

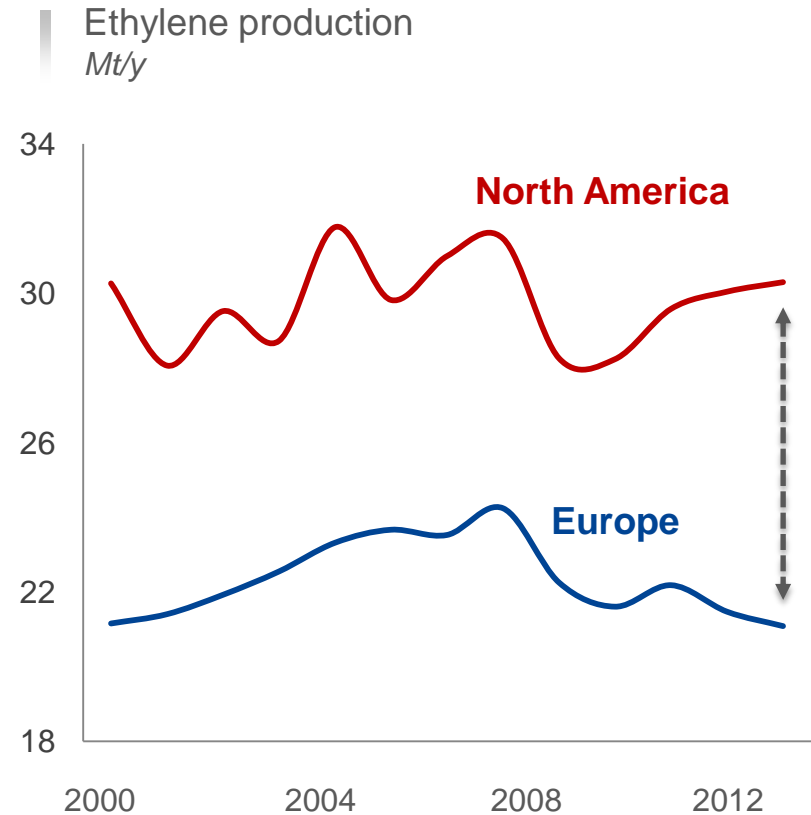
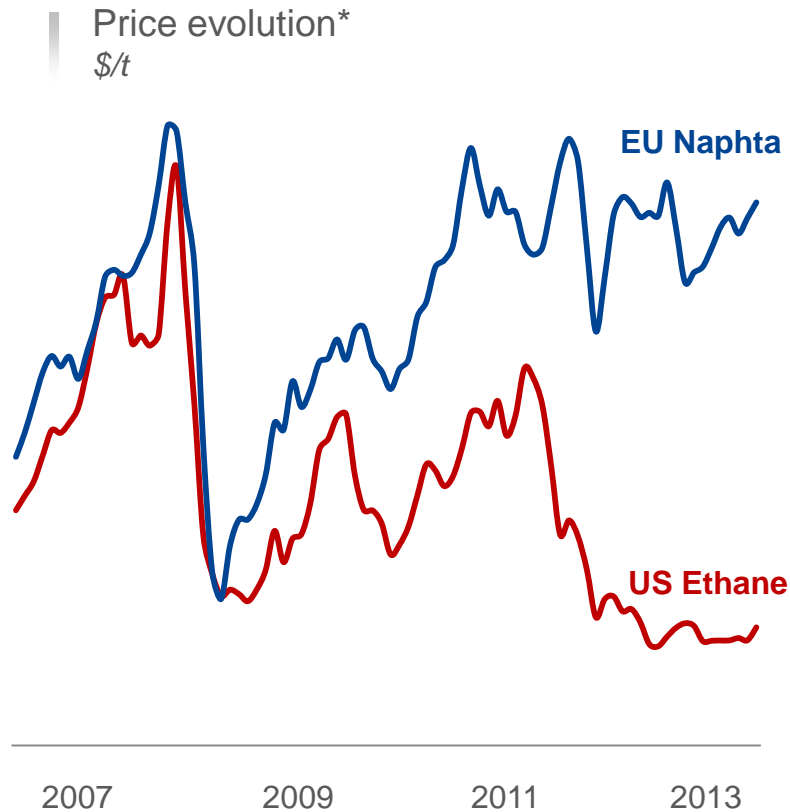


PRESENTATION TO FOURTH IEA-IEF-OPEC SYMPOSIUM ON ENERGY OUTLOOKS

Nathalie BRUNELLE
Senior VP Strategy, Development, Research
Refining & Chemicals

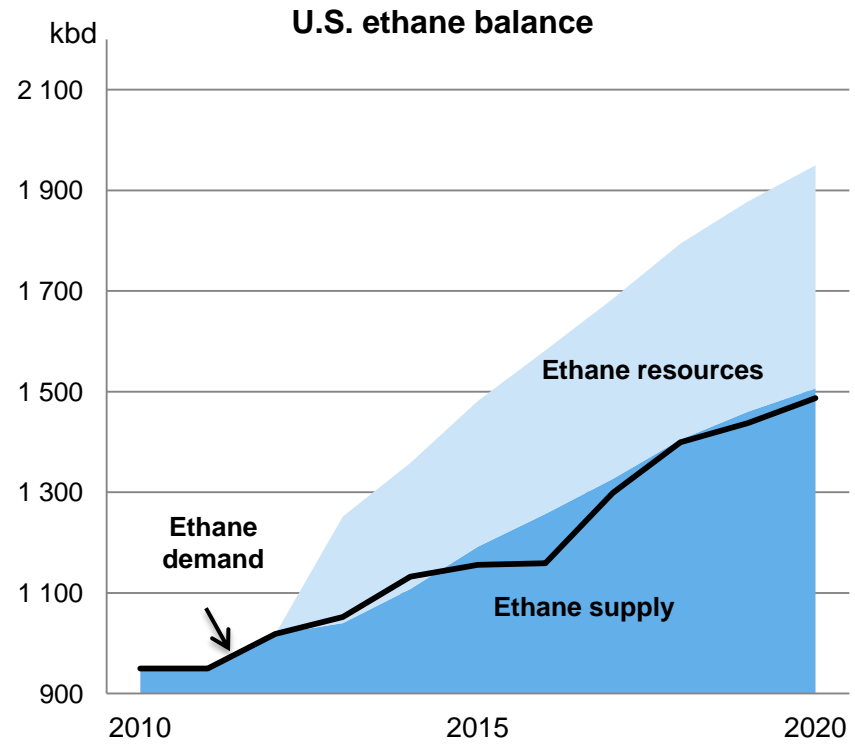
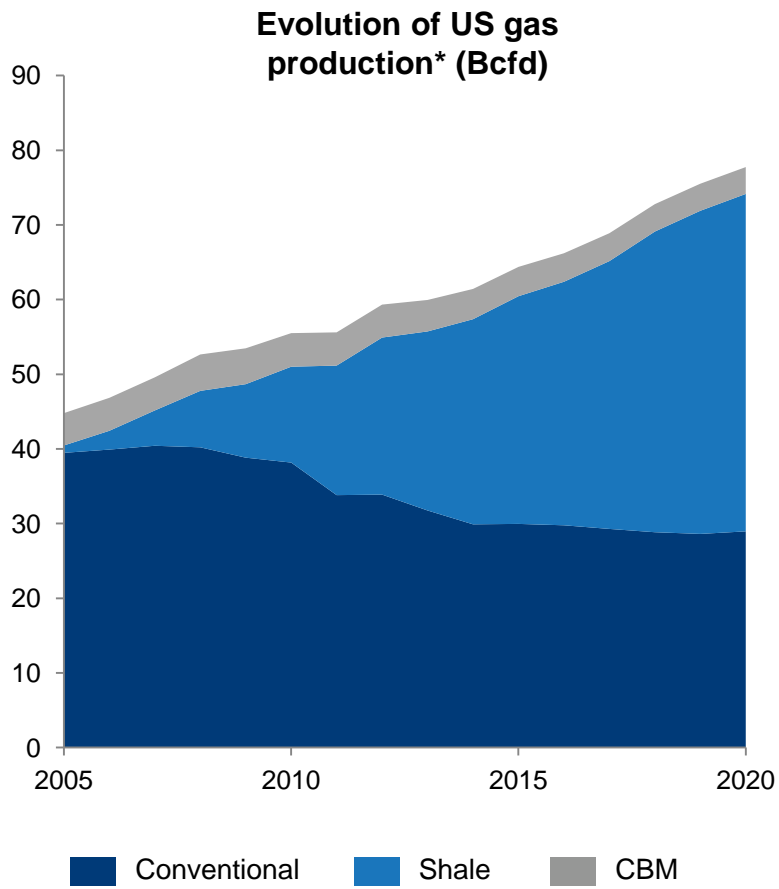
January 22, 2014
Riyadh, Saudi Arabia

US FEEDSTOCK ADVANTAGE : ALREADY A REALITY



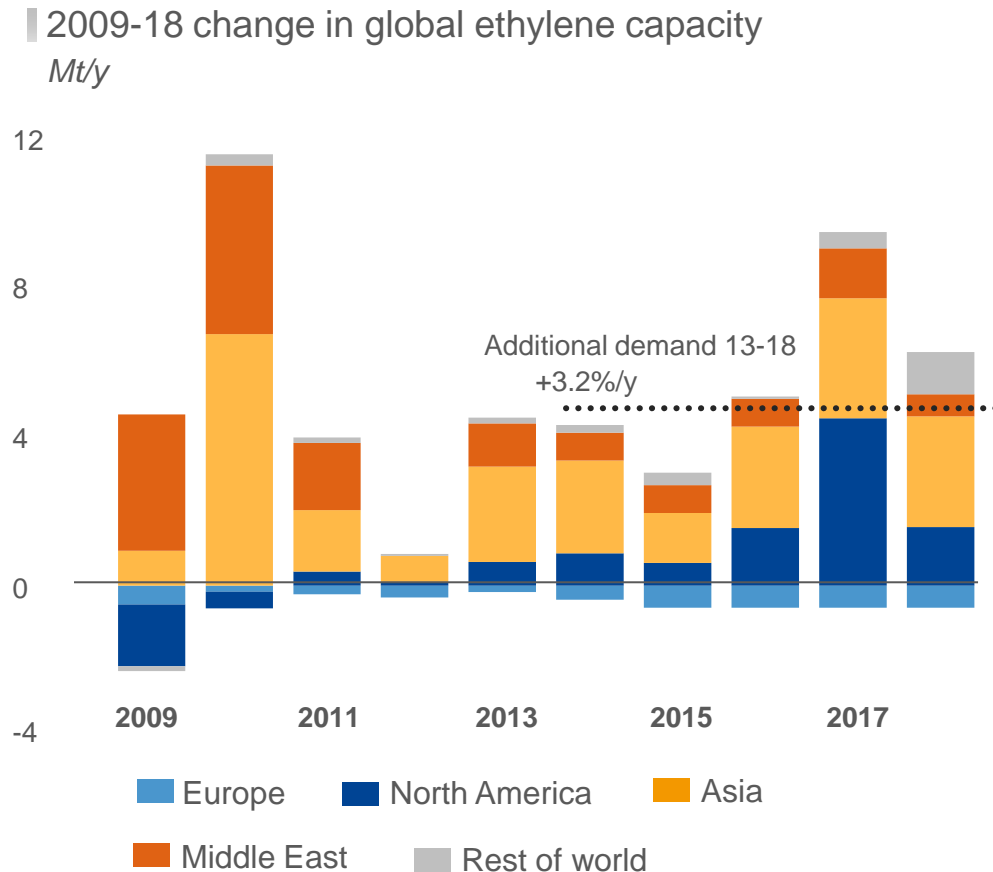
US plants benefiting from low price of feedstock and energy

THE US ENERGY REVOLUTION & PETROCHEMISTRY



* Source : Total estimations

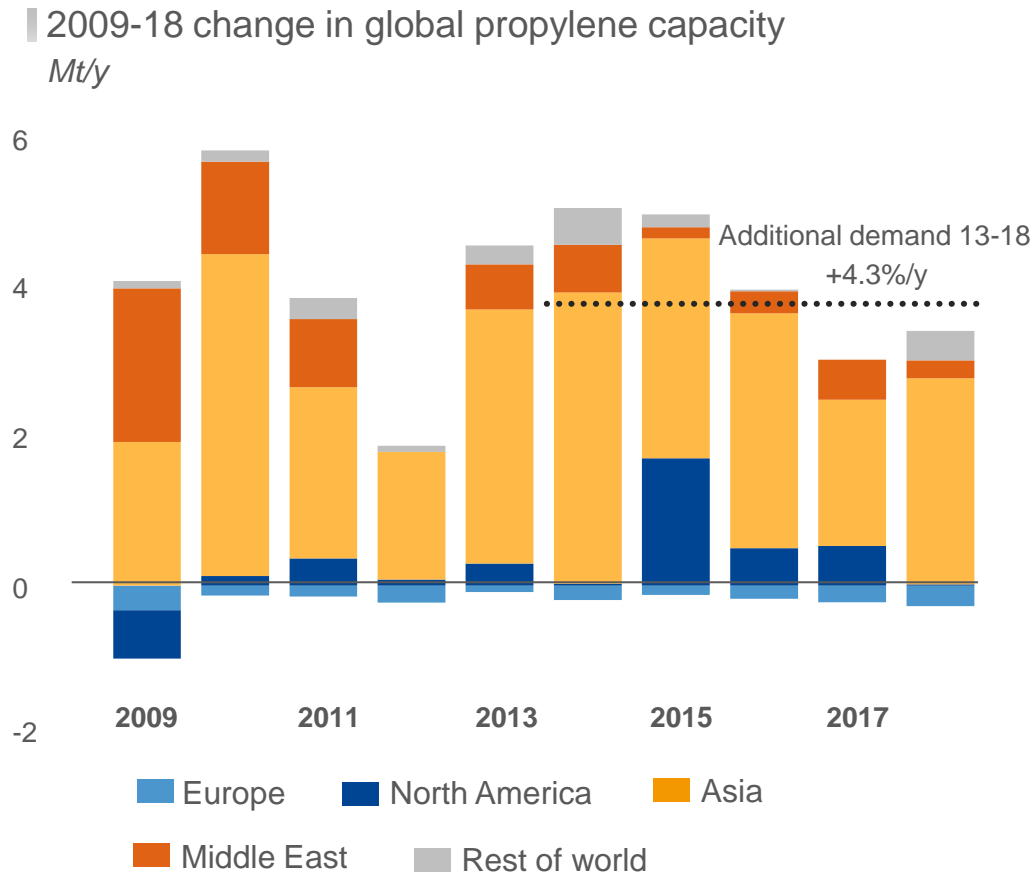
MORE NEW CAPACITIES TO COME IN ETHYLENE ...



- US projects on ethane to add 30% regional capacity, essentially dedicated to PE derivatives
- ME projects based on mixed feedstock and allowing more diversified downstream
- Naphtha based production represent now less than 50% of world ethylene

US to become a major exporter of ethylene derivatives

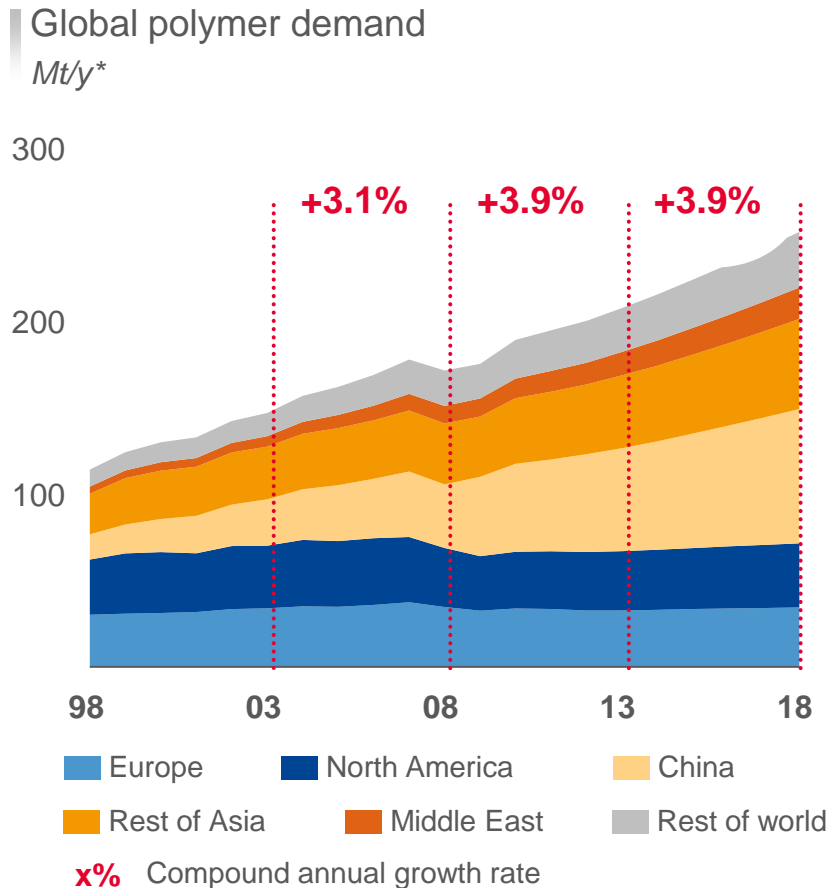
... AND PROPYLENE ...



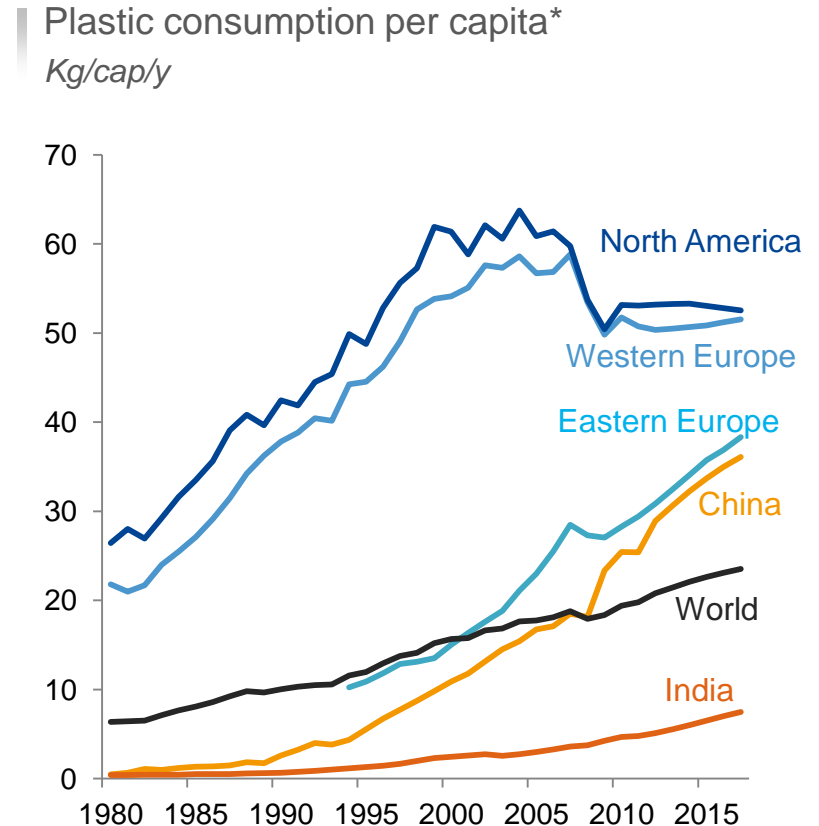
- Around 23% to come from alternative feedstock (propane, coal, methanol) in 2018 compared with 12% in 2012
- US excess of propane to be exported overseas

New routes for propylene production appear with attractive feedstock price

... TO FEED GROWING GLOBAL MARKET



* Perimeter : PE, PP, PS, PET, PVC



*Perimeter: PE/PP/PS

Will East of Suez growing demand continue to absorb additional capacity ?

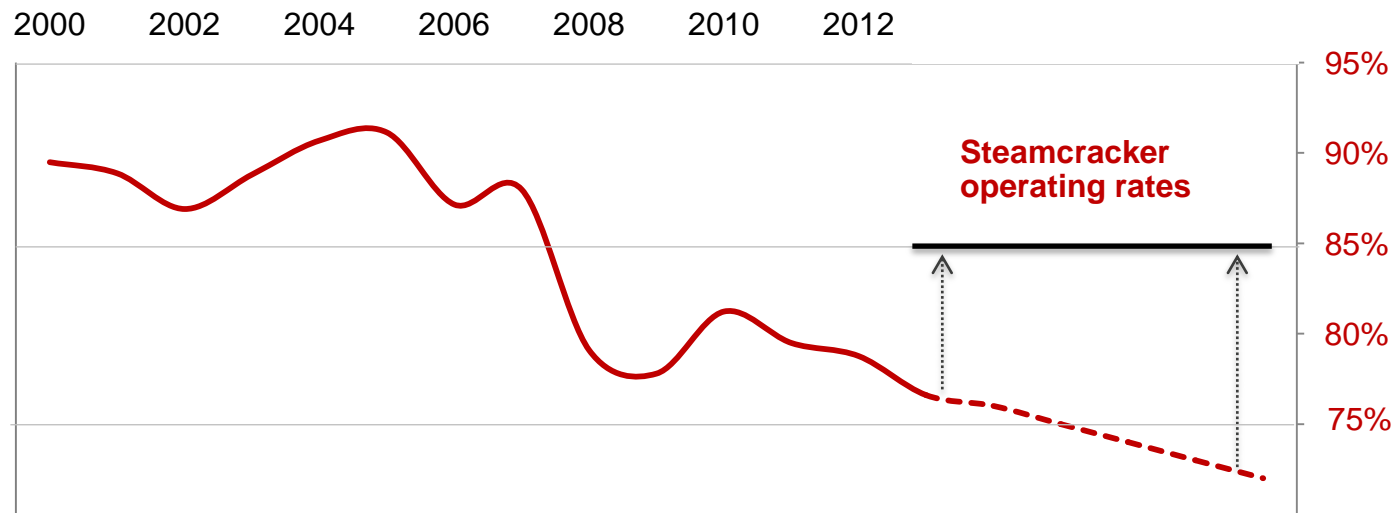
NORTH AMERICA TO ARBITRATE ON PE EXPORTS



North American exports to target growing South American markets but also Asia and Europe

WITH NO LOCAL COMPETITIVE FEEDSTOCK AND LIMITED MARKET GROWTH, EUROPEAN PETCHEM INDUSTRY HAS TO ADAPT

European ethylene production capacity



End-2012 European ethylene capacity : 26 Mt/a

- Restoring utilization rates
- Increasing imports from US and Middle-East



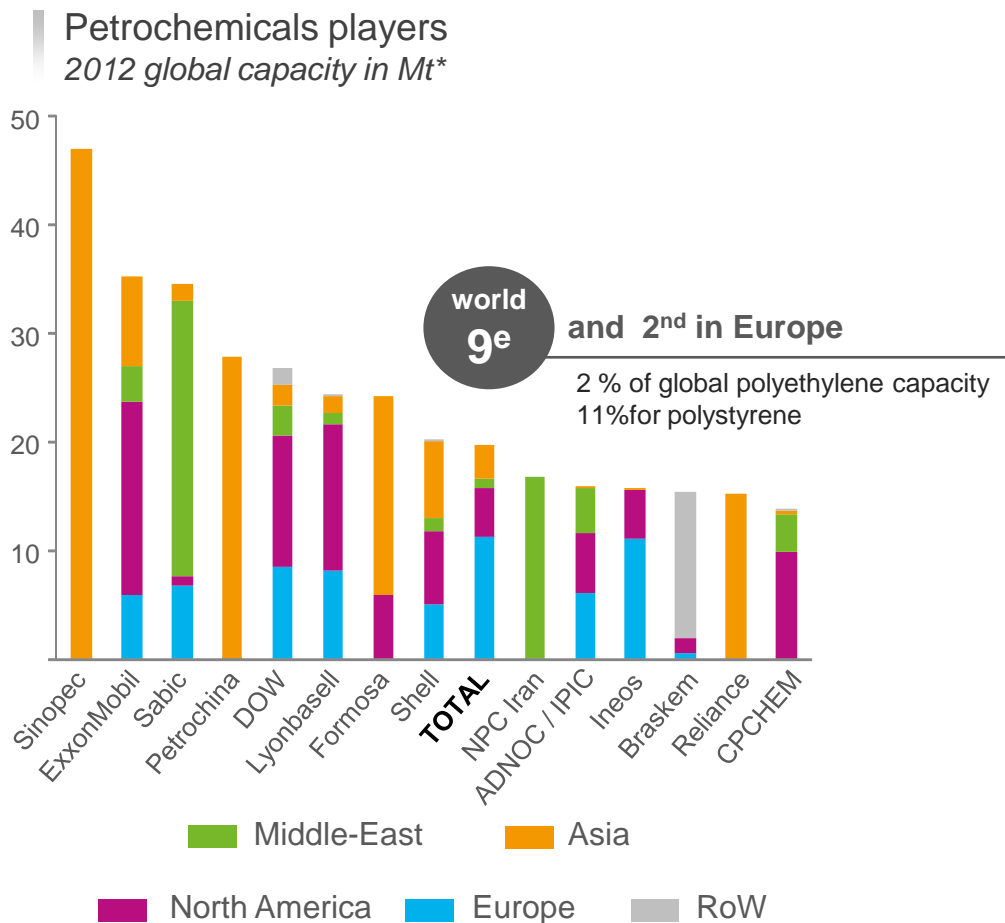
Estimated 15% capacity reduction need over 2013-2020

BENEFITING FROM THE ENVIRONMENT TO GET STRONGER



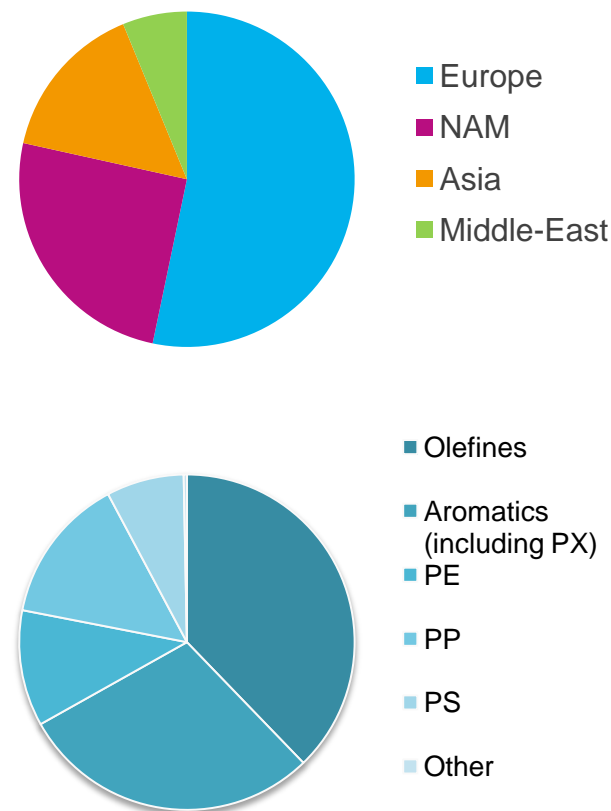
Our strategy : safe and reliable refining-petrochemicals
focused on increasing value and redeploying towards growing markets

TOTAL : MAJOR GLOBAL PLAYER IN PETROCHEMICALS



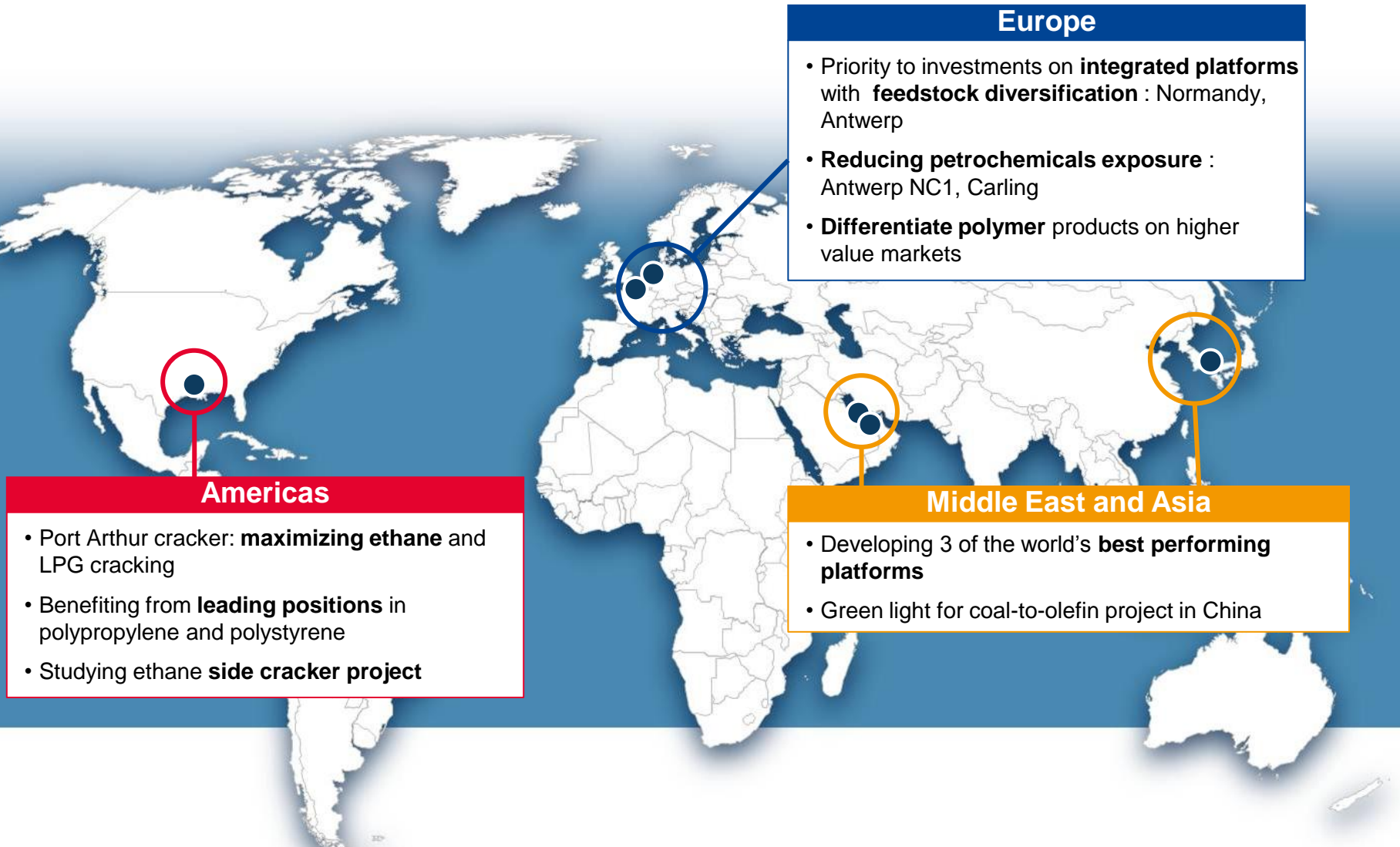
* Portfolio: Ethylene + Propylene + Benzene + Toluene + Mixed Xylenes
+ Polyethylene + Polypropylene + Polystyrene + EPS + PET + PVC

TOTAL's global capacity at end-2013
(including share in Satorp)



A sizeable and diversified petrochemicals portfolio

TAKING UP THE CHALLENGE ON KEY PLATFORMS



BENEFITING FROM INTEGRATION BETWEEN REFINING AND PETROCHEMICALS BEYOND PRODUCT EXCHANGE

Unique optimized platforms

Refining

Naphtha, LPG, refinery offgas, propylene, aromatics, ...



Petrochemicals

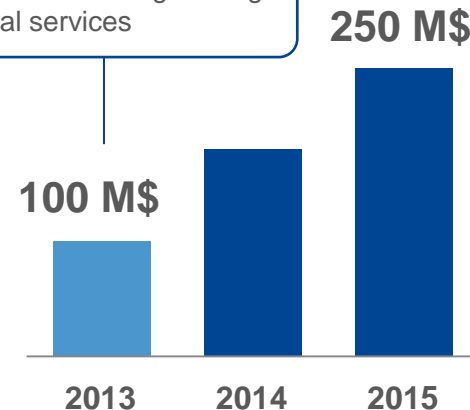
Hydrogen, steam, low sulphur fuel oil, pyrolysis Gasoline

Synergies expected from TOTAL's new R&C organization
Net operating income

First synergies in Normandy and Antwerp

Renegotiated energy contracts

First benefits of rightsizing central services



Leveraging on single site management, common infrastructures and size effect

QUESTIONMARKS AND CHALLENGES FOR A MAJOR PLAYER

Markets

- Demand growth in LAM and Asia
- Shale hydrocarbons phenomenon (magnitude, logistics, other regions ?)
- Gas exports from the US et potential impact on prices
- LPG associated production, “swing” demand and world trade flows

Operations

- Operational Excellence & Leading Innovation
- Access to competitive feedstock and energy
- Pace of restructuring

People

- Skills and know-how