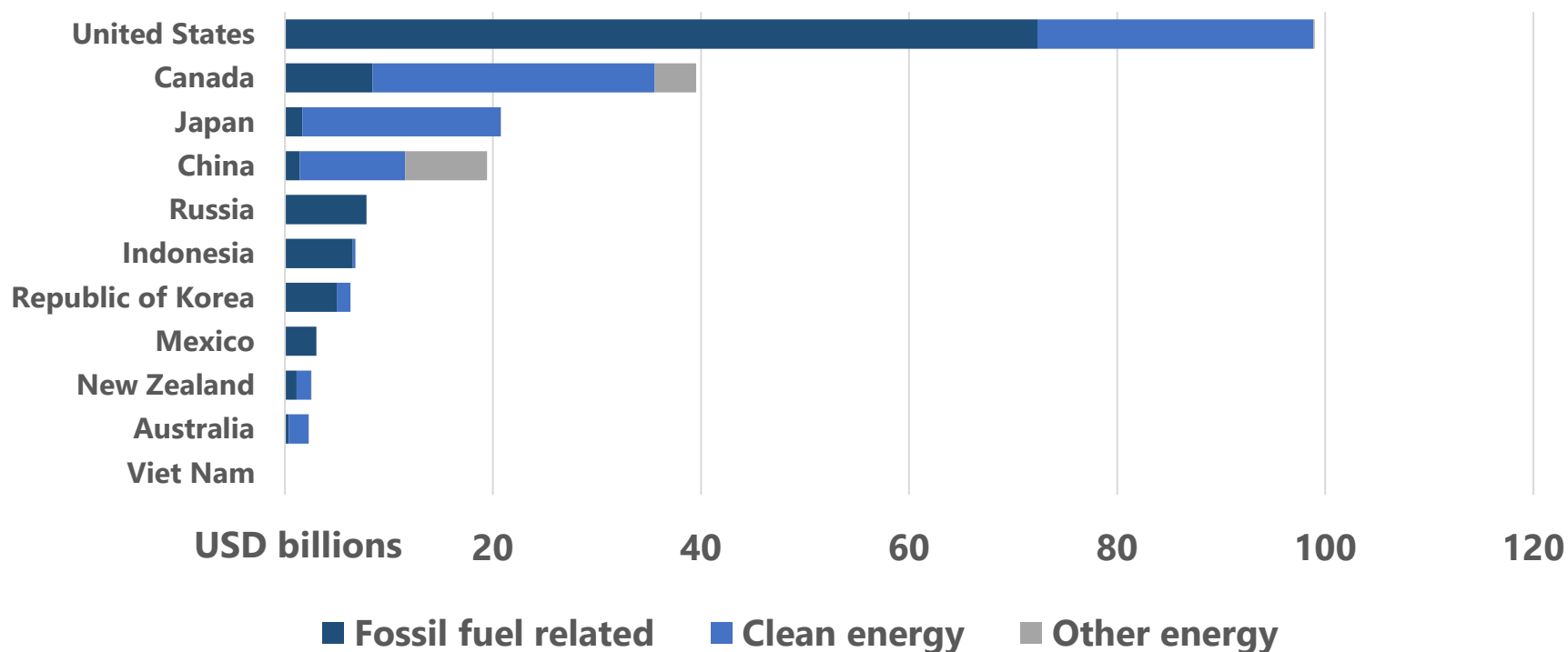


Source: IGU, GIIGNL, APERC Analysis

Some APEC LNG importers could help mitigate storage constraints by allowing LNG re-exports from their economies and enabling LNG reloading services at underutilized LNG regasification terminals.

Key Findings: Fiscal Recovery Packages

Announced fiscal spending on energy sector programs, in 2020 and 2021

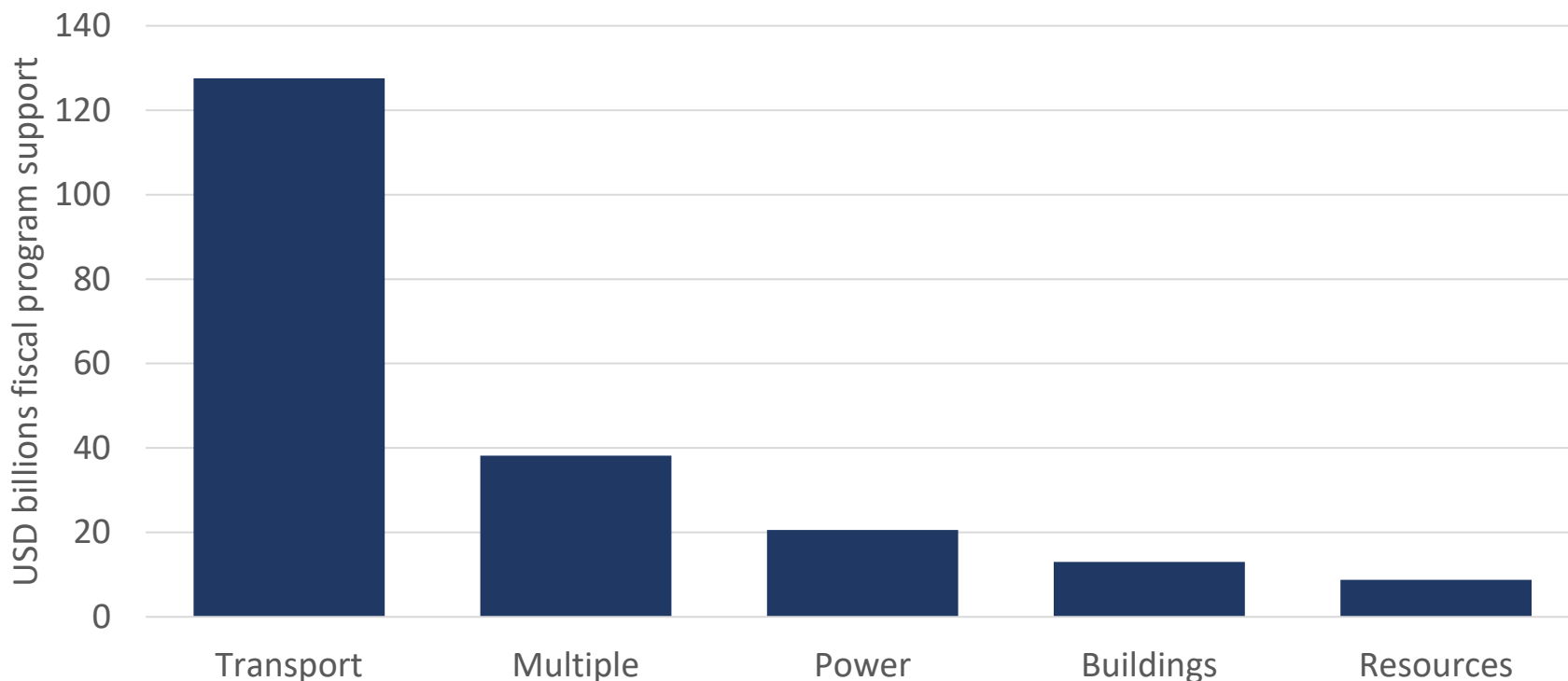


Source: Energy Policy Tracker (2021)

Recovery packages could kickstart an energy transition in the 2020s by funding R&D, establishing new supply chains, and lowering the costs of key emerging low-carbon technologies.

Key Findings: Fiscal Recovery Packages

Announced fiscal spending on energy sector programs, in 2020 and 2021



Source: Energy Policy Tracker (2021)

Most fiscal spending is targeting energy consuming sectors. For example, while 5.4% of APEC's energy sector stimulus targets oil and gas suppliers, 33% is supporting the hard-hit airline sector.



Thank you!

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