Global energy prospects and their implications for energy security & sustainable development

Dr. Fatih Birol
Executive Director, International Energy Agency
OECD, Paris, 24 February 2020
The last century has witnessed multiple transitions to and from different fuels and technologies. The challenge today is one of scale: global energy use is ten times higher than in 1919... and growing.
Well-supplied oil markets, largely thanks to US shale, have traded in a remarkably narrow band despite the range of supply disruptions and geopolitical uncertainties over the last year.
The 20-year switch

When consumers needed more energy in the past, they traditionally turned to oil. In the future, they turn first to electricity.
Natural gas turns to Asia

Developing economies in Asia account for half of global growth in gas demand, with industrial consumers taking the largest share, and this provides the spur for almost all the growth in gas trade, led by LNG.
Renewables provide three-quarters of the growth in electricity supply to 2040 under stated policies but much more is needed: in Sustainable Development Scenario wind and solar capacity in 2040 is 50% higher.
Africa emerges as a key driver for global energy markets

With rapidly rising population and a major switch away from the traditional use of biomass, Africa emerges as a major source of global growth for oil, natural gas and renewables.
Defying expectations, global CO₂ emissions did not rise in 2019

New IEA data show global CO₂ emissions were unchanged at 33 gigatonnes in 2019, even as the world economy expanded by 2.9%, mainly due to lower emissions from electricity generation.
No single or simple solutions to reach sustainable energy goals

A host of policies and technologies will be needed across every sector to keep climate targets within reach, and further technology innovation will be essential to aid the pursuit of a 1.5°C stabilisation.
Conclusions

- The energy sector is adjusting to new pressures, but the overall response remains far from adequate in view of the energy security & environmental threats the world faces.

- While solar, wind, storage & digital technologies are transforming the electricity sector, legacy issues surrounding existing infrastructure also need to be tackled.

- Investment in energy efficiency, renewables and more flexible energy systems must significantly accelerate.

- The oil & gas industry is critical for some key capital-intensive technologies to reach maturity, including CCUS, low-carbon hydrogen, biofuels, and offshore wind.

- The IEA is convening, leading & supporting a Grand Coalition – made up of govts, industry & civil society – to accelerate global energy transitions that underpin energy security & economic growth.