

## Downstream & Chemicals



## Profitable downstream & chemicals portfolio

# **Fuels refining & marketing** Focused, regional optimization Refinery Integrated fuels value chain

#### **Petrochemicals**

Advantaged feed, scale and technology



- Olefins / Polyolefins complex
- Aromatics complex

#### **Lubricants & additives**

Strategic positions serving global markets



- Premium base oil plant integrated with refinery
- World-scale additives plant



## Strategy focused on leading returns



**World-class operational excellence** 

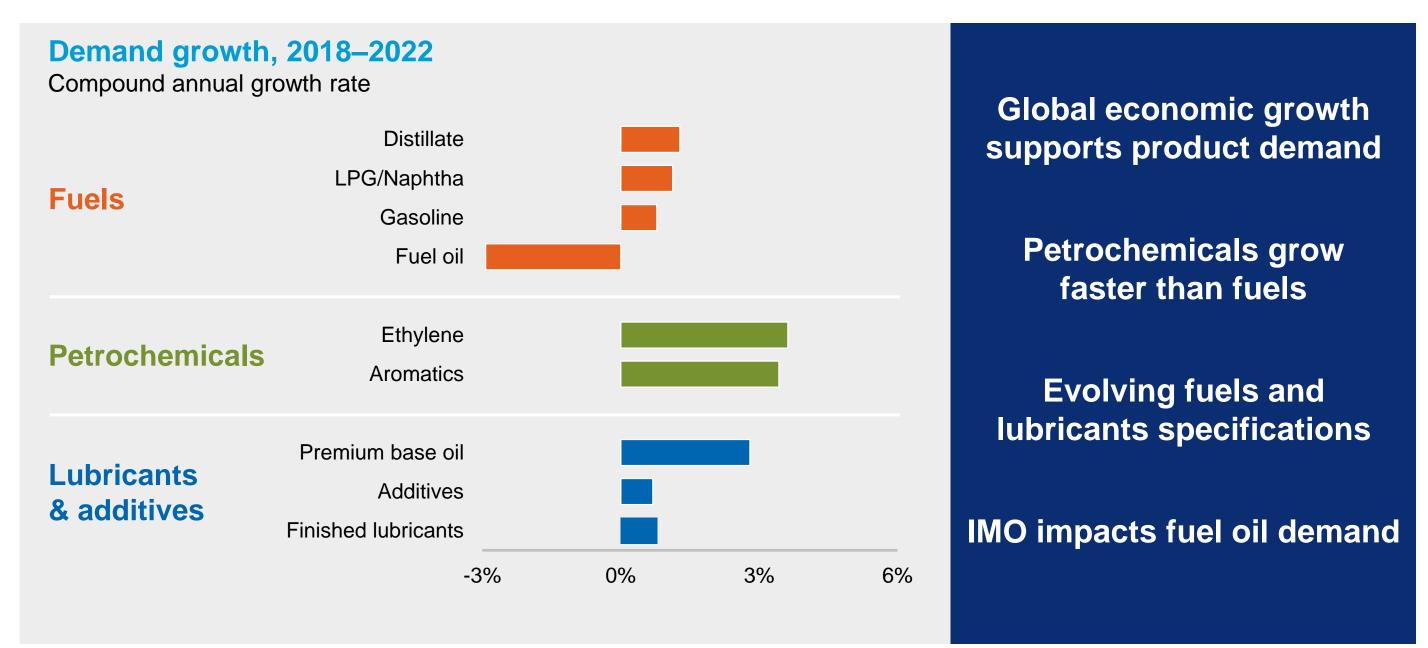
Grow earnings across the value chain

**Target investments** 

**Lead the industry in returns** 



## Global product demand

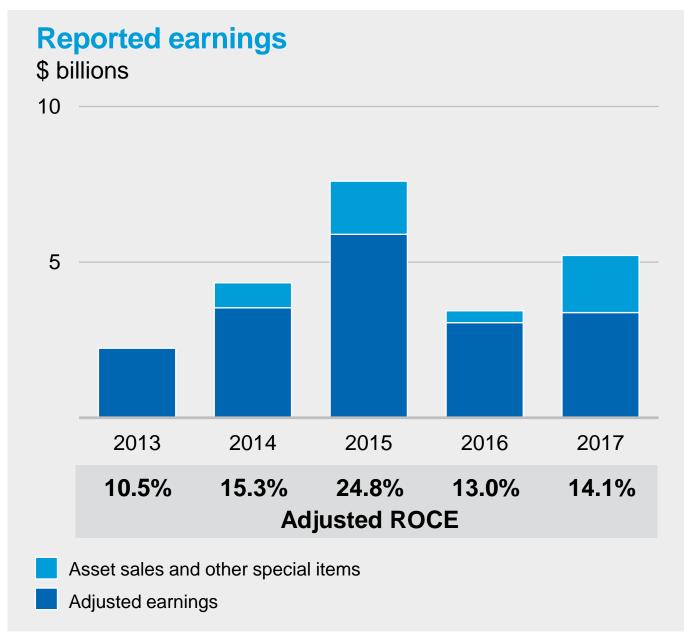


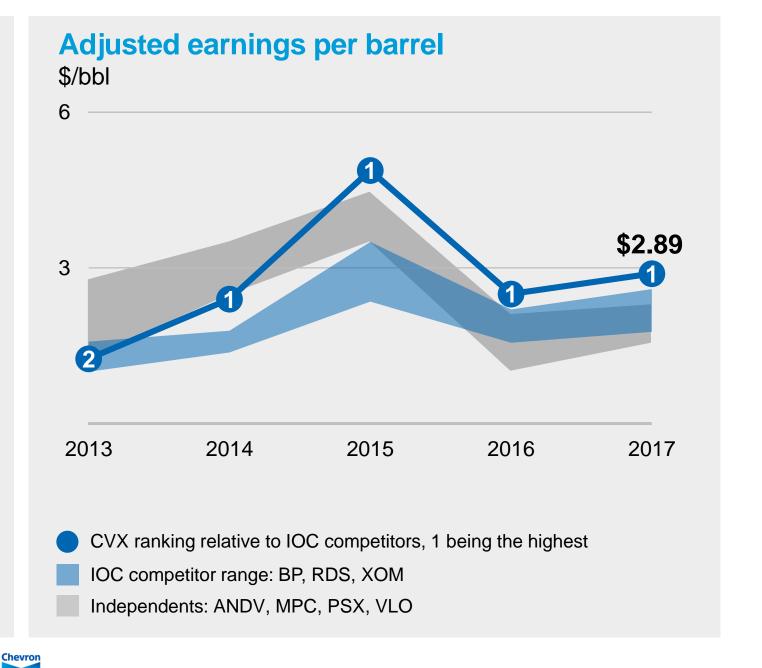
See Appendix: slide notes for definitions, source information, calculations, and other.



Sources: Wood Mackenzie, NexantThinking™ Petroleum and Petrochemicals Economics program, Klein & Company

## Financial performance





See Appendix: reconciliation of non-GAAP measures and slide notes for definitions, source information, calculations, and other.



## **Major capital projects**

#### **Evaluation / FEED**

**GS Caltex** 

Mixed feed cracker olefins project

**Oronite** 

China blending & shipping

**ChevronPhillips Chemical Co.** 

USGC petrochemicals project II

**Singapore Refining Co.** 

Resid upgrading



#### **Under construction**

**Richmond refinery** 

Modernization

**Salt Lake refinery** 

Alkylation retrofit



#### **Commission / start-up**

**ChevronPhillips Chemical Co.** 

USGC petrochemicals project

Singapore Refining Co.

Clean mogas / cogeneration

**Oronite** 

Singapore carboxylate







## Integrated fuels value chains

#### **U.S. West Coast**

- #1 brand share in Western U.S.
- Mexico retail market entry
- San Joaquin Valley equity crude
- Tightly integrated supply chain



#### U.S. Gulf Coast

- Leading brand in Central America
- Top net cash margin refinery
- GOM / Venezuelan equity crudes
- Opportunity to integrate Permian



#### **Asia Pacific**

- Long-standing partnerships
- World-class manufacturing
- Strengthening refinery flexibility and marketing positions





## **Fuels marketing activities**

#### **Mexico retail market entry**

- Plan to grow by up to 350 sites
- Developing key branded marketer relationships
- Integrated with USWC supply chain

#### **ExtraMile c-store joint venture**

- JV with Jacksons Food Stores Inc.
- Expand existing franchise offering
- Plan to double Western U.S. footprint to ~1,400 sites by 2027

#### **Asia marketing position**

- Plan to grow by up to 300 sites
- Enhance customer / retail offering







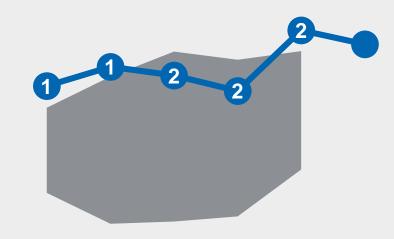


## Refinery performance



Percent

90%



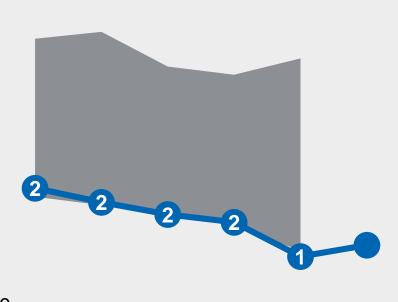
70% — 2008 2010 2012 2014 2016 2017

- CVX ranking relative to competitors
- Competitor range

#### **Energy efficiency**

Index

120



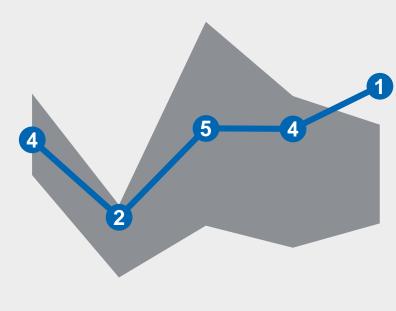


- CVX ranking relative to competitors
- Competitor range



Index

35





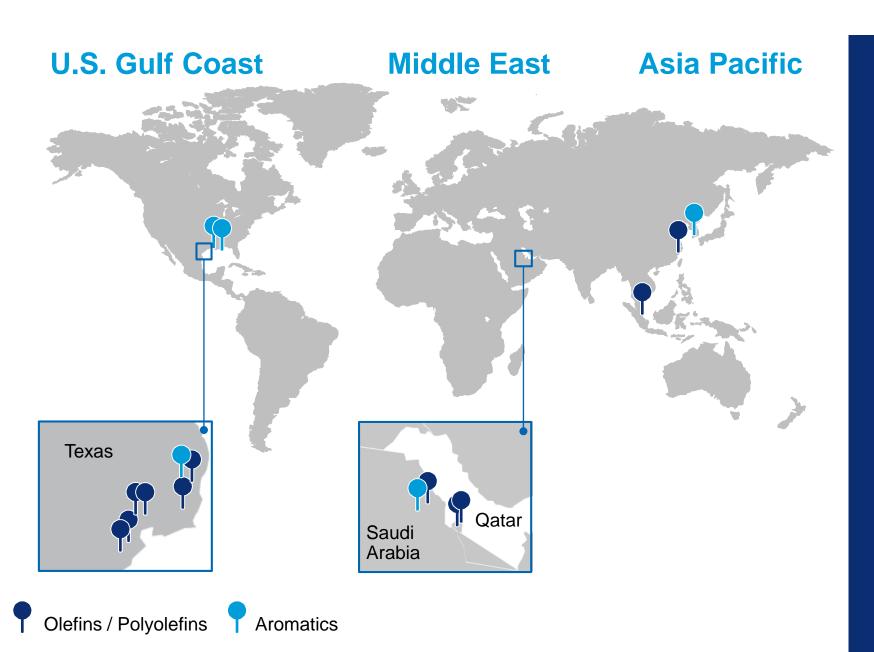
- CVX ranking relative to competitors
- Competitor range

See Appendix: slide notes for definitions, source information, calculations, and other.



Sources: Solomon Associates and Chevron data

## Petrochemicals portfolio



#### **ChevronPhillips Chemical**

Advantaged feed, scale & technology

- #1 HDPE marketer
- Leading NAO producer
- MarTECH™ Loop Slurry

#### **GS Caltex**

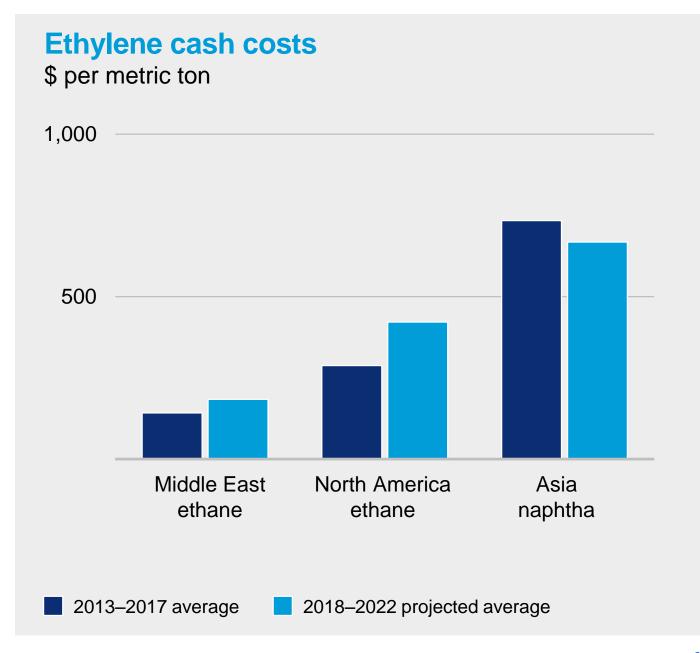
Scale, location advantage

- 4<sup>th</sup> largest aromatics single site
- Integration with refining
- Proximity to Asian demand

See Appendix: slide notes for definitions, source information, calculations, and other



## Advantaged feedstock



#### **Petrochemicals profitability**

Oil / gas price ratio continues to benefit lighter feedstocks

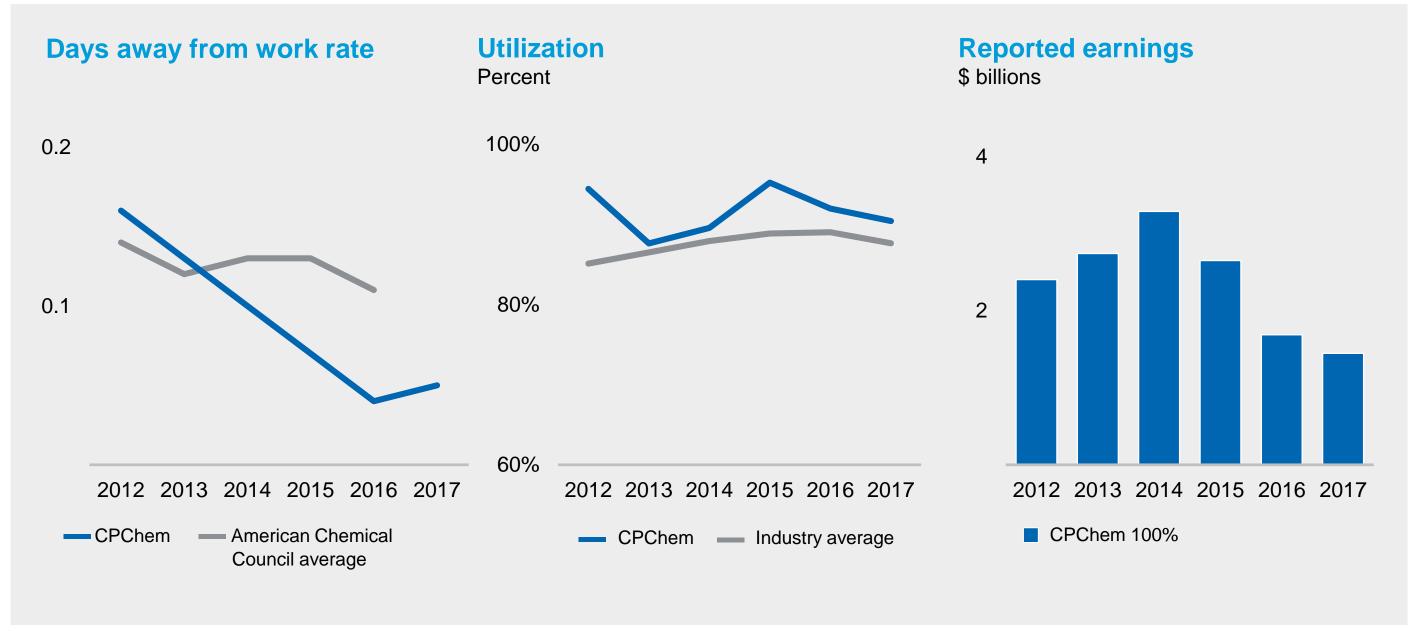
North America ethane maintains advantage over Asia naphtha

Integrated polyethylene margins remain strong



Source: NexantThinking™ Petroleum and Petrochemicals Economics program

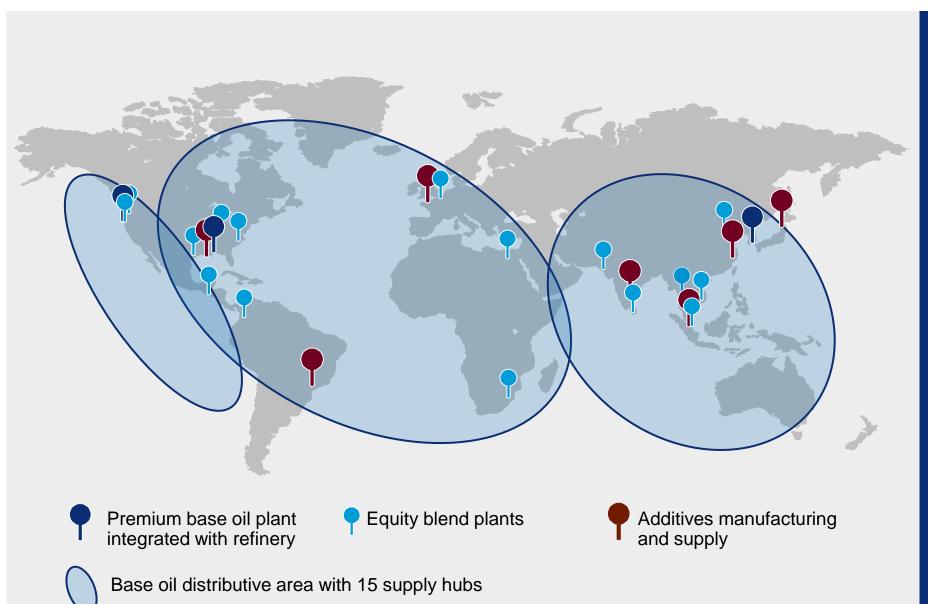
## **ChevronPhillips Chemical performance**



See Appendix: slide notes for definitions, source information, calculations, and other.



#### **Lubricants and additives**



#### Premium base oil

Leading producer, global slate

#### **Finished lubricants**

Formulation technology expertise
Strong global brands

#### **Additives**

Leading global supplier
Targeting key growth markets

See Appendix: slide notes for definitions, source information, calculations, and other.



#### Lubricants and additives activities

#### Premium base oil

- Reliable, global operations
- Improved average yield ~25%
- Lowered supply chain costs ~15%

#### **ICONIC™** Lubricantes

- JV with Ipiranga in Brazil
- Ipiranga and Texaco brands
- ~23% market share

#### **Additives growth**

- World-class reliability
- Award winning passenger car additives
- Positioned for China growth









## **Technology**

#### **Manufacturing**

- ISOALKY<sup>™</sup> technology
- Next generation hydro-processing catalyst

#### **Product development**

- Techron<sup>®</sup>
- OEM partnerships
- Renewable fuels

#### **Digital solutions**

- Customer experience
   & mobile pay
- Global e-commerce platform
- Sensors & predictive maintenance









