A perspective on refining in South Africa

December 3rd, 2009

Global position has local effects

- $142/bbl oil and the global fall-out of the US sub-prime problem has changed the World's energy picture
- There is unrelenting pressure to reduce greenhouse gas emissions
  - 95gm CO_2/km by 2020 in EU for cars
  - New EU and US emissions taxes for refiners "well to wheels"
- Remaining dependent on imported oil is an uncomfortable position for many economies
- There continue to be politico-economic interventions in the fuel market to *reduce imported fuel demand* and promote :
  - renewable fuels
  - fuels with reduced levels of fossil carbon
  - "fuels" that are not "refined" – (renewable) electricity, hydrogen
  - fuels manufactured locally

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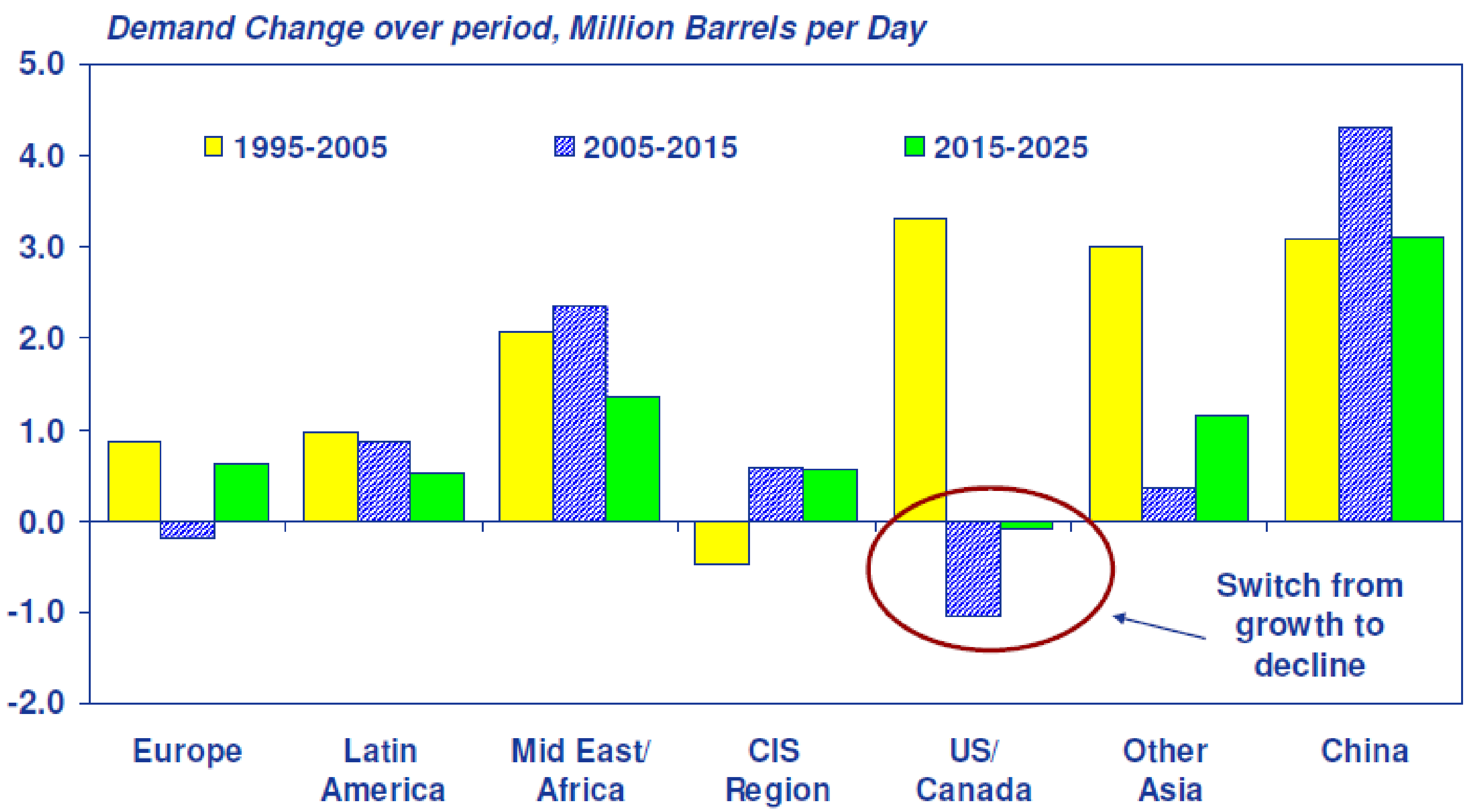
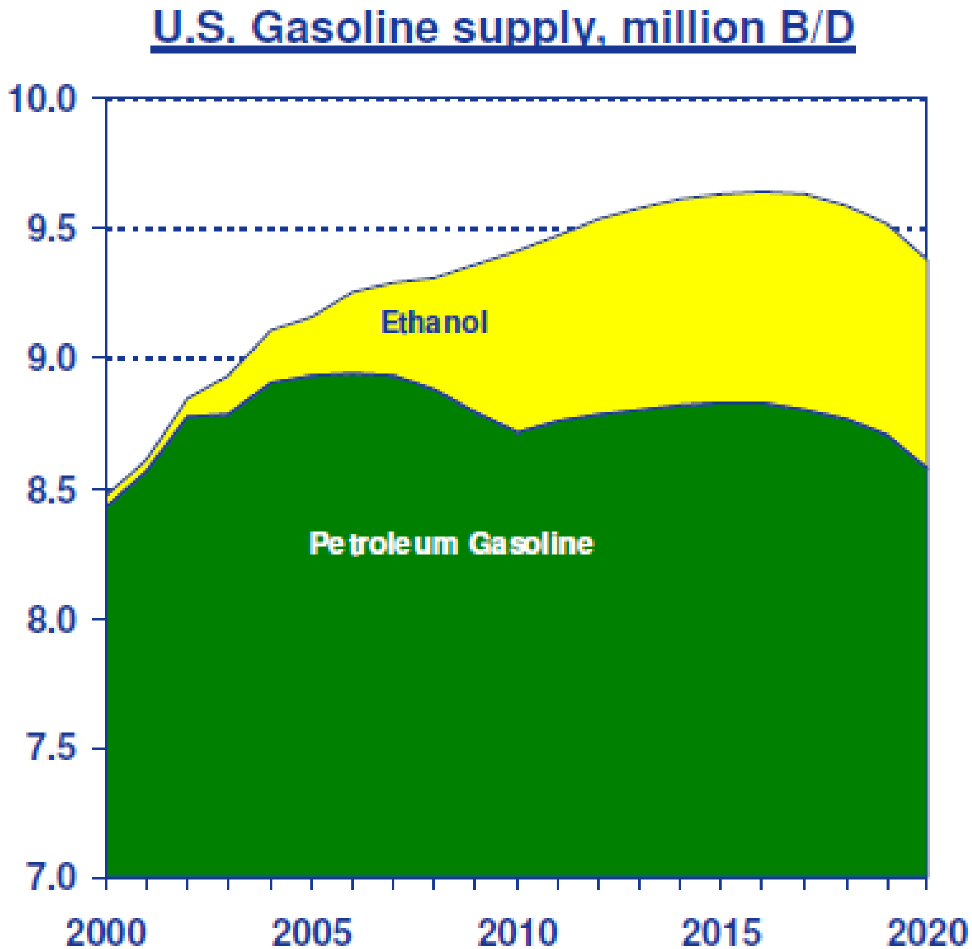
Fundamental change in demand pattern



US interventions change the game



Drop in total demand (CAFÉ standards)

Renewable Fuels Mandate forces ethanol in – demand for crude-sourced petrol never recovers

Result:

- Reduced operating rates, and/or
- close refineries (already happening) and/or
- export

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Europe faces a major supply/demand imbalance

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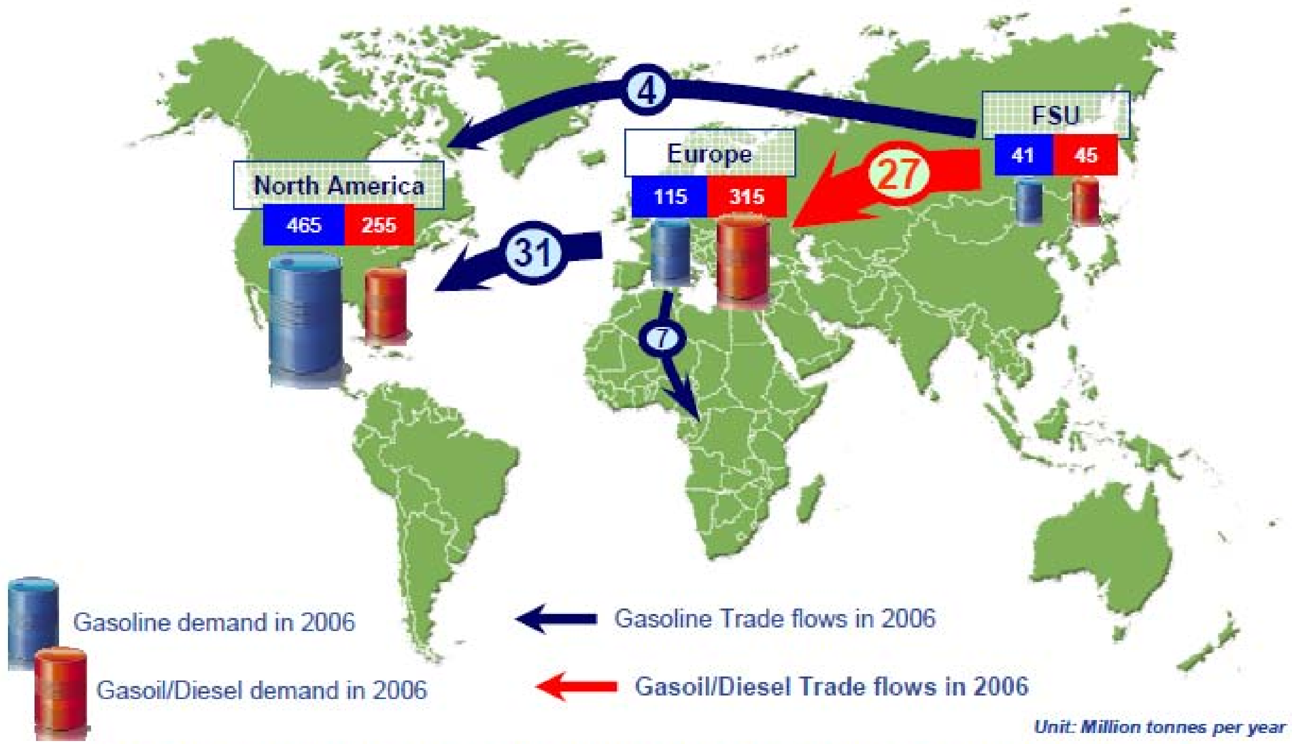

Refining is a vital part of the supply chain to meet EU consumer needs.

Source: International Energy Agency, 2008, Wood Mackenzie

But export to where?

US is an historical importer

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The new trading scenario

- EU remains gasoline-long
  - Ever-increasing pressure to improve vehicle efficiency *reduces demand* and *pushes dieselisation*
  - Punitive initial and annual emissions-based taxes
- US ceases to be a buyer and becomes a seller
  - Increase in “orphaned” petrol looking for home
  - Depresses prices
- Where can it go
  - Brazil closed (large domestic oil industry and ethanol supplies)
  - Middle East – investing to meet own demands
  - (West) Africa – close to both and growing demand.
- Bad news for global refining economics

Poor outlook For Refining Margins – NW Europe Complex

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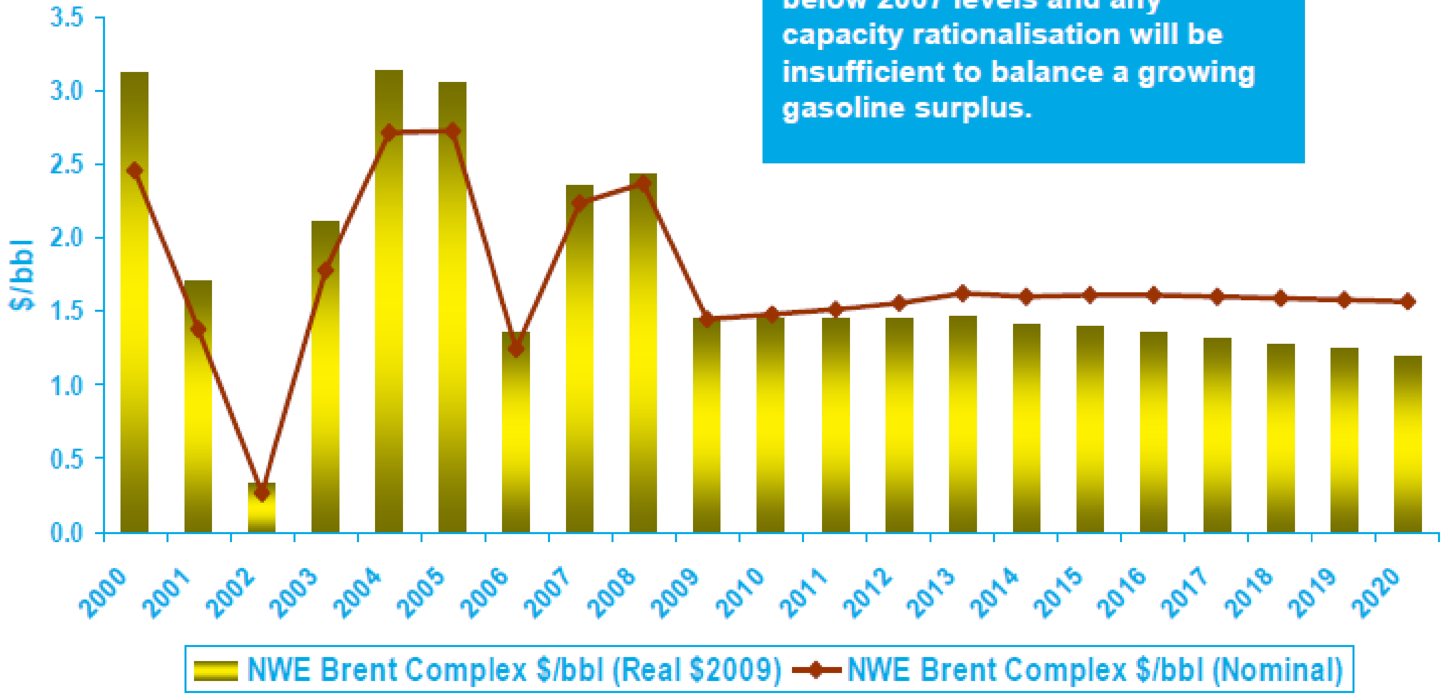
Forecast margins are around breakeven. Utilisation rates will be below 2007 levels and any capacity rationalisation will be insufficient to balance a growing gasoline surplus.



Source: Wood Mackenzie

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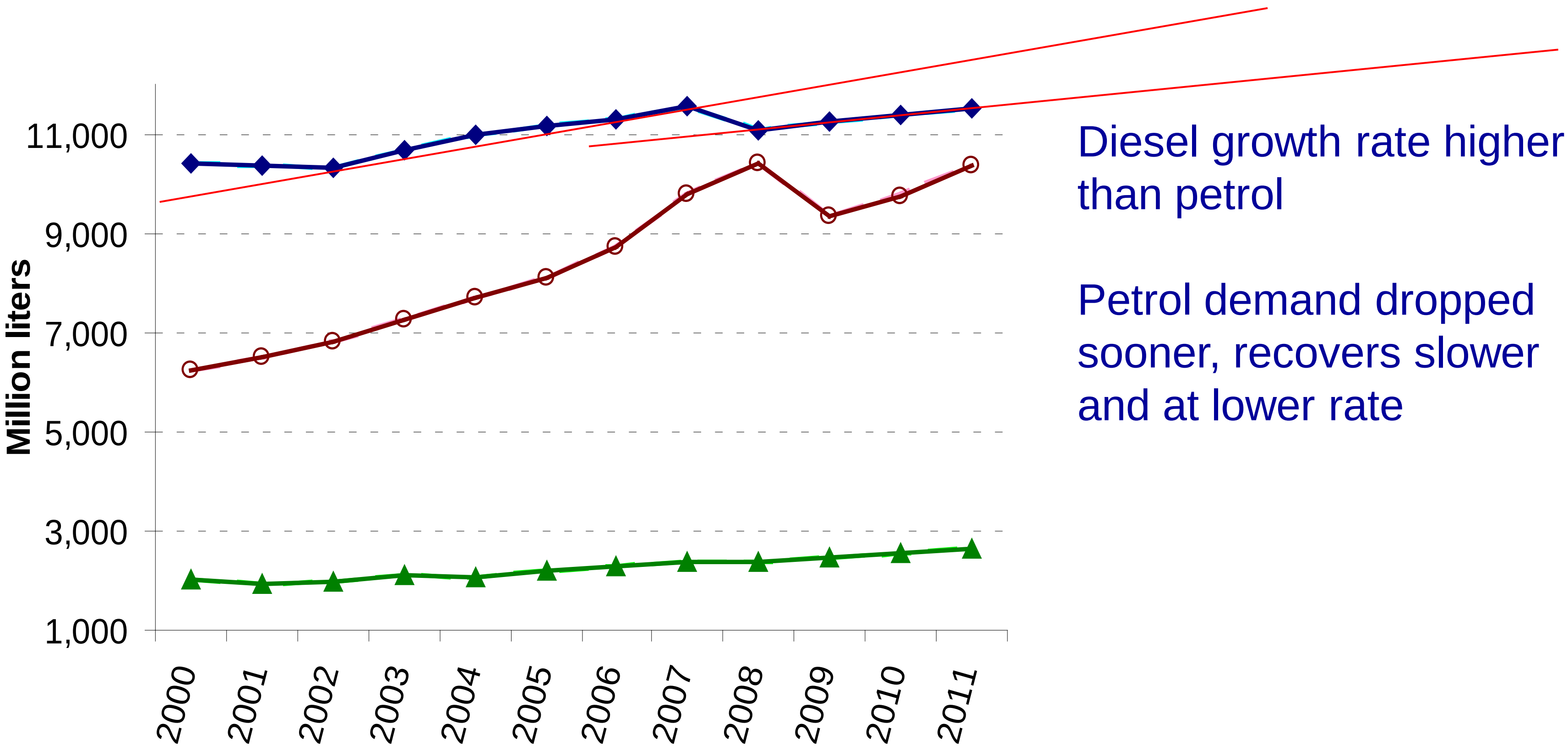
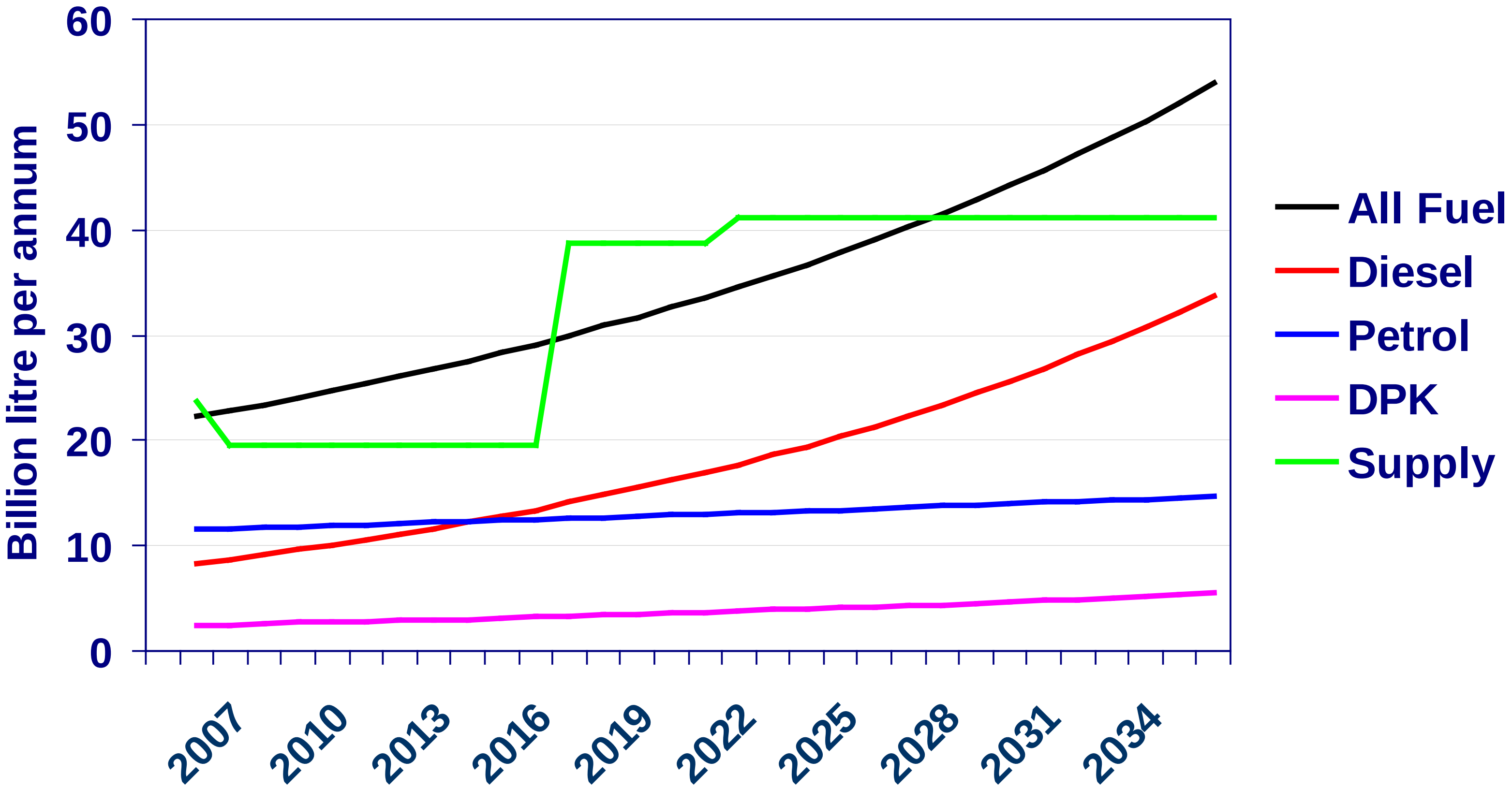
RSA Fuel Demand (NERSA)



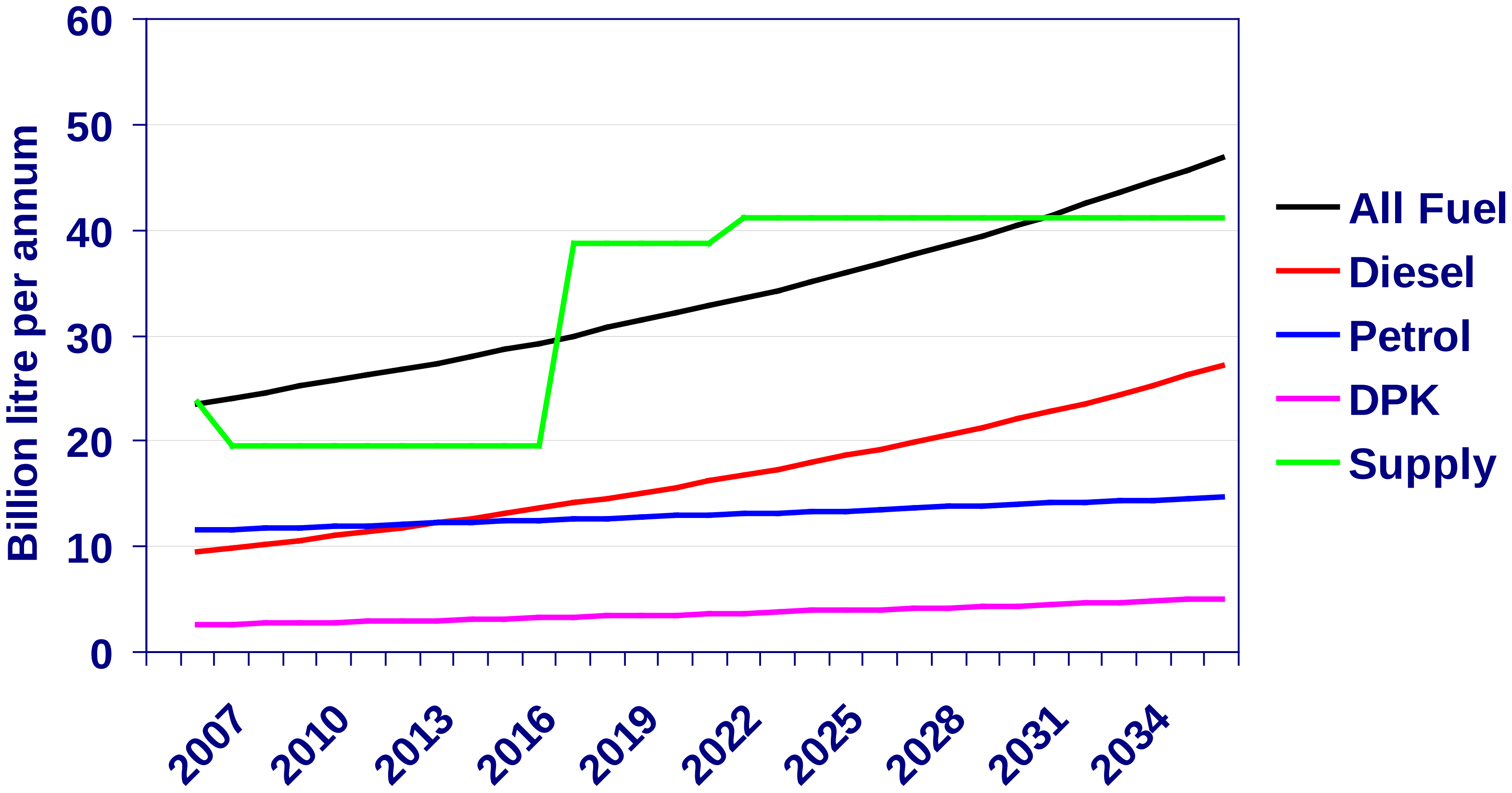
Diesel growth rate higher than petrol

Petrol demand dropped sooner, recovers slower and at lower rate

RSA Demand growth – reasonable recovery



RSA Demand growth – slower recovery



Challenges for RSA refiners

- Doing nothing is not an option – national shortfall
- Clean Fuels 2 *quality* being negotiated
  - Five years to implement
  - R40bn capex
  - Need to maintain margin for long enough to recover costs
- Existing refineries can recover *quantity* reduced when CF1 implemented
  - Uncertainty regarding excess capacity should Coega proceed
- If Coega goes ahead, with depressed world demand, placing volumes in excess of RSA demand at right price is a concern – will RSA get the income needed?
- Investment in logistics infrastructure at a time of uncertain wholesale margin

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Thank you.