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2. APEC Energy Demand and Supply Outlook 6<sup>th</sup> Edition  
***2-2 BAU Energy Supply***

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***Preliminary results  
(under review by economies)***

***Please do not cite***

# Outline

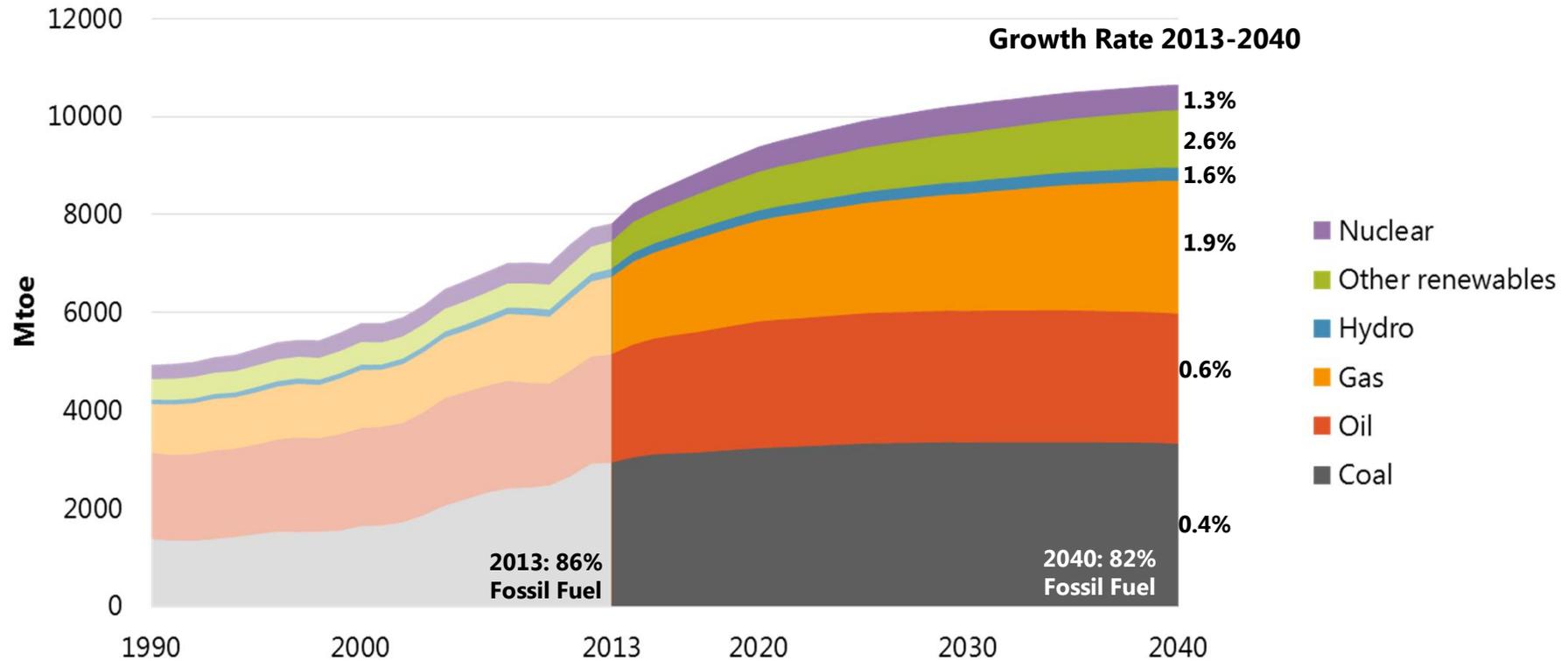
- “ **Key Messages**
- “ **APEC’s Total Primary Energy Supply**
  - **Oil Supply**
  - **Coal Supply**
  - **Natural Gas Supply**
  - **Nuclear Energy**
  - **Renewable Energy**
- “ **Conclusion**

## Key Messages

- “ Fossil fuels will continue to dominate energy supply in APEC, with Oil and Coal representing around 82% of fossil supply. Drive for cleaner fuels leads to robust growth in natural gas through-out the forecast period.
- “ Asia will see tremendous growth in Primary Energy Supply due to economic expansion.
- “ Renewable Energy, including hydro, is expected to have the highest growth rate among primary energy supply at 2.4% annually.
- “ Energy production will grow in tandem with demand. However, due to high demand growth, the supply gap in APEC rises by more than 40% in 2040 which will need to be sourced from outside APEC.

# Fossil-fuels continue to dominate energy supply

Total primary energy supply by fuel, 1990 - 2040

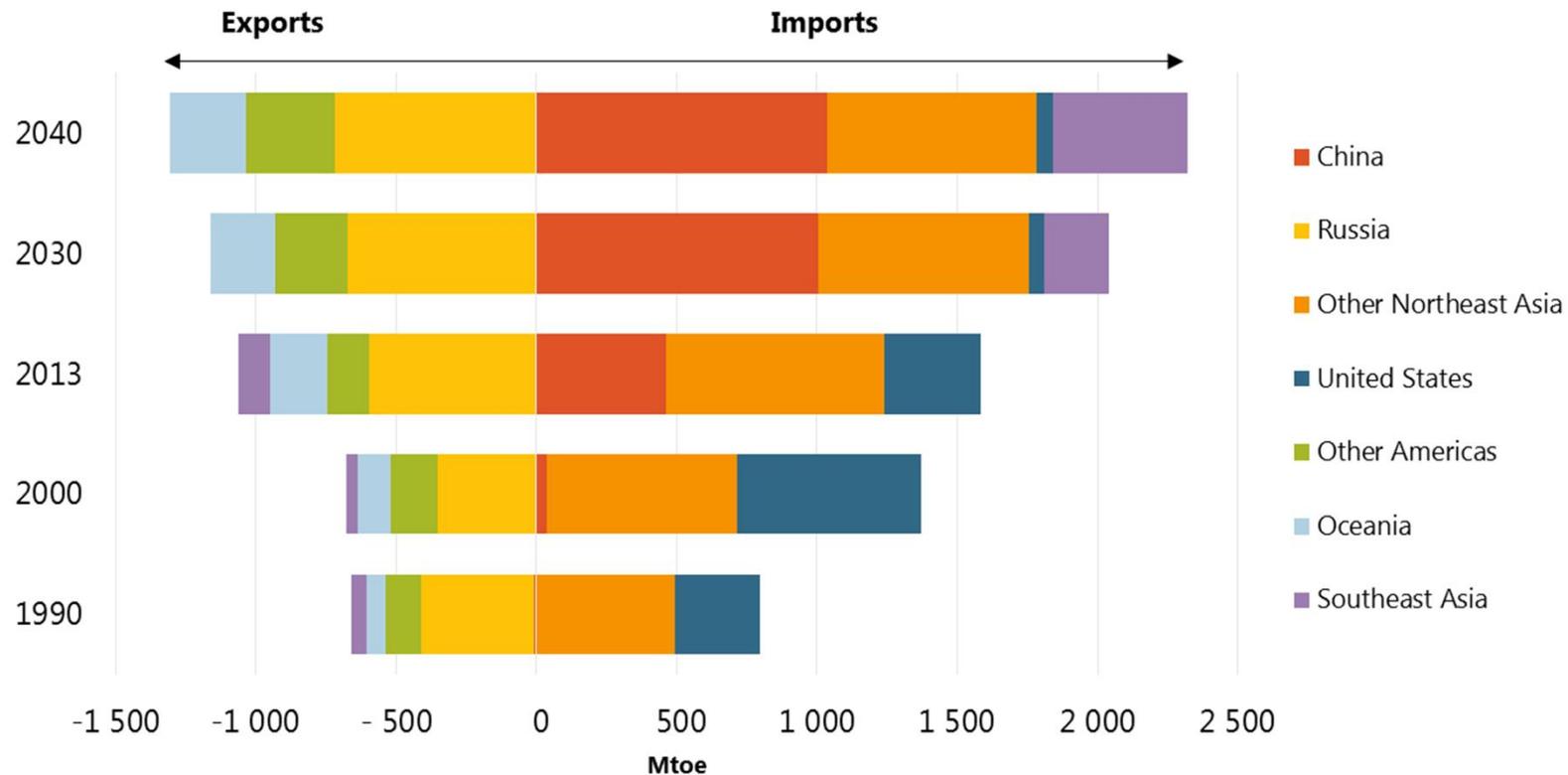


Source: IEA statistics 2015 and APERC analysis

***Energy supply in APEC region will more than double by 2040 from 1990 level.***

# Net energy supply gap continues to widen in the future

Net primary energy supply, 1990 - 2040

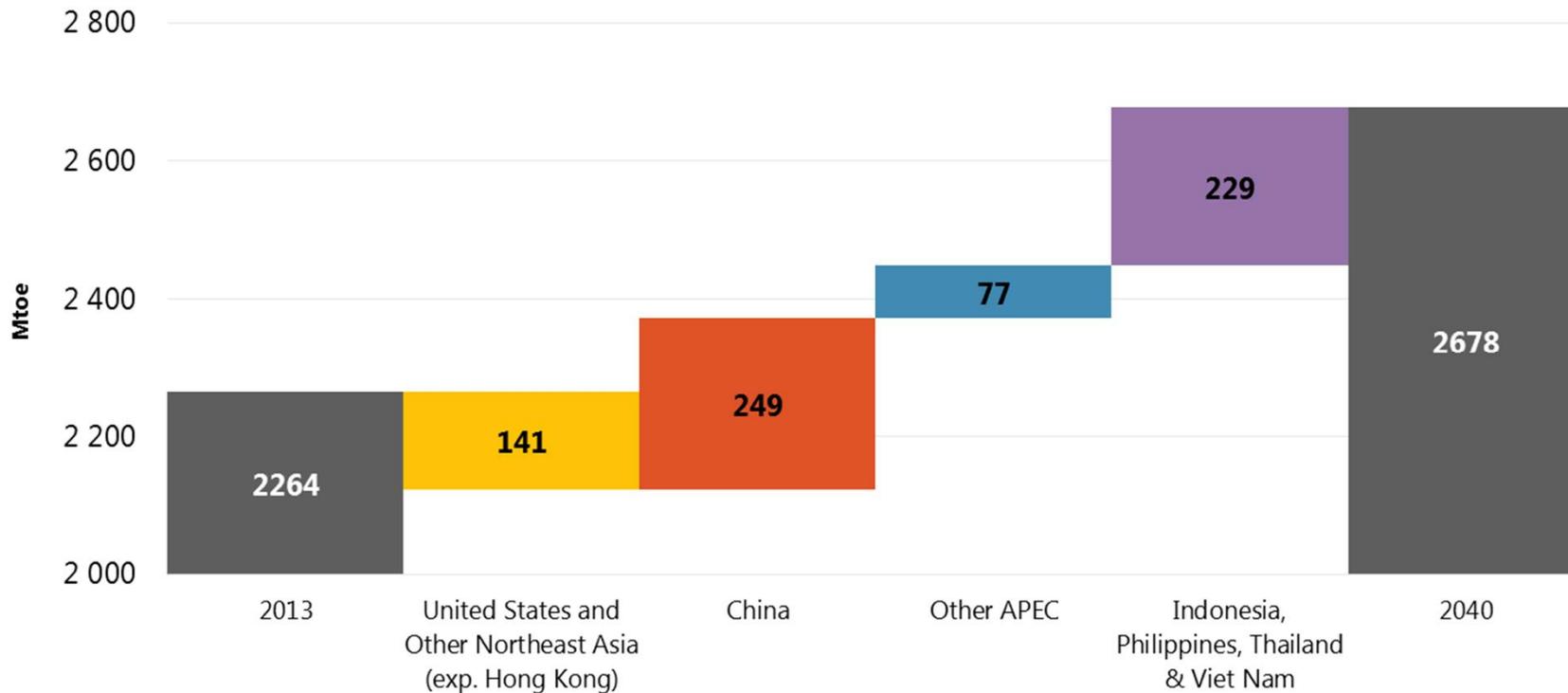


Source: IEA statistics 2015 and APERC analysis

***APEC will continue to be net energy importer in 2040 as demand increase at faster rate than production.***

# Asia will drive oil demand in APEC

Oil demand in APEC, 2013 and 2040

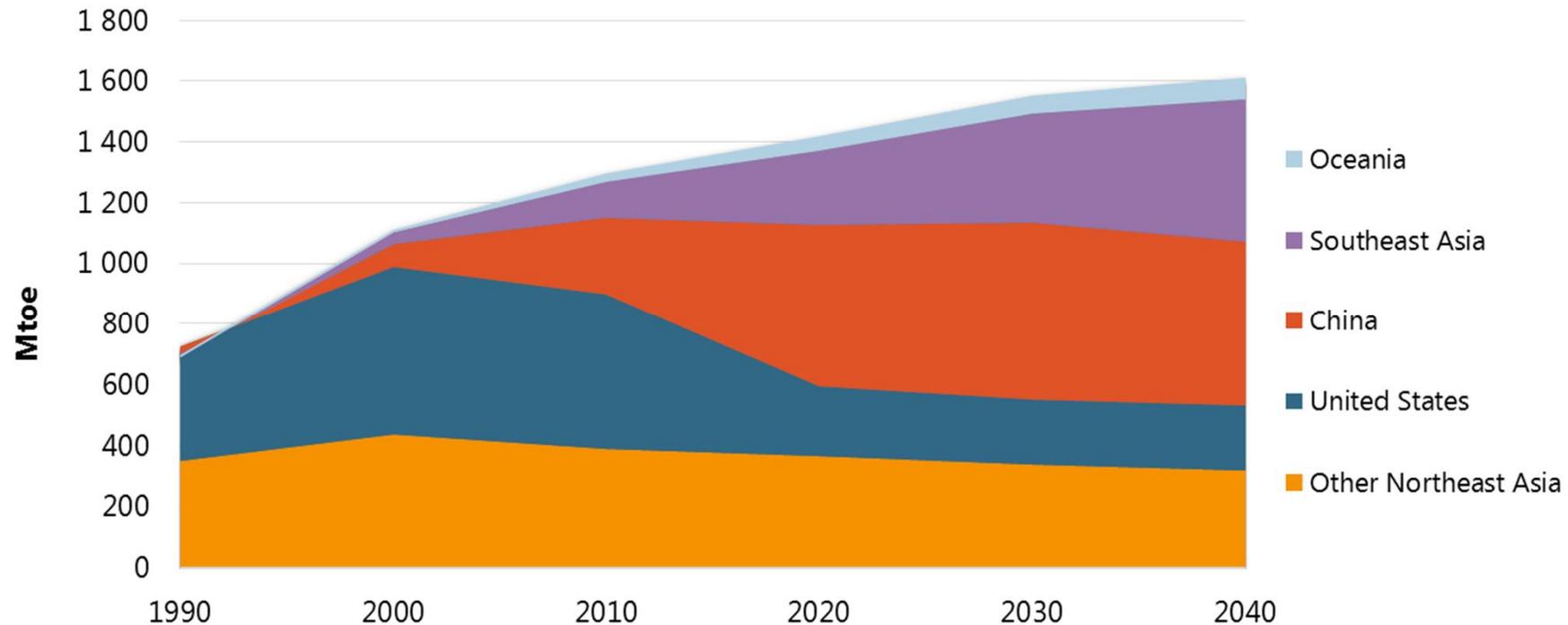


Source: IEA statistics 2015 and APERC analysis

**However, APEC wide oil shares in energy mix will fall from 28% in 2013 to 25% by 2040**

# Oil import will continue to grow at 1.1% annually

Net oil import in APEC, 1990 - 2040

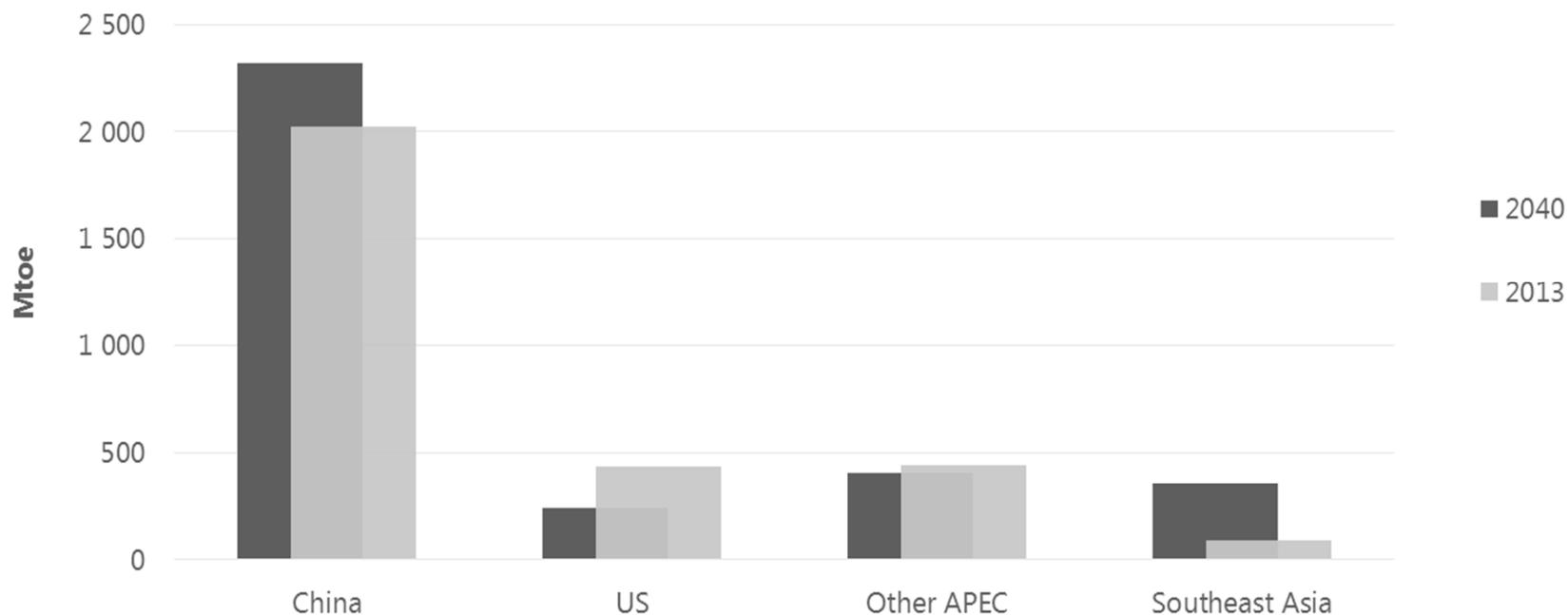


Source: IEA statistics 2015 and APERC analysis

***Russia and Other Americas are the only regions with net oil production while Southeast Asia net oil imports will more than double in 2040***

# Electricity demand will expand coal supply in Asia-APEC...

Coal demand in APEC, 2013 and 2040

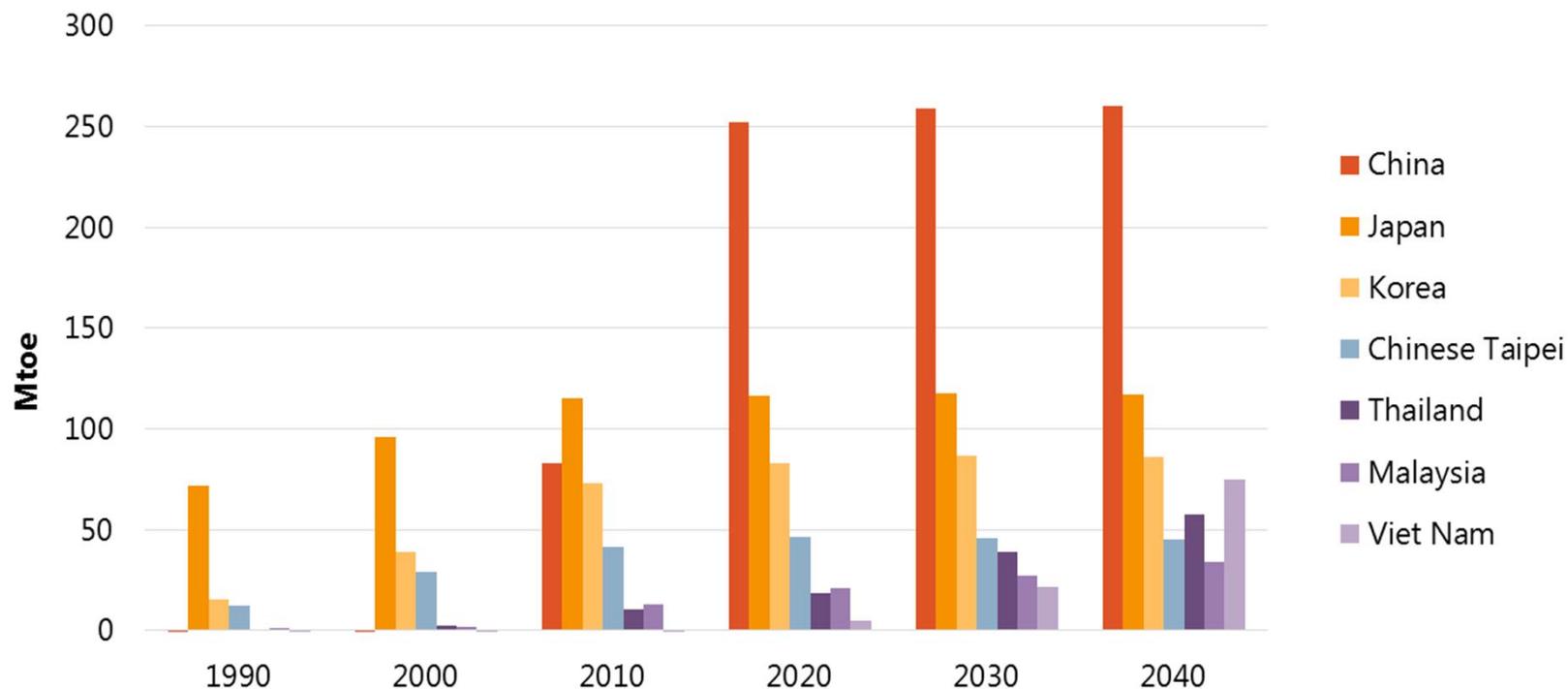


Source: IEA statistics 2015 and APERC analysis

**... But coal is expected to show the weakest growth among primary energy sources at 0.4% annually**

# Majority of net coal importers are in Asia

Net coal import for selected economies, 1990 - 2040

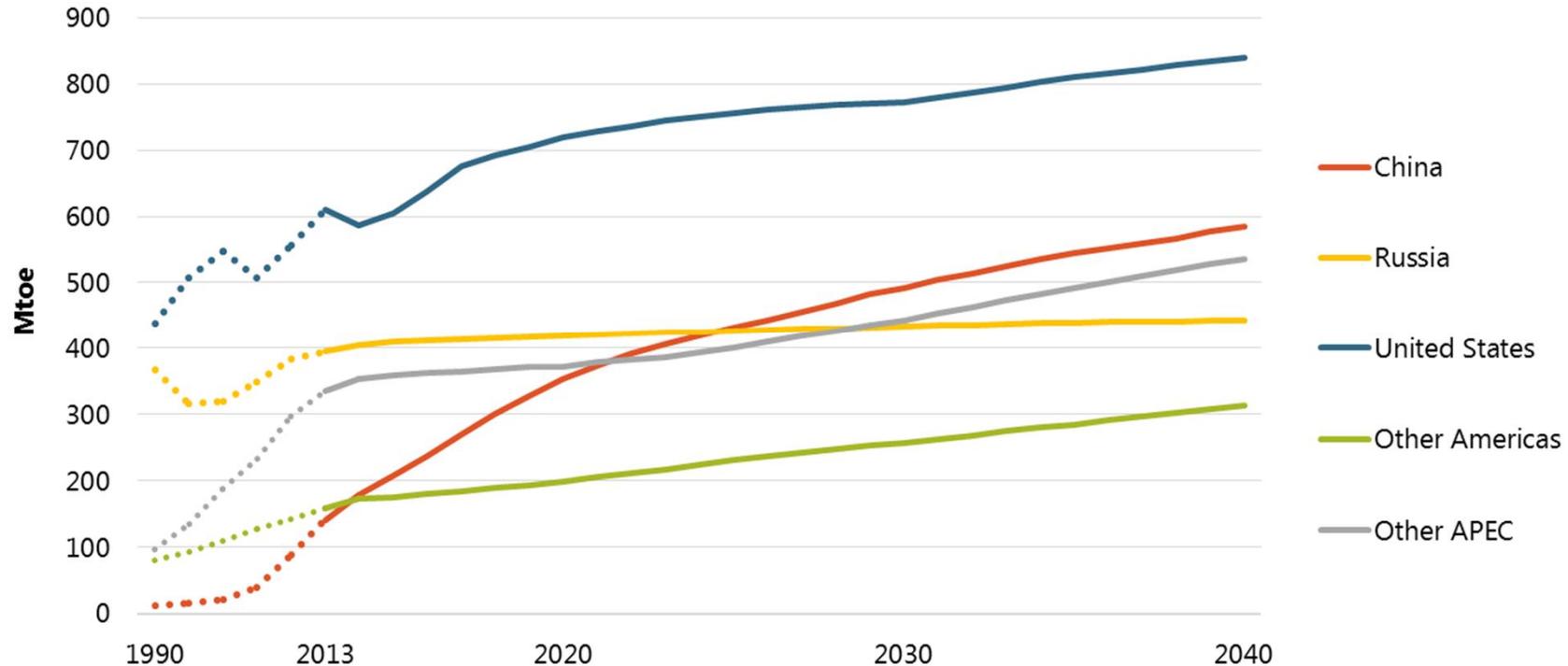


Source: IEA statistics 2015 and APERC analysis

***Potential intra-APEC coal trades that can help to fill the import gap between APEC members***

# All regions will show increase in natural gas supply

Gas demand by region, 1990 - 2040

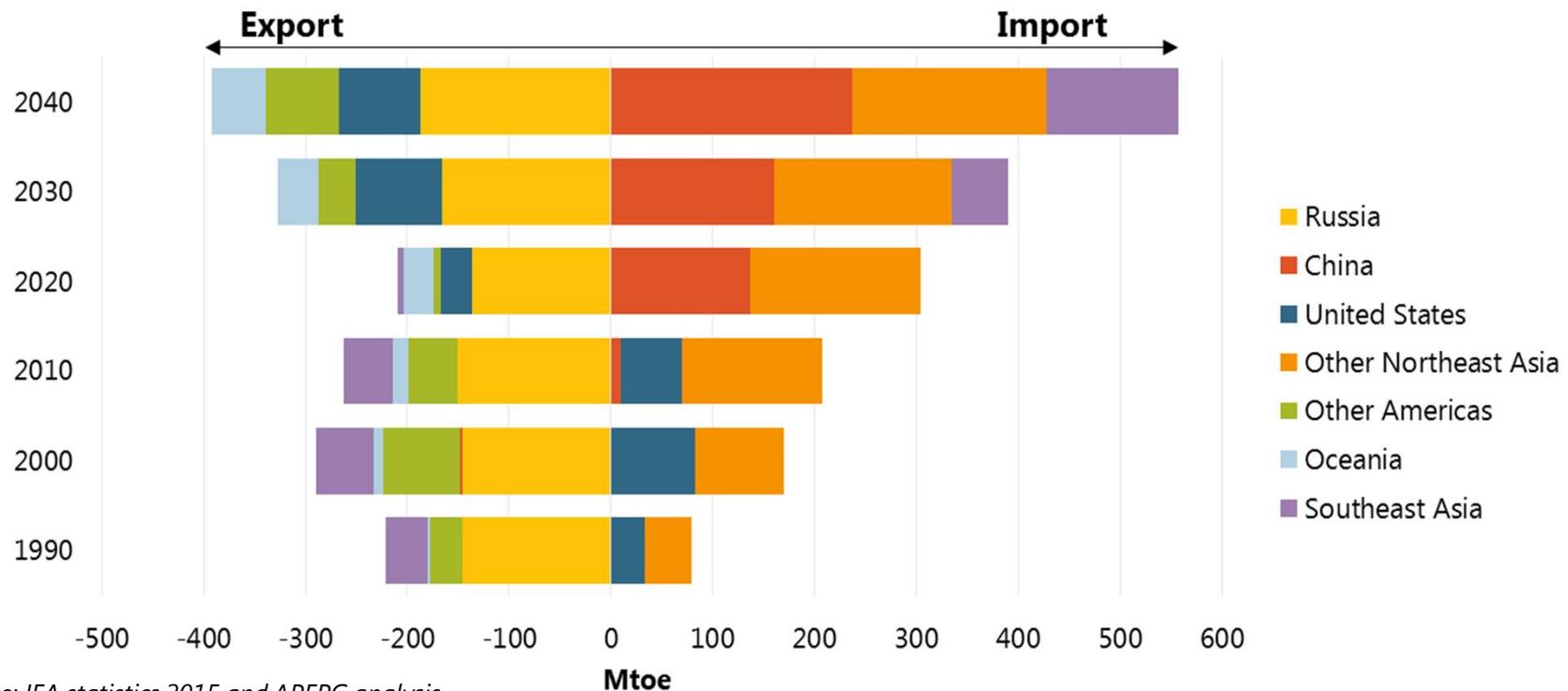


Source: IEA statistics 2015 and APERC analysis

**China will show the strongest growth with 5.4% annual growth rate followed by Other Americas at 2.6%**

# APEC: From net gas exporter to net gas importer

Net gas supply by region, 1990 - 2040

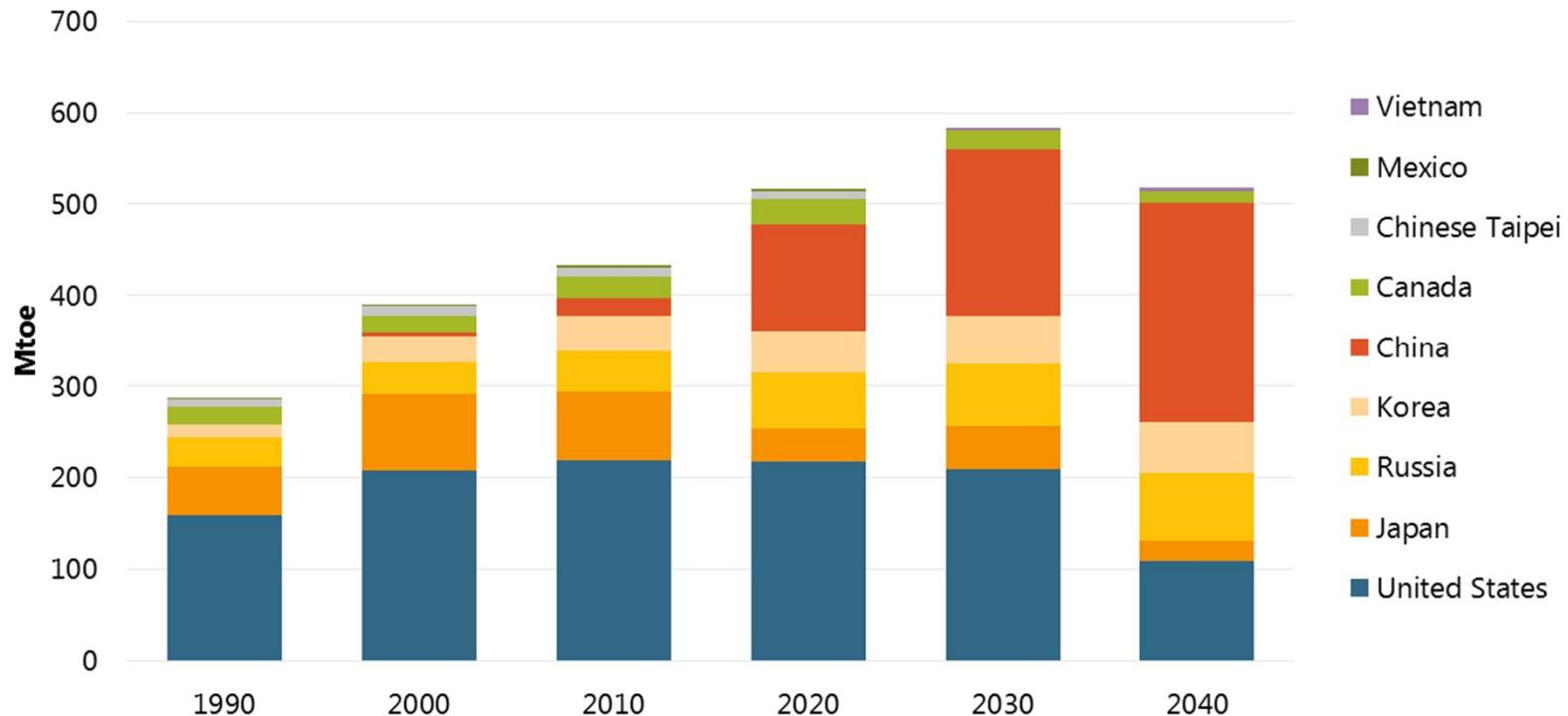


Source: IEA statistics 2015 and APERC analysis

***China to overtake Other NE Asia as largest gas importer, while US becomes a net exporter and SEA becomes a net importer***

# China overtakes the US as largest nuclear energy producer

Nuclear energy demand, 1990 - 2040

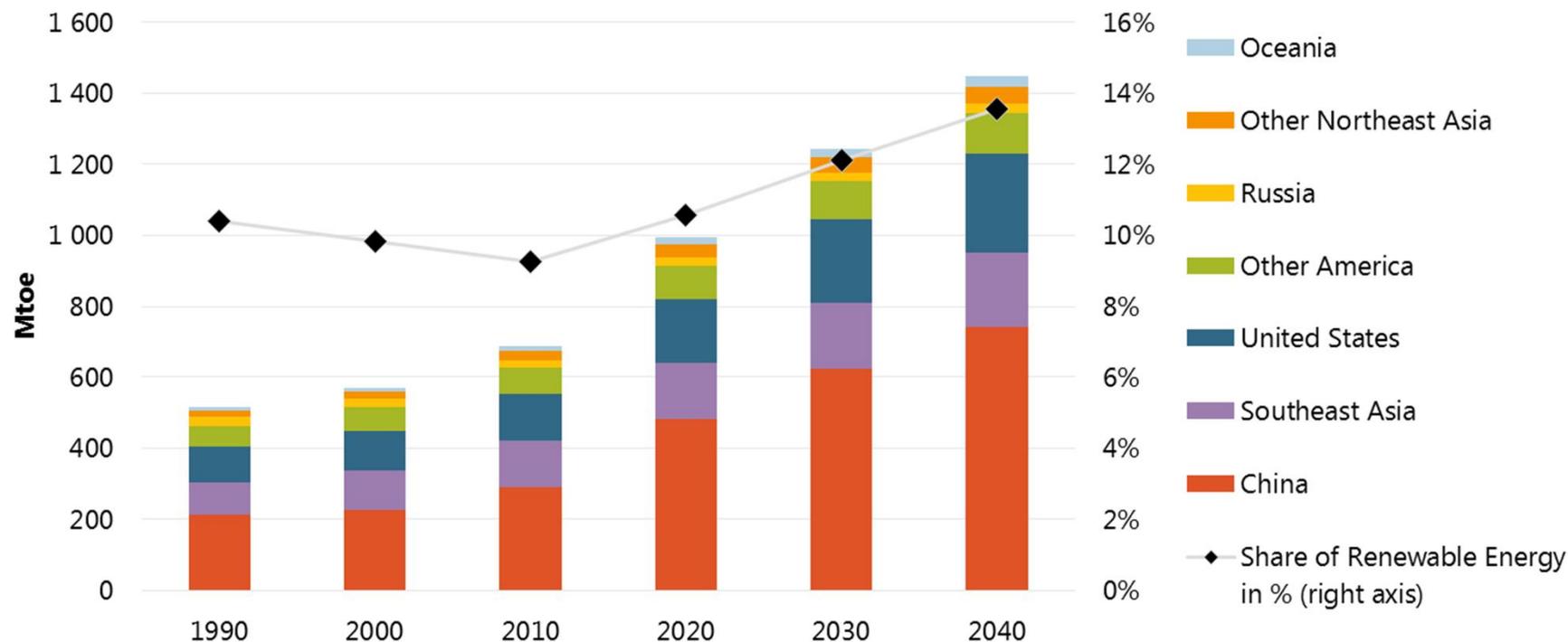


Source: IEA statistics 2015 and APERC analysis

**4 economies (China, Russia, the US and Korea) will make up 95% of nuclear energy production in APEC and peak in 2030**

# 80% of renewables are from China and Southeast Asia

RE supply and shares in APEC, 1990 - 2040



Source: IEA statistics 2015 and APERC analysis

**Shares of renewables in primary energy supply will increase from 11% in 2013 to 14% by 2040**

# Conclusion

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- “ **Fossil fuels will continue to dominate the energy mix in APEC**
- “ **Achieving an optimal energy mix that meets energy security criteria while limiting impacts on the environment and providing energy at affordable prices will continue to be a challenge for governments**
- “ **An integrated energy market in APEC will help to facilitate further energy trade, which subsequently can help to reduce energy import dependencies from outside APEC, particularly from the Middle East**
- “ **Closer cooperation can help to foster better understanding among APEC members on how to address future energy supply and demand challenges**

*Thank you for your kind attention*

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