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# Group II in Asia Pacific: Trends and New Capacities

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# Today's discussion

- Impacts of macro trends
- Supply and demand
- Key implications

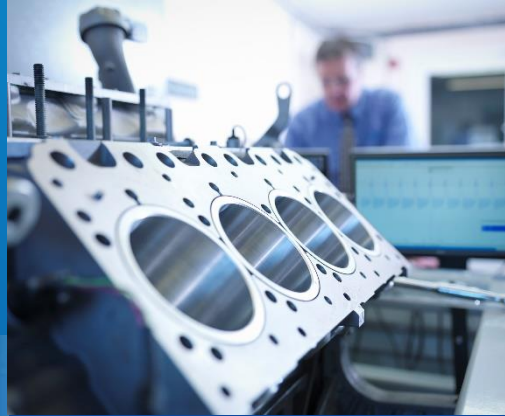


# Macro trends driving future requirements



## Global trends

- Efficiency demands
- Reduce GHG emissions



## Application changes

- Higher fuel economy
- Energy efficiency / EV
- More severe operating conditions
- Longer drain intervals



## Impact on base stocks

- 'engineered fluids' to meet performance demands

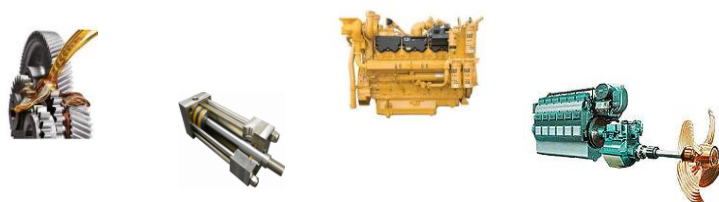
# Tailoring base stock design to meet needs

Fuels and lubes economy  
Durability  
Emissions



Grp IV Grp III Grp II Grp I

Evolving performance  
Changing TBN and fuels  
Energy efficiency

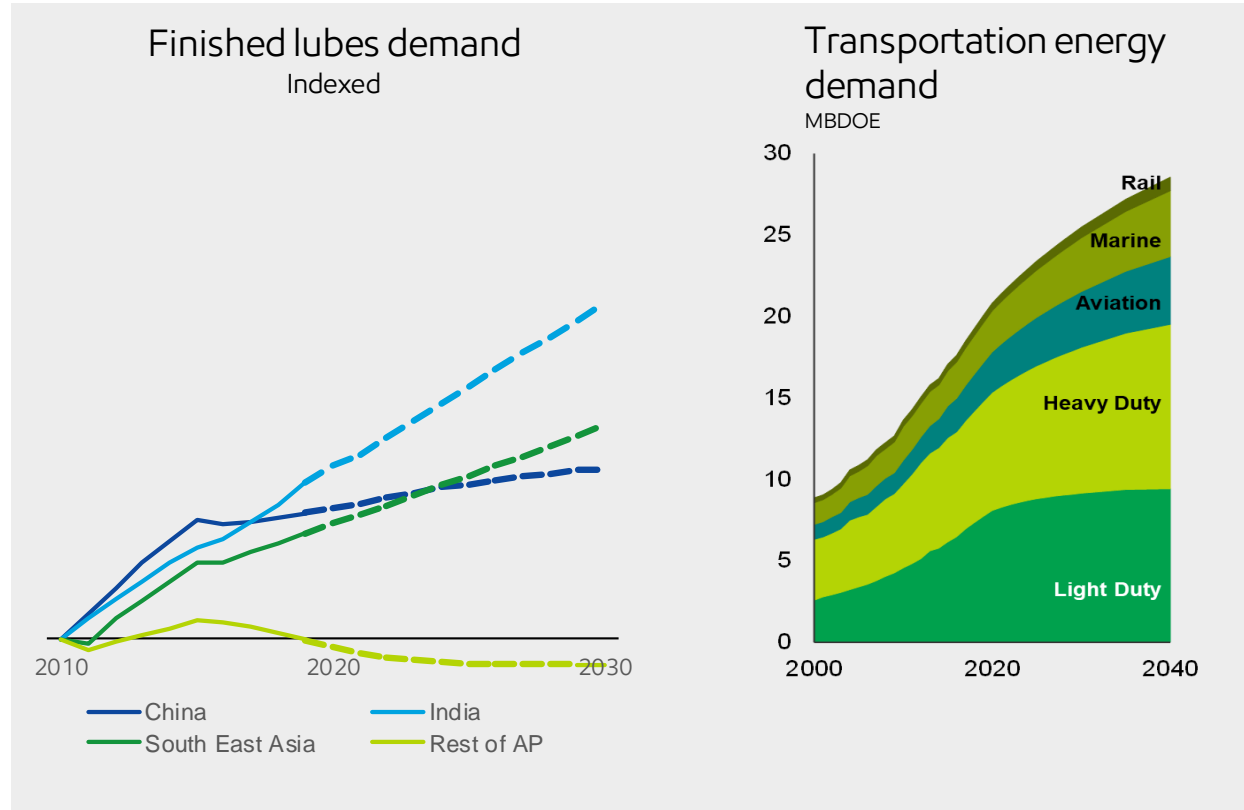


Grp IV Grp III Grp II Grp I

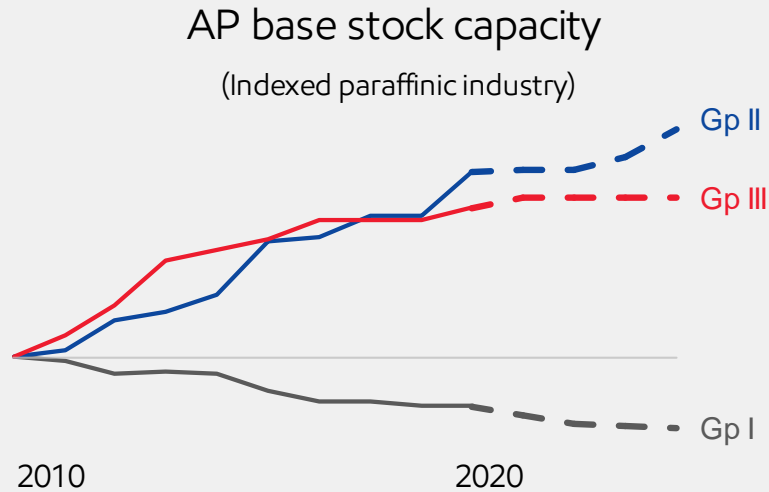
- Manage increasing complexity while meeting more stringent industry requirements

# Growing lubes demand, changing mix

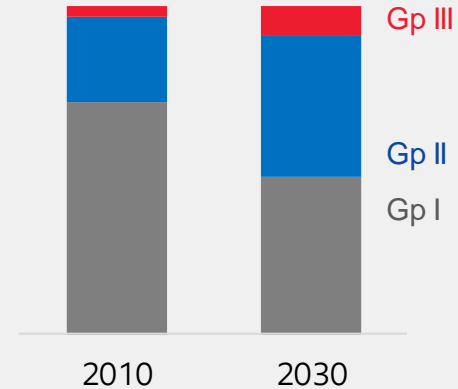
- India, Southeast Asia driving growth
- China demand moderating
- Impacts of electrification
- Growth shifting to heavy duty



# Growing supply, shifting demand



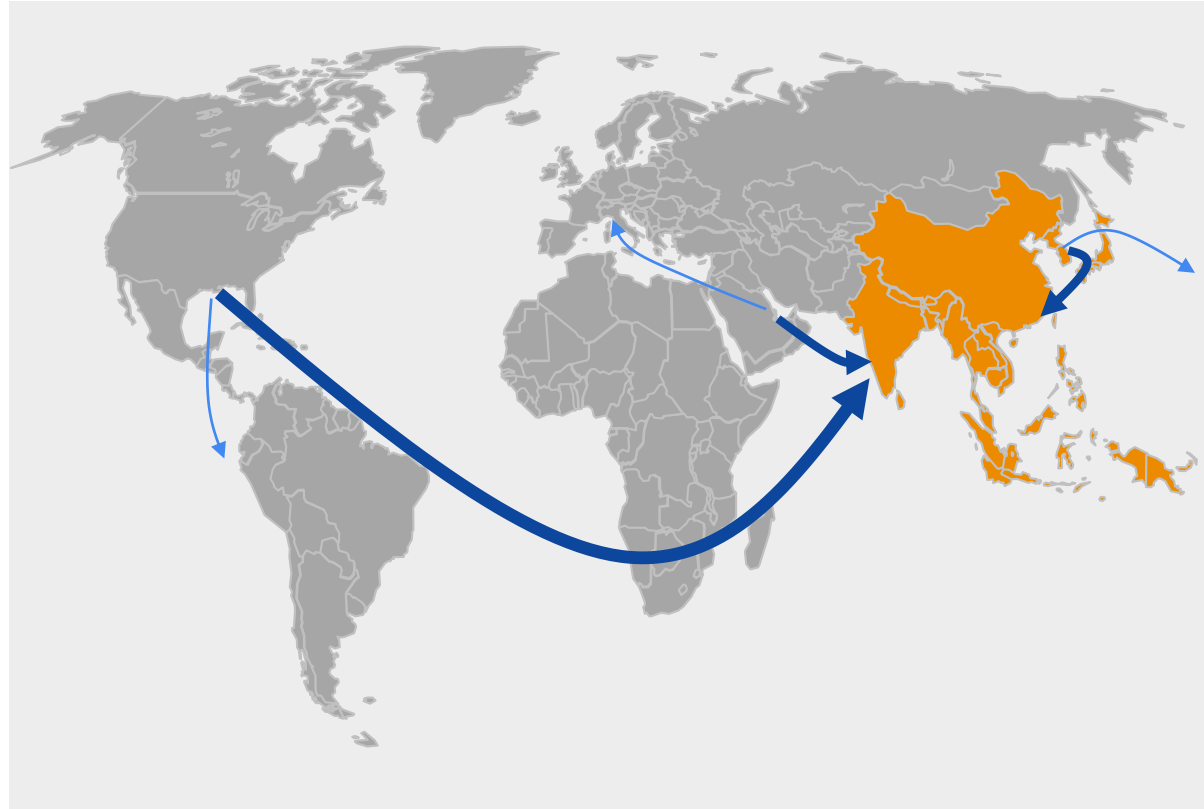
## Base stock demand



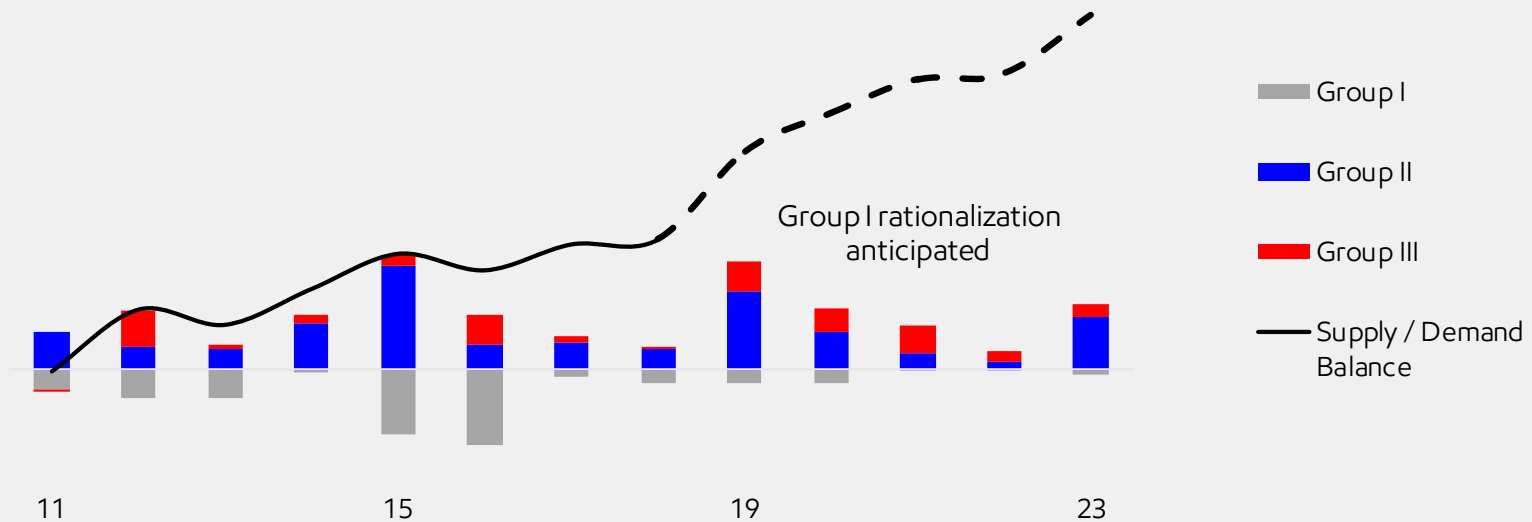
- New capacity centered on Group II and III
- Group I remains technically capable despite diminishing supplies
- High viscosity requirements rely on Group I
- Group II “heart of the market” in Asia Pacific

# New capacities and volatility in Asia Pacific

- Asia Pacific currently net importer
- New capacity leading to volatility, shifting supply
- Uncertainty for suppliers and consumers



# Supply demand balance challenges producers



- Recent capacity additions outstrip demand growth
- Rationalization anticipated to rebalance global market
- IMO 2020 further pressures Group I refiners



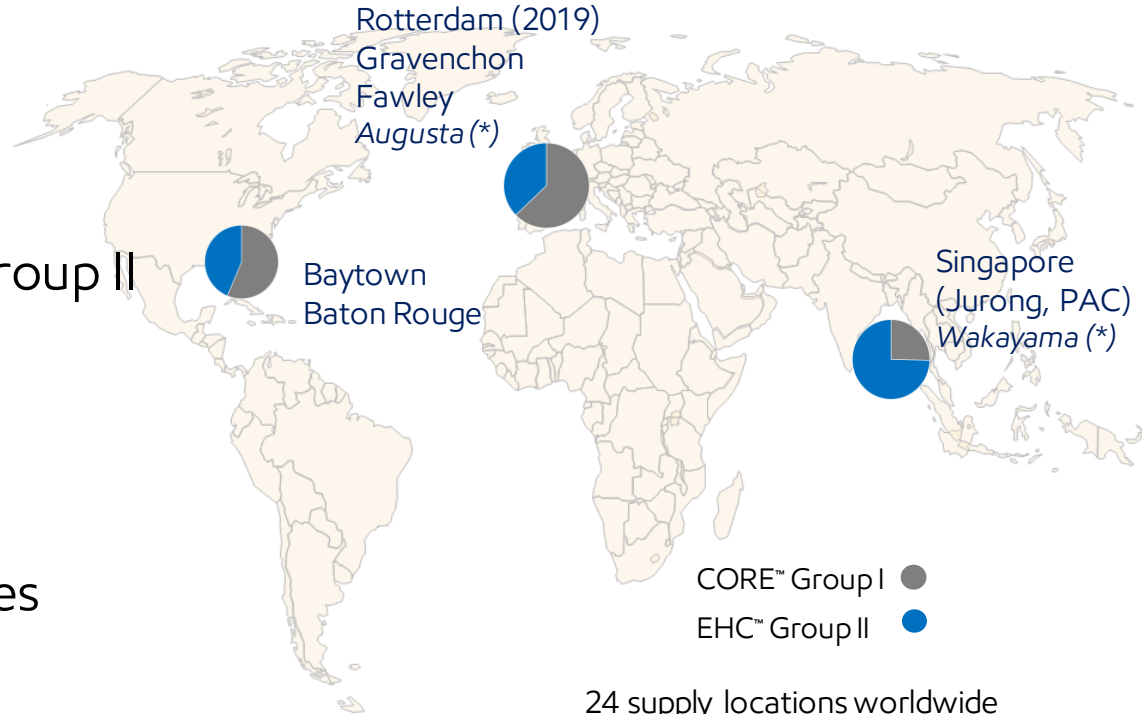
# Implications for the industry and customers

- Adapt and respond to uncertainty and volatility
- Meet rapidly changing requirements
- Address diversity, reduce supply chain complexity
- Optimize blending through base stock design
- Ensure reliable, quality supply over the long term



# ExxonMobil expanding global capabilities

- Singapore expansions
- Innovative high viscosity Group II
- Long-term Group I supply
- Committed global resources



24 supply locations worldwide

6 refineries, 5 distributors, 12 terminals

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