The APEC Energy Overview 2024

Introduction

The APEC Energy Overview is an annual publication that provides insights into the current energy supply, demand, policies, and key developments in the 21 APEC economies. The 2024 edition of the APEC Energy Overview includes data up to 2021 and offers analyses on the initial economic recovery following the pandemic, as well as the ongoing impact of COVID-19 on energy supply and demand across APEC economies.

In addition to energy supply, transformation, and final consumption data for the period 2000 to 2021, each of the APEC member economy chapters provides an up-to-date accounting of energy policies and notable energy developments to the first quarter of 2024.

Key Findings

1. **Macroeconomy:** The APEC region, which was similarly significantly impacted by COVID-19 as the world, recovered with an economic output of around 6.1% (PPP constant 2017 USD) in 2021

2. **Energy Supply**
   (1) The recovery in economic activity resulted in an annual increase in the APEC energy supply by over 19 exajoules (5.7% increase) to finally settle at 362 051 PJ in 2021. Renewables surged by 7.3%, contributing significantly to the overall rise in energy supply.
   (2) All energy products rebounded similarly in 2021. Coal saw a 6.4% increase, gas by 5.4% and oil rose by 5.2%. By composition, in 2021, coal share of TPES reached 34.6%, followed by oil (27.4%), gas (23.9%), renewables (8.3%), and others (5.8%).
   (3) APEC continues to be a net energy importer from the rest of the world, but the proportion of net imports to energy supply has been declining rapidly for more than two decades. While net imports experienced a slight increase in 2021, its level was well below the 2018 level. This marks the third consecutive year that net imports have remained at this low since 2019.

3. **Energy Demand**
   (1) The most significant rebound occurred in the transport sector with a 7.3% increase in 2021, but its level remained significantly lower than the pre-pandemic levels in 2019.
   (2) The non-energy sector, which drove the growth of final consumption in 2020, remained strong and grew 4.8% in 2021. The rebound was also seen in the final consumption in the services (4%) and industry (3.5%) sectors in 2021.
   (3) Meanwhile, consumption in the residential sector, which was largely unchanged in 2020 in view of the shift to a work-from-home scheme for many workers, saw a rise of 2.2% in 2021.

4. Power Sector

(1) Power generation in APEC increased significantly (up 6.4%) to exceed 18 600 TWh in 2021. Other renewable generation (which includes solar and wind) still maintained the fastest growth at 25% in 2021.

(2) Thermal power generation showed a strong recovery (6.1%) after declining in 2020 due to the pandemic; in particular, oil-fired (8.6% increase) and coal-fired (8.1%) remarkably rebounded in 2021.

(3) Nuclear electricity generation also recovered, by 3.4%. However, power generation from hydro and geothermal remained declining by 1.3% and 0.3%, respectively, in 2021.

5. APEC Dual Energy Goal

(1) APEC member economies have agreed to meet two energy-related objectives as a collective: reducing energy intensity by 45% in 2035 relative to a 2005 baseline and doubling the share of modern renewables in the APEC energy mix for the period 2010 to 2030.

(2) As of 2021, APEC-wide **final energy intensity** [final energy consumption/GDP (2017 PPP USD)] has improved 27% compared to the 2005 level, leaving an additional 18% improvement needed to meet the 2035 goal. APEC is on track to achieve this energy intensity improvement if current trends continue.

(3) The observed improvement in **primary energy supply intensity** of 25% [primary energy supply/GDP (2017 PPP USD)] is very close to the observed improvement in final energy intensity.

(4) The share of modern renewables[i] of final **energy consumption** has increased from 6% in 2010 to almost 9.9% in 2021, which is a 66% improvement.

(5) In terms of supply, modern renewables in TPES have increased from 4.8% in 2010 to 7.5% in 2021, which is almost a 53% increase at the halfway mark to the goal year of 2030.

(6) Progress has also been made in doubling the **share of renewables in the electricity generation** by 2030. Renewable generation accounts for 25% of APEC electricity generation in 2021, up from 15.6% in 2010

Please see the full report at the following link to explore more details:

https://www.apec.org/publications/2024/08/apec-energy-overview-2024

[i] Biomass used in the residential and commercial sectors is assumed to be traditional biomass and is not included in the definition of modern renewables. All other renewables (biomass used by industry, hydro, geothermal, etc.) are considered modern renewables. Modern renewables also include the share of electricity that is generated from renewable sources