



**Australia's sole manufacturer of value added polyethylene**

**17 March 2015**

**Ethane Pipeline Investors**

**Qenos Site Visit**



*Shaping our future*

# Welcome to Qenos Botany

- Welcome & Introductions
- Housekeeping
  - SH&E
    - Dematched Site
    - Drug & Alcohol Free Site
    - Emergency Evacuation & Assembly Area
  - Amenities
- Plan for the afternoon

# Agenda

1	Introduction & Housekeeping	Begin 2.00 pm
2	Qenos overview	
3	Afternoon tea & plant tour safety briefing	
4	Olefines Plant Tour	Target 3.00 pm
5	Wrap-up with time for Q&A	Finish 4.00 pm

# Qenos is a Strategic business...

- As Australia's sole manufacturer and leading supplier of polyethylene (PE), Qenos is the cornerstone of Australia's petrochemical and plastics industry
  - Primary focus on the Australian domestic PE market
  - Products supplied to hundreds of plastics fabricators
  - Manufacturing facilities at Altona (Vic) and Botany (NSW);
- Through the conversion into high value chemicals rather than use as fuel, Qenos adds significant value to ethane and LPG from Bass Strait (Vic) and ethane from the Cooper Basin (SA)
- Owned by China National BlueStar Group
  - 80% China National Chemical Corporation ("ChemChina")
  - 20% The Blackstone Group
- Annual Turnover A\$700M-A\$900M
- Employees - 720 (280 in Botany); Contractors – 350 (150 in Botany)

# ...adding value to Australian natural resources...

Adding Value

Qenos adds value to Australian natural resources by applying its detailed knowledge of petrochemical and polymer process chemistry.



As the cornerstone of the plastics industry, Qenos is a vital link in the Australian manufacturing value chain across all major sectors.

# ...with feedstock supply linked to gas production.



## Qenos Botany

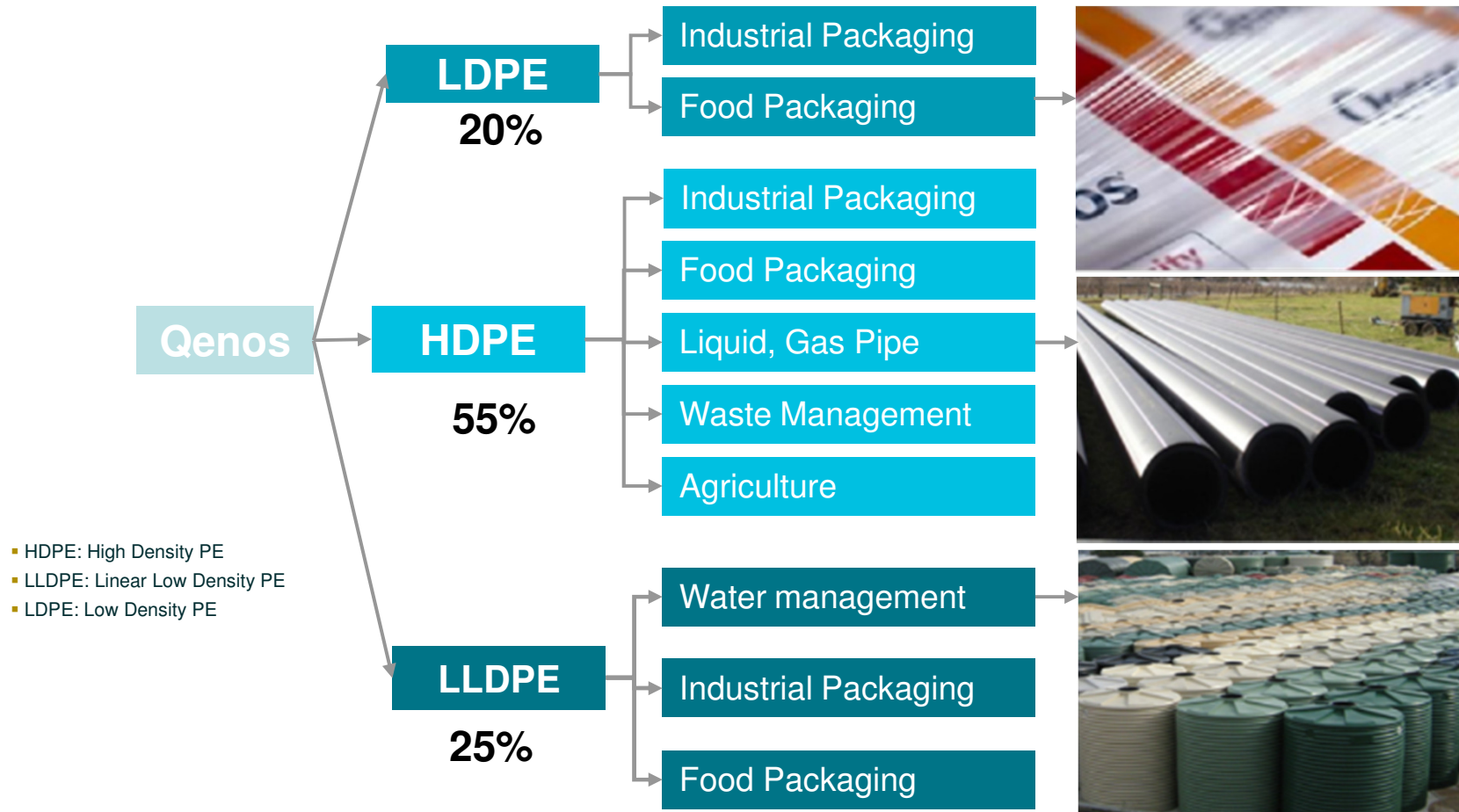
- Ethane feedstock supplied by Santos via dedicated 1375km pipeline from Moomba to Qenos Botany
- Ethane supply contract recently extended beyond 2015.

## Qenos Altona

- Ethane feedstock supplied from Bass Strait via Longford and Long Island Point processing plants
- LPG supplied from the ExxonMobil Altona Refinery
- \$195m investment complete



# Key Polyethylene Market Sectors

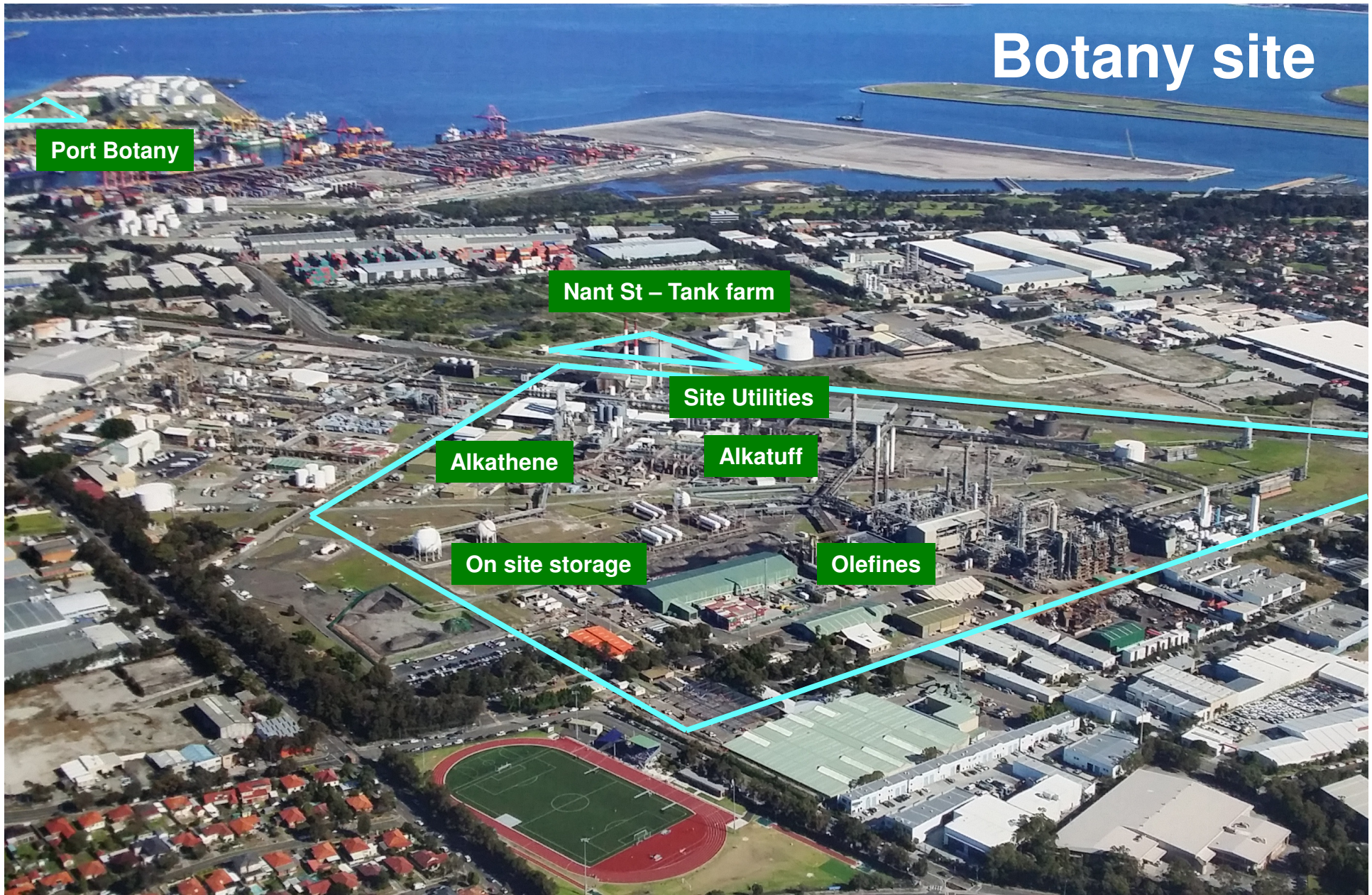


Qenos is a key supplier across several industries



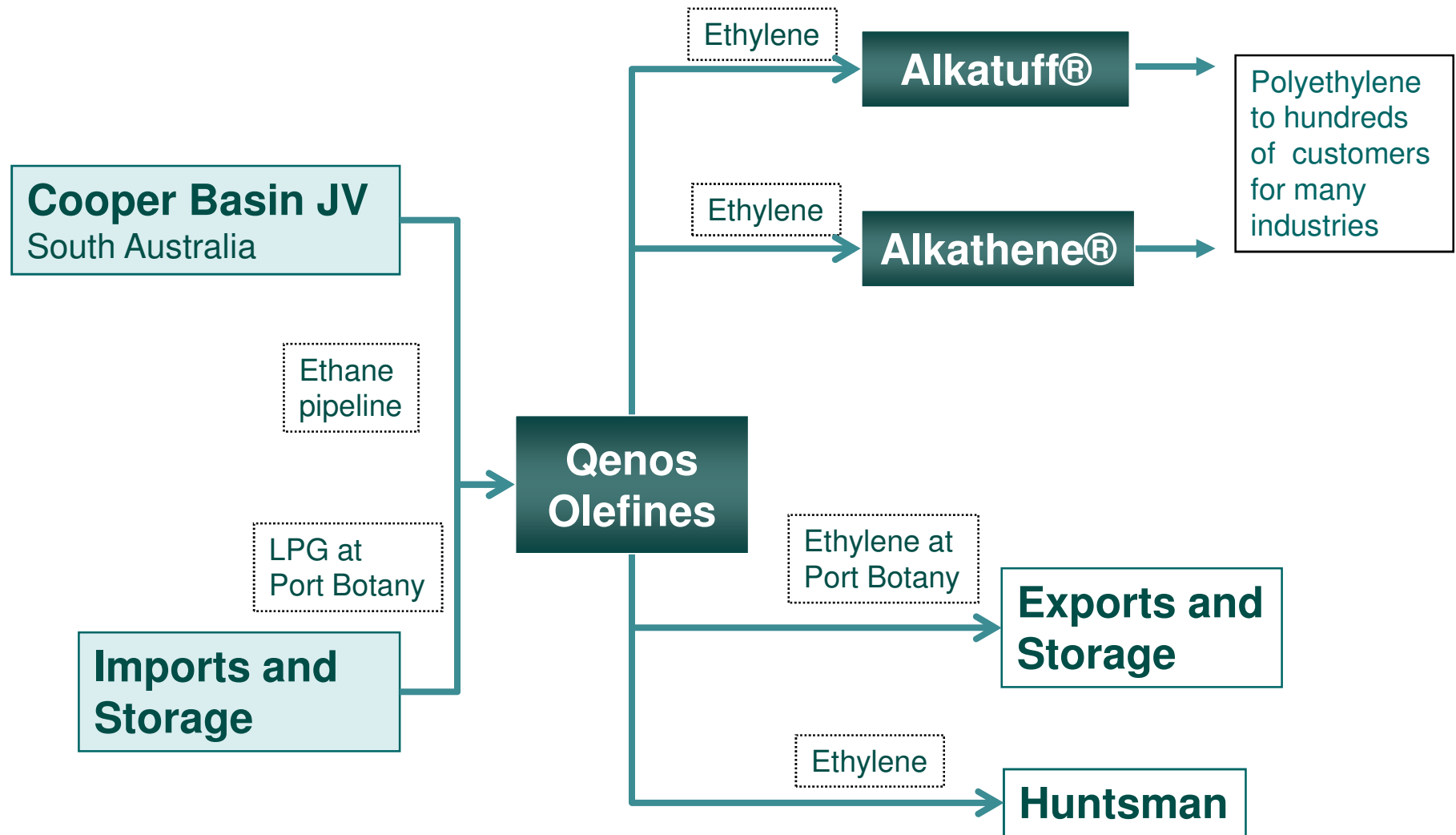


# Botany site





# Qenos Botany Operation



# Botany Olefines

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- Adds value to Australia's natural resources by utilising advantaged ethane feedstock
  - Olefines manufactures ethylene for Qenos Botany polyethylene plants and merchant local ethylene sales
  - Built to process Naphtha/LPG feedstock in 1983 then converted to ethane in 1996
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# Botany Polymers

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## Alkatuff

- Alkatuff® mainly manufactures linear low density PE (LLDPE) and HDPE
- The Alkatuff single reactor unit was commissioned in 1992
- Successfully manufactured Metallocene (Alkamax) – products used to produce water tanks, mobile garbage bins, film for packaging



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## Alkathene

- Alkathene® manufactures low density PE (LDPE)
- Alkathene has 4 reactors, first of which was commissioned in 1957 and the last in 1982
- Autoclave reactors successful for manufacture of film grades (film clarity)

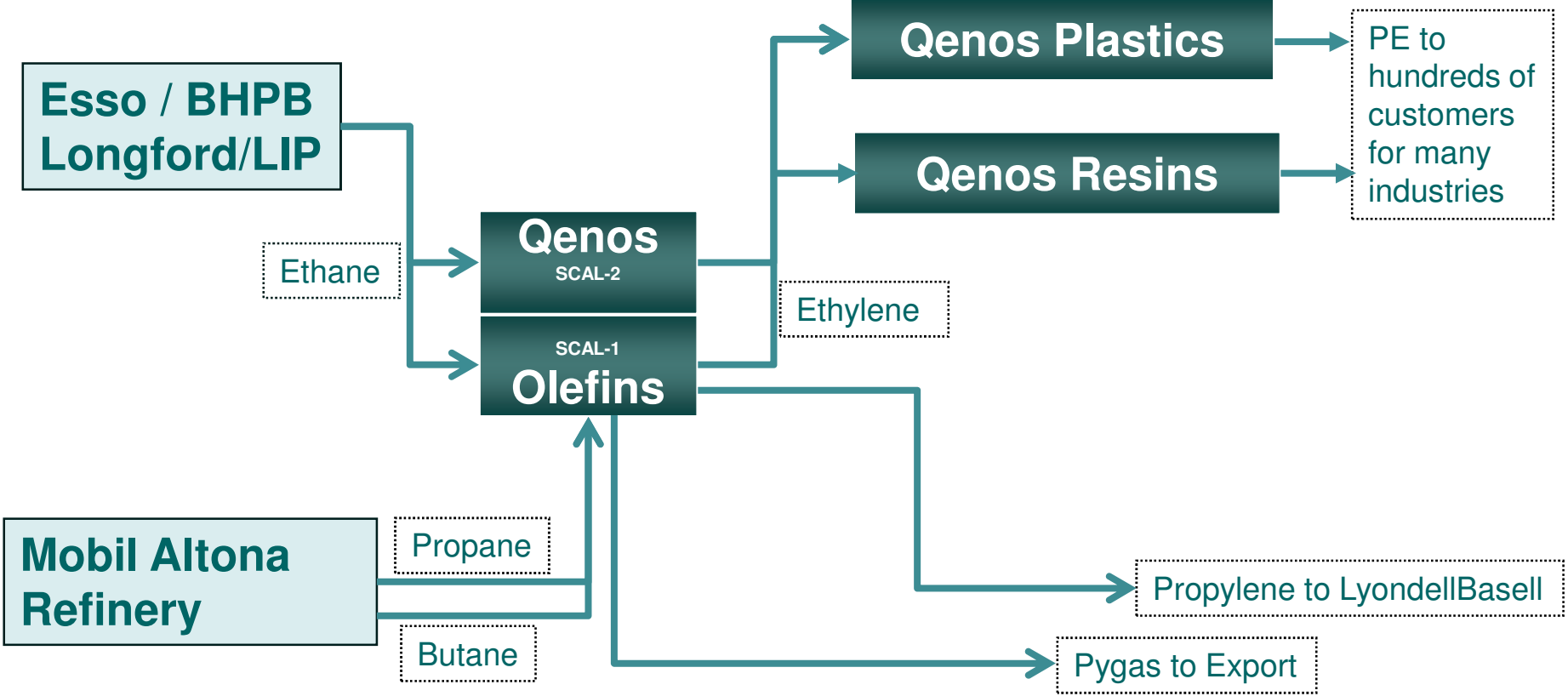




# Altona site



# Qenos Altona Operation





# Altona Olefins



- Olefins manufactures ethylene and propylene
- Ethylene is supplied to Qenos Altona polymer plants
- Ethane and LPG feedstock supplied from Bass Strait
- Furnaces are used to crack the feedstock at up to 900degC
- Distillation is the main separation process

# Altona Polymers



## Plastics

- Manufactures HDPE – made in low pressure process
- HDPE used in milk bottles, containers and pipes

## Resins

- Manufactures HDPE – low pressure slurry reactors
- HDPE used in containers, pails and pipes



# Qenos has undertaken a re-investment phase to underpin the long-term sustainability of its operations

- **In November 2010, with Victorian Government support, Qenos announced a \$195m investment to expand and upgrade the Altona manufacturing facilities. The project was completed and officially launched on 29 April 2013**
  - Project will increase Altona's production capacity by 20% of domestic High Density Polyethylene, enhancing Qenos's international cost competitiveness by improving scale and efficiency
  - New facilities was officially opened by the Victorian Premier The Hon Dr Denis Napthine MP
- **In March 2011, Qenos & AGL Energy Limited co-announced a \$45m investment to construct a state of the art cogeneration facility to be built in Altona. The project was completed and officially launched on 24 May 2013**
  - The cogeneration unit will meet all of Qenos's electricity demand and will be capable of producing a third of steam requirements, while reducing greenhouse gas emissions



# Qenos Extends Botany Ethane Contract



- Signing of five year contract extension with Santos and Origin Energy for the supply of ethane to Qenos plant in Botany
- Attended by senior representatives of each company as well as the Hon. Anthony Roberts, NSW Minister for Resources and Energy
- Contract extension underpins Qenos Botany, by enabling a significant major maintenance in 2015, reinforcing Qenos's ongoing commitment to supply customers and the Australian market

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# Olefines Plant Tour - Safety Briefing

- Remain with the group
- Stay within the designated walkways
- No photos to be taken during plant tour
- De-matched site – mobile phones to be left in room
- Emergency procedure & evacuation areas
- PPE - Hard hats, Safety glasses, Hi-vis jacket, hearing protection will be provided



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