

APERC OIL REPORT 2023

Introduction

The APERC Oil Report 2023 is the 5th edition of an annual oil report that has been published by the Asia Pacific Energy Research Centre since 2018. For this edition, the report highlights the changes in oil consumption, production, trade flows, prices, and refining, amid dynamism in the oil market brought about by a confluence of factors (COVID-19 pandemic, net zero commitments and Russia-Ukraine conflict). It is hoped that this report will serve as one of the useful resources for policymakers across the APEC region to improve the sustainability, security and affordability of their economies' energy systems.

Key Findings

Demand

Global oil demand increased by 19 million barrels per day (mb/d) from 2000 to 2022, driven by strong demand growth in the non-OECD economies.

APEC-wide demand rose by almost 9 mb/d from 2000 to 2022, in line with population and economic growth. China and Southeast Asia led the growth, while there were declines in the United States and Northeast Asia.

Based on the APEC 8th Energy Demand and Supply Outlook, oil demand in APEC will increase by 2.3 mb/d in 2030, with China and Southeast Asia leading the growth. On the other hand, United States and Northeast Asia will continue experiencing declines.

The oil demand outlook for China is especially uncertain. The APEC Outlook calls for an increase of 2.0 mb/d in Chinese oil demand by 2030. This projection falls midway between the IEA and OPEC outlooks which expect Chinese demand in 2030 to increase by 1.7 and 2.9 mb/d, respectively.

Changes in the relative shares of various petroleum products can also be an important issue for product pricing and trade flows. Over the past two decades, global diesel consumption exhibited an annual growth rate exceeding that of gasoline by 5 percentage points, leading to a shift in the global mix of major petroleum products. In contrast, APEC's product mix has remained relatively stable over the last 20 years. In 2021, APEC's gasoline share was 10 percentage points higher, and its diesel share was 5 percentage points lower than the global averages.

Supply

Global oil production (crude oil and NGLs) rose to 91.2 mb/d in 2022, with APEC and OPEC contributing 44% and 42% of the global production respectively. Production from the rest of the world contributed the remaining 14%.

Over the last two decades, APEC production grew by almost 9 mb/d, contributed largely by United States and Russia with growth of 7 mb/d and 2.5 mb/d respectively. Elsewhere, Other Americas and China's outputs only increased marginally, while Southeast Asia and Oceania's recorded declines during the same period.

The Southeast Asia region has experienced oil production declines over the past twenty years, with regional production falling by 0.8 mb/d between 2000 and 2022. Indonesia had the largest decline among the region member economies with a drop of 0.35 mb/d.

The APEC 8th Energy Demand and Supply Outlook projects an increase in APEC crude oil production of 2.8 mb/d between 2021 and 2030, of which United States contributes the most with 1.7 mb/d gain.

Trade

The increase in tight oil production in the United States and oil sands production in Canada contributed to a decline in APEC's oil import dependency. Crude oil dependency declined from 37% to 29% between 2010 and 2021, while petroleum products dependency decreased from 1% to -3% during the same period.

Russian crude oil and petroleum products exports have shifted to the Asian market, particularly China and India. Meanwhile, total Chinese crude oil imports dropped in 2022 for the first time in two decades, driven by increased domestic production and relatively weak economic activity due to continued COVID-19 measures.

Southeast Asia continued to be dependent on crude oil from the Middle East, although those volumes declined as the region purchased more crude oil from Africa and the United States.

Price

Brent and WTI crude oil prices were affected by several events between 2014 and 2022. Crude prices hit over USD 100 per barrel mark following the Russia-Ukraine conflict in February 2022.

Petroleum product prices were also affected by increased refining margins, including the US Gulf Coast gasoline and diesel crack spreads, increasing by 5-6 times their 4-year average (2018-2021). Sanctions on Russian petroleum product exports led to increased demand and tightened global refining capacity constraints and contributed to elevated petroleum product prices. Despite market adjustments, the June 2023 crack spreads remain 2-3 times higher than the 4-year average. The Singapore market exhibits a similar trend, albeit at lower levels. In June 2023, the Singapore gasoline and diesel crack spreads are approximately 40% and 60% higher than their respective 4-year averages.

Refining

Global refining capacity stood at 101.9 mb/d in 2022, with an approximate utilisation rate of 80%. Looking ahead, a net addition of 4.2 mb/d in refinery capacity is anticipated from 2023 to 2028, resulting in a total refining capacity of 106.1 mb/d in 2028.

Declining demand due to the COVID-19 pandemic drove the closure of less efficient refineries. Concurrently, China undertook initiatives to replace small-scale refineries with larger, integrated, and more complex facilities.