### The Commercial Development of the GTL Industry

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- Who is Sasol Chevron?
- The GTL Process keeping it simple
- Why GTL?
  - Potential demand outstrips supply
  - It's clean and environmentally better
  - It's versatile
- Building GTL projects it's happening!



### Sasol and Chevron are positioned to lead a growing Gas to Liquids industry





Proven GTL Technology Operating Experience GTL Marketing Experience



International Presence Marketing Expertise E&P Experience





# The GTL process converts natural gas into easily-transportable liquid products





# GTL produces premium quality products into global markets





### **GTL Diesel Supply is Small vs. Diesel Demand**



Notes: Road diesel estimated as 2/3 of Gasoil/Distillate. GTL Diesel supply from public announcements, generally assuming diesel is 70% of plant capacity. Diesel forecasts from Purvin & Gertz.

#### ... and GTL Diesel Fits in Incremental Demand

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### GTL diesel offers a pathway to more efficient, cleaner economies

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#### Environmental benefits of GTL diesel: cleaner fuel = cleaner exhaust



High quality translates to substantial emissions reductions (relative benefits depend on engine, exhaust reduction devices, and comparative fuels)

"Emission factors for the combustion of fuels in road vehicles", IFEU Heidelberg, December 2004 – GTL Diesel compared with a low-sulphur reference fuel.

## Daimler Chrysler engine tests indicate that GTL blending benefits are non-linear



Increased GTL content:

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- Reduces aromatics (easier oxidation)
- Increases cetane number (reduced injection delay produces a smoother burn)

- Current diesel engines have compression ratios and injection timings set for conventional fuels. Most benefits can be achieved with ~ 50% GTL in the blend
- Further benefits are possible if diesel engines are retuned or redesigned for GTL



#### Fuel substitution: Fuel Compatibility is Worth Money



Source: California Energy Commission and California Air Resources Board 2003, Reducing California's Petroleum Dependence, California US



### **GTL diesel marketing strategy**



Maximum performance and emission benefit



### Sasol Chevron's strategy is to find a few, substantial locations worldwide



#### Sasol Chevron

### **GTL Project Status - Oryx**

- 34,000 barrels/day of liquid products
- Under construction
- Inauguration 6 June 2006
- 51% Qatar Petroleum, 49% Sasol
- Sasol Chevron is marketing diesel and naptha







### **GTL Project Status - EGTL**

- 34,000 barrels/day of liquid products
- EPC Contract Awarded to Team JKS, a consortium of JGC, KBR and Snamprogetti
- Startup 2009
- 75% Chevron Nigeria Ltd 25% NNPC





- The GTL process is commercial today
- GTL is driven by both supply push (reserves monetization with strong market demand) and demand pull (premium qualities)
- GTL products offer attractive properties
- 2006 is an important milestone, with the start of the Oryx plant in Qatar

### This year ... GTL becomes a commercial reality!