

International Energy Agency, International Energy Forum, and Organization of the Petroleum Exporting Countries Energy Outlook Symposium
16th February, 2022

Key findings

The 12th IEA IEF OPEC Symposium on Energy Outlooks served as an opportunity to compare the outlooks prepared by the IEA and OPEC and other government organizations and market stakeholders and exchange perspectives on energy security, market stability, and sustainable and inclusive growth.

Finding 1

Global energy demand in 2050 will be below 2020 levels, reflecting a major change in the historical relationship between economic growth and energy demand growth (according to IEA's SDS and NZE and Equinor Rebalance projections).

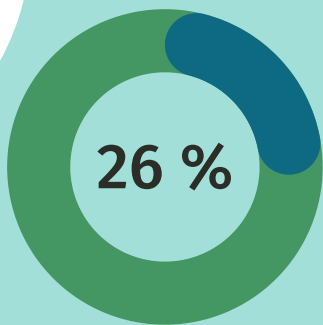
AI, Big Data, and many new technologies (that involve carbon capture and storage, and energy efficiency) are changing global energy consumption.

In OPEC's Reference Case, oil slightly decreases from 30 % in their 2020 baseline to 28 % in 2045, while IEA STEPS reports a dip from 29 % to 27 % in the same period.

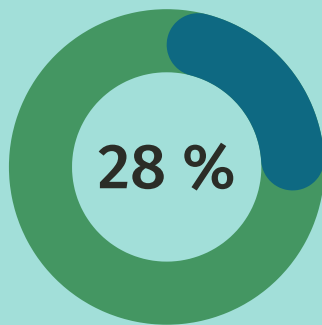
Finding 2

Oil production is unlikely to grow as it did a decade ago & financial returns matter now more to investors than the increase of production.

Natural gas demand is likely to grow under most scenarios over 2020 demand of 3323 mtoe.



IEA's STEPS scenario reaches 4192 mtoe in 2045 (26% over 2020 demand).



OPEC Reference scenario projects 4267 mtoe (28% over 2020 demand).

- GECF RCS, IRENA Planned and IEE Reference scenarios project it to reach **4810 mtoe**, **4845 mtoe**, and **4855 mtoe** in 2050, respectively.
- **In a more ambitious and "Paris-aligned scenario"**, natural gas demand is expected to flatten or decline in the coming decades.

Finding 3

Fossil fuels are expected to remain in use for decades to come. It will take many years to change an energy system that took decades to develop.

- **In IEA and OPEC main scenarios**, oil maintains its position as the leading primary energy source globally **while the IEA NZE** is the only scenario where natural gas takes over this role.
- Fossil fuels continue to dominate the primary energy mix, with oil, natural gas, and coal providing 68% under **IEA STEPS**, and 70% under **OPEC's Reference** scenario in 2045, though this is notably less than their current share of about 80%.

The IRENA 1.5°C scenario projects the highest renewables demand, at **10686 mtoe** by 2050.

Finding 4

Renewable energy (including solar, wind, hydropower, biomass, and other) demand is expected to grow under all scenarios.

It is becoming clear that an increasing number of consumers is demanding higher standards, aligned with ESG criteria, and new trends in corporate compensation, among others.

Finding 5

At this stage, it remains difficult to demonstrate the commitment of governments to the effective implementation of fuel-efficient fleet and electric vehicle regulations.



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