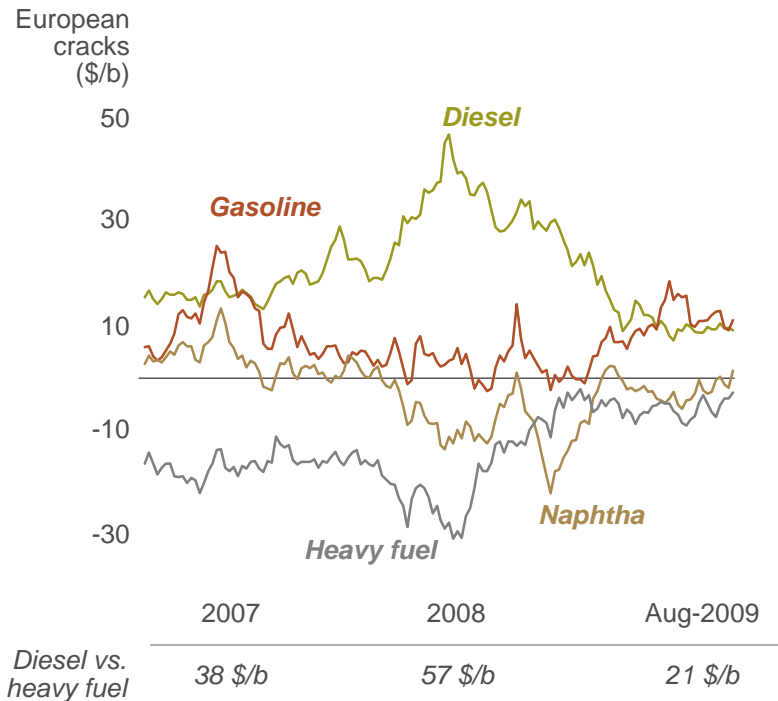


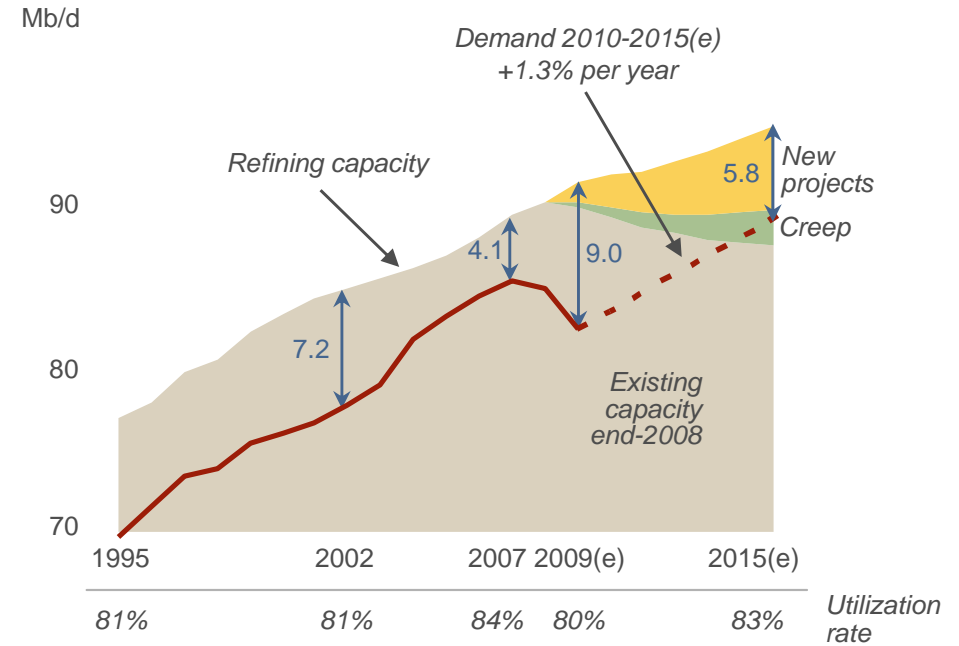
# Downstream - Chemicals

# Depressed refining environment

## Current refining margins severely affected



## Worldwide spare capacity progressively reduced



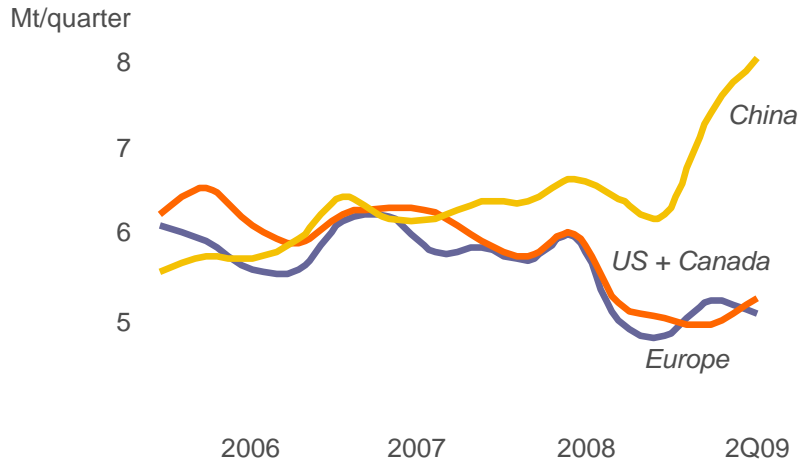
- > Decline in demand and new capacity coming onstream in Asia
- > Diesel margins down sharply due to reduction in transport activity
- > Impact of OPEC reductions on crude mix affecting conversion and desulfurization margins

- > Need to reduce capacity, mostly in OECD countries
- > Middle distillate margins and crude spreads to recover with economic growth and increased call on OPEC
- > Worldwide demand growth of gasoline to slow down due to US environmental measures and progressive change in consumption behavior

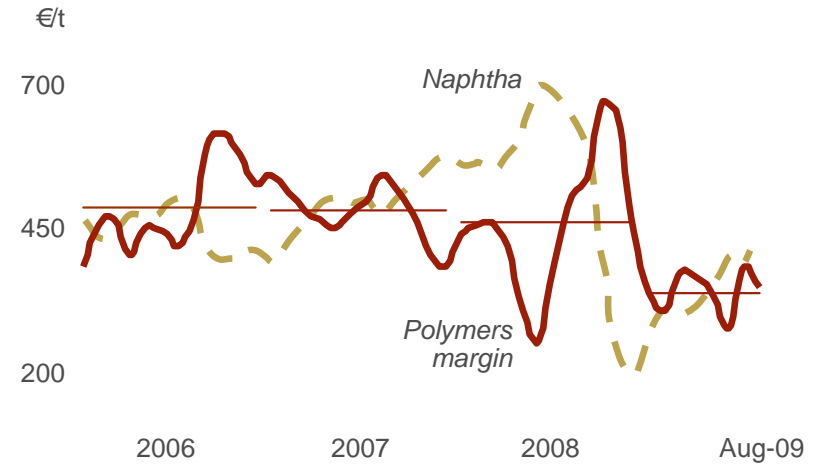
**Long-term demand driven by non-OECD countries and middle distillates**

# Chemicals : first signs of recovery coming from Asia

Polymers demand\*



Polymers margin in Europe\*



Total's polymers sales worldwide

(3-month rolling average)

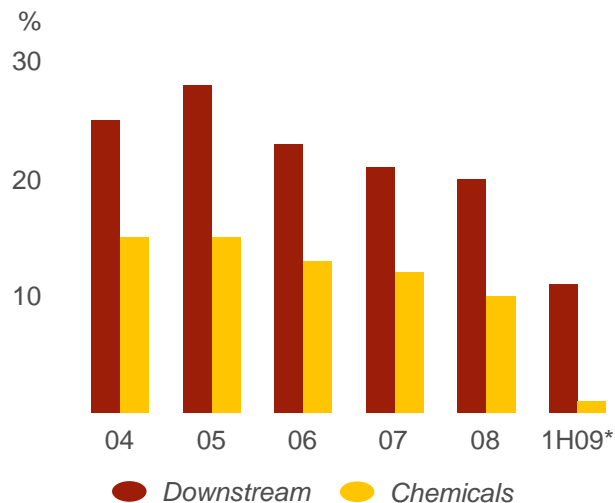


**Unprecedented drop in demand in Europe and US**  
**Export opportunities for US and European plants**  
**Specialty chemicals showing signs of recovery**

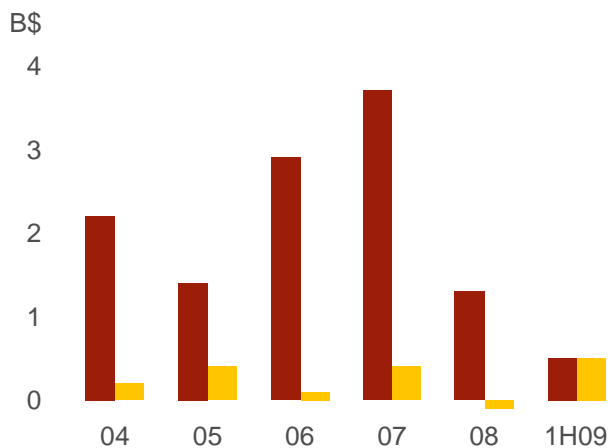
polymers = polyethylene, polypropylene, polystyrene  
 \* public data

# Taking necessary steps to restore good profitability

Downstream - Chemicals ROACE

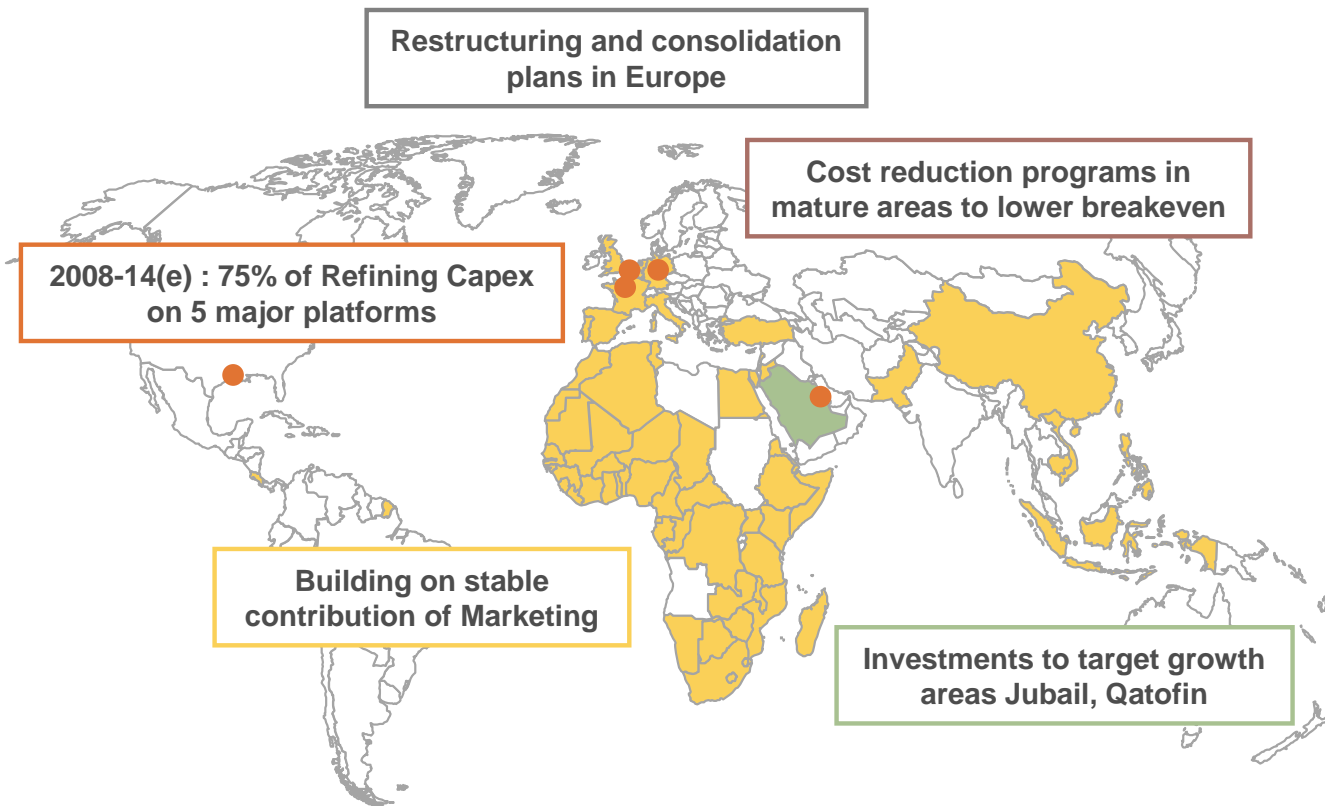


Downstream - Chemicals net cash flow\*\*



\* annualized

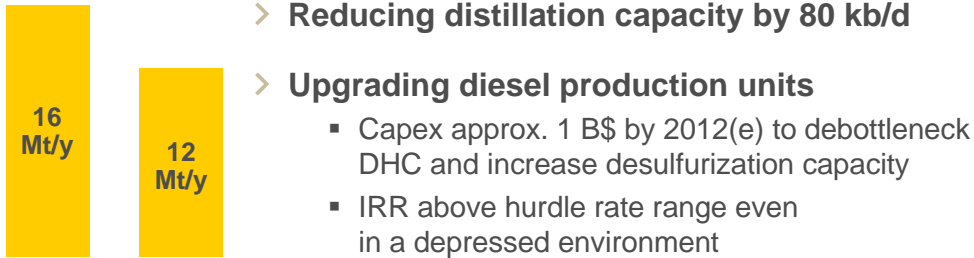
\*\* after Capex ; excluding Arkema and AZF



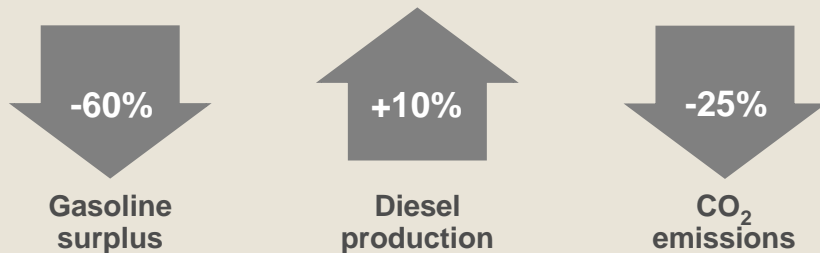
**High-grading Total's portfolio by taking into account new environment**

# Upgrading and restructuring refining in Europe

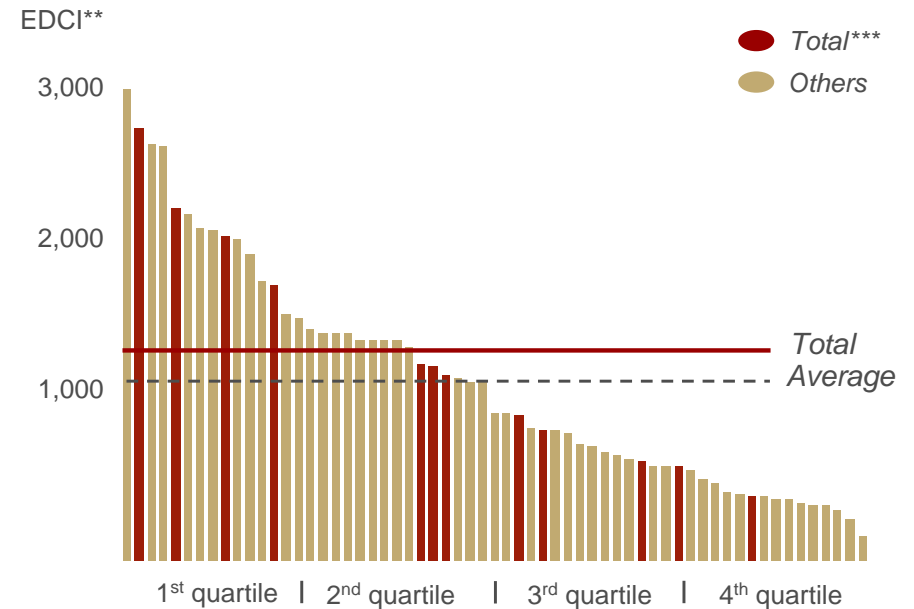
## March 2009 modernization plan of Normandy refinery



## Impact on Normandy refinery outflows



## Ranking of the main refineries in Europe\*



- > Four refineries in the top quartile of Europe
- > But still less sophisticated refineries in the portfolio

## Adapting refining positions

**Increasing middle distillate yields to benefit from economic recovery**

\* including Majors + Eni + Repsol + Petroplus

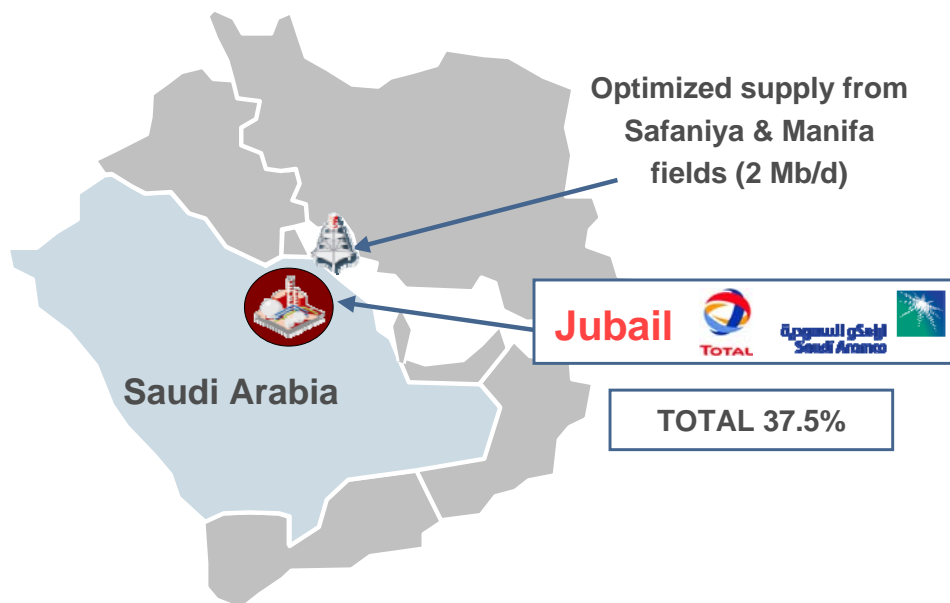
\*\* EDCI : Equivalent Distillation Capacity Installed, estimates based on published data

\*\*\* Total's refineries, including participations

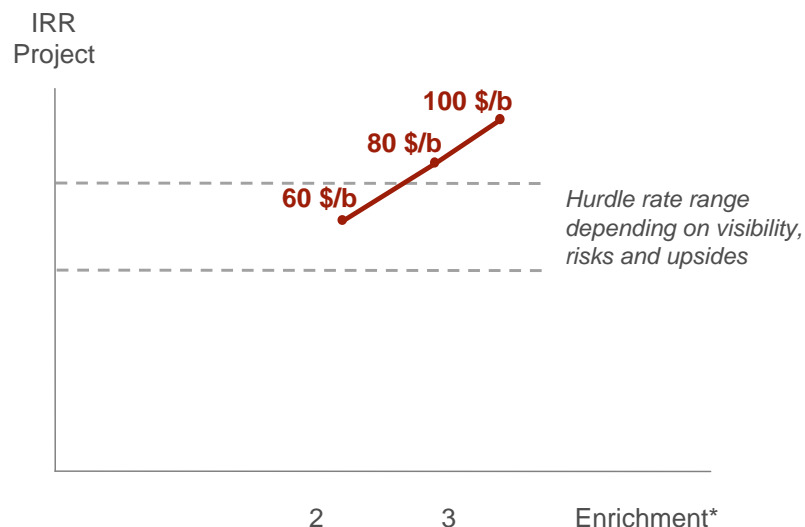


# Jubail : high value project reinforced by 25% cost reduction

Excellent location for both supply and export



Profitable and financially robust project



> Successful partnership with Saudi Aramco

> Production start-up mid-2013(e) :

- 400 kb/d capacity to treat Arab Heavy
- Full conversion with high middle distillate yield
- Integrated with 700 kt/y paraxylene unit
- Targeting both export and local markets

> EPC contracts awarded in June 2009 for 9.6 B\$

> Top ranked estimated net cash margin per ton worldwide among large refineries\*\*

> 25% equity to be listed on the Riyadh stock market and ~65% of the project financed with external debt

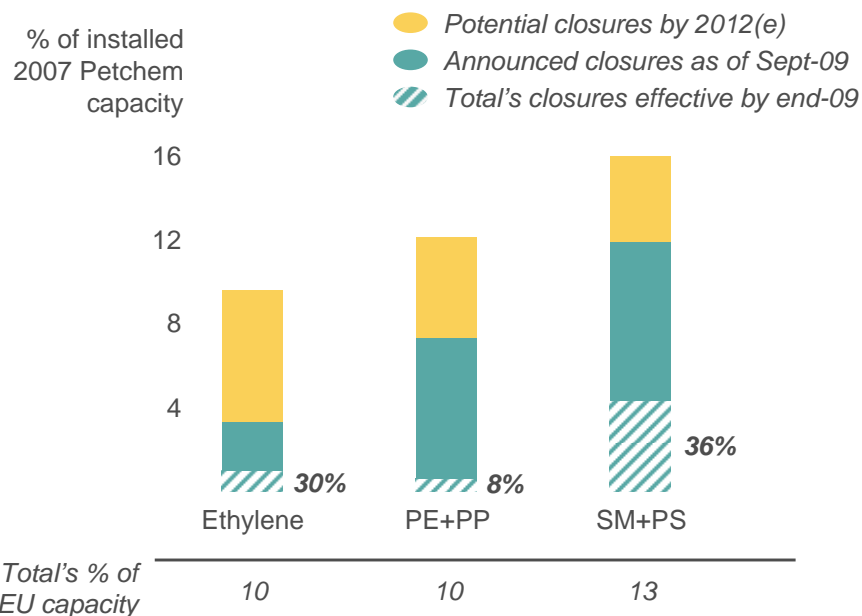
***Ideally positioned to meet long term demand***

\* cumulative net cash flow over life of project divided by development Capex

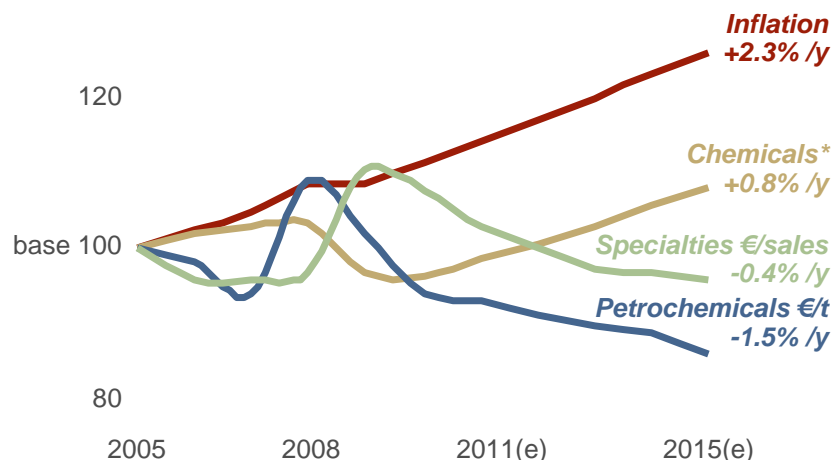
\*\* published data

# Chemicals : ongoing restructuring in mature markets to emerge stronger after the recession

Capacity reduction in Europe



Fixed costs for Total's Chemicals in US and Europe



## > Restructuring Total's petrochemicals in France :

- Effective early-2009, styrene restructuring and closure of one cracker in Carling
- New plan announced in March 2009 : permanent closure of non-competitive units (2 LDPE lines & 1 PS line) and reorganization

## > Focus on cost control in all Chemicals divisions

- > Fixed costs Chemicals 1H09 : -12% vs. 1H08\*\*
- > HSE remains the priority

**Reducing breakeven and focusing on top tier production units**

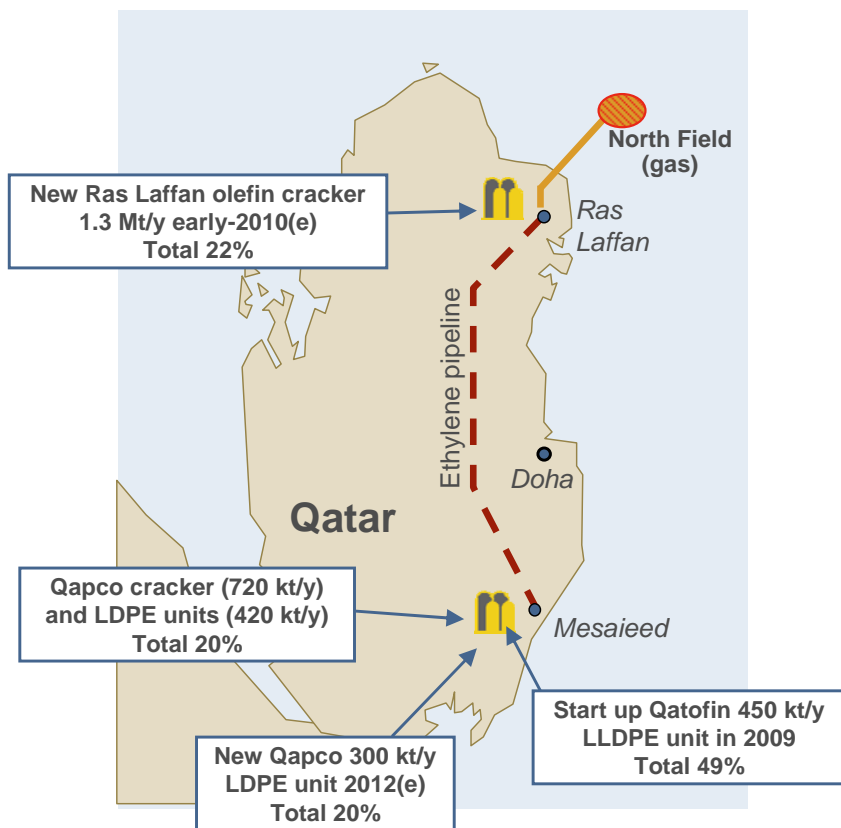
**Chemicals share of business segments capital employed 12% in 2009 vs. 24% in 2004**

\* excluding Arkema in 2005

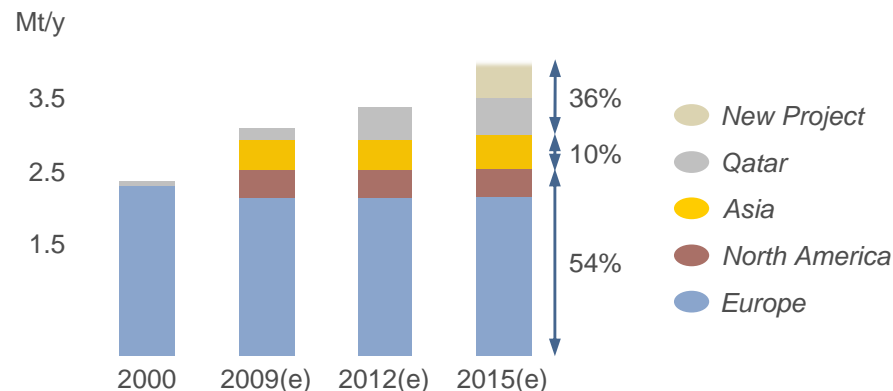
\*\* recurring cash costs, excluding portfolio changes and currency effects

# Petrochemicals : increasing leverage to advantaged feedstock and growth areas

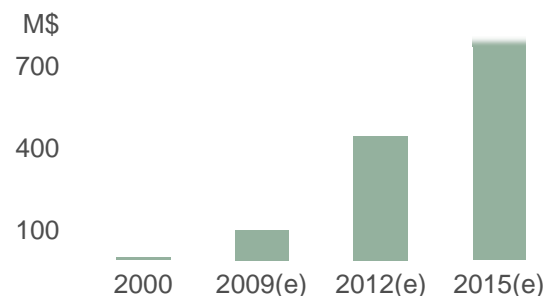
## Successful integration in Qatar



## Total's ethylene capacity



## Net operating income from growth areas\*



**Total's share of ethylene production from stranded ethane increasing from 6% in 2008 to 14% in 2010(e)**

**Share of growth areas in Petrochemicals capital employed increasing from 5% in 2000 to 36% in 2015(e)**

\* Asia, Middle East and Africa