



# Joint Qatari-Japanese Energy Seminar

September 29, 2010  
Tokyo, Japan

Presented by Rashid Al-Fehaidi, Project Director

# OUR VISION IS CLEAR

## ORYX GTL VISION

We aim to be an integrated energy company globalizing premium, environmentally friendly GTL products.

## ORYX GTL VALUES

**People:** ensuring that all staff are treated with respect and dignity.

We actively pursue stakeholder satisfaction.

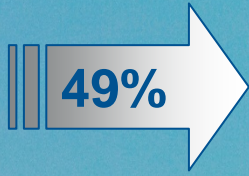
**Sustainable development:** Create a culture of operational excellence and continuous improvement in a zero harm manner.

**Integrity:** We shall base our actions on a consistent framework of honesty, fairness and discipline.

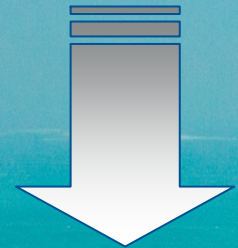
we make **GTL** the choice  
[www.oryxgtl.com.qa](http://www.oryxgtl.com.qa)

**ORYX** **GTL**   
QF - SABIC joint venture  
أوريكس لتحويل الغاز إلى سوائل المحدودة  
**ORYX GTL Limited**





**ORYX** **GTL**   
QP - SASOL joint venture  
أوريكس لتحويل الغاز إلى سوائل المحدودة  
**ORYX** **GTL** Limited



**USD 1 billion investment**  
**Project financed**  
**32 400 bbl/d - two trains**  
**Products - Liquid fuels and LPG**



# What is GTL?

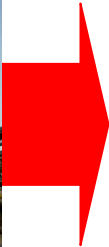
- Broadly, GTL is a process that converts natural gas to an *easily transportable* liquid product
- In practice, GTL is synonymous with the Fischer-Tropsch process



# GTL – Basic Process



*Air Separation*



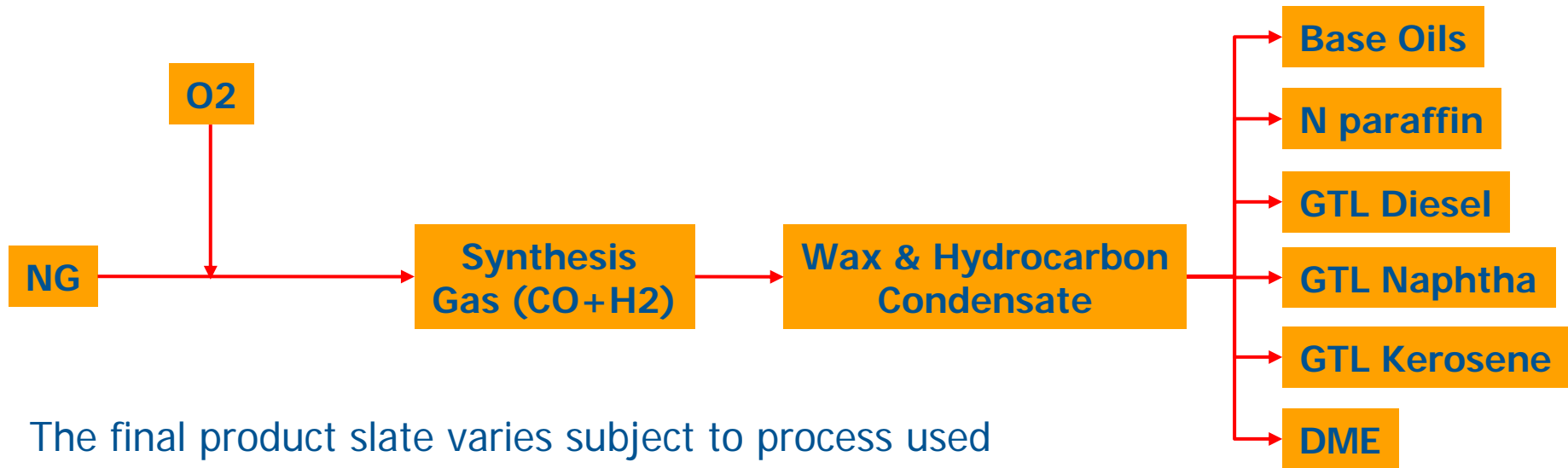
*Reforming*



*Fisher Tropsch*



*Refining*

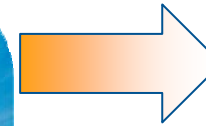
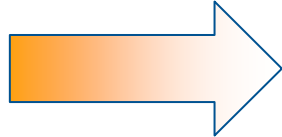


The final product slate varies subject to process used

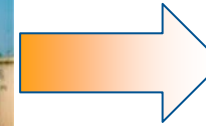
# Feed and Products



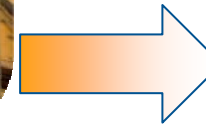
330 MMSCF/d  
Natural Gas



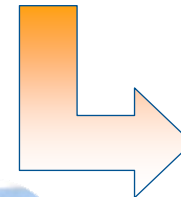
1 000 bbl/d  
LPG



22 400 bbl/d  
Diesel



9 000 bbl/d  
Naphtha



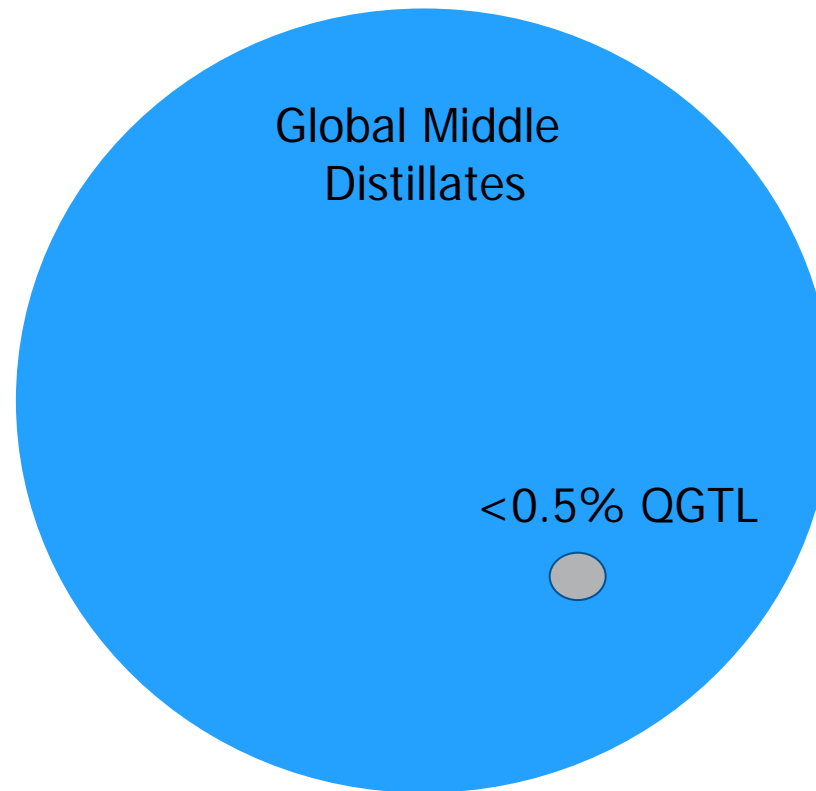
25 000 bbl/d (160 m<sup>3</sup>/hr)  
Irrigation Water

Ras Laffan Industrial City  
supplies:

- Desalinated water
- Power
- Sea Cooling water



# Middle Distillates – A Growth Market

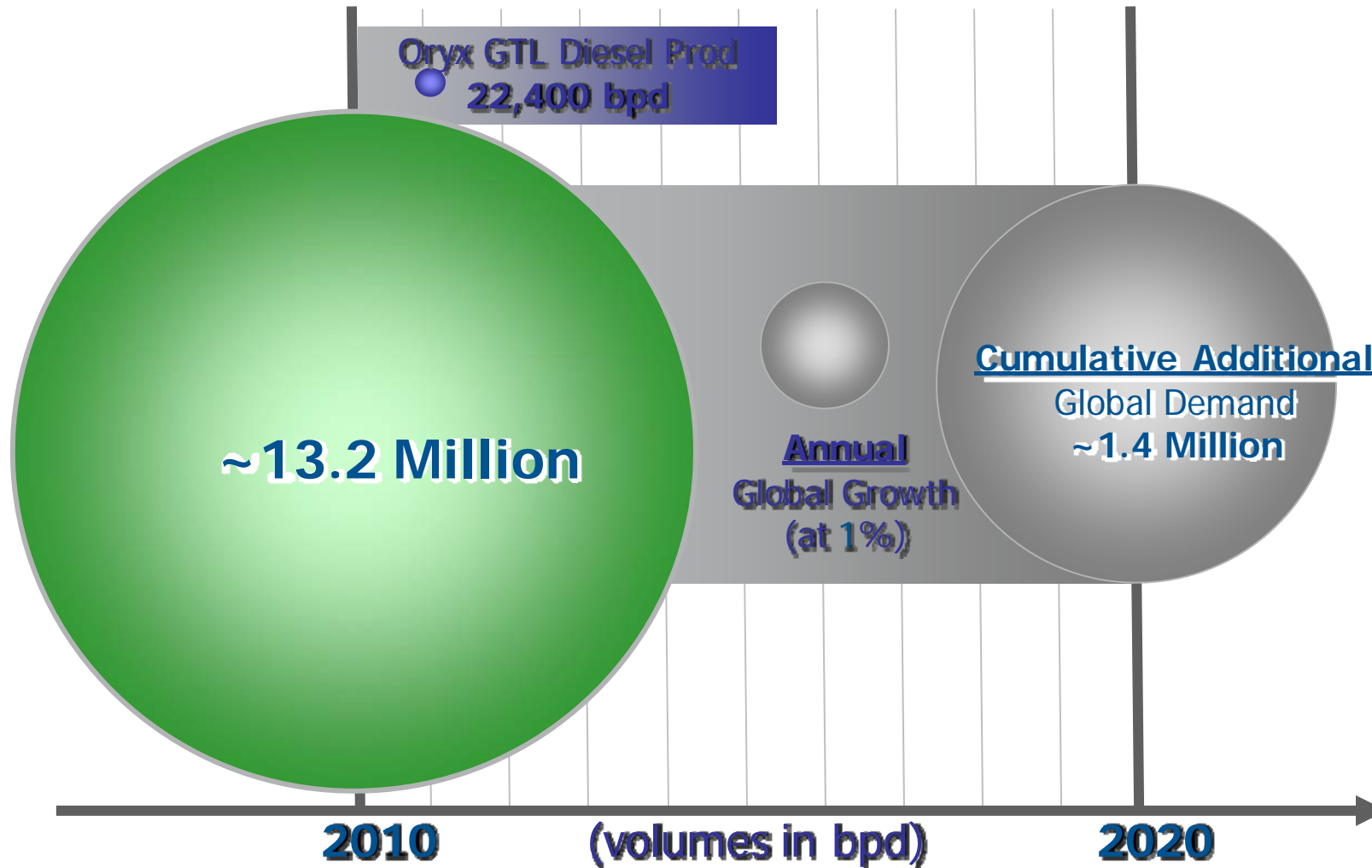


Source: IEA

- 32 million bpd global middle distillates (IEA) – 0.5% includes ORYX GTL and Pearl GTL total volumes

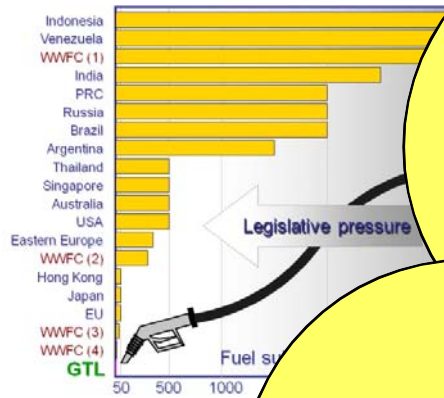


# Liquid Fuels



# Nature of GTL Diesel

## Fuel standards



## Use in conventional engines

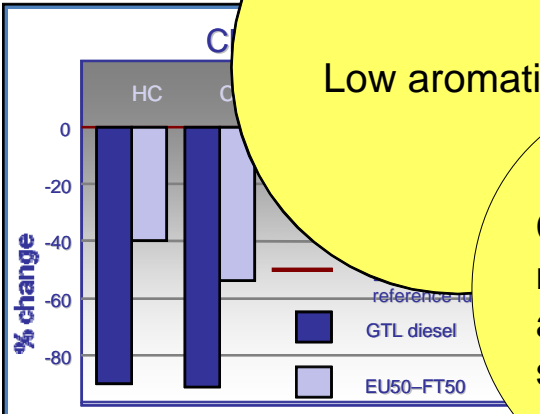
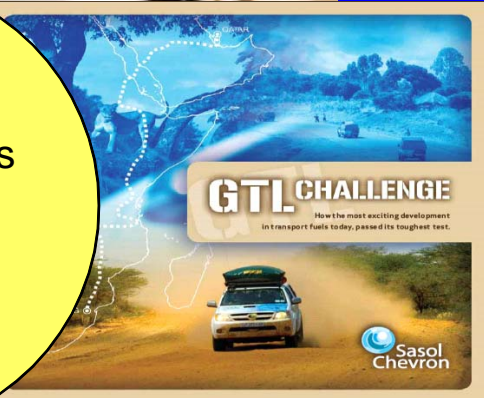


Virtually sulphur free

Low aromatics

GTL diesel has high cetane number

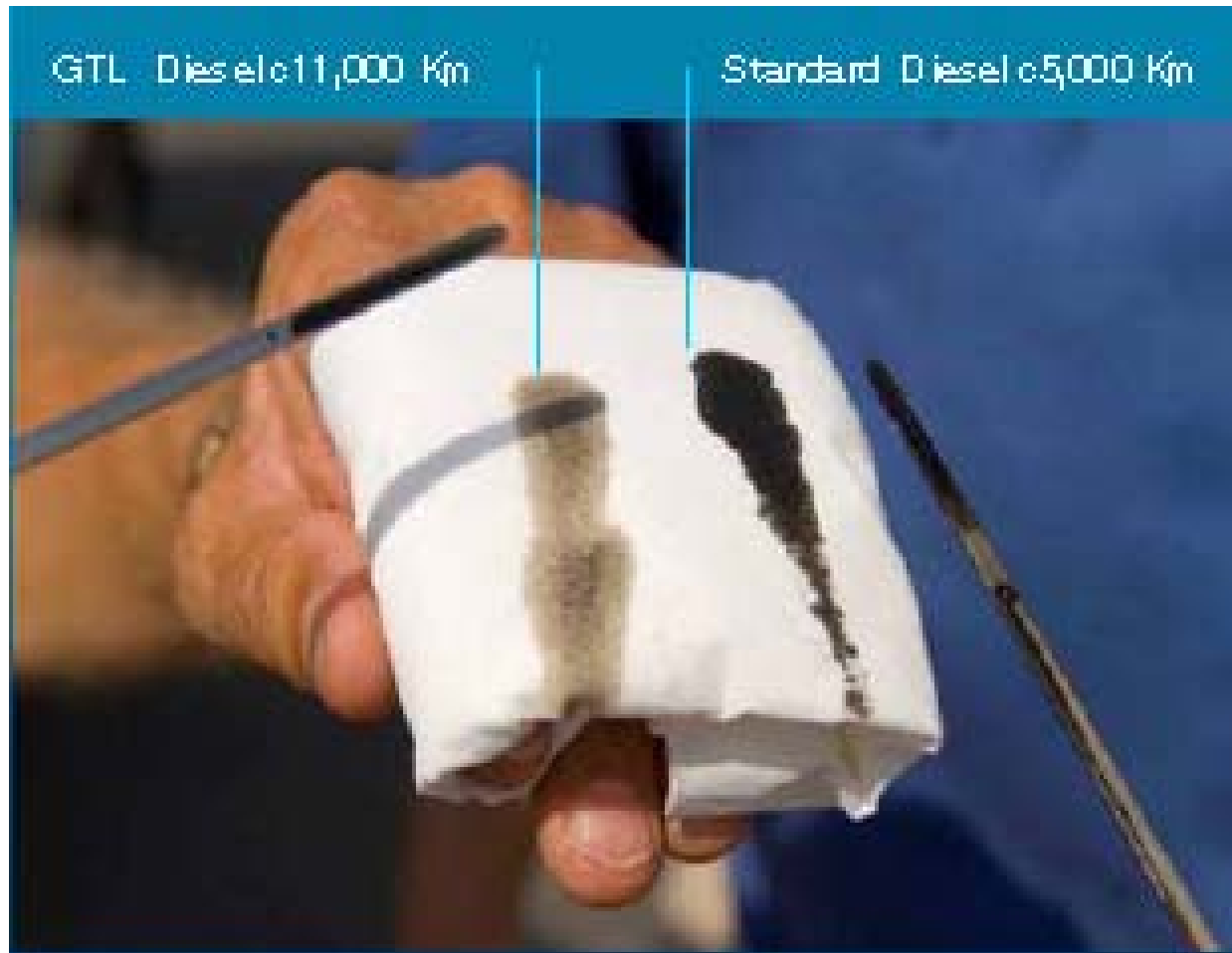
Cleaner exhaust, meets current and future fuel standards



Results from passenger engine trials with Daimler Ch...



# Nature of GTL Diesel



Comparison of engine oil using neat GTL diesel and conventional diesel



# Nature of GTL Naphtha

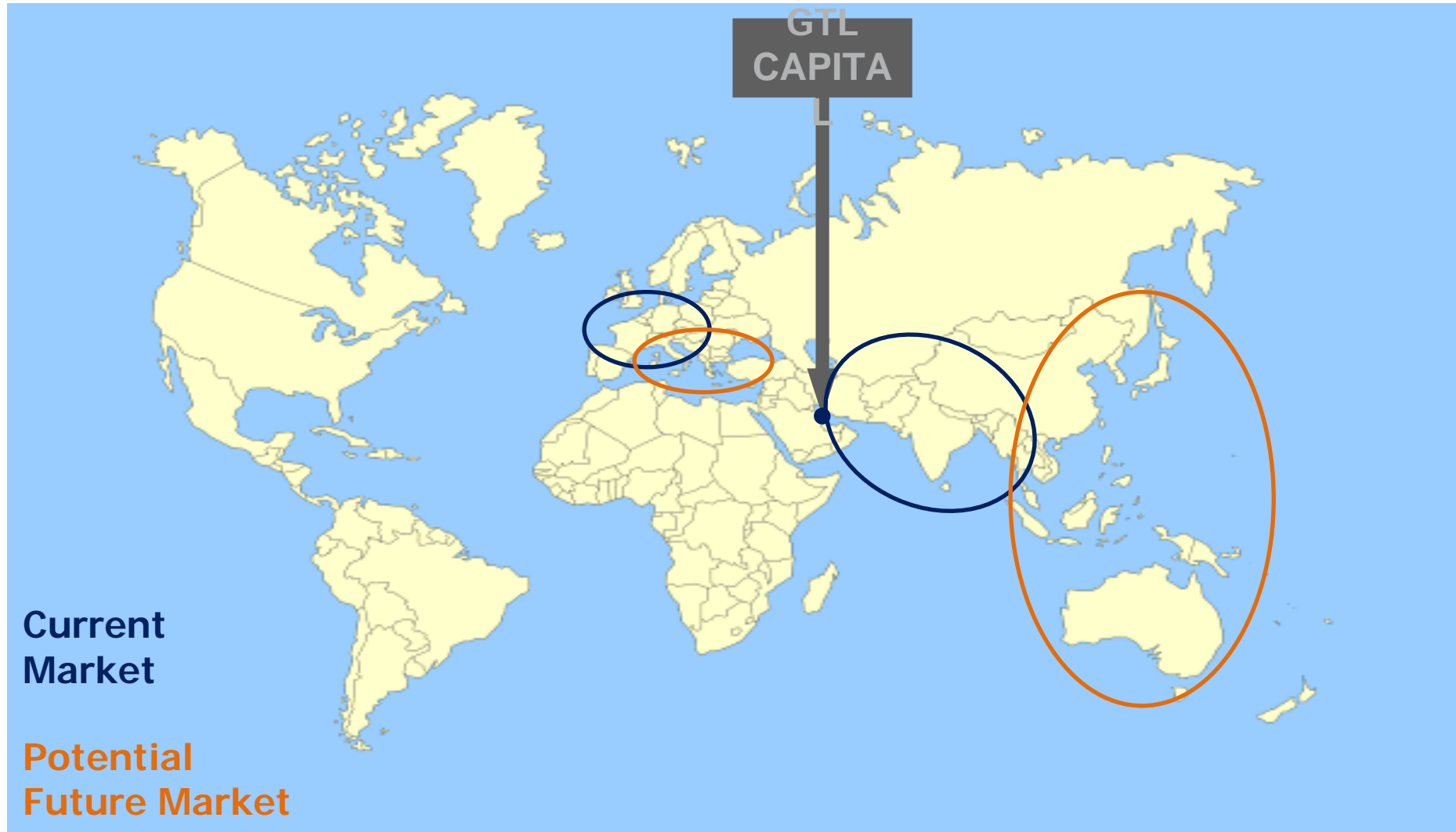
- GTL naphtha:
  - An excellent feedstock for steam crackers
  - High paraffinic content
  - Has a low coking/fouling rate for furnace tubes during cracking
  - Virtually free of aromatics and sulphur

# Marketing



- Sold over 21 million barrels of GTL products
- Combination of Term and Spot sales agreements
- ORYX GTL plans to commence its own marketing activities beginning 2011
- Our GTL diesel successfully registered with REACH program

# Marketing





# Growth Programme



- Debottlenecking project feasibility and FEED in progress to increase plant thruput capacity by up to 10% (thruput of approximately 32,000 bpd achieved to date)

# Future Development



ORYX GTL also exploring all potential technologies to enhance and increase the product slate through value add projects such as:

- Wax extraction
- LAB
- N paraffins
- Jet fuel

# Synthetic Jet Fuel

The world's 1<sup>st</sup> flight on internationally approved fully synthetic jet fuel took place on September 21, 2010 in South Africa





# Closing Remarks

- Development of GTL is complementary to Qatar's gas based industry
- GTL provides a valuable export product
- Increases the value addition potential 'in country' and could provide access to new, growth markets
- GTL was good decision for Shareholders, all project economics exceeded initial assumptions

we make GTL the c



どうもありがとう  
**Thank You**