2. APEC Energy Demand and Supply Outlook 6th Edition

2-2 BAU Energy Supply

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Preliminary results
(under review by economies)

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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 throughout 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

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

Source: IEA statistics 2015 and APERC analysis
Net energy supply gap continues to widen in the future

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

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

Source: IEA statistics 2015 and APERC analysis
Oil import will continue to grow at 1.1% annually

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

Source: IEA statistics 2015 and APERC analysis
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

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

Source: IEA statistics 2015 and APERC analysis
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

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

Source: IEA statistics 2015 and APERC analysis
80% of renewables are from China and Southeast Asia

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

Source: IEA statistics 2015 and APERC analysis
Conclusion

- 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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