

# A Japanese View on Future of Transport Energy: IEEJ Outlook 2020

Session 3: Policy and technology evolutions in the road transport sector:  
What impact on energy demand and investment ?

The 10<sup>th</sup> IEA-IEF-OPEC Symposium on Energy Outlooks

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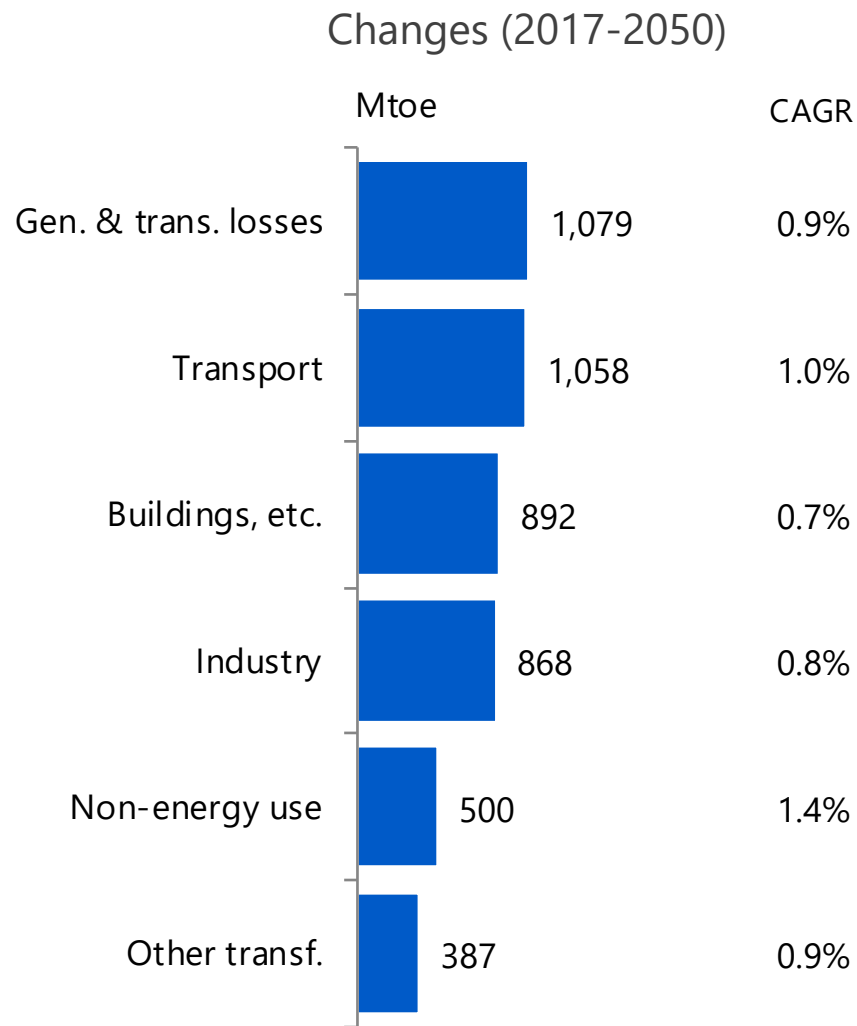
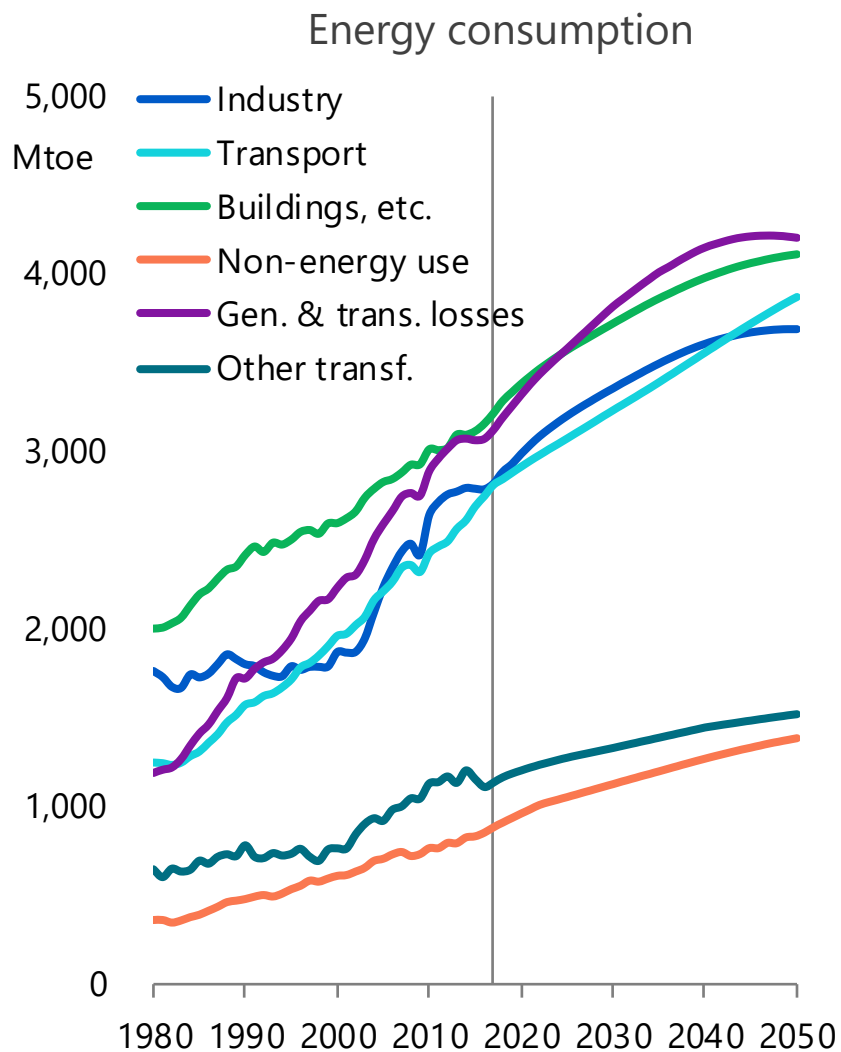
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# Outlook for World Final Energy Demand

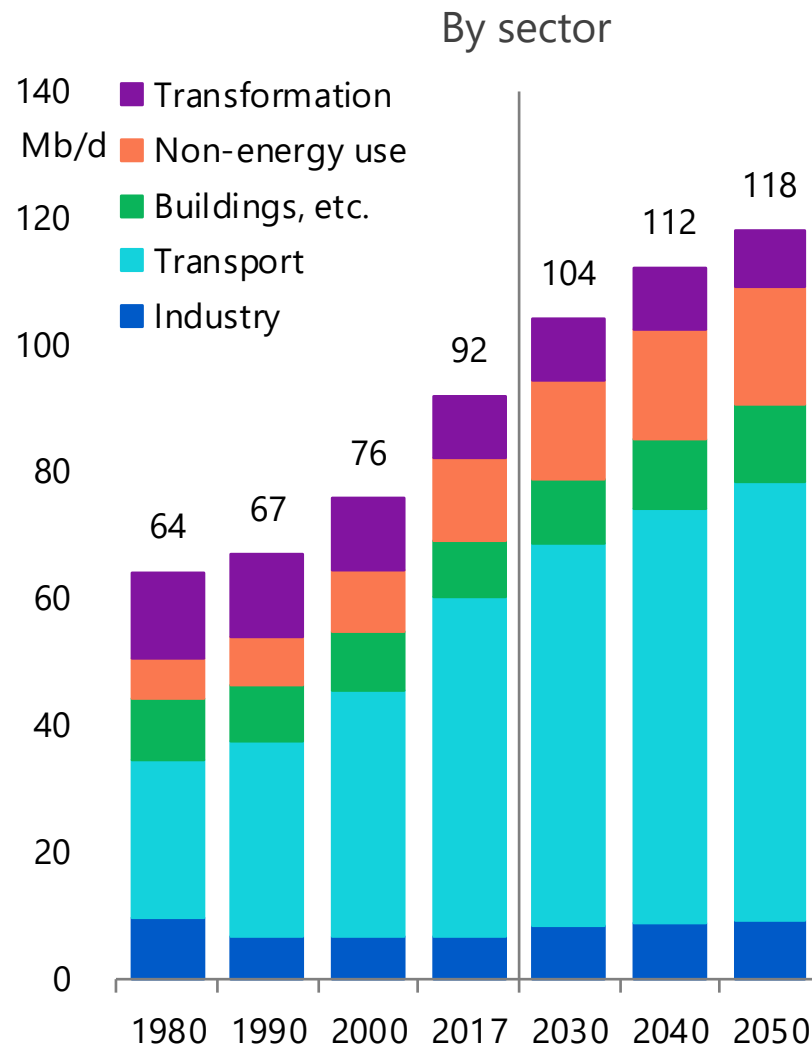
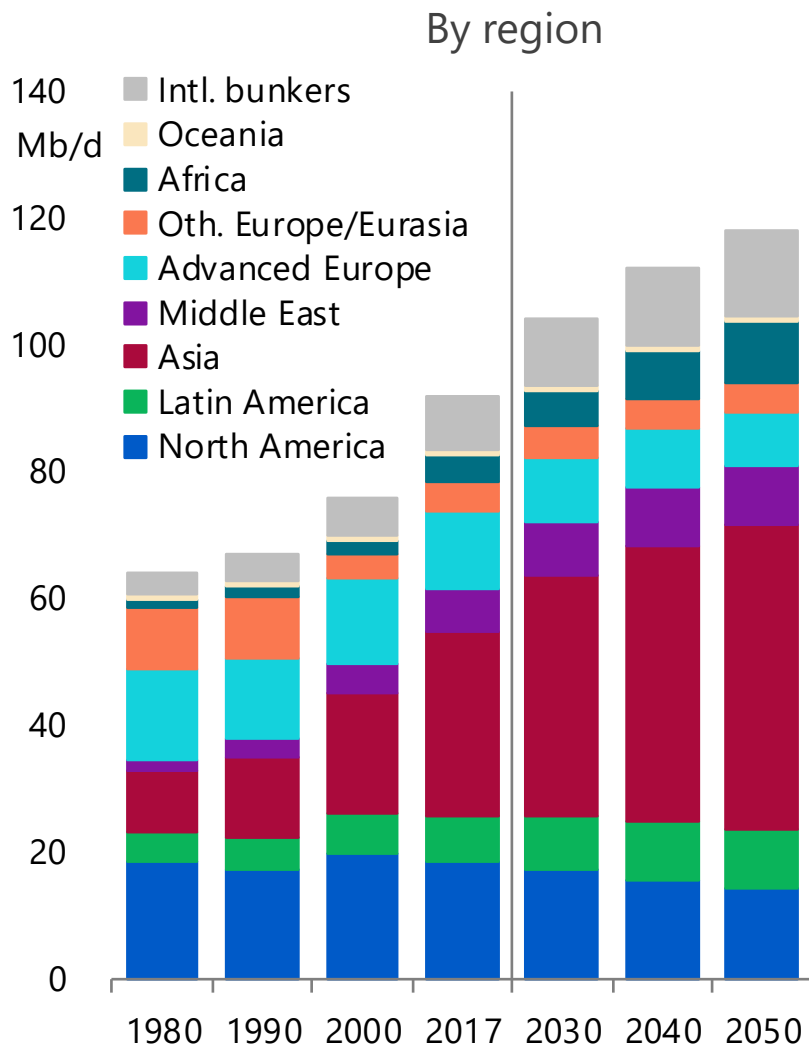
## Transportation sector is an important source for the growth





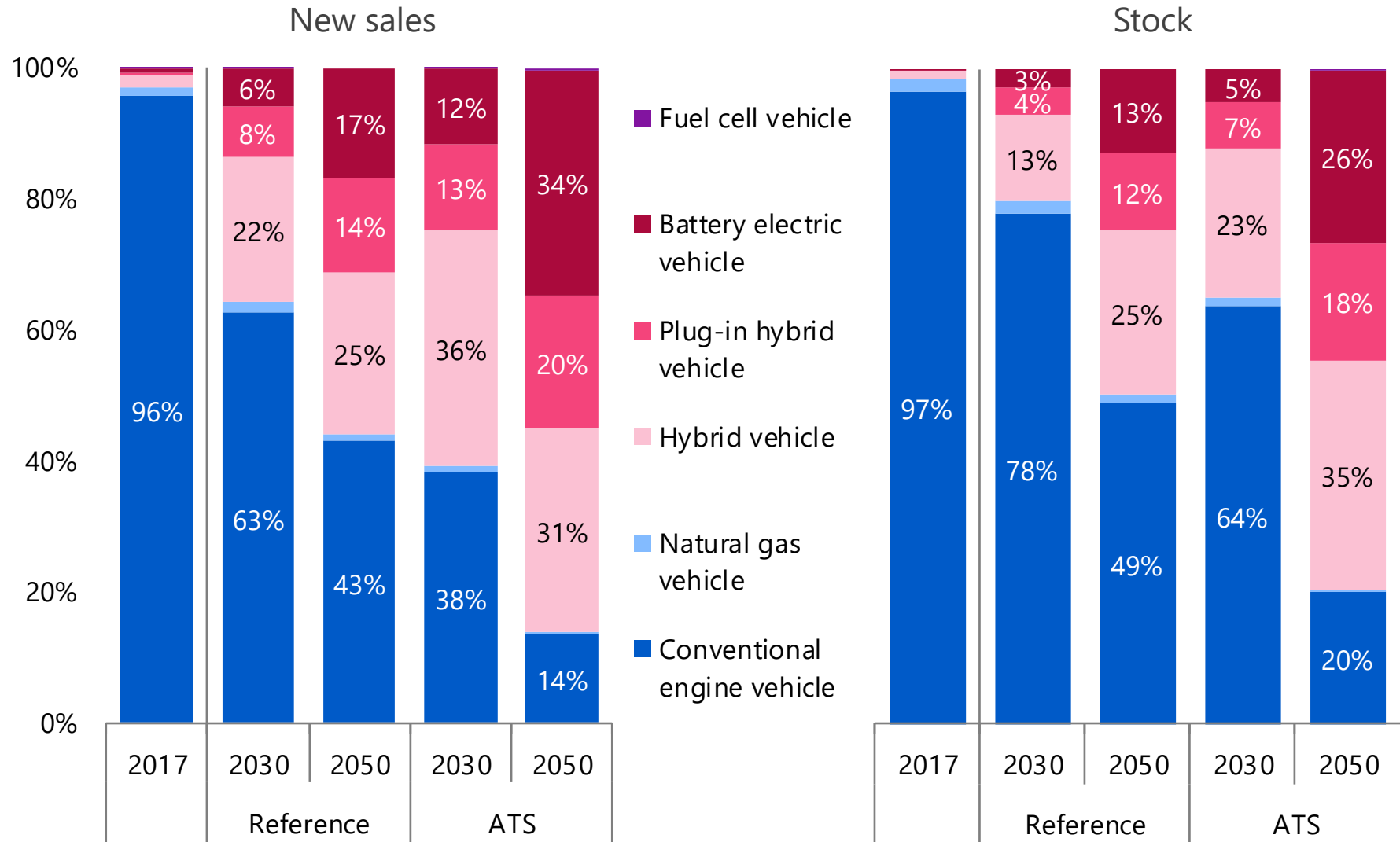
# Outlook for World Oil Demand by region/sector

## Asia and Transportation drives the growth



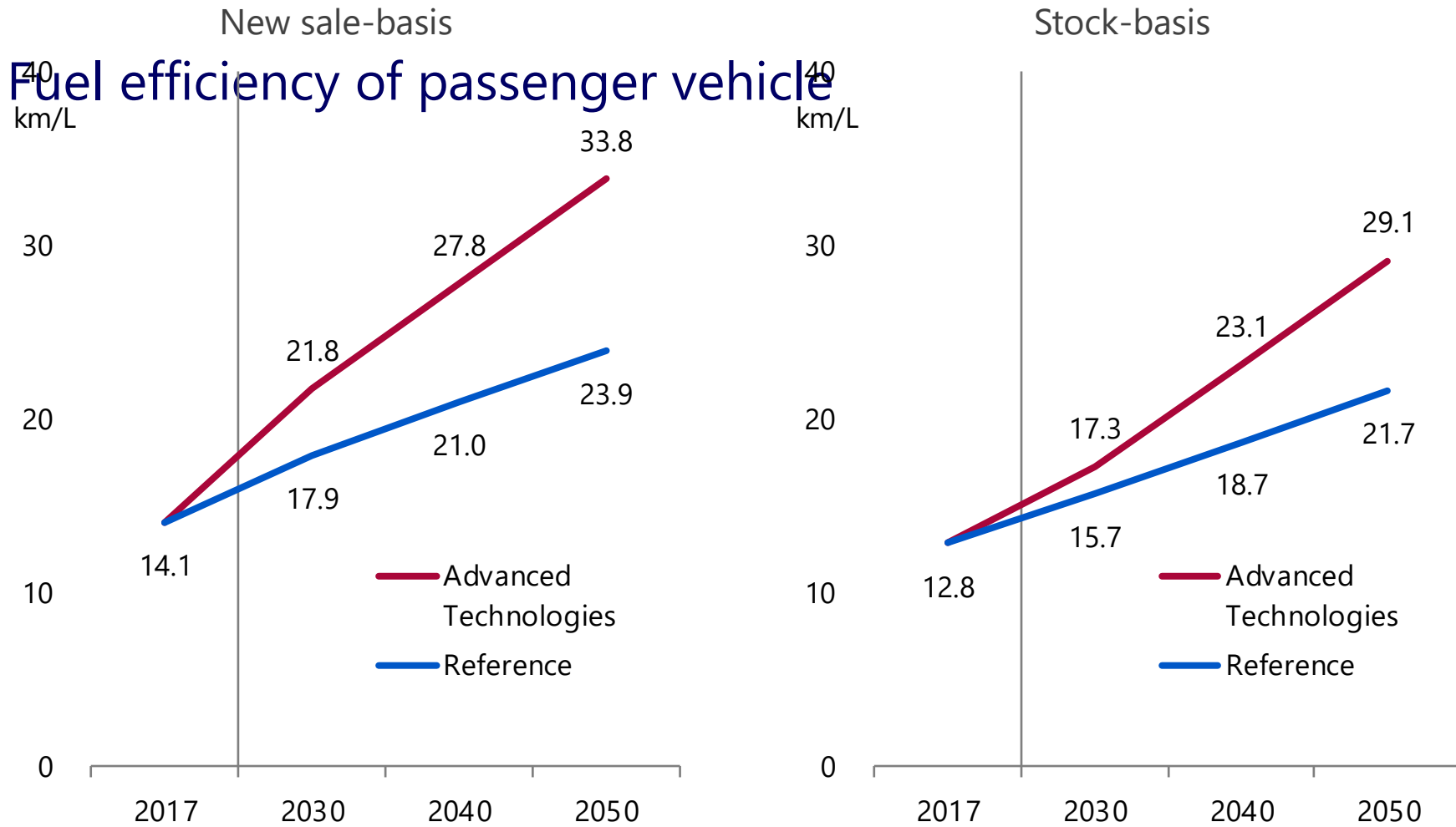
# Outlook for World Share of Passenger Vehicle

## ATS sees 80% plus ZEVs in 2050



# Outlook for World Fuel Efficiency of Passenger Vehicle

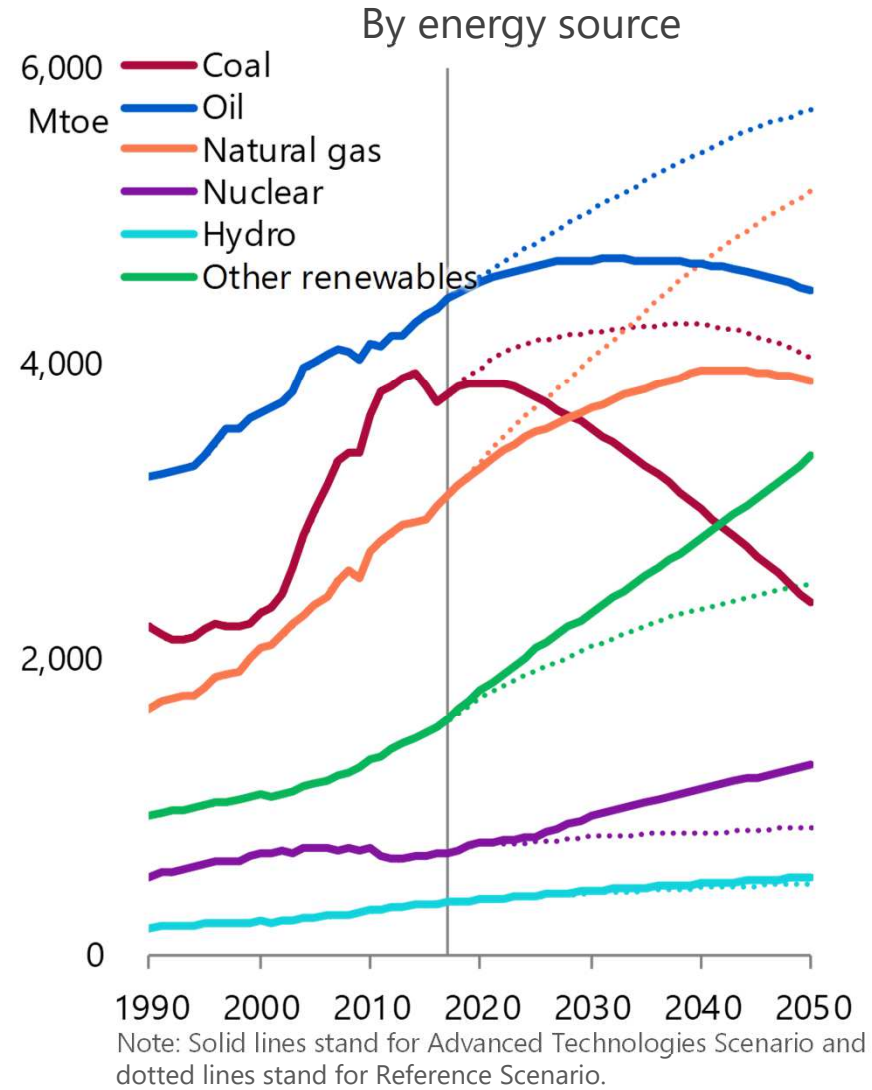
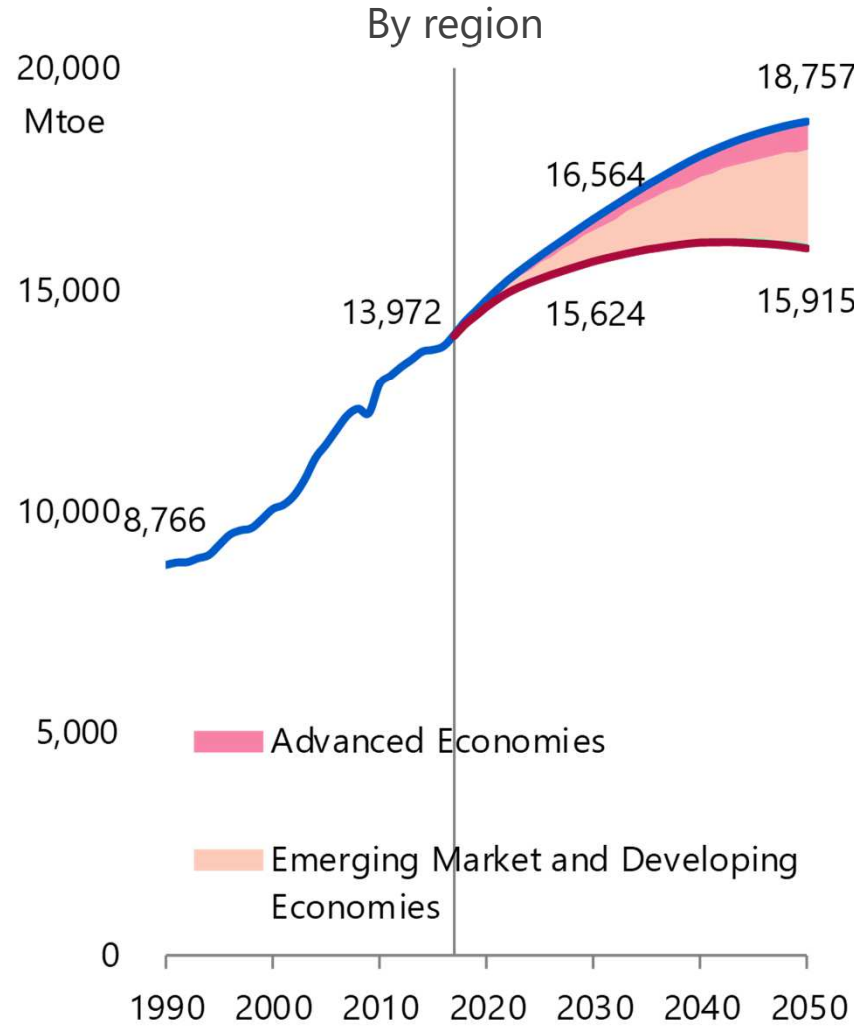
## ATS sees 34% improvement of fuel efficiency (stock base) in 2050



Note: Litres of gasoline equivalent

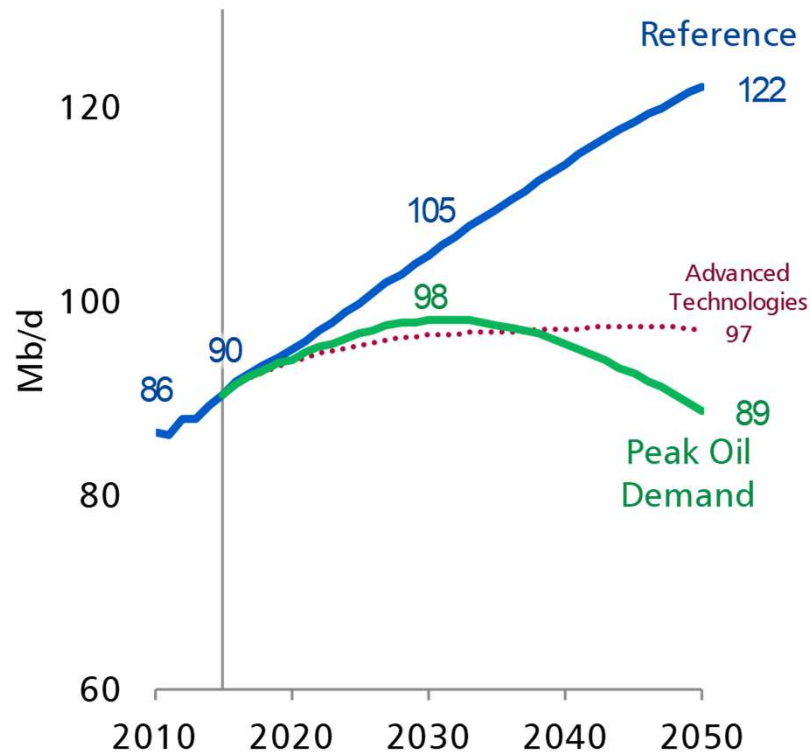
# Outlook for World Primary Energy Demand

## ATS sees "Oil Demand Peak" and other important change in energy mix



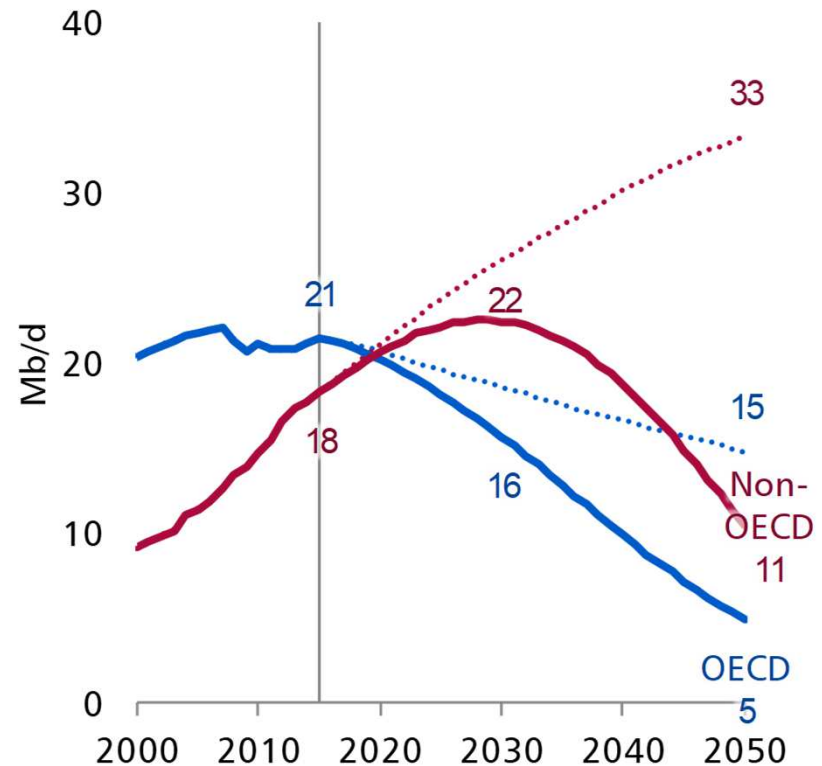
# Oil demand peaks by rapid penetration of ZEVs

## Oil consumption



In the Peak Oil Demand Case, oil consumption hits a peak of 98 Mb/d around 2030 then declines. The reduction from the Reference Scenario is 7 Mb/d and 33 Mb/d in 2030 and in 2050, respectively.

## Oil for Road [Peak Oil Demand Case]



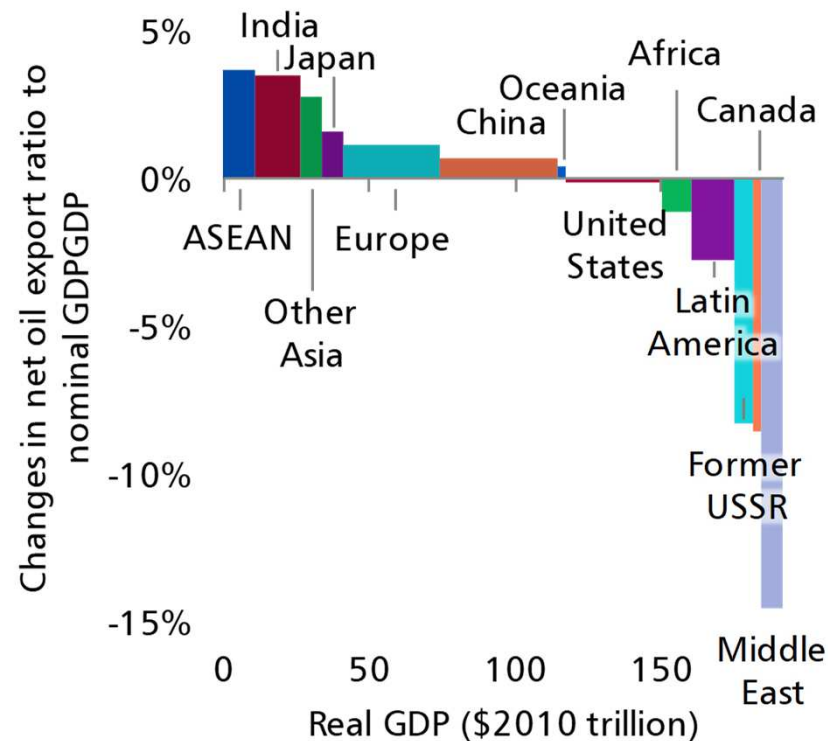
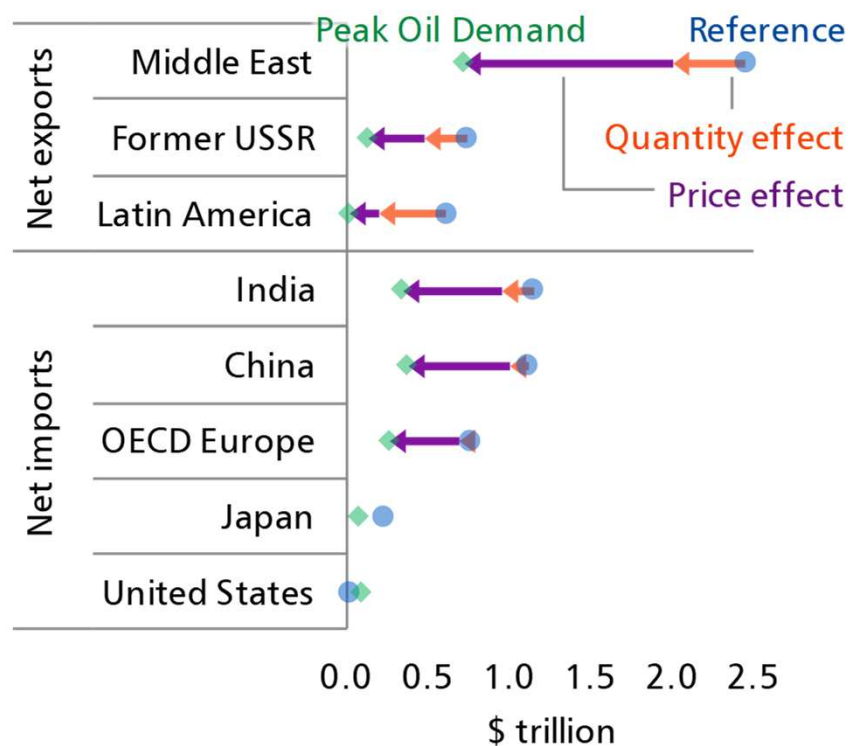
NOTE: Dotted lines are the reference scenario

Oil consumption by cars in Non-OECD, which continues to increase rapidly in the Reference Scenario, also declines from around 2030. It is as much as one third of the Reference Scenario in 2050.

Source: "IEEJ Outlook 2018" (IEEJ, October 2017)

# Economic impacts of peak oil demand

## Changes in net oil exports/imports and ratios to nominal GDP [2050]



NOTE: Europe excludes the former Soviet Union

Although the Middle East obtains the relative gain, its net oil export decreases of \$1.6 trillion or 13% of nominal GDP is significant.

On the other hand, the most benefiting country from net oil import decreases is India, the second largest oil consumer, followed by China, which has more car fleet than in any other countries. The United States has little impact despite of its consumption scale since it is almost oil self-sufficient.

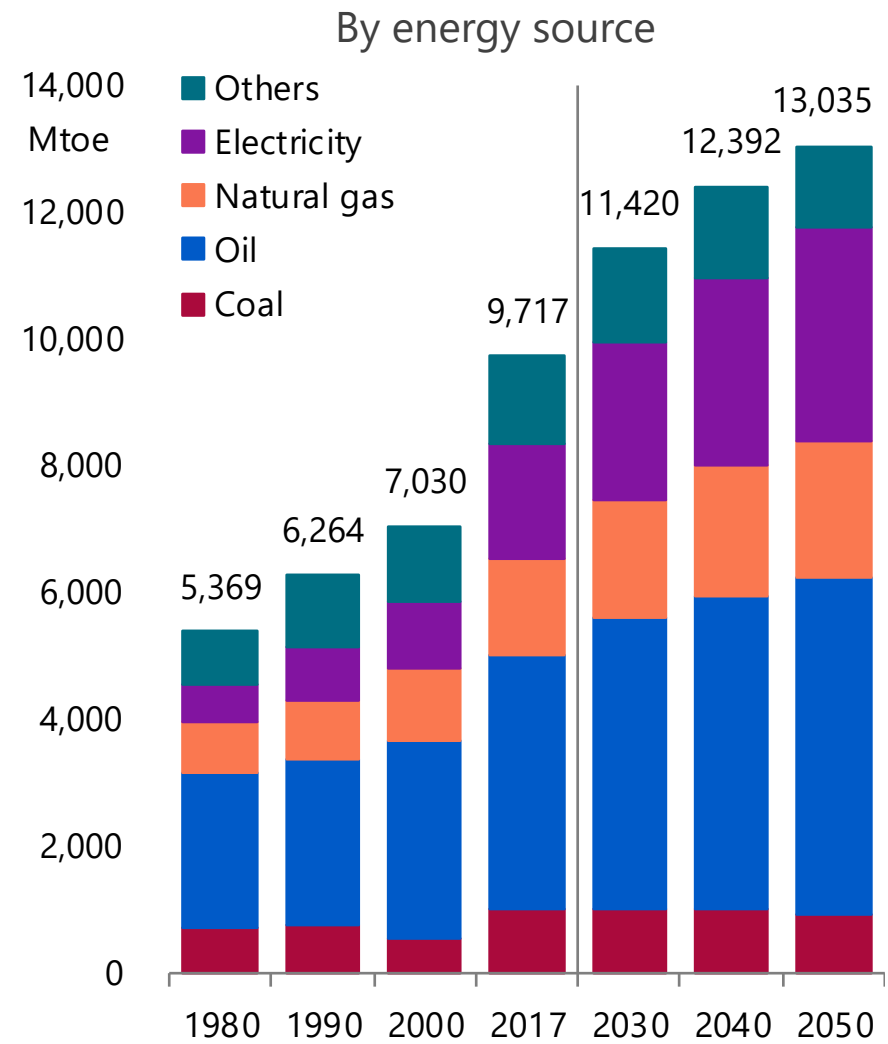
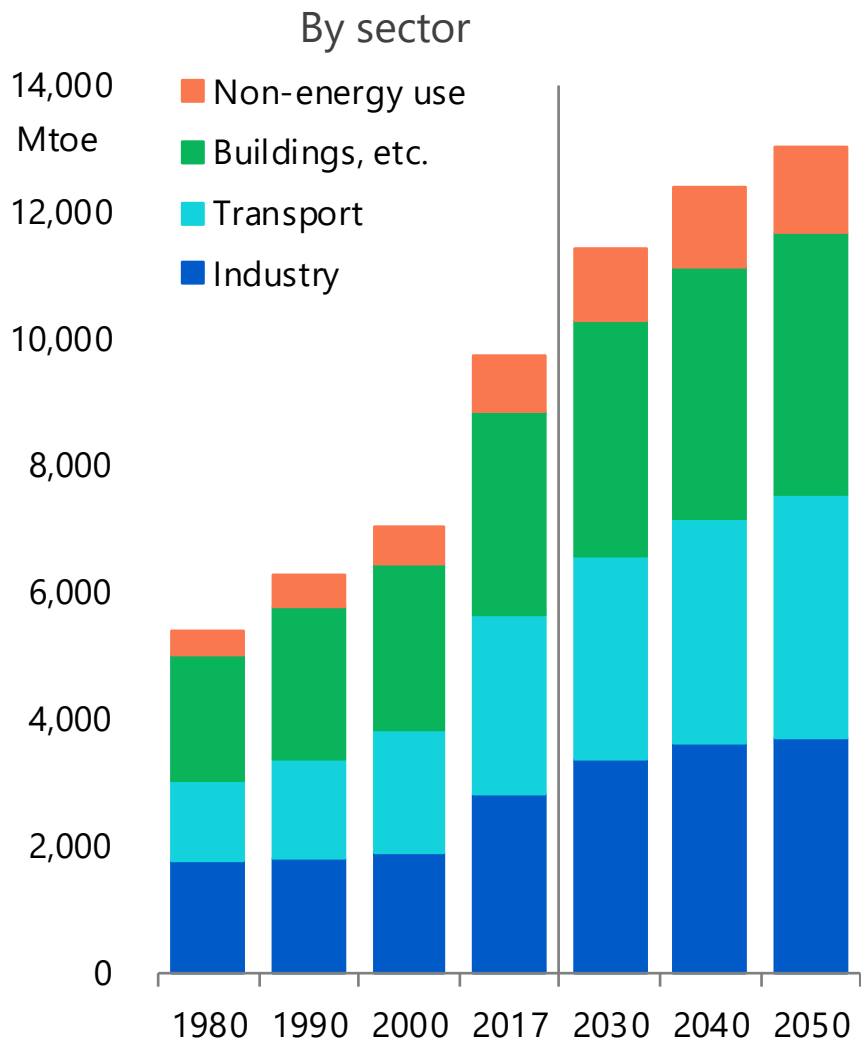
Source: "IEEJ Outlook 2018" (IEEJ, October 2017)



# Reference material

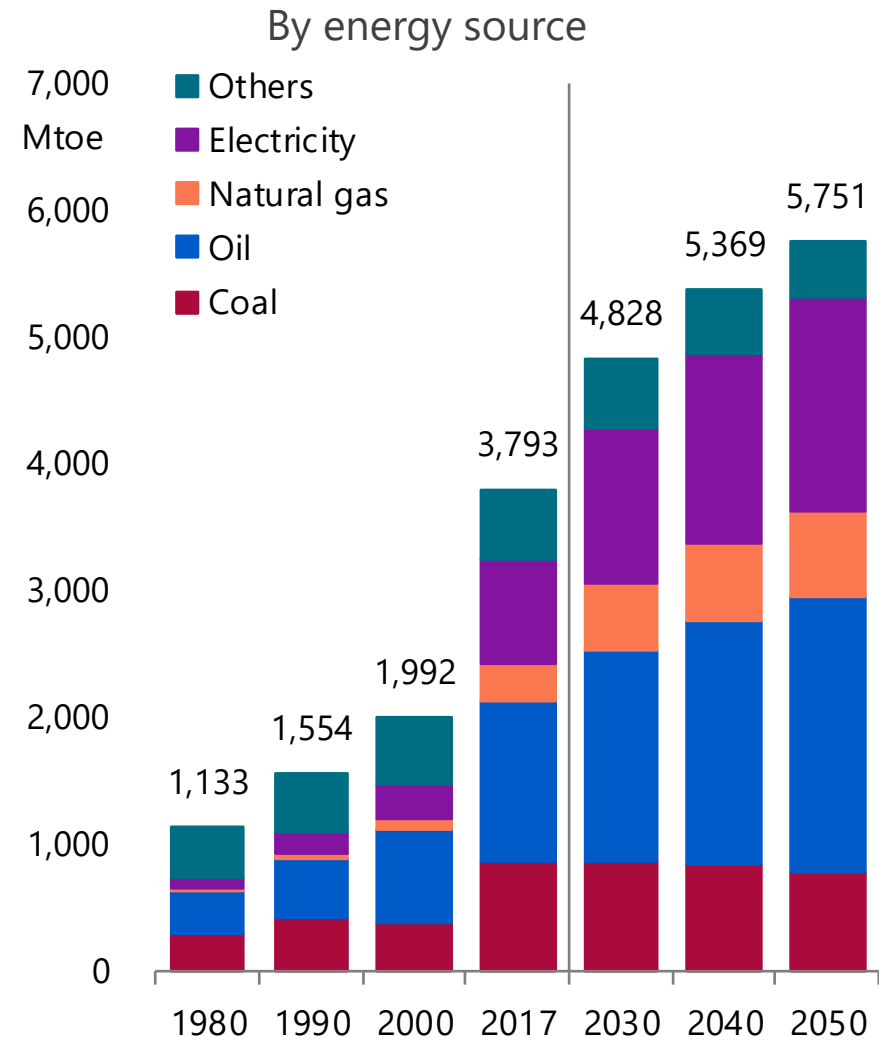
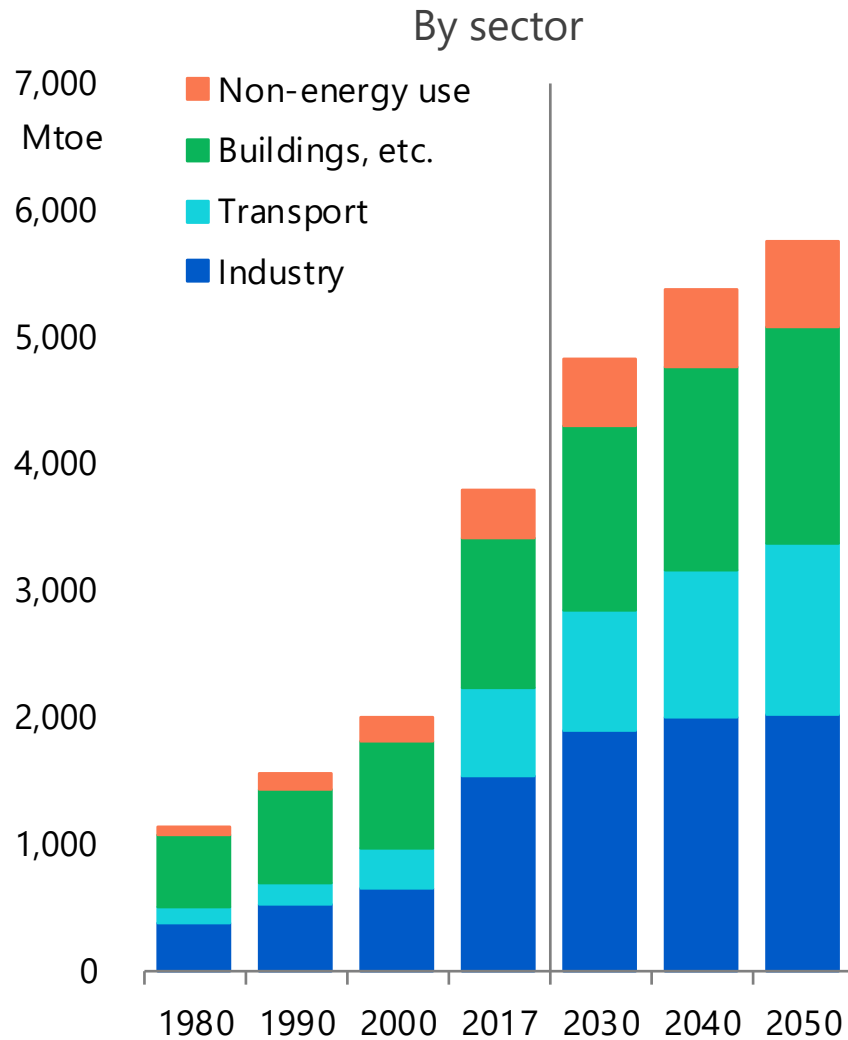
# Outlook for World Final Energy Demand by sector/energy

## Transportation/oil is an important source for the growth



# Outlook for Asian Final Energy Demand by sector/energy

## Transportation/oil is an important source for the growth



# Outlook for Asian Oil demand by country/sector

## Transportation in emerging Asia drives the growth

