

ASEAN ENERGY OUTLOOK

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ASEAN – A community of opportunities



ASEAN TRADE

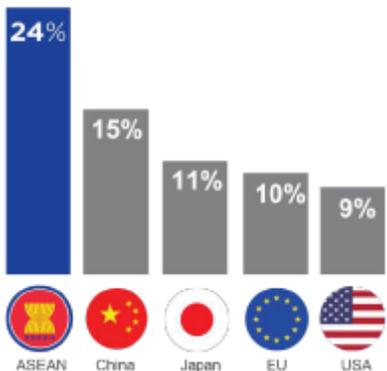
Total ASEAN Trade

US\$ 2.3
trillion



Despite the moderation in global trade growth, total ASEAN trade grew by **US\$ 700 billion** between 2007 and 2015.

Major Trading Partners

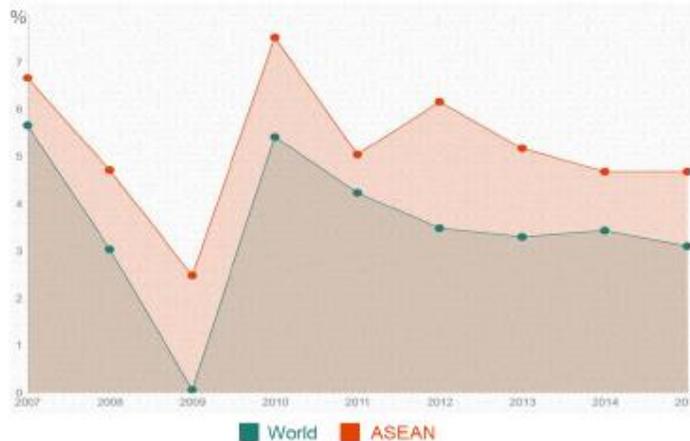


Intra-ASEAN trade comprised the **largest share** of ASEAN's total trade by partner in 2015.



ASEAN ECONOMY

With an average annual real growth rate of **5.3%** between 2007-2015, ASEAN has consistently outperformed global growth.



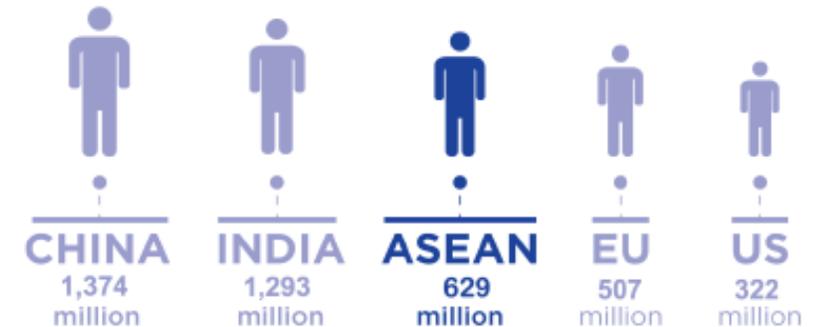
At US\$ 2.4 trillion, ASEAN economy in 2015 was

the **6th largest in the world** & the **3rd largest in Asia**.



ASEAN PEOPLE

Collectively, ASEAN population was the **3rd largest in the world** in 2015.



More than half

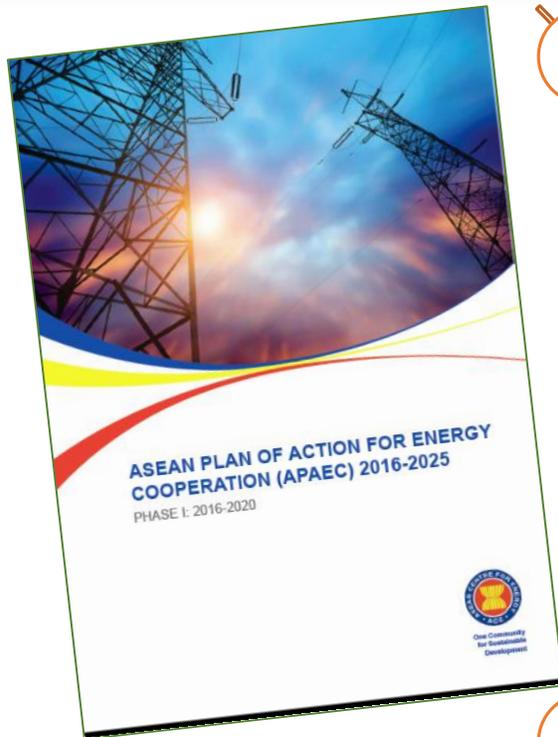
of the population were **below 30 years** of age



and **47.7%** lived in **urban areas**.

ASEAN ENERGY BLUEPRINT - THE APAEC 2016-2025

“Enhancing Energy Connectivity and Market Integration in ASEAN to Achieve Energy Security, Accessibility, Affordability and Sustainability for All”

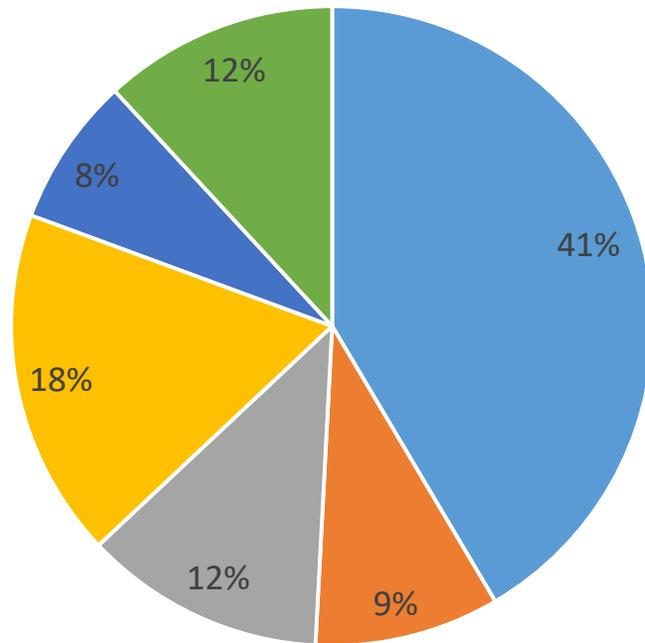


- ASEAN Power Grid
- Trans-ASEAN Gas Pipeline
- Coal and Clean Coal Technology
- Energy Eff. and Conservation
- Renewable Energy
- Regional Energy Policy and Planning
- Civilian Nuclear Energy

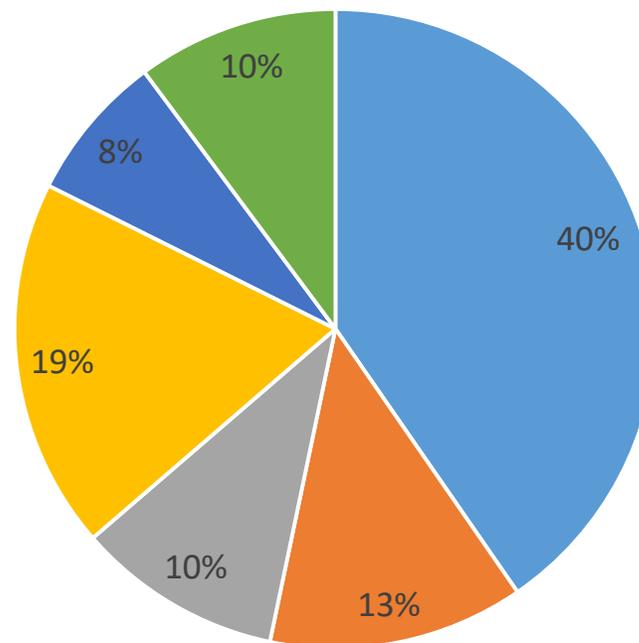
Historical Comparison

Total Primary Energy Supply – Countrywise

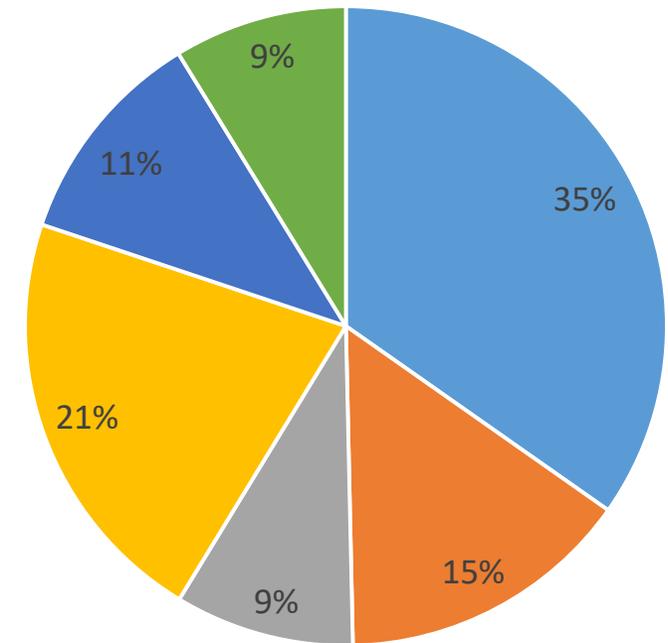
1990 – 237 MTOE



2000 – 385 MTOE



2015 – 635 MTOE



■ Indonesia

■ Malaysia

■ Philippines

■ Thailand

■ Viet Nam

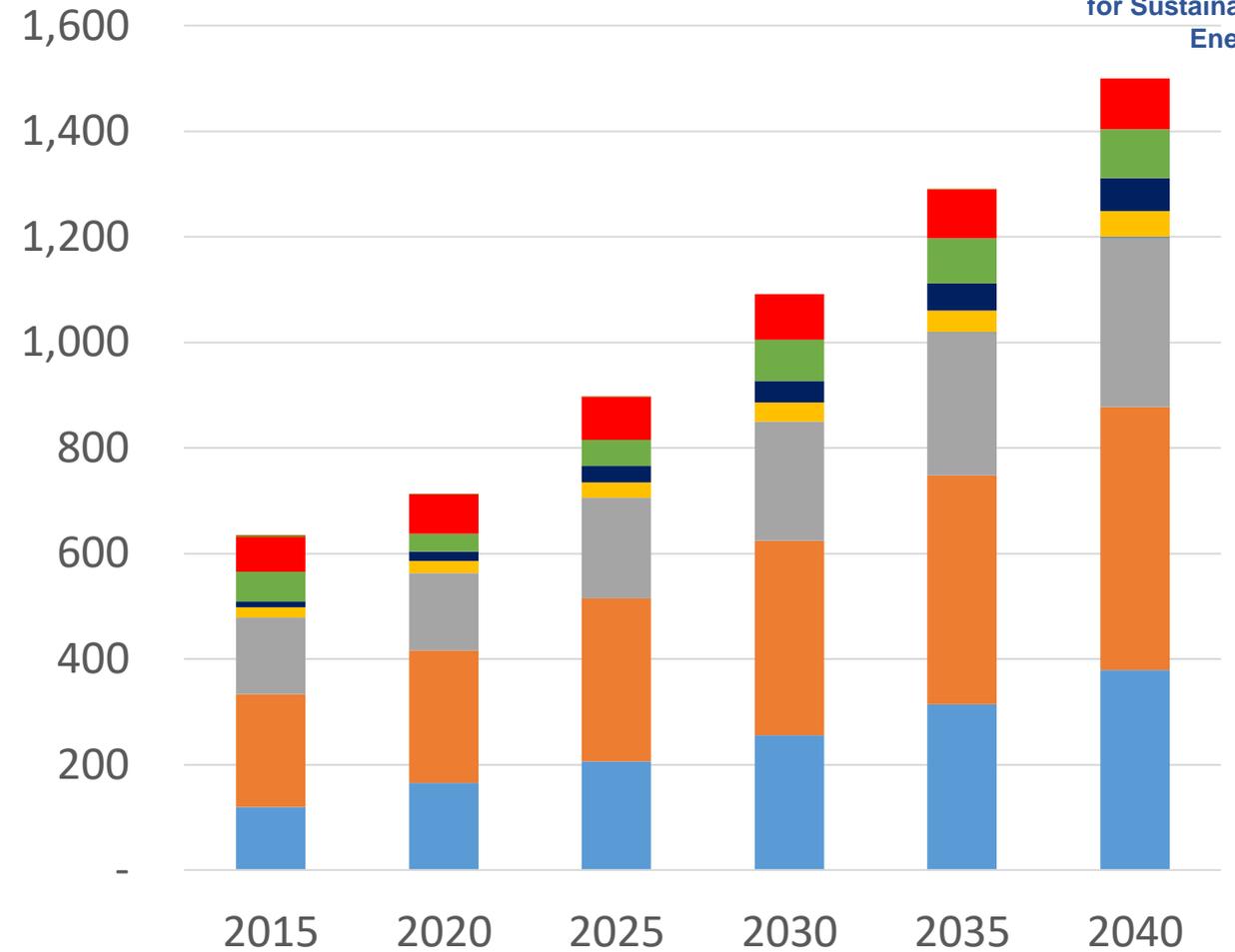
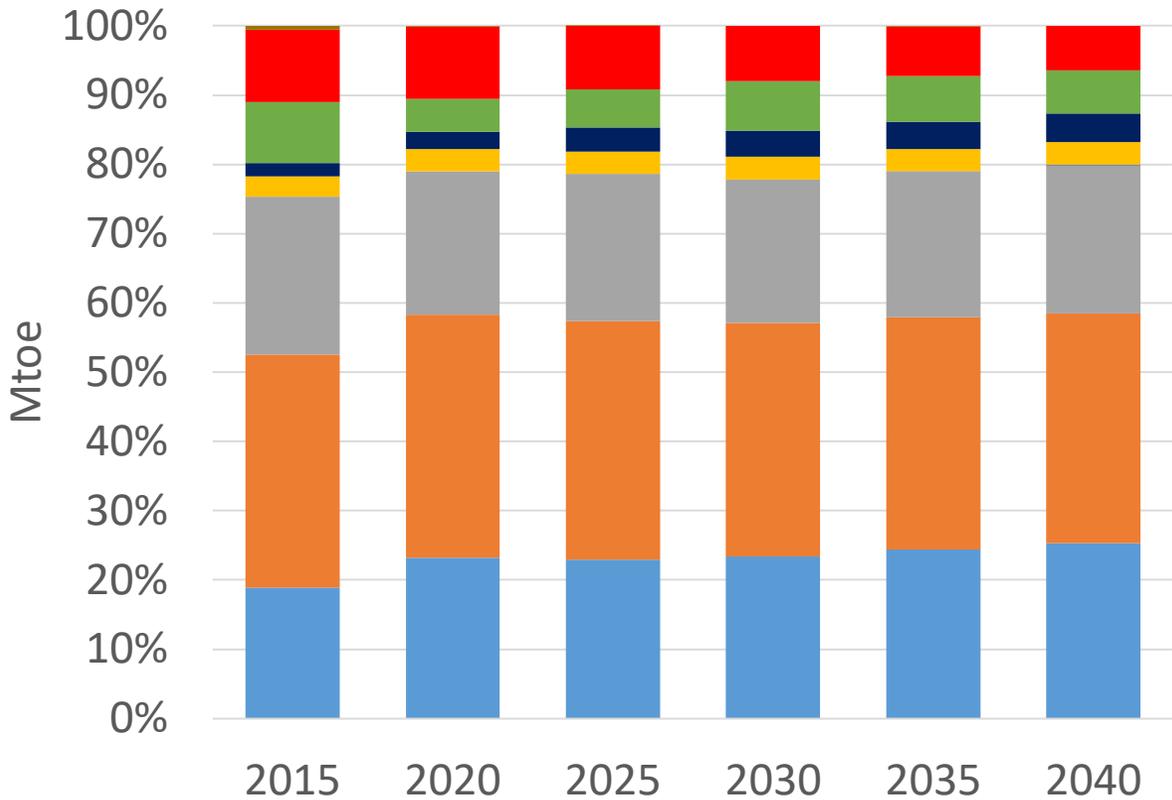
■ Rest of ASEAN

ASEAN Energy Outlook

Projected Total Primary Energy Supply (TPES) in 2015 - 2040



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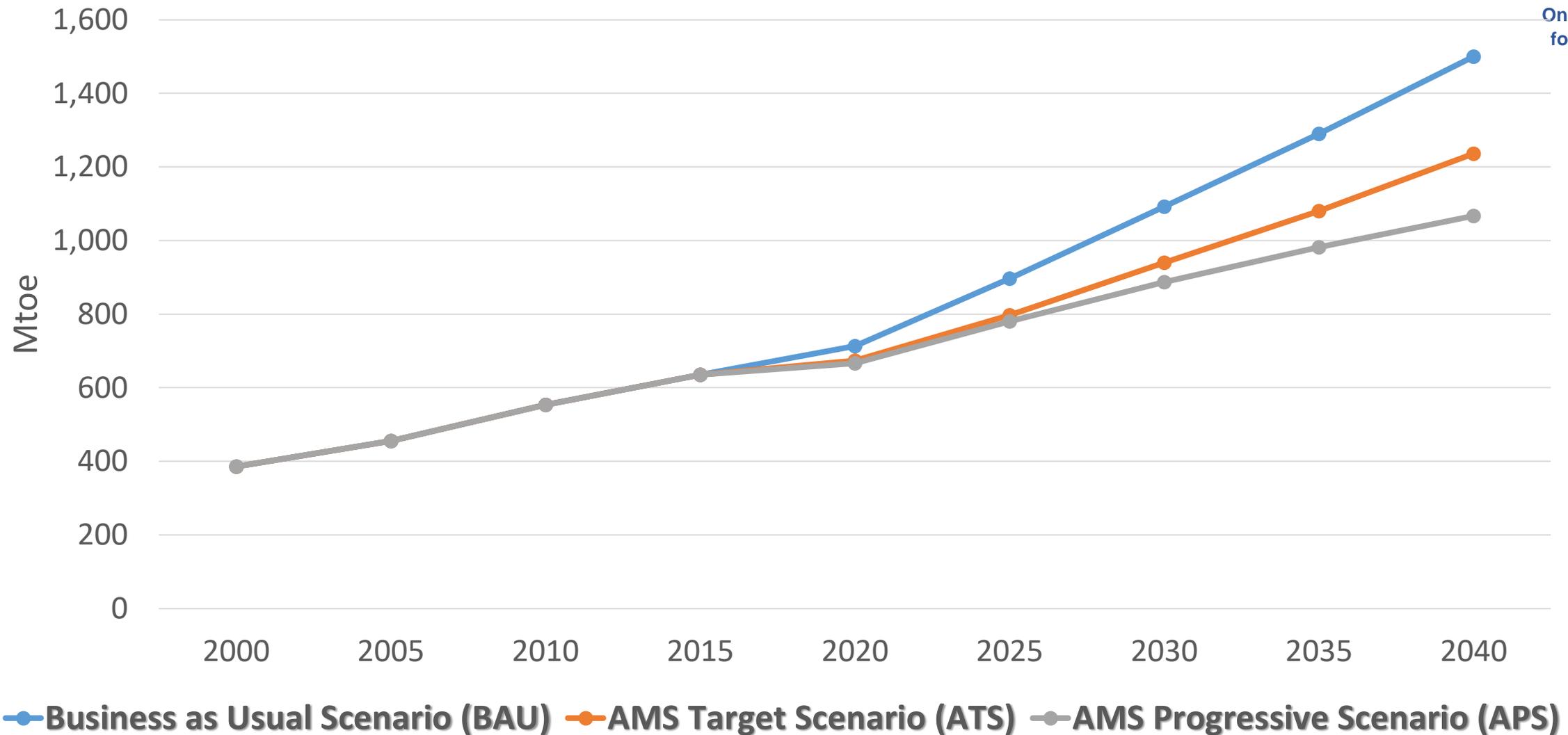


- Coal
- Oil
- Natural Gas
- Nuclear
- Hydro
- Geothermal
- Other RE
- Trad Biomass
- Others

Total Primary Energy Supply – SCENARIOS



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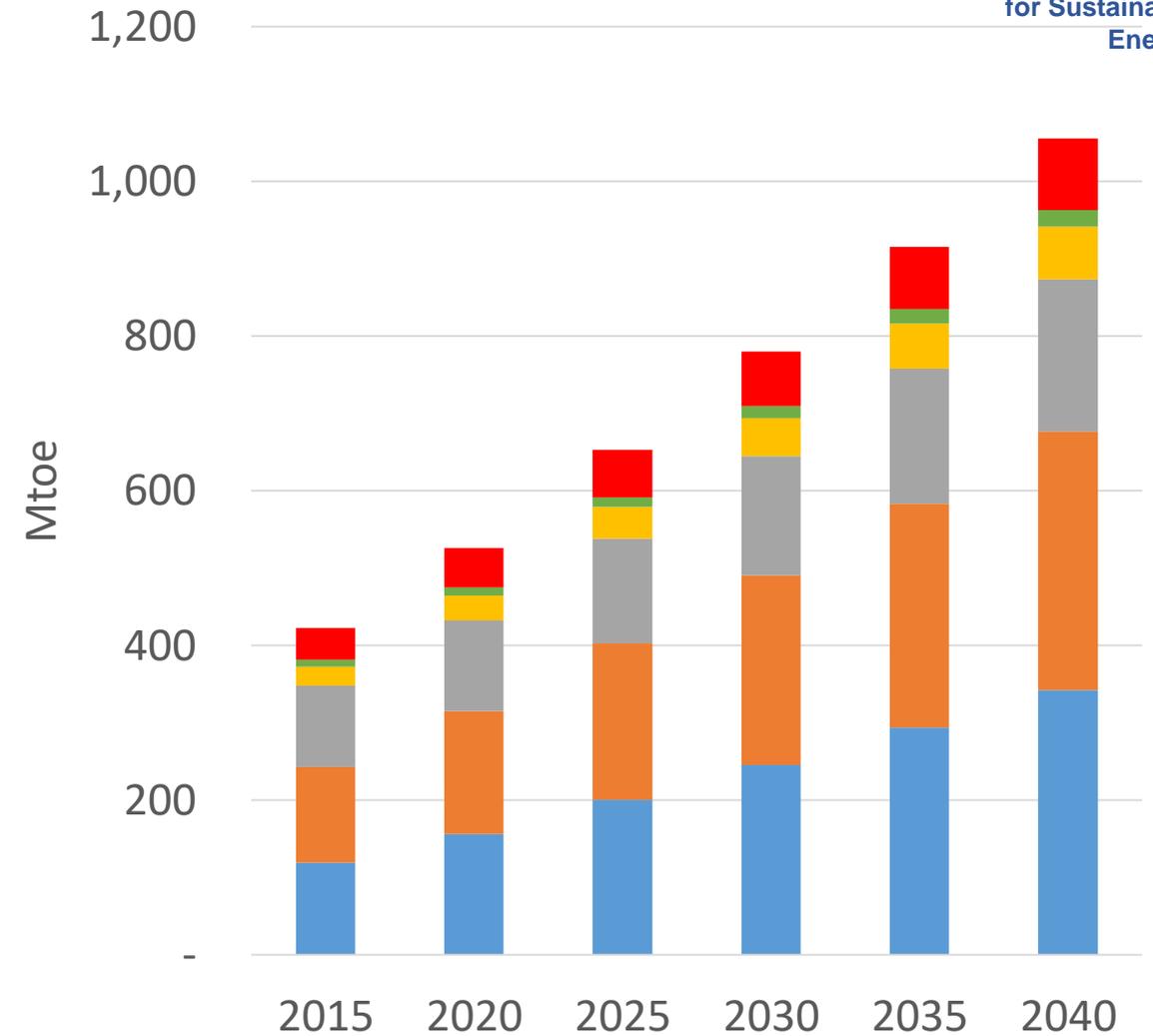
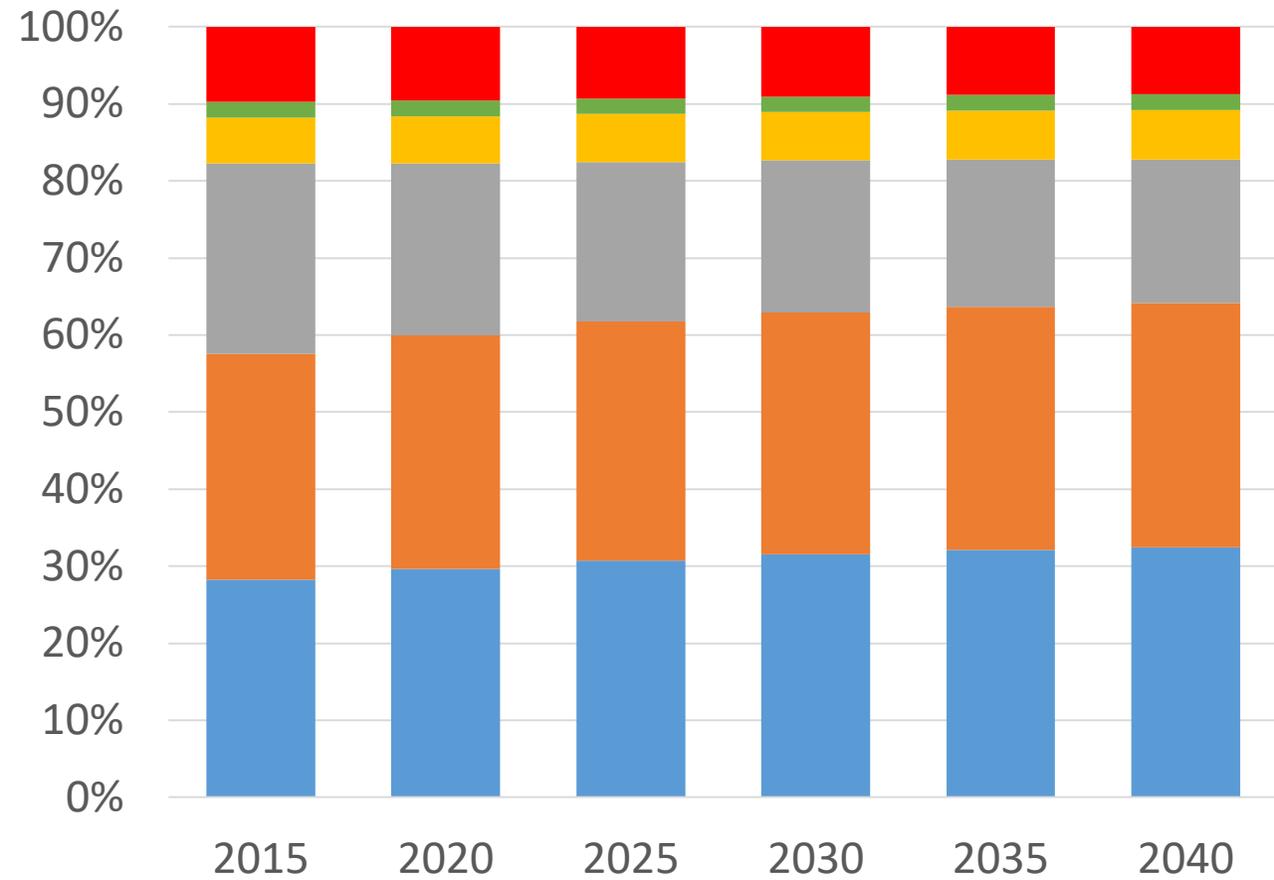


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Projected Total Final Energy Consumption 2015 - 2040



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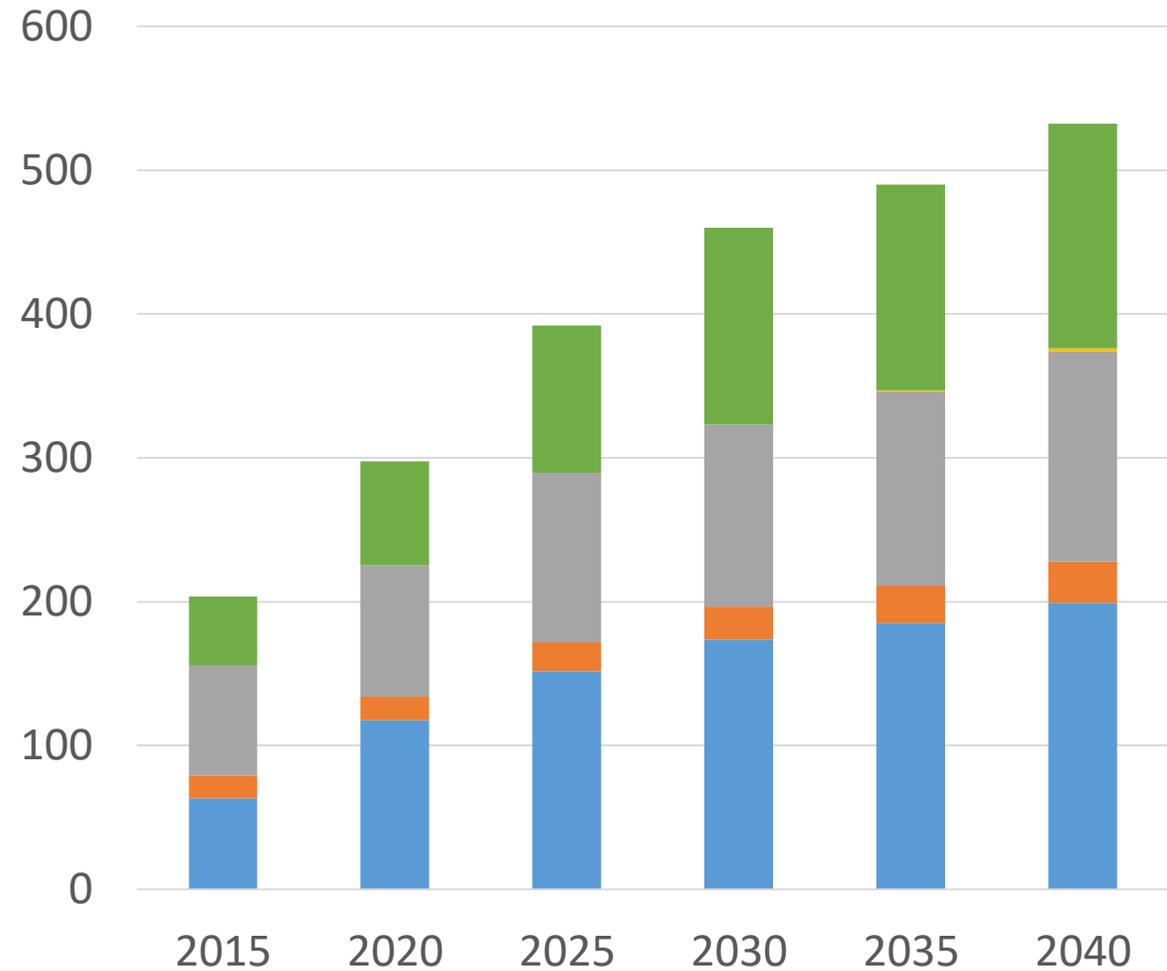
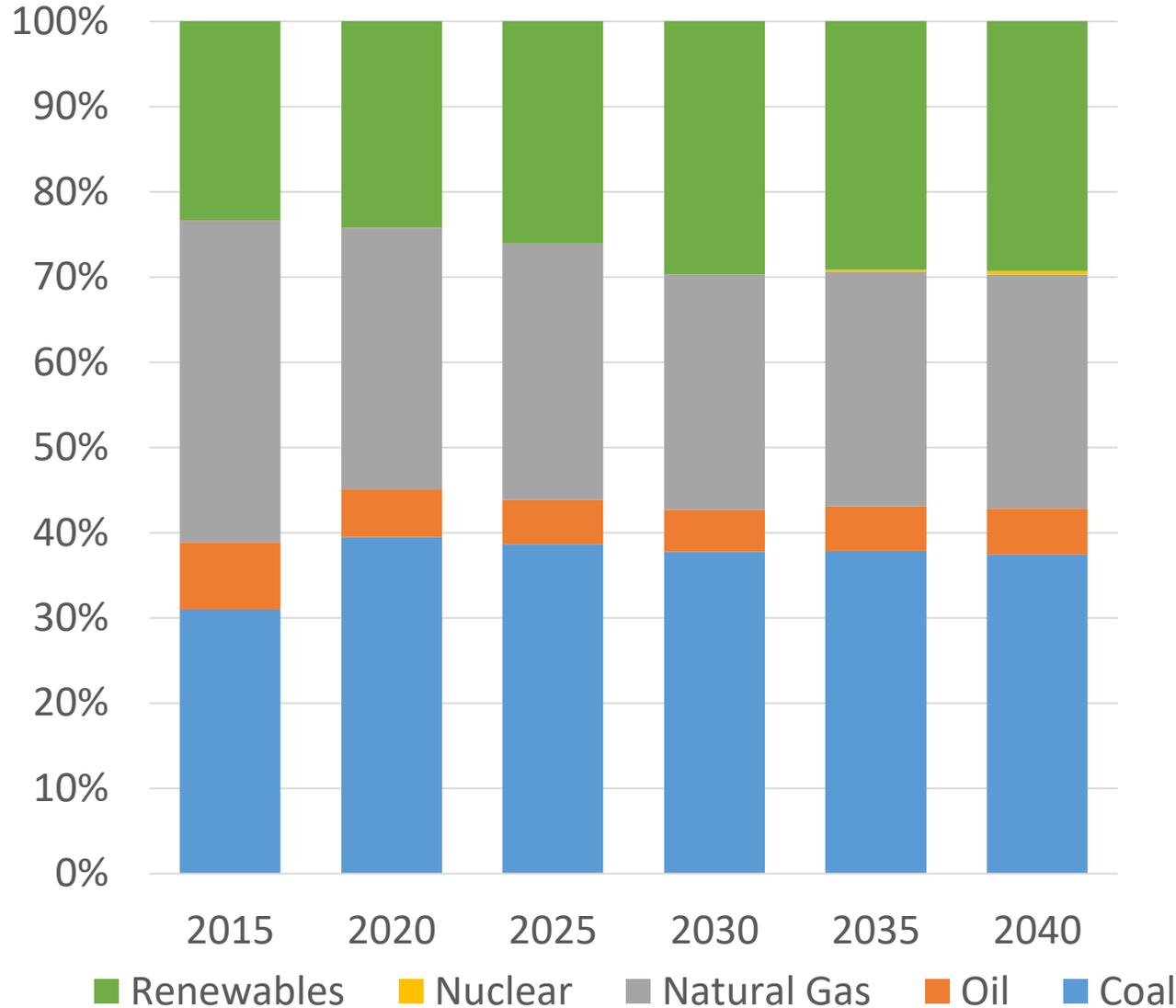
- Industry
- Transport
- Residential
- Commercial
- Others
- Non Energy Uses

ASEAN Energy Outlook

Projected Installed Power Capacity (BAU) 2015 - 2040



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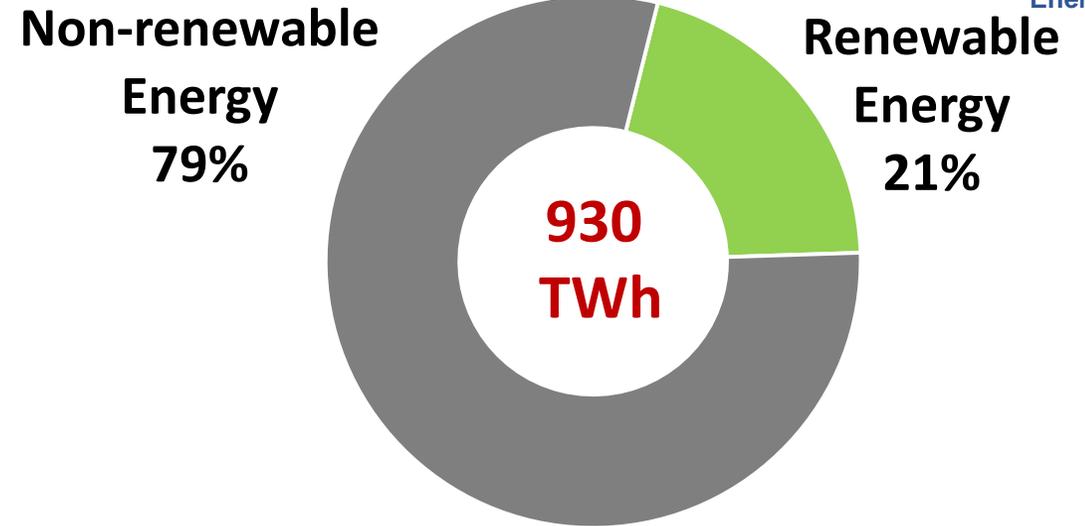
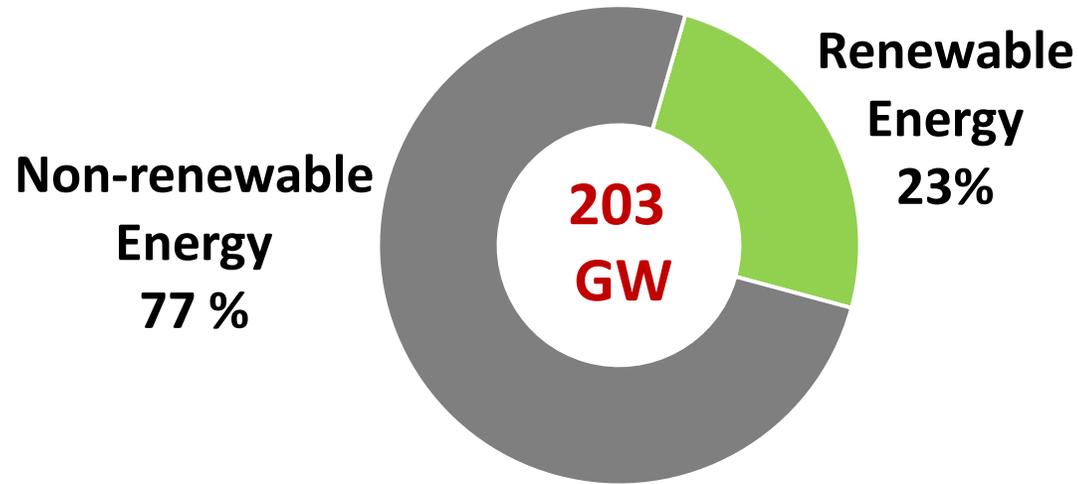


ASEAN Energy Outlook

Installed Power Capacity 2015



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Installed Power Capacity for Renewable Energy :
48 GW



19.8% Hydropower
1.7% Geothermal
0.3% Wind
0.9% Biomass
0.7% Solar

Power Generation for Renewable Energy
197 TWh



15.7% Hydropower
2.3% Geothermal
0.4% Wind
2.6% Biomass
0.4% Solar

Conclusion

- ASEAN energy will grow 3.9% per year into 2040 – much higher than the expected world average 1%.
- Country's contribution is changed but 5 major AMS continue dominating the energy demand.
- Continues to rely on fossil fuels – but EE will reduce 18-28% demand by 2040.
- Industry and transport as main driver for the energy consumption – high potential for EE saving.
- Today's installed capacity dominated by natural gas – outstrip by coal in the next 5 years, and RE will also grow fast.



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