

28 April 2021

## Medium- to Long-Term Prospects for Gas and Coal

Presented by:

**OPEC Secretariat**

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- **Key Assumptions and Global energy demand**
- **Coal and Gas outlook**
- **Trends in the power sector**
- **Key takeaways**

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# Global GDP will recover from COVID-19 crisis but long-term average growth will be slower



- Global population projected to increase from **7.7 billion in 2019** to **9.5 billion in 2045**
- Approximately 96% of the population growth is foreseen in non-OECD countries
- Global GDP expected to increase by 2.9% p.a. on average between 2019 and 2045
- Most of the GDP growth driven by **non-OECD** countries
- **India** is expected to remain the **fastest-growing** developing country with average GDP growth of 5.6% p.a.
- **China's** economy is rapidly moving towards **maturity** and growth rate will **decelerate** to an average **2.8% p.a.**
- GDP growth in **OECD** estimated at average **1.6% p.a.**

# The outlook assumes the evolutionary development of existing energy policies and technologies

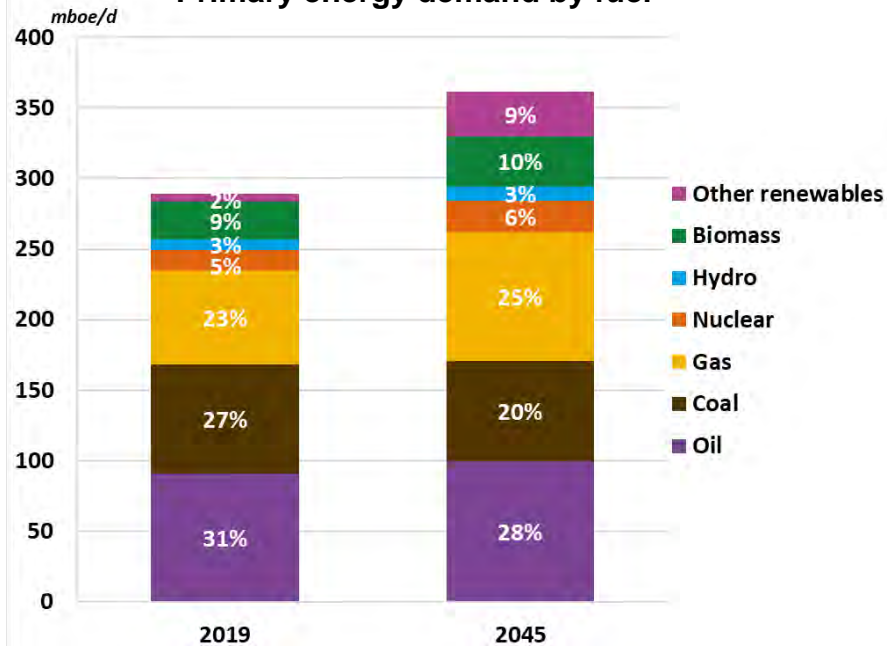


- Outlook accounts for **key energy-related policy initiatives** in major regions and countries
- Evolutionary extensions of **fuel efficiency standards** assumed
- Internal Combustion Engines will remain **dominant** for the foreseeable future
- Shared mobility **growing** swiftly, especially in urban areas
- Potential of **hydrogen** being explored to meet environmental **policy objectives**
- Due to the effects of COVID-19, **remote working** continues to develop
- Continued **energy efficiency gains** across all sectors
- IATA/ICAO and IMO policy initiatives for **aviation and marine transport** sectors

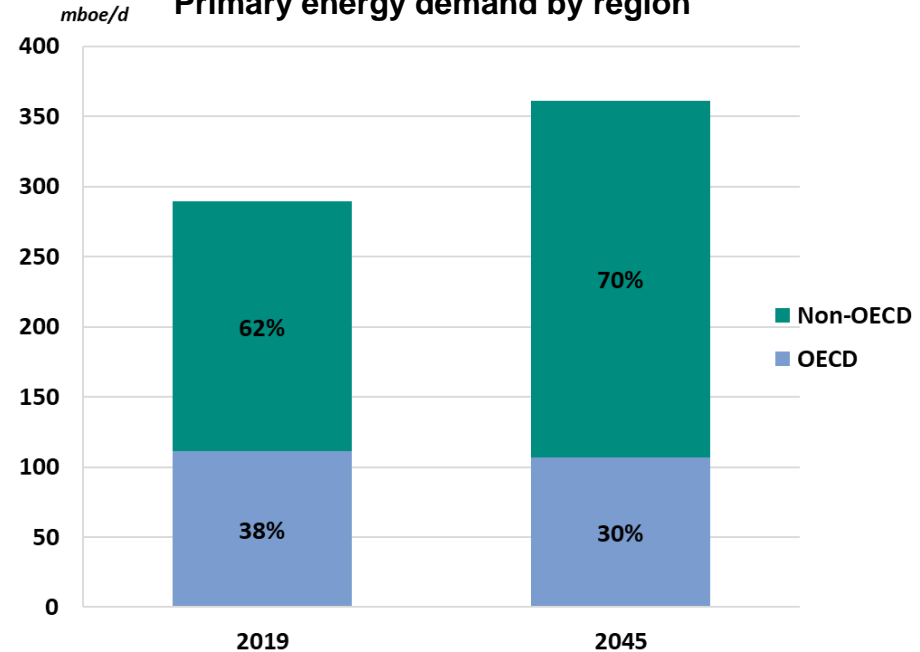
# Global energy demand projected to increase by 72.1 mboe/d to reach 361.3 mboe/d by 2045 (0.9%p.a.)



### Primary energy demand by fuel



### Primary energy demand by region

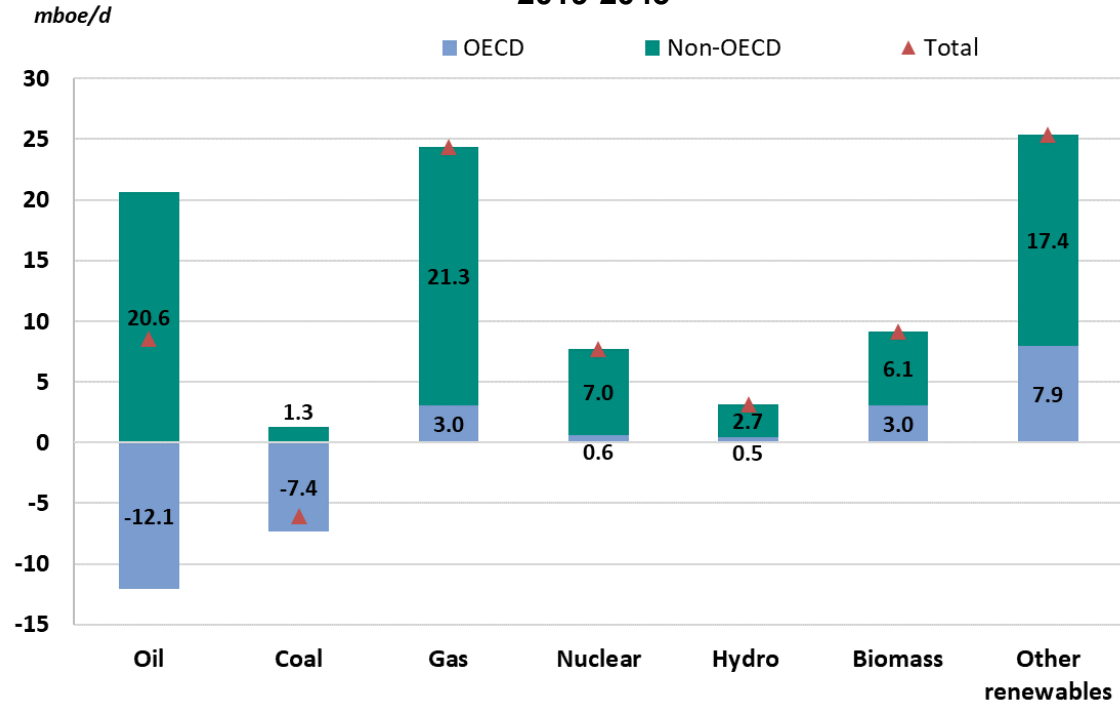


- Oil will still have **the largest market share** in 2045 although its share will decline
- Demand increases in **non-OECD regions** and drops in **OECD**

# 'Other renewables' is the fastest growing fuel

- Demand for **Other renewables** will grow the most in absolute and percentage terms (+25.5 mboe/d)
- **Natural gas** will see the second largest volumetric increase in demand ((24 mboe/d)
- **Coal** is the only source fuel recording a decline in total demand

Growth in primary energy demand by region and by fuel type, 2019-2045



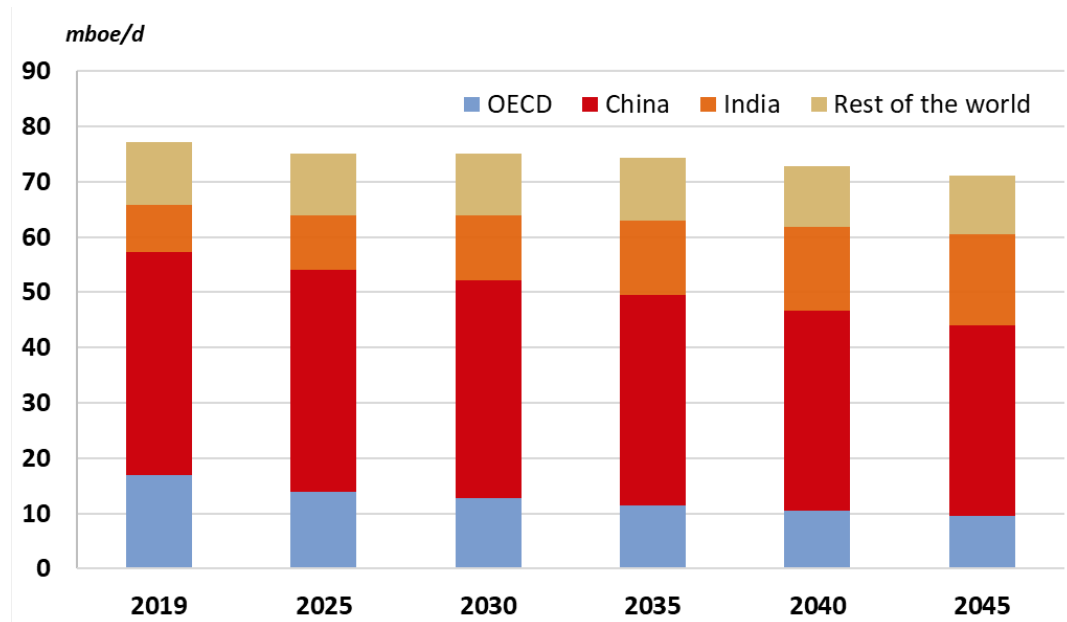


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# Coal demand is expected shrink by more than 6 mboe/d (0.3% decline p.a.)

- Coal demand in **India** is expected to grow between 2019 and 2045 at a pace of 2.6% p.a. (double in absolute terms)
- Coal demand is seen falling in the **OECD Americas**, **OECD Europe** and even **OECD Asia Oceania**
- The share of coal in the overall energy demand mix will drop to below **20%**

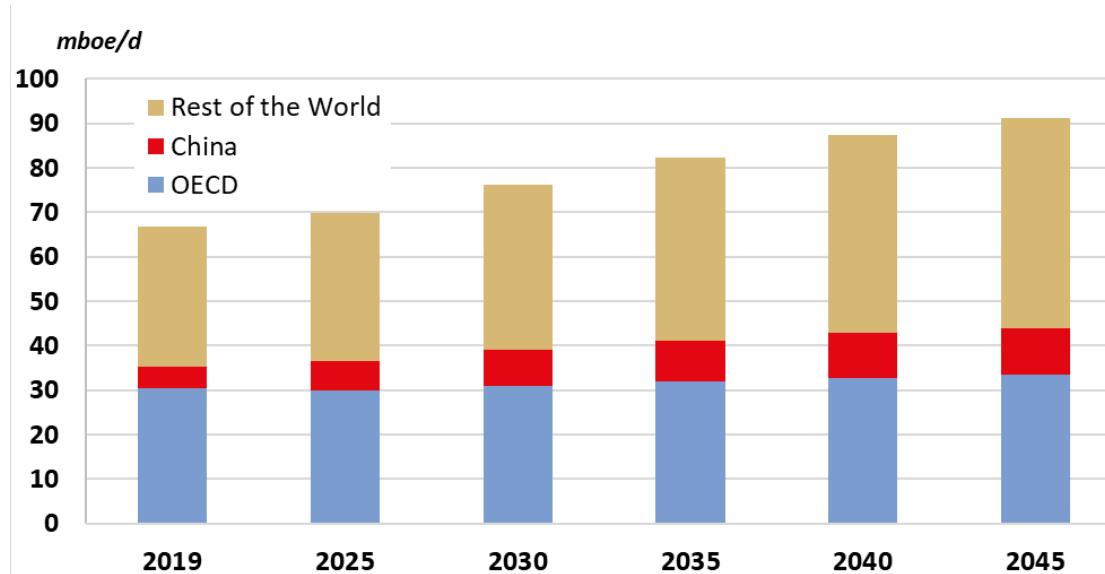
Coal demand growth by major regions, 2019-2045



# Natural gas is the only fossil fuel for which demand will increase in OECD countries

- Demand for **Natural gas** continues to develop in medium- and long-term in both OECD and non-OECD
- The incremental demand of around 24.3 mboe/d is unevenly distributed (88% by non-OECD countries)
- The share of natural gas in the energy mix is expected to double in **India** and to increase by 50% in **China**

Growth in gas demand by major regions, 2019 – 2045

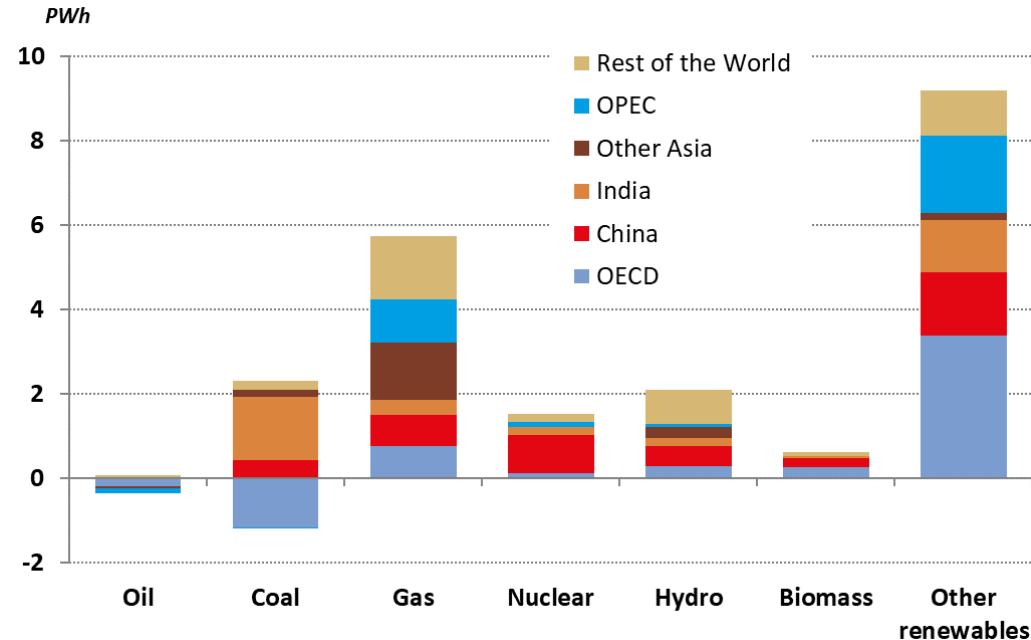


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# Gas and Other renewables projected to increase share in the electricity generation mix

- Other renewables (mostly wind and solar) are expected to add **more than 9 PWh** of generation in the long-term
- Gas-fired generation rising by almost 6 PWh, profiting from policy support as well as declines in coal-fired generation
- Coal sees only **limited increase** in power generation as rising number of countries putting effort into the decommissioning of old power plants

Electricity generation increase by fuel, 2019-2045



# Key takeaways



- **Global energy demand** projected to increase by **72.1 mboe/d** to reach **361.3 mboe/d** by 2045 (0.9%p.a.)
- **China** and **India** lead demand growth (combined increase of **36.5 mboe/d**)
- **Gas** experiences the **second most** incremental growth in long term (24.3 mboe/d)
- The share of natural gas in the energy mix is expected to double in **India** and to increase by 50% in **China**
- Coal demand is seen falling in the **OECD Americas**, **OECD Europe** and even **OECD Asia Oceania**
- Gas-fired generation rising by almost 6 PWh but Coal sees only **limited increase** in power generation

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Thank You.



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