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2. APEC Energy Demand and Supply Outlook 6th Edition
2-1 BAU Demand

Atit Tippichai
Researcher, APERC

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

Please do not cite

Outline

Past trends

Methodologies

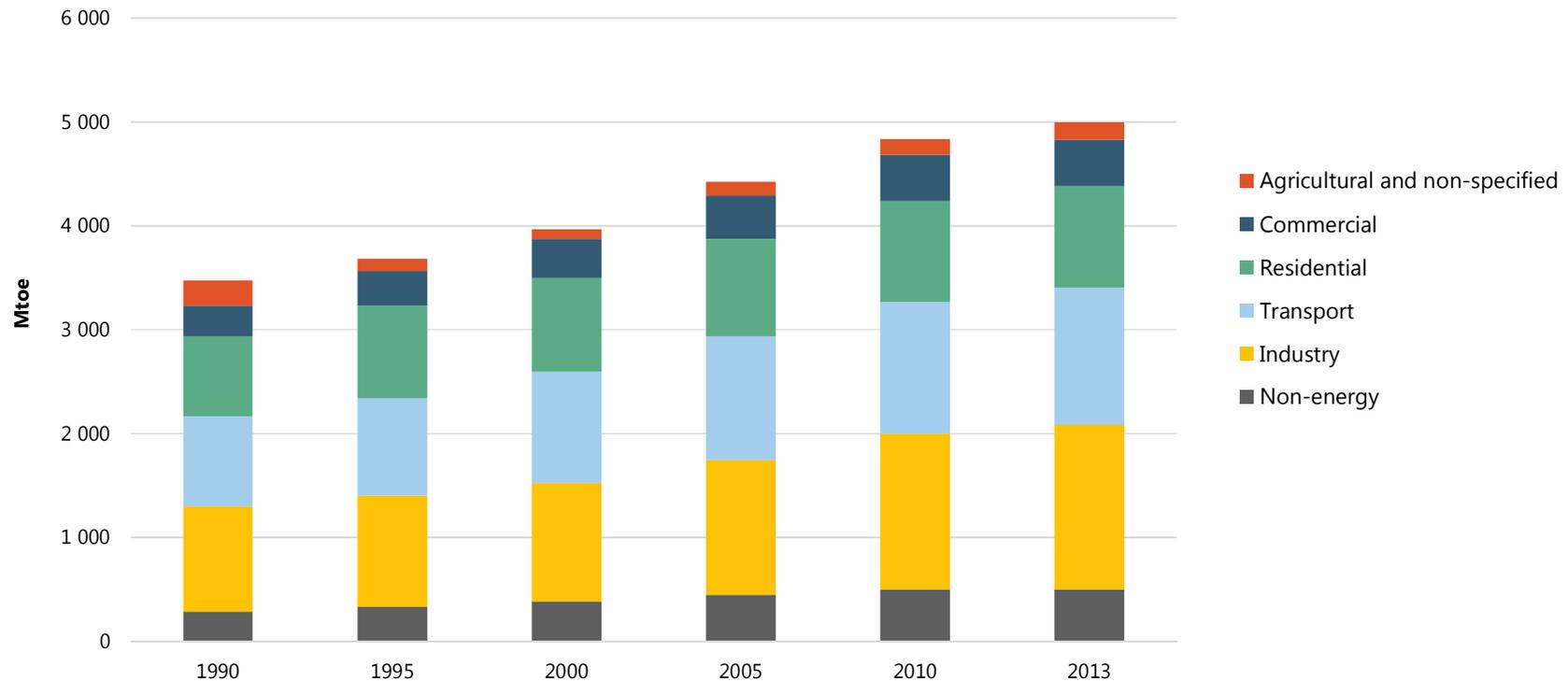
Projections

Key trends and implications

Past trends –

APEC energy demand driven by industry and transport sectors

APEC final energy demand



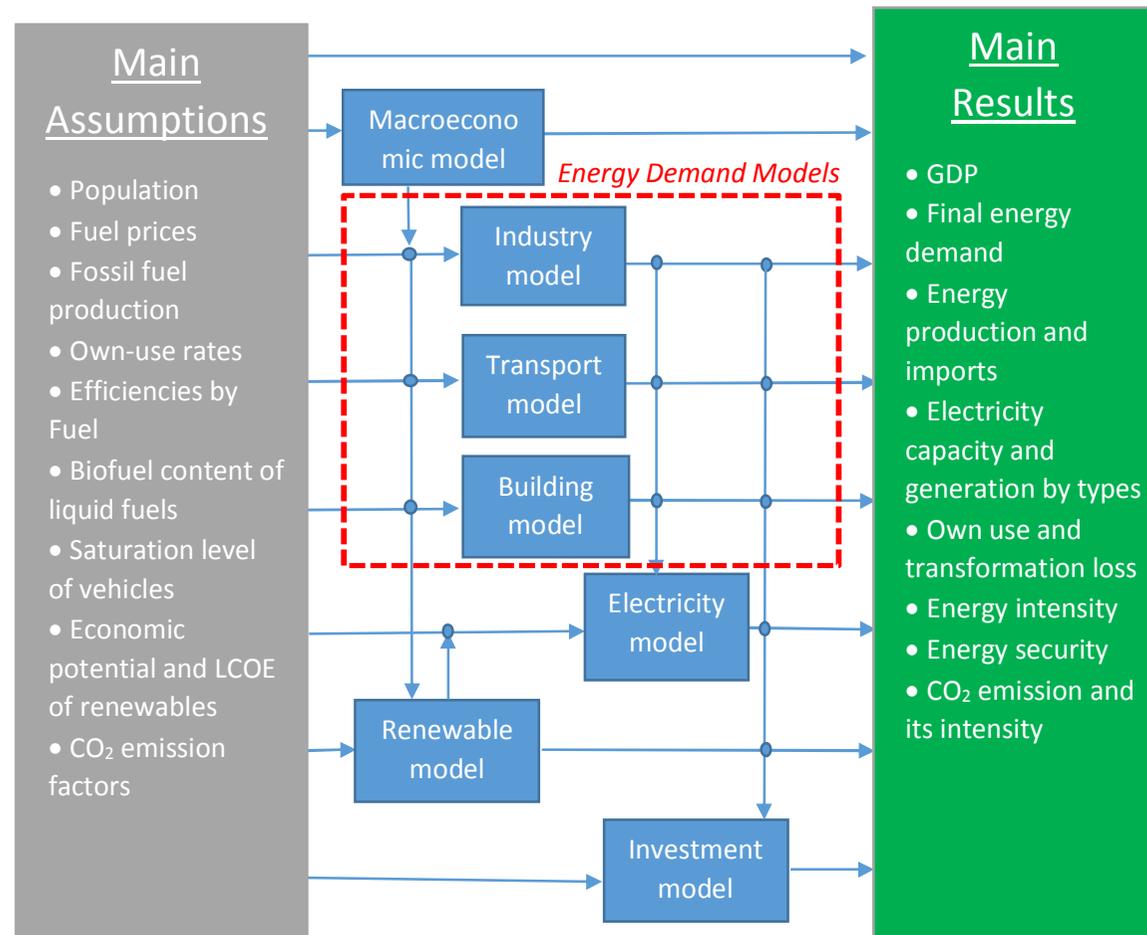
Source: APERC Analysis and IEA statistics (IEA, 2015)

APEC accounts for about 60% of world's energy consumption. Historical demand over the period 1990 to 2013 rose on average 1.6% annually.

Methodologies –

APERC uses top-down and bottom-up models

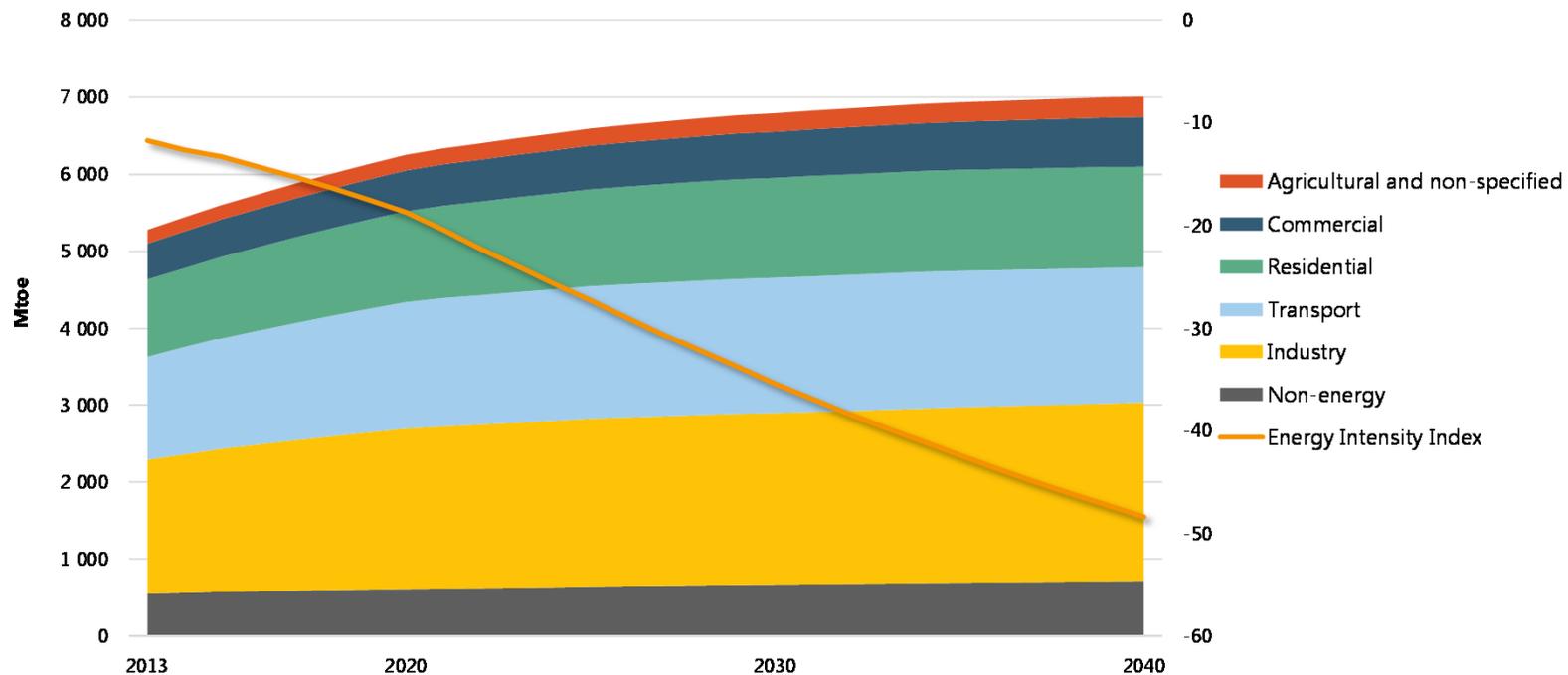
The framework of APERC's models



Projections –

Industry and transport sectors remain dominant for energy demand in APEC region

Final energy demand in APEC region

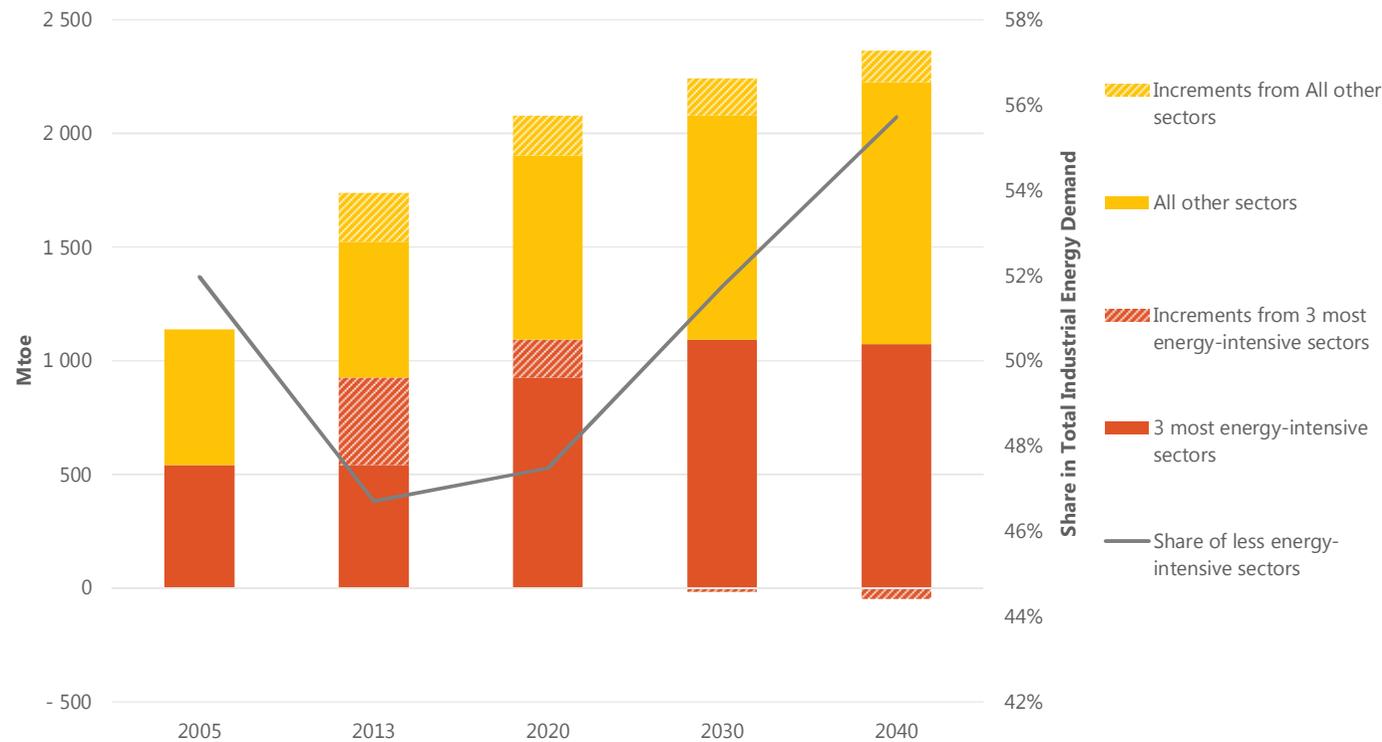


Final energy demand will increase 33% from 2013 level by 2040 with an average annual growth rate of 1.05%. The APEC's energy intensity (EI) reduction target of 45% cannot meet by 2035 in the BAU scenario.

Projections –

Less energy-intensive industries will drive energy demand in industry after 2020

APEC industrial energy demand by sub-sector

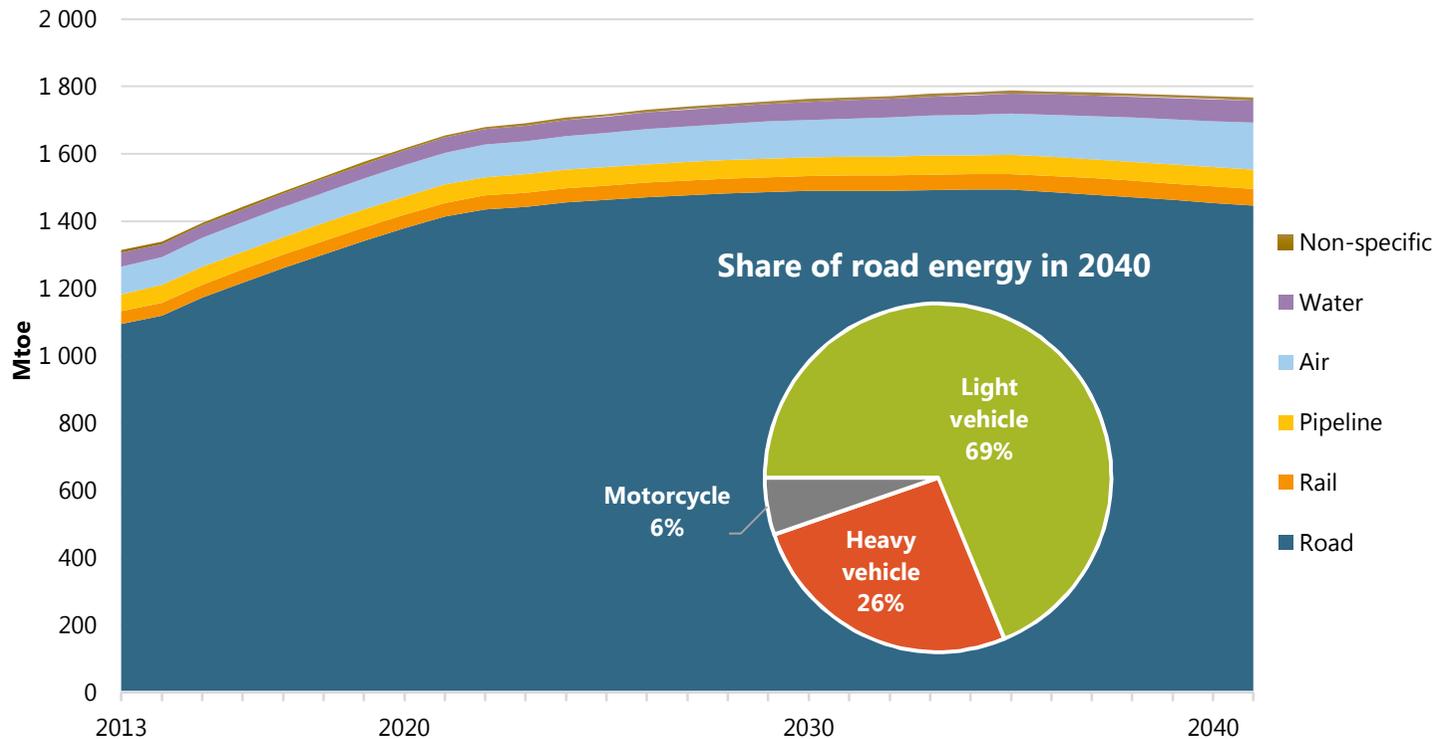


Industrial energy demand projected to rise at an annual growth rate of 1.07%. The three most energy-intensive sectors (i.e., iron & steel, chemical, and non-metallic) will stabilise their energy demand after 2020.

Projections –

Road transport still dominates energy demand in transport sector

Domestic transport energy demand by mode

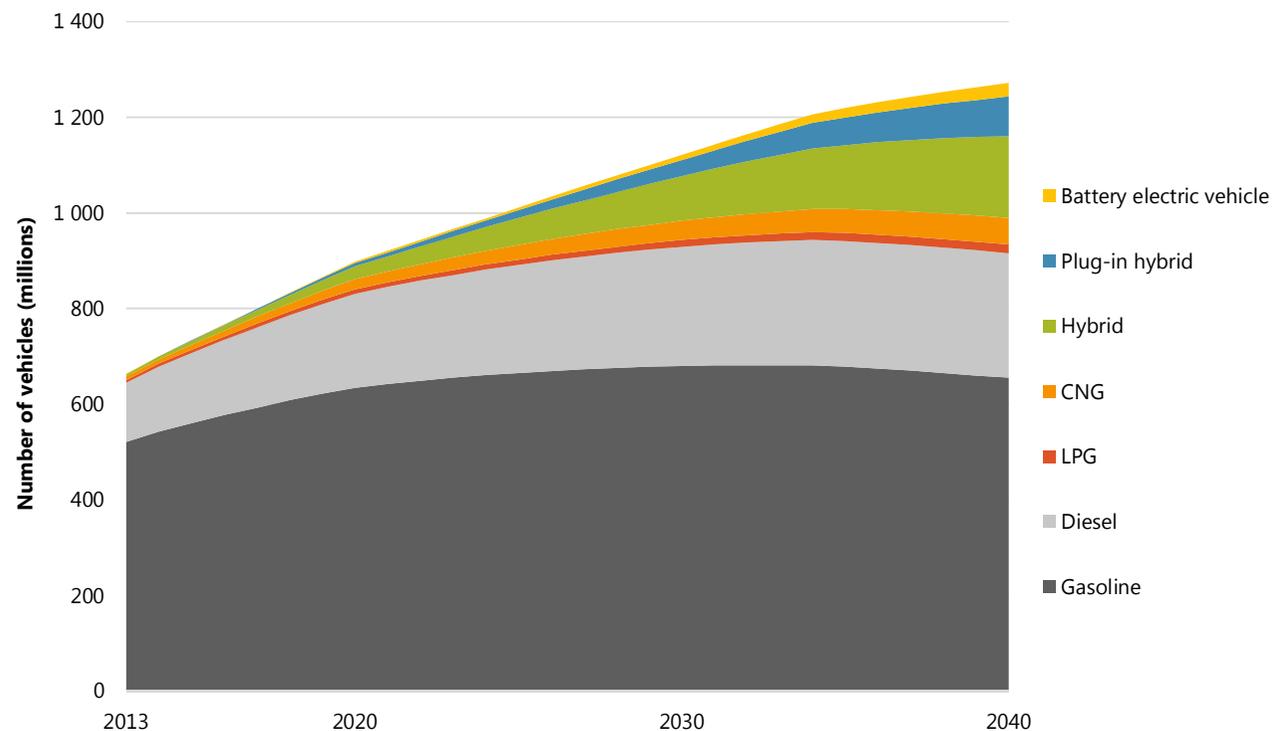


Transport energy demand will increase with an annual growth rate of 1.03%. Road transport still dominates demand, stabilizing from 2025 and declining after 2035.

Projections –

Vehicle stock doubles with high penetration rate of energy efficient vehicles

Vehicle stock by technology

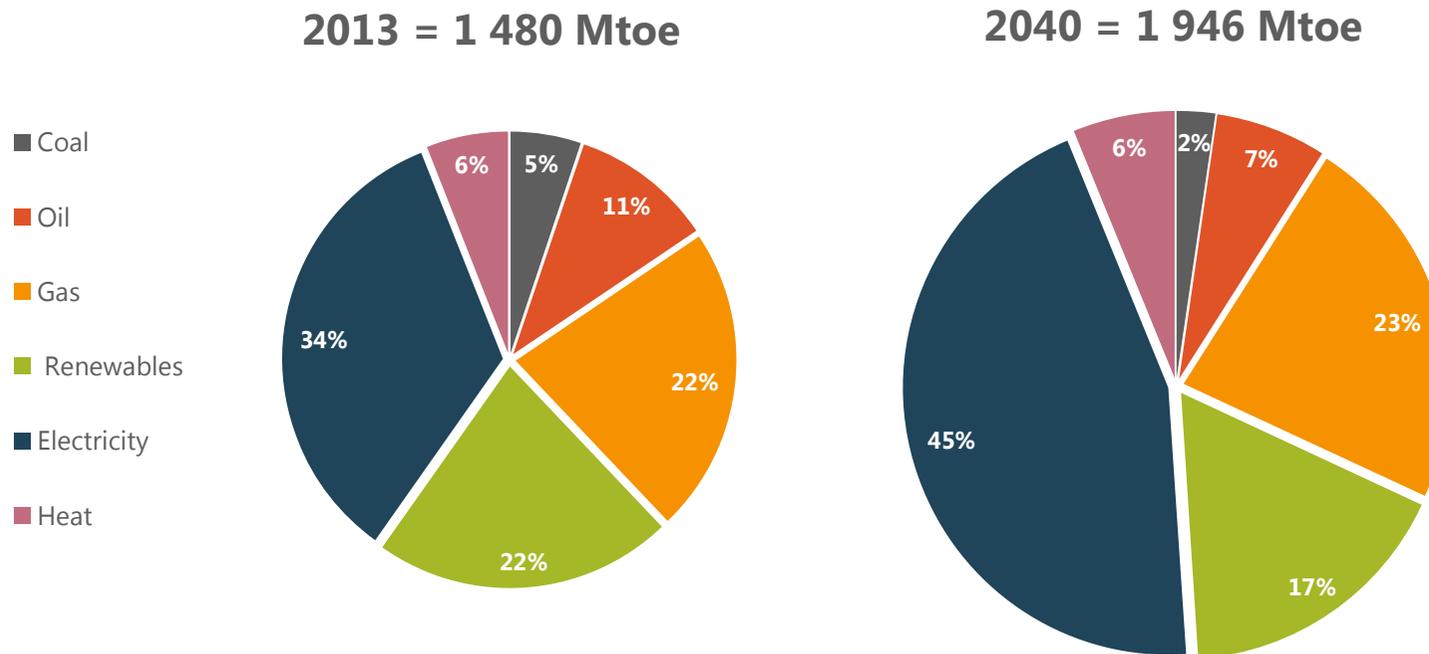


Vehicle stock will increase with an annual growth rate of 2.5%. About 74% of the increased vehicles are from China and Southeast Asia. Electric vehicles (e.g., hybrid, plug-in hybrid, battery electric vehicles) will represent about 22% by 2040.

Projections –

Electricity drivers energy demand in building sectors

Building energy demand by fuel type

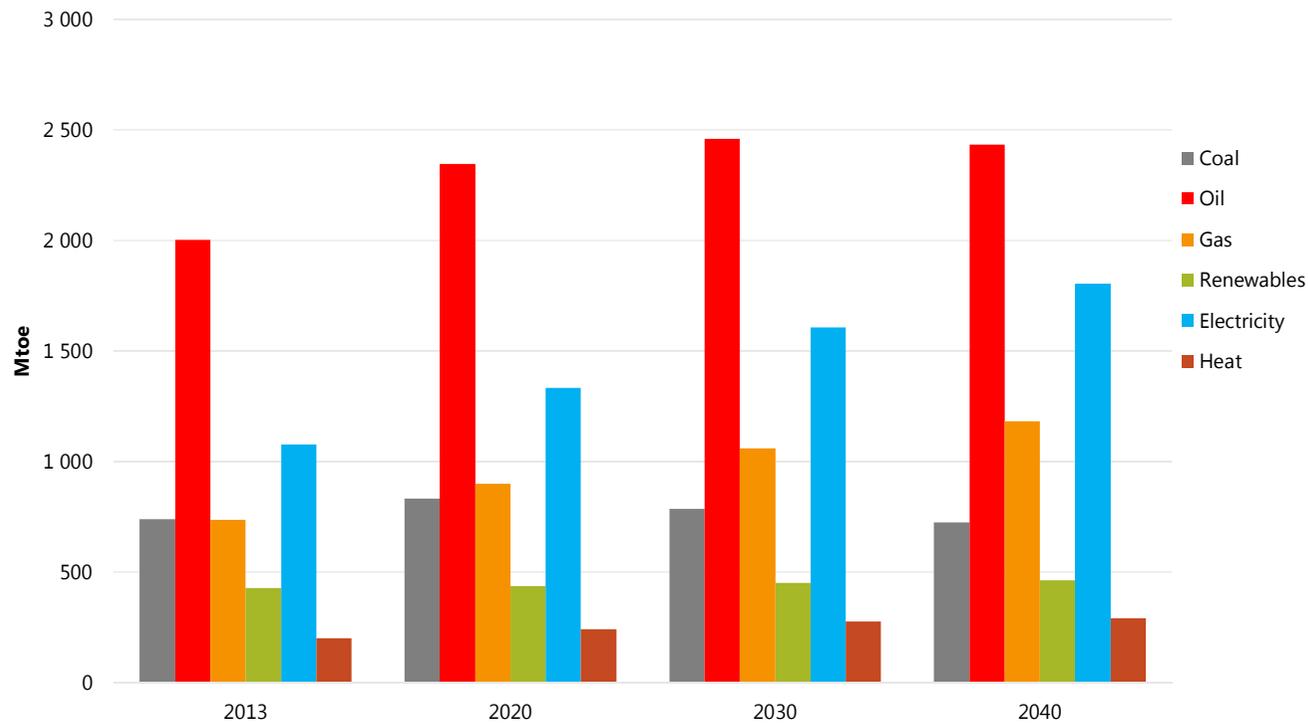


Energy demand in residential and commercial sub-sectors will increase with an annual growth rate of 0.93% and 1.20%, respectively. Electricity will maintain the largest share as penetration of electric appliances grows with rising incomes.

Projections –

Oil demand will be stabilised while electricity and gas continue growing

APEC energy demand by fuel type

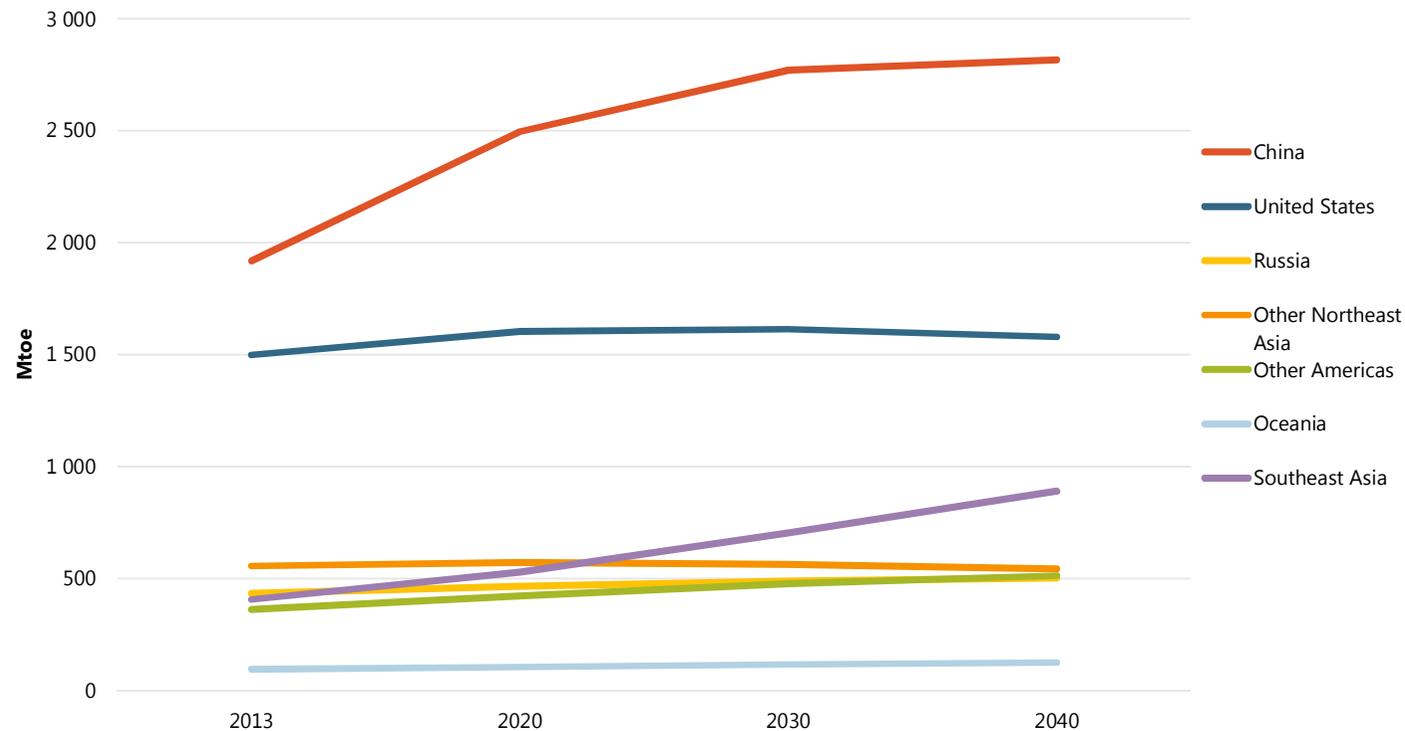


Electricity and gas demand will increase more than 60%, growing almost 2% per year.

Projections –

China and The United States dominate energy demand in APEC region

Final energy demand by sub-region



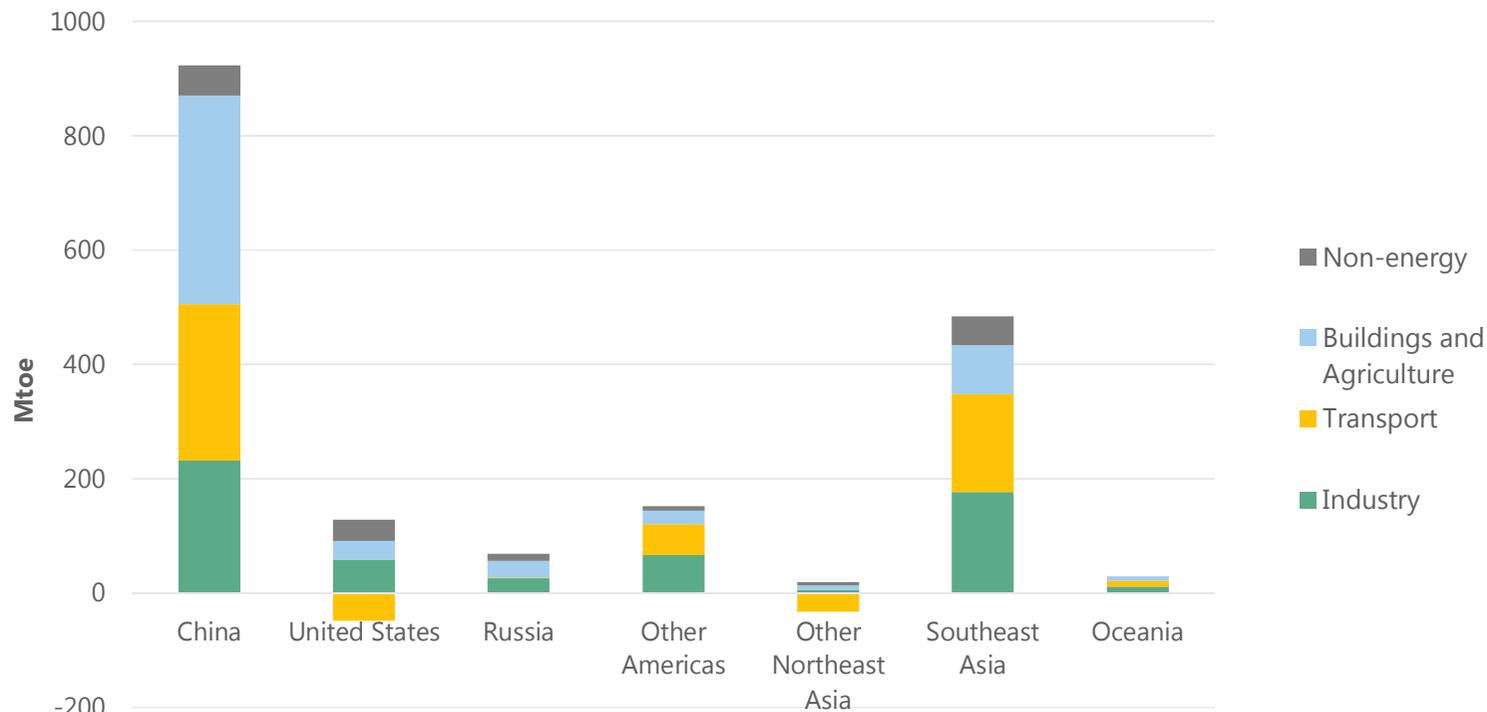
Energy demand for China and South East Asia will increase 50% and 120%, respectively. While, Other North East Asia and The United States will stabilize energy demand.

Note: **Oceania** (Australia, New Zealand and PNG), **Other Americas** (Canada, Chile, Mexico and Peru), **Other Northeast Asia** (Hong Kong, Japan, Korea and Chinese Taipei), **Southeast Asia** (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam)

Projections –

China and South East Asia drive energy demand in APEC region

Increased energy demand by sub-region by sector in 2040



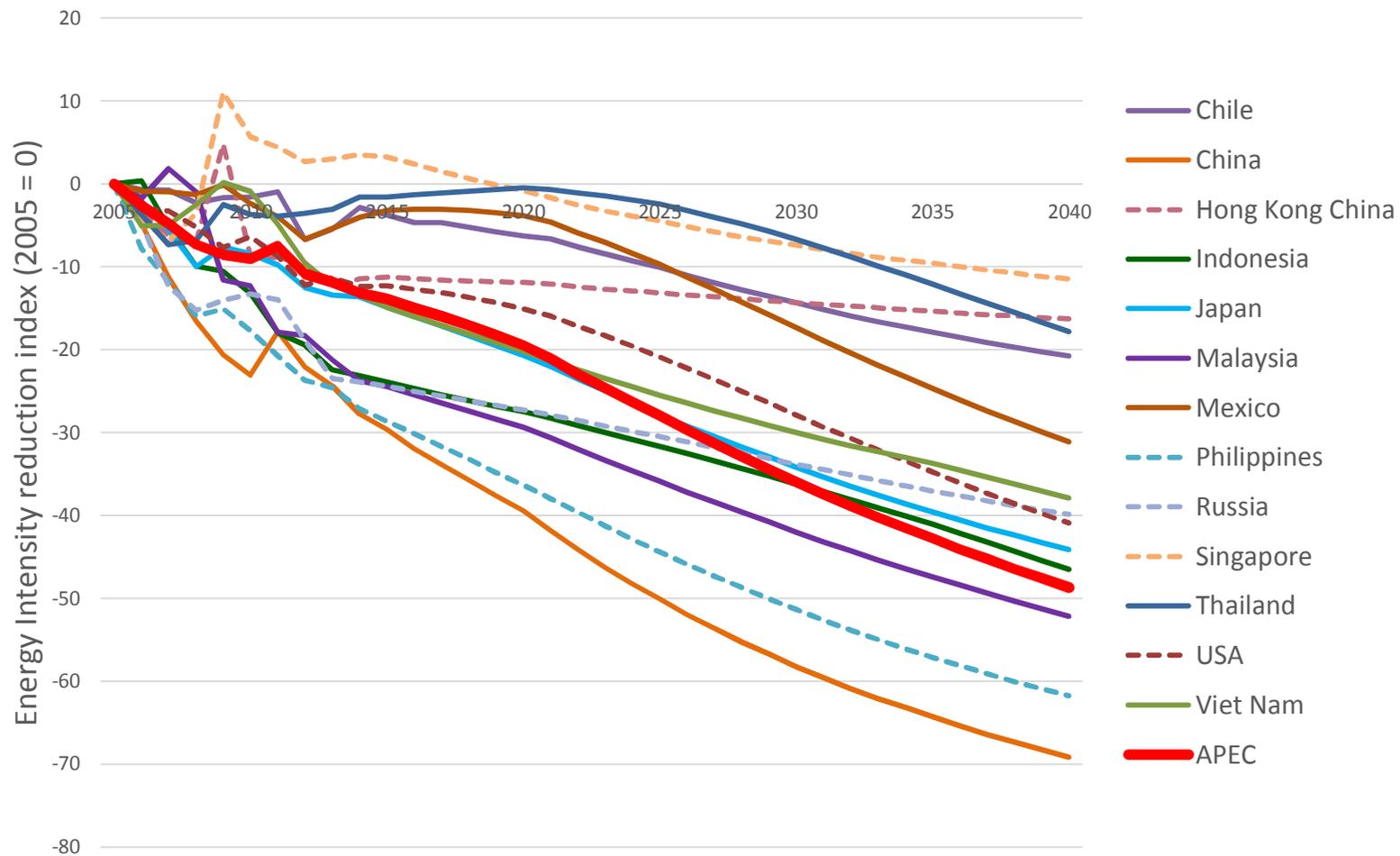
China and South East Asia will dominate more than 80% of the increased energy demand. Reduction in transport energy demand for the US and Other NEA.

Note: **Oceania** (Australia, New Zealand and PNG), **Other Americas** (Canada, Chile, Mexico and Peru), **Other Northeast Asia** (Hong Kong, Japan, Korea and Chinese Taipei), **Southeast Asia** (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam)

Projections –

China largely contribute to energy intensity reduction in APEC region

Energy intensity reduction by selected APEC economies



APEC Energy Demand – Key trends and implications

- “ China and Southeast Asian economies drive the growth of energy demand in APEC region**
- “ Energy demand in the future will grow slower than last decades. The APEC’s EI reduction target of 45% cannot meet by 2035 in the BAU scenario.**
- “ Industrial and commercial energy demand still kept raising while transport and residential will be stabilised by 2040**
- “ Oil demand will be declining while electricity and gas continue growing**
- “ More efforts needed for energy saving in road transport sector and also the less energy-intensive industrial sectors**

Thank you for your kind attention