The future of GTL in a fast-changing gas market
Marjo Louw – Country President, Sasol Qatar
Forward-looking statements: Sasol may, in this document, make certain statements that are not historical facts and relate to analyses and other information which are based on forecasts of future results and estimates of amounts not yet determinable. These statements may also relate to our future prospects, developments and business strategies. Examples of such forward-looking statements include, but are not limited to, statements regarding exchange rate fluctuations, volume growth, increases in market share, total shareholder return and cost reductions. Words such as “believe”, “anticipate”, “expect”, “intend”, “seek”, “will”, “plan”, “could”, “may”, “endeavour” and “project” and similar expressions are intended to identify such forward-looking statements, but are not the exclusive means of identifying such statements. By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and there are risks that the predictions, forecasts, projections and other forward-looking statements will not be achieved. If one or more of these risks materialise, or should underlying assumptions prove incorrect, our actual results may differ materially from those anticipated. You should understand that a number of important factors could cause actual results to differ materially from the plans, objectives, expectations, estimates and intentions expressed in such forward-looking statements. These factors are discussed more fully in our most recent annual report under the Securities Exchange Act of 1934 on Form 20-F filed on 12 October 2012 and in other filings with the United States Securities and Exchange Commission. The list of factors discussed therein is not exhaustive; when relying on forward-looking statements to make investment decisions, you should carefully consider both these factors and other uncertainties and events. Forward-looking statements apply only as of the date on which they are made, and we do not undertake any obligation to update or revise any of them, whether as a result of new information, future events or otherwise.
Sasol: an integrated technology-driven company

the GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
Sasol: an integrated technology-driven company

the GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
Sasol at a glance

- An international integrated energy and chemical company
- The world’s largest producer of synthetic fuels
- South Africa’s leading energy and chemicals company
- Pioneer in gas-to-liquids (GTL) and coal-to-liquids (CTL) technology
- 60 years experience in gas conversion related technologies
- In-house technology development capacity
- Strong intellectual property portfolio

- Turnover (US$21.8bn)\(^1\)
- Market cap (US$27.0bn)\(^2\)
- Listed on JSE (SOL) and NYSE (SSL)
- Exploration, development, production, marketing and sales operations in more than 38 countries
- ~34 000 employees worldwide

Notes
1 For year ending 30 June 2012
2 Market capitalisation at 30 June 2012
**our integrated business model**

Exploration and production of feedstock
- Coal
- Natural gas
- Oil

Crude oil – open market purchases

GTL/CTL technology (LT or HT)

Syngas production

Co-products

Fuel components

Refining and blending

Recovery and beneficiation

Chemical workup

Chemical feedstock

Chemical feedstock – third party producers

Marketing of products

New Energy

Sasol’s integrated value chain, largely in our South African operations, aligns our diverse and interdependent businesses
Sasol: an integrated technology-driven company

Sasol’s GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
a history in synthetic fuels
**FT reactor intensification**

- Develop an intensified slurry phase reactor to increase production capacity without increasing shell size.
- Reactor development combined with further catalyst development.

*Enhanced performance through increased volumetric conversion efficiency*
Sasol: an integrated technology-driven company

the GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
natural gas production and demand forecast (tcf)

<table>
<thead>
<tr>
<th>Region</th>
<th>2010 Production</th>
<th>2010 Demand</th>
<th>Δ</th>
<th>2035 Production</th>
<th>2035 Demand</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>7.8</td>
<td>3.9</td>
<td>3.9</td>
<td>14.1</td>
<td>9.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Canada</td>
<td>6.1</td>
<td>3.3</td>
<td>2.8</td>
<td>9.0</td>
<td>5.0</td>
<td>4.0</td>
</tr>
<tr>
<td>China/India</td>
<td>4.6</td>
<td>5.7</td>
<td>(1.1)</td>
<td>9.7</td>
<td>16.6</td>
<td>(6.9)</td>
</tr>
<tr>
<td>C&amp;S America</td>
<td>6.8</td>
<td>6.6</td>
<td>0.2</td>
<td>11.7</td>
<td>14.4</td>
<td>(2.7)</td>
</tr>
<tr>
<td>Europe</td>
<td>9.5</td>
<td>19.2</td>
<td>(9.7)</td>
<td>8.3</td>
<td>23.2</td>
<td>(14.9)</td>
</tr>
<tr>
<td>FSU</td>
<td>28.9</td>
<td>24.3</td>
<td>4.6</td>
<td>39.9</td>
<td>26.5</td>
<td>13.4</td>
</tr>
<tr>
<td>Korea/Japan</td>
<td>0.2</td>
<td>5.0</td>
<td>(4.8)</td>
<td>0.2</td>
<td>5.9</td>
<td>(5.7)</td>
</tr>
<tr>
<td>Middle East</td>
<td>16.3</td>
<td>12.5</td>
<td>3.8</td>
<td>28.8</td>
<td>24.0</td>
<td>4.8</td>
</tr>
<tr>
<td>Oceania</td>
<td>2.1</td>
<td>1.2</td>
<td>0.9</td>
<td>5.7</td>
<td>2.2</td>
<td>3.5</td>
</tr>
<tr>
<td>Sakhalin</td>
<td>0.4</td>
<td>0.0</td>
<td>0.4</td>
<td>0.6</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>9.3</td>
<td>7.4</td>
<td>1.9</td>
<td>13.4</td>
<td>15.3</td>
<td>(1.9)</td>
</tr>
<tr>
<td>U.S.</td>
<td>21.1</td>
<td>23.8</td>
<td>(2.7)</td>
<td>26.4</td>
<td>26.5</td>
<td>(0.9)</td>
</tr>
<tr>
<td>World</td>
<td>113.1</td>
<td>112.9</td>
<td>0.2</td>
<td>167.8</td>
<td>168.7</td>
<td>(0.9)</td>
</tr>
</tbody>
</table>

## 2010 LNG trade flows (tcf)

<table>
<thead>
<tr>
<th>From/To</th>
<th>Africa</th>
<th>Canada</th>
<th>China/India</th>
<th>C&amp;S America</th>
<th>Europe</th>
<th>FSU</th>
<th>Korea/Japan</th>
<th>Middle East</th>
<th>Oceania</th>
<th>Sakhalin</th>
<th>SE Asia</th>
<th>U.S.</th>
<th>World</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>0.03</td>
<td>0.05</td>
<td>0.31</td>
<td>1.33</td>
<td></td>
<td>0.24</td>
<td>0.21</td>
<td></td>
<td></td>
<td></td>
<td>0.07</td>
<td>0.31</td>
<td>2.54</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>China/India</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>C&amp;S America</td>
<td>0.00</td>
<td></td>
<td>0.01</td>
<td>0.02</td>
<td></td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td>0.01</td>
<td>0.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td>0.01</td>
<td>0.11</td>
<td></td>
<td>0.05</td>
<td>0.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
<td>0.18</td>
</tr>
<tr>
<td>FSU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Korea/Japan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>Middle East</td>
<td>0.01</td>
<td>0.44</td>
<td>0.08</td>
<td>1.15</td>
<td>1.28</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
<td>0.15</td>
<td>0.08</td>
<td>3.29</td>
<td></td>
</tr>
<tr>
<td>Oceania</td>
<td></td>
<td>0.17</td>
<td></td>
<td></td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.04</td>
<td></td>
<td>0.83</td>
</tr>
<tr>
<td>Sakhalin</td>
<td></td>
<td>0.02</td>
<td></td>
<td></td>
<td>0.39</td>
<td>0.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.02</td>
<td></td>
<td>0.43</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>0.14</td>
<td>0.06</td>
<td>1.92</td>
<td>0.01</td>
<td>0.21</td>
<td>2.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>0.00</td>
<td>0.04</td>
<td>0.81</td>
<td>0.47</td>
<td>2.61</td>
<td>0.00</td>
<td>4.53</td>
<td>0.34</td>
<td>0.00</td>
<td>0.49</td>
<td>0.40</td>
<td>9.70</td>
<td></td>
</tr>
</tbody>
</table>

major global trade flows (2035)

Unconventional gas supplies & LNG help to diversify trade flows, putting pressure on conventional gas suppliers & oil-linked pricing mechanisms

US prices: a leading indicator of things to come?

source: Federal Reserve Bank of St. Louis
global gas market – in summary

- supply and demand balances do not yet take Levant Basin and East African discoveries into account, nor the full potential of unconventional gas (e.g. shale gas)
- gas producing countries/regions will continue to supply domestic/regional demand before attending to pipeline sales to neighbouring countries/regions
- LNG will serve markets where geopolitical challenges and physical geographical barriers make pipelines unfeasible
- access to shortfall markets will be determined by:
  - netback prices > wellhead prices
  - access to pipelines or receiving infrastructure (LNG)
  - production costs
- new production of natural gas (conventional and unconventional) is expected to change the dynamics of the market
  - voluntary production curtailment strategies to influence market prices
  - change in pricing strategies – pressure on oil-linked pricing
  - changes in consumption patterns – lower gas prices should stimulate demand
  - new players in the pipeline and LNG markets
Sasol: an integrated technology-driven company

the GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
global demand outlook for liquid fuels

pricing outlook for middle distillates
(Europe as global proxy)

IHS CERA: Global oil prices and margins (Dec 2012)
on-road diesel market has room for clean fuels…

Source: International Fuel Quality Center, May 2012
... and the marine fuels market will put pressure on middle distillate barrels

Source: International Fuel Quality Center, August 2012
GTL fuels: world class products

- Clear, clean burning fuel for diesel and jet engines
- High cetane number, virtually sulphur and aromatics free
- Convenient and easy to use
- Compatible with existing engine technology and distribution infrastructure
- Enables development of new generation internal combustion engine technologies with improved engine efficiency and further reduction of tailpipe emissions
- Naphtha is an ideal cracker feedstock or diluent for oil sands
demonstrated performance benefits

First passenger flights in September 2010 on fully synthetic jet fuel

In 2006, a Toyota Hilux Raider, drove from Johannesburg to Qatar on pure GTL diesel

The US Air Force has tested GTL fuel in B-52s and B-1Bs
Local Air Quality Benefits:
High cetane number and low levels of sulphur and aromatics ensure a more efficient and cleaner-burning combustion environment, even in blends.

Comparable CO₂ Budget:
Greenhouse gas (GHG) impact measured on a life cycle basis is lower than that of conventional diesel fuel, according to a recent peer-reviewed study published in Environmental Science and Technology.
capital cost: a different world after ORYX GTL

IHS CERA Downstream Indexes

Steel and Pipe
Construction labor
Equipment
Engineering and project management
Electrical and instrumentation
Civil and construction

Source: IHS CERA, October 2012
regulatory environment

Governments will continually evaluate and regulate environmental concerns like;

• carbon management – increased pressure on efficiency and reduced greenhouse gas emissions

• increased pressure on reduction of water effluent

• emergence of alternatives for use of CO2 and effective carbon capture and storage

• reduced flaring
natural gas

• historical GTL strategy – solution for stranded and associated gas
• current GTL strategy – address energy market imbalances
  • abundance of natural gas (conventional or unconventional) – monetization alternative
  • strategic need for liquid fuels – diesel and aviation kerosene (jet fuel)
  • contribute to clean fuel pool
  • solution for stranded and associated gas, reduced flaring

• irrespective of intended strategy, sufficient natural gas for +25 years is required
people

- sufficient skilled and experienced human resources
  - project management and execution
  - GTL plant operations
developing opportunities around the globe

GTL Project Under Development (FEED Phase)
GTL Project Under Development (Feasibility Phase)
CTL Project Under Study (Pre-Feasibility Phase)
Sasol Affiliated Plant Operating or Under Construction
Sasol: an integrated technology-driven company

the GTL journey

the fast-changing world of gas

the case for more GTL

challenges facing GTL

today’s GTL opportunities: a Sasol perspective

closing remarks
the planets are lining up for a bright GTL future!
Thank you

شكراً