

# Peak Oil & its Impact on Airlines

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Rob McLeod

# Introduction to Hartree

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Hartree is a major energy trading company with 25+ years' history...

**Founded to combine financial knowledge with physical trading expertise**

**Backed by the huge US Private Equity firm, Oaktree Capital**

**Global presence with main offices in New York, London, Singapore & Dubai**

**Active in all major energy markets; particularly focussed on oil products**

- Extensive physical trading: *Storage, arbitrage, supply & offtake*
- Proprietary trading driven by in-depth fundamental analysis

**Hartree offers bespoke services for hedging & risk management**

- Leveraging extensive market knowledge, analysis and trading capabilities

# Is Peak Oil finally here?

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Peak oil has been talked for decades, but has changed meaning...

## **Peak Oil used to refer to peaking supply**

- Key to price rally in 2003-08 as marginal supply was ever higher cost

## **But high prices drive innovation and behavioural changes**

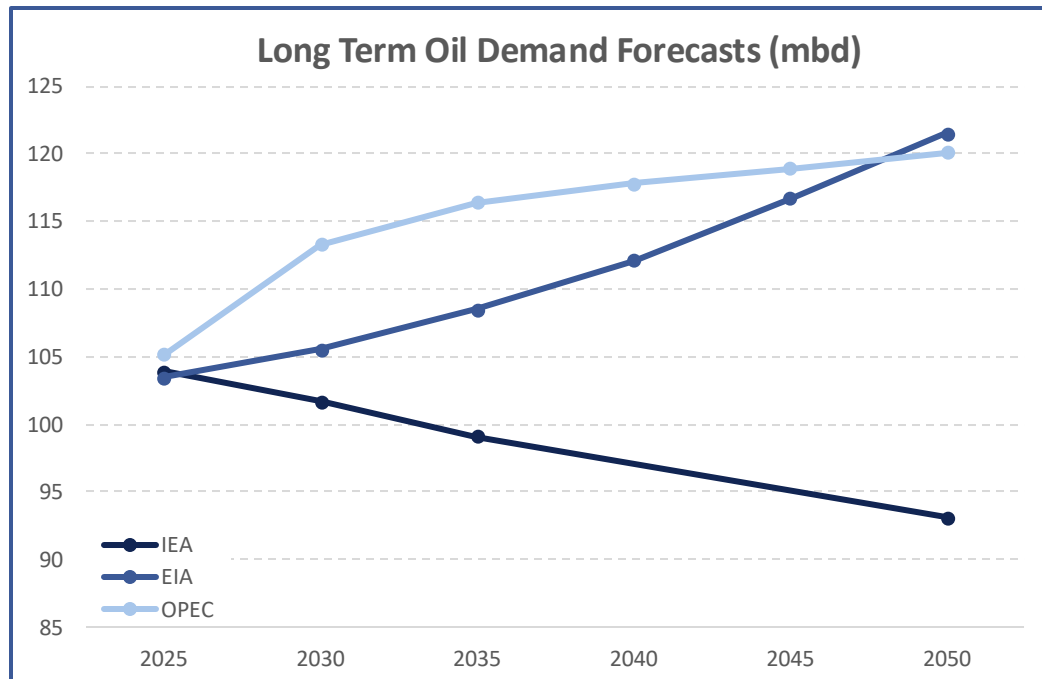
- Enhanced oil recovery (e.g. gas injection)
- Horizontal drilling + Hydraulic fracturing -> Shale Revolution
- Biofuels mandates
- Engine efficiency & later electric vehicles

## **Now, some forecasters predict oil demand will soon peak**

- IEA predict demand will peak between 2028-2030
- Some however say there's no peak in sight

# Long-Term Demand Outlook

Political differences potentially explain opposing views...



- Opinions vary wildly:
  - OPEC & EIA say “no peak in sight”
  - IEA, banks and others see peak within 10 years
- People have been predicting “Peak Coal” for years, but demand grows each year
- Inflection likely determined by economics not politics
- Trump policies & falling emphasis on ESG likely push the peak back

Sources: IEA, EIA, OPEC, Hartree

# Does falling demand mean falling prices?

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Hopes of lower oil prices sadly may be misplaced...

**Without investment supply naturally declines 4-6% per year**

- Continual investment is needed just for production to stand still

**Nobody is predicting demand to decline at that sort of rate**

- BP's Net Zero Scenario predicts average 1.2% annual decline rate

**Without continued investment we could see supply shortages**

**IEA called for an end to fossil fuel investment in 2021**

- Following the energy crisis, that has been walked back by officials

# What will peak demand mean for refiners?

Transport fuels are the dominant drivers of refining margins...

## Long-Term Average Cracks (\$/bbl)

LPG	-28.92
Naphtha	-4.66
Gasoline	10.90
Jet	16.58
Diesel	17.74
VLSFO	-0.29
HSFO	-11.78

(European Benchmark, 2015-24)

Sources: ICE, Platts, Argus, Hartree

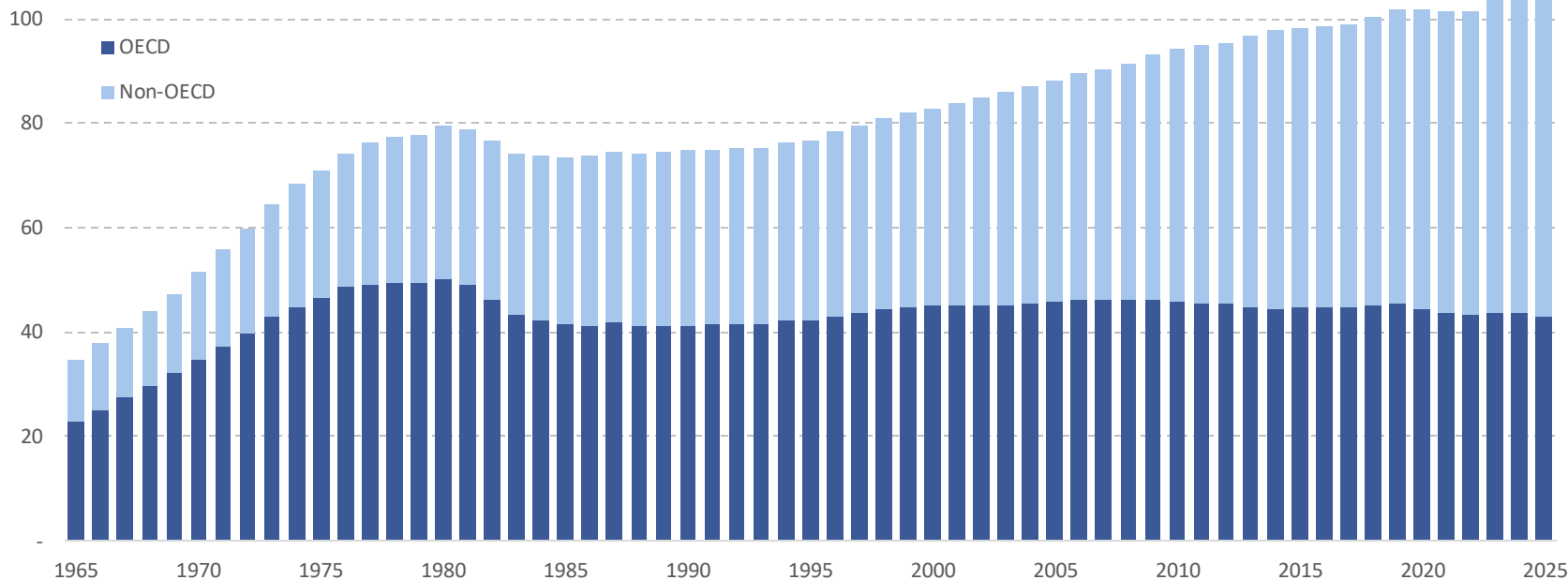
All positive margin driven by:

- Gasoline (30-50% Yield)
- Diesel (25-45% Yield)
- Jet fuel (5-15% Yield)

VLSFO cracks positive since IMO 2020

Petrochemicals and Jet Fuel will have to do more to support margins

Refineries should be able to make this shift, but it will require investment



Sources: Energy Institute, Hartree

## Global Refinery Capacity (mbd)

**OECD refining capacity has been static for decades, but capacity closures will likely accelerate in coming years...**

# Specific Implications for Airlines

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Lagging other industries in de-carbonising will create challenges...

## **Refiners are largely paid by road transport fuels & jet fuel:**

- As diesel & gasoline demand drop their margins will be pressured
- Jet fuel will have to do more to drive refinery margins

## **More refinery closures are likely, especially in the West:**

- Several regions will likely become more dependent on imports
- In-land regions could become particularly exposed

## **Investment will be needed:**

- Refiners – to shift yields towards jet fuel
- Mid-stream – improved logistics for moving fuel to where it is needed
- Airlines – diverse / secure supply, including SAF



# Contacts

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Please do stay in touch...

The Hartree logo consists of the word "Hartree" in a white serif font, centered within a solid dark blue rectangular background.

Hartree

**Rob McLeod**

Global Fuel Price Risk Management

*T: +44 (0) 207 2017593*

*M: +44 (0) 7889 923855*

*E: [rmcleod@hartreepartners.com](mailto:rmcleod@hartreepartners.com)*



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