



# Global Opportunities for Iranian Petrochemicals

13<sup>th</sup> Iranian Petrochemical Forum  
Tehran 2017

 **Nexant**

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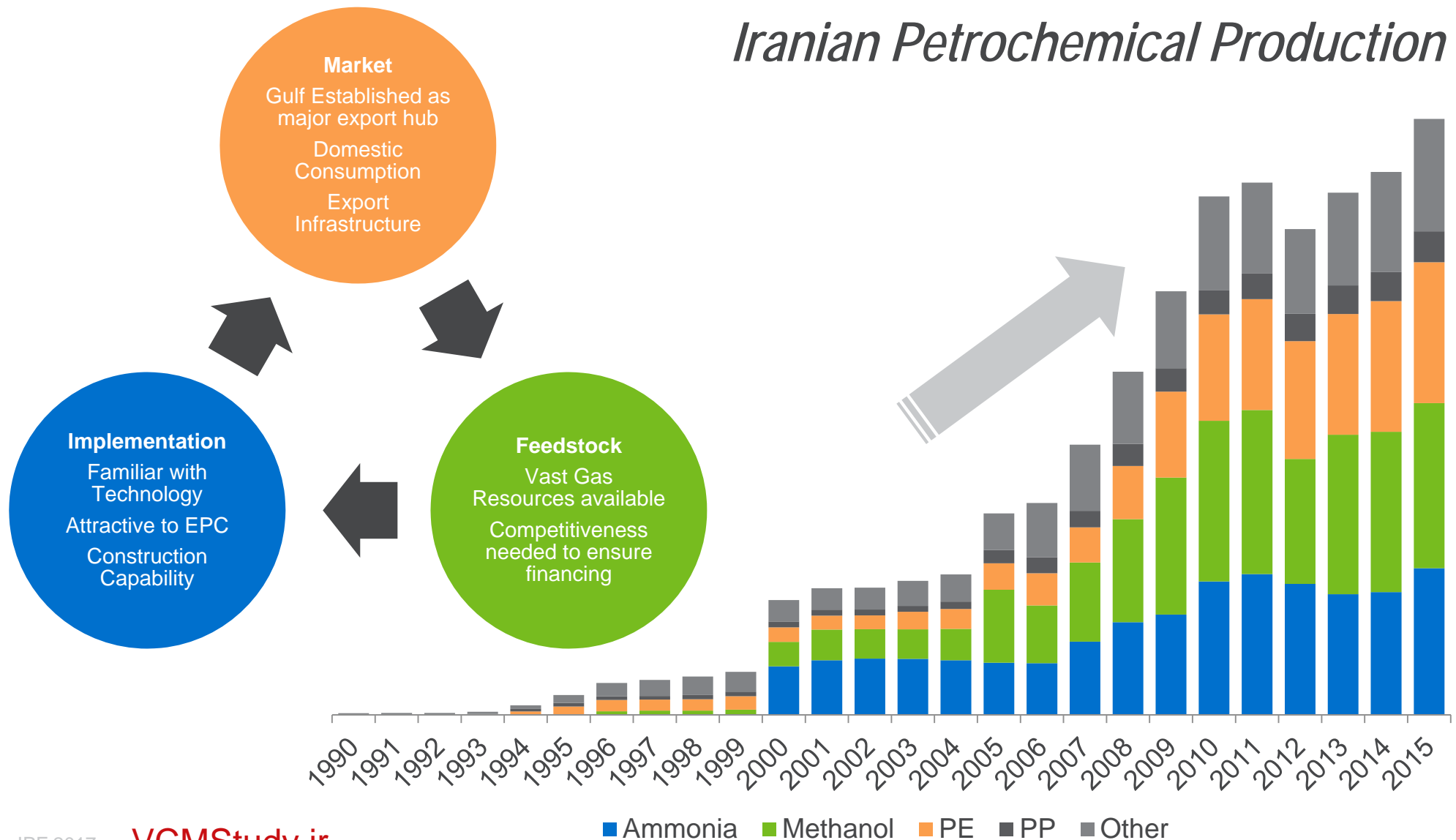


April 2017

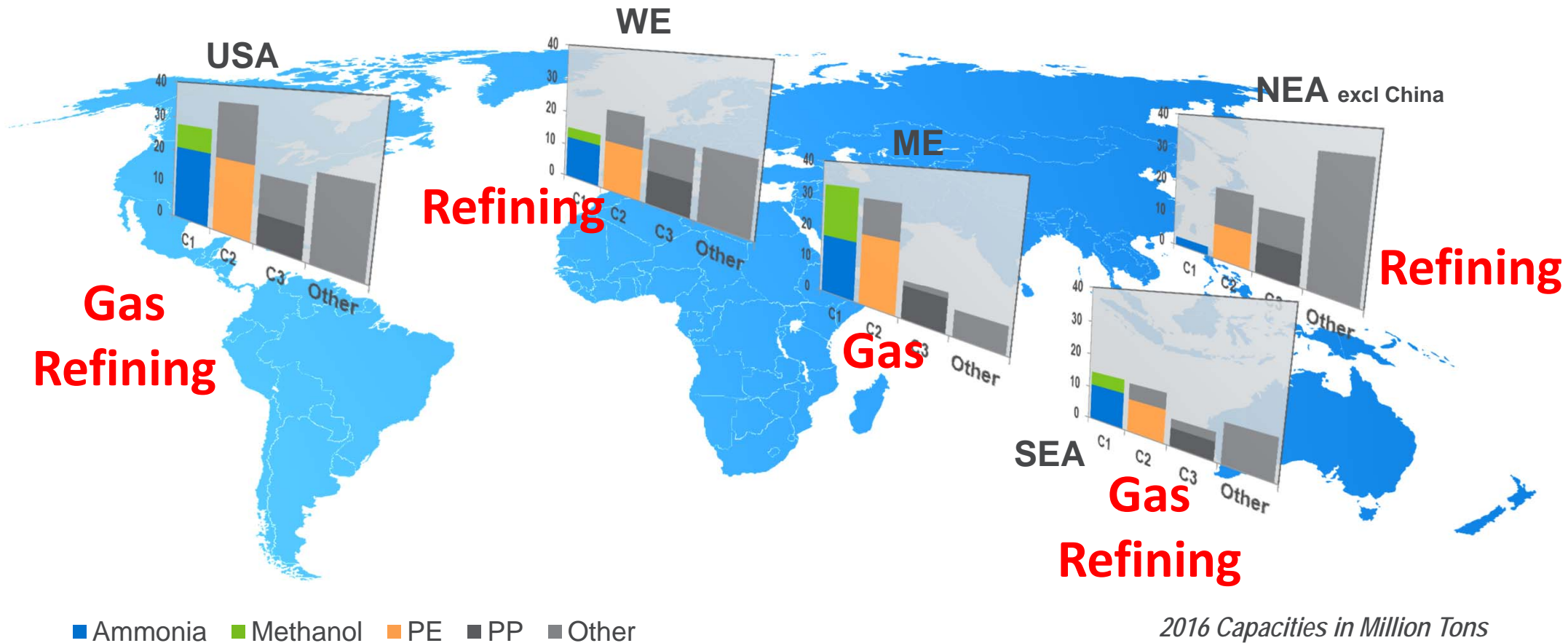


# Historically Iran has achieved excellent production growth and has strong potential to expand further in Petrochemicals

## Iranian Petrochemical Production

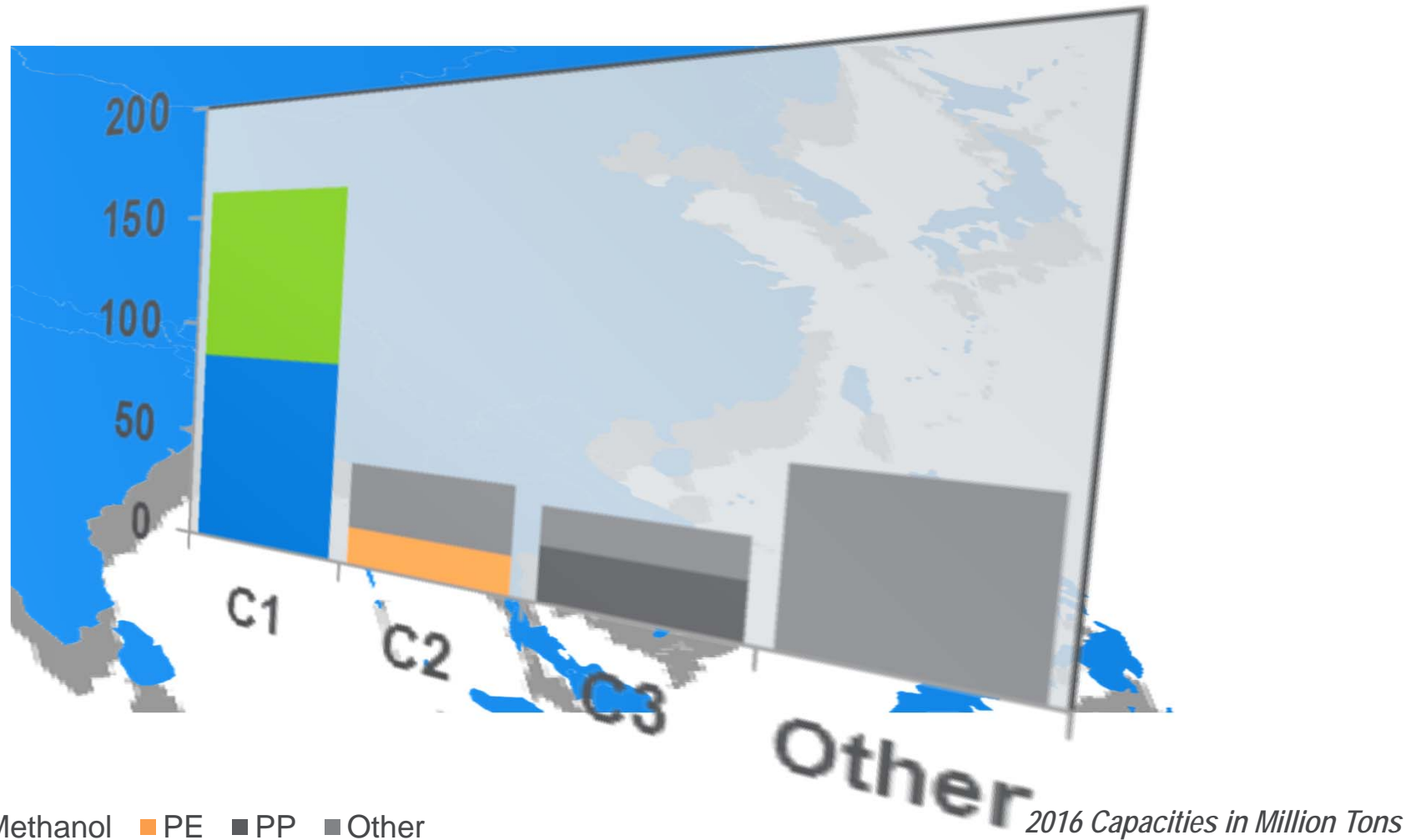


# A significant presence in petrochemicals requires plentiful and competitive feedstocks



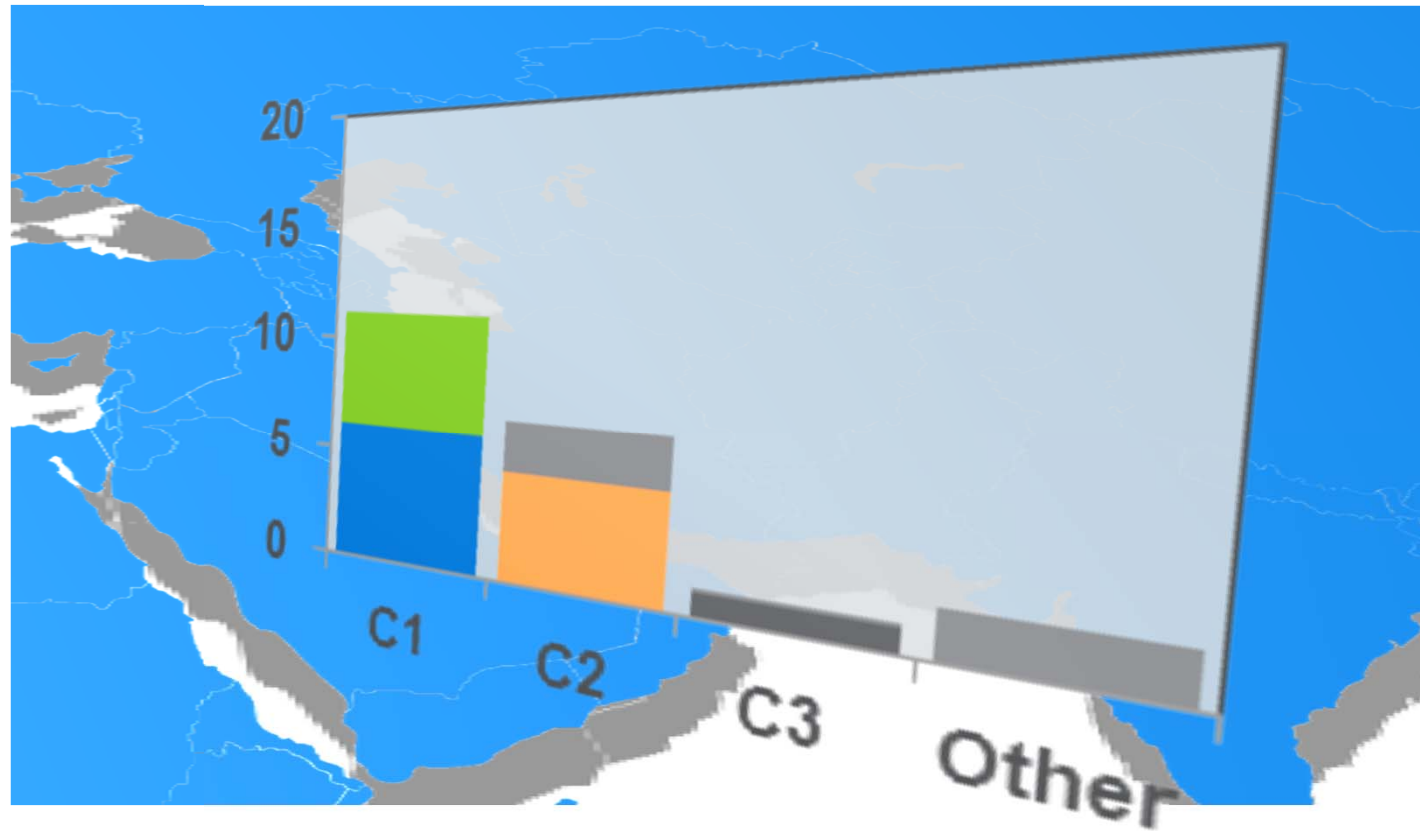
**Middle East has demonstrable advantage in gas based petrochemicals**

China is now massively more significant than any other region, supported by major investments in coal based chemistry



**Chinese surpluses will disrupt the “Export to Asia” model followed across the ME**

# Iran's feedstock position has meant a focus on C1/C2 chemistry with little production outside PE or of C2+ derivatives



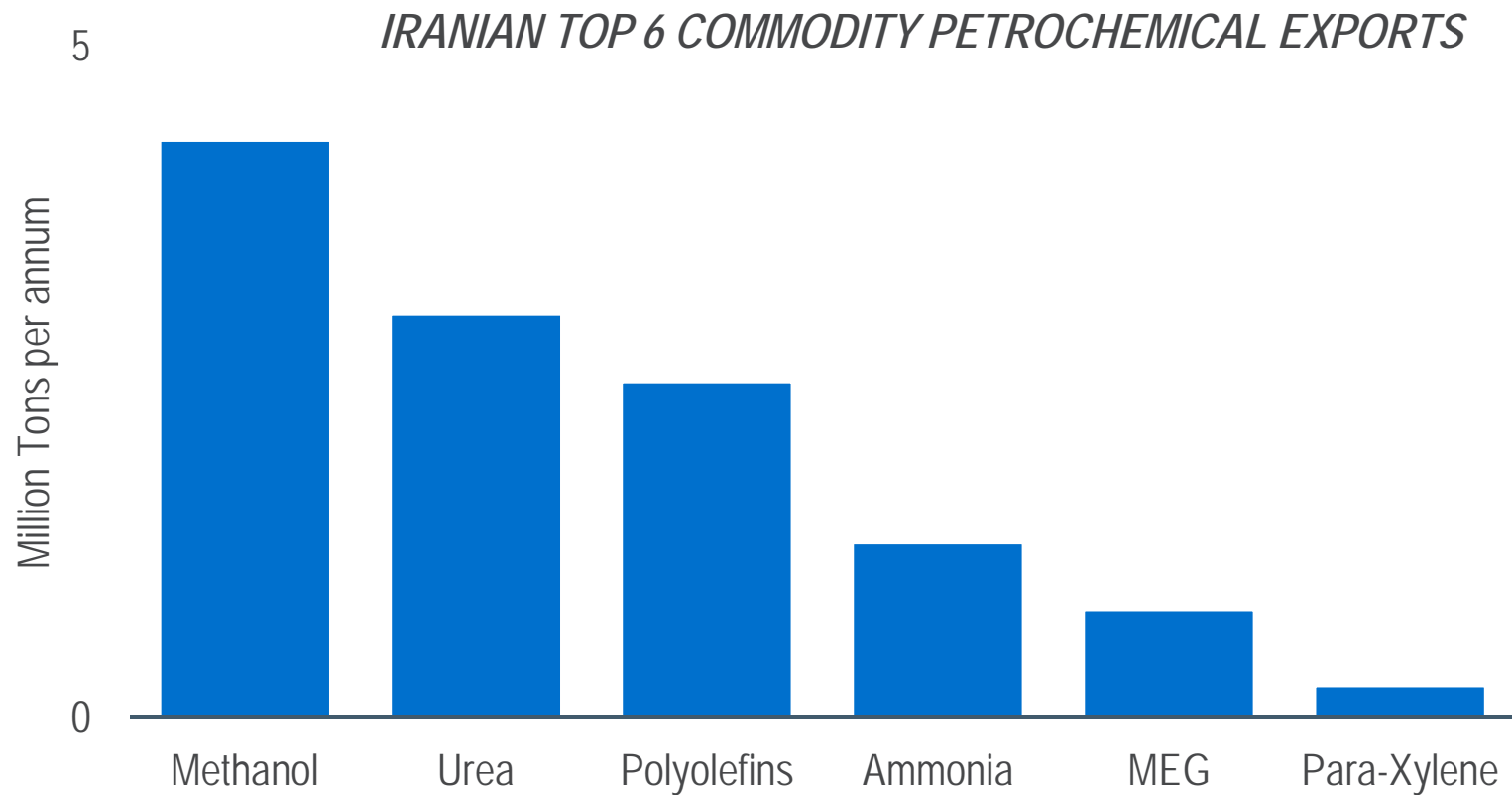
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■ Ammonia ■ Methanol ■ PE ■ PP ■ Other

2016 Capacities in Million Tons

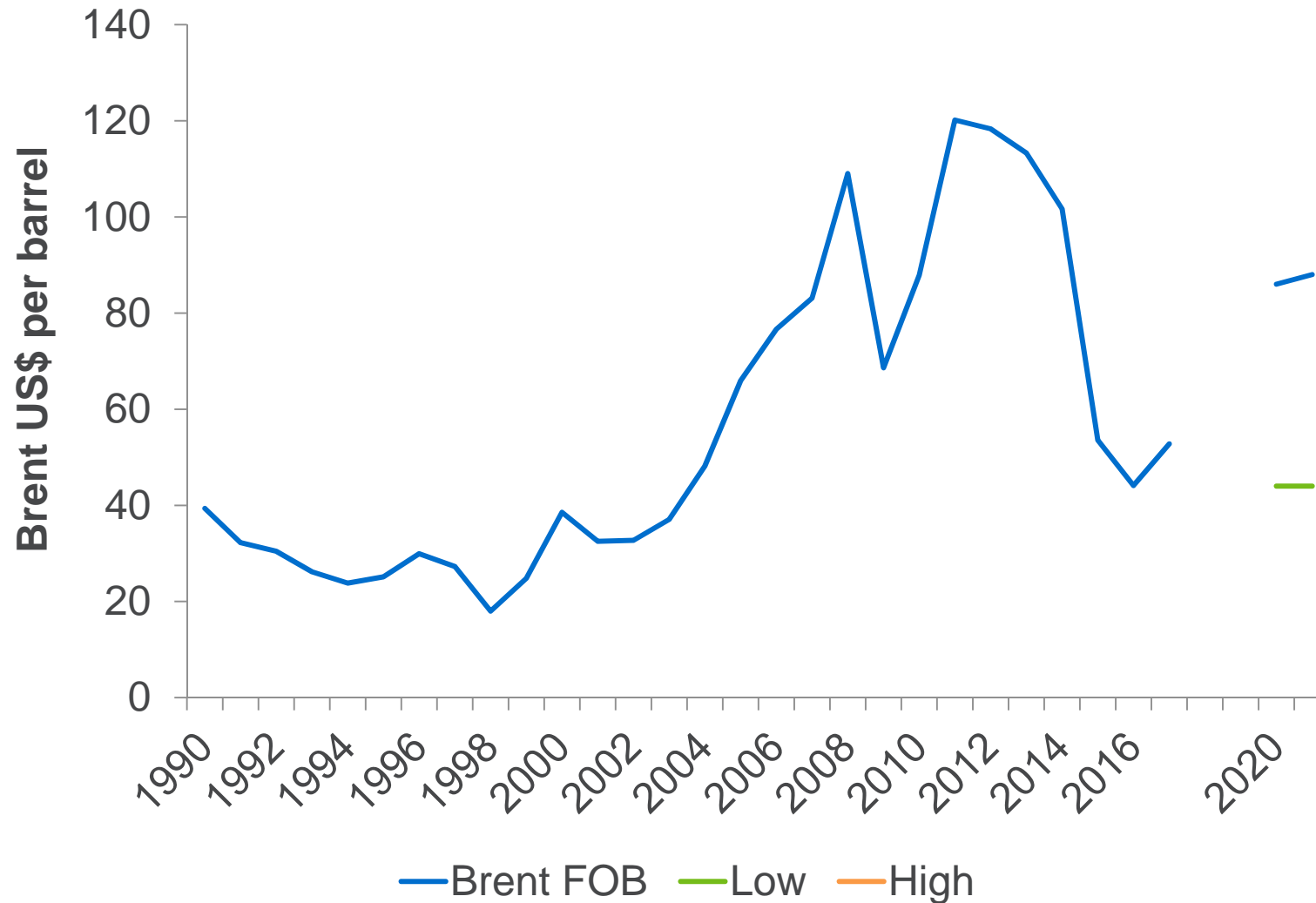
**While Iranian competitiveness is centred on gas based processing, domestic import substitution opportunities exist for C2+ products**

# Iranian investments have already resulted in significant export of commodity petrochemicals



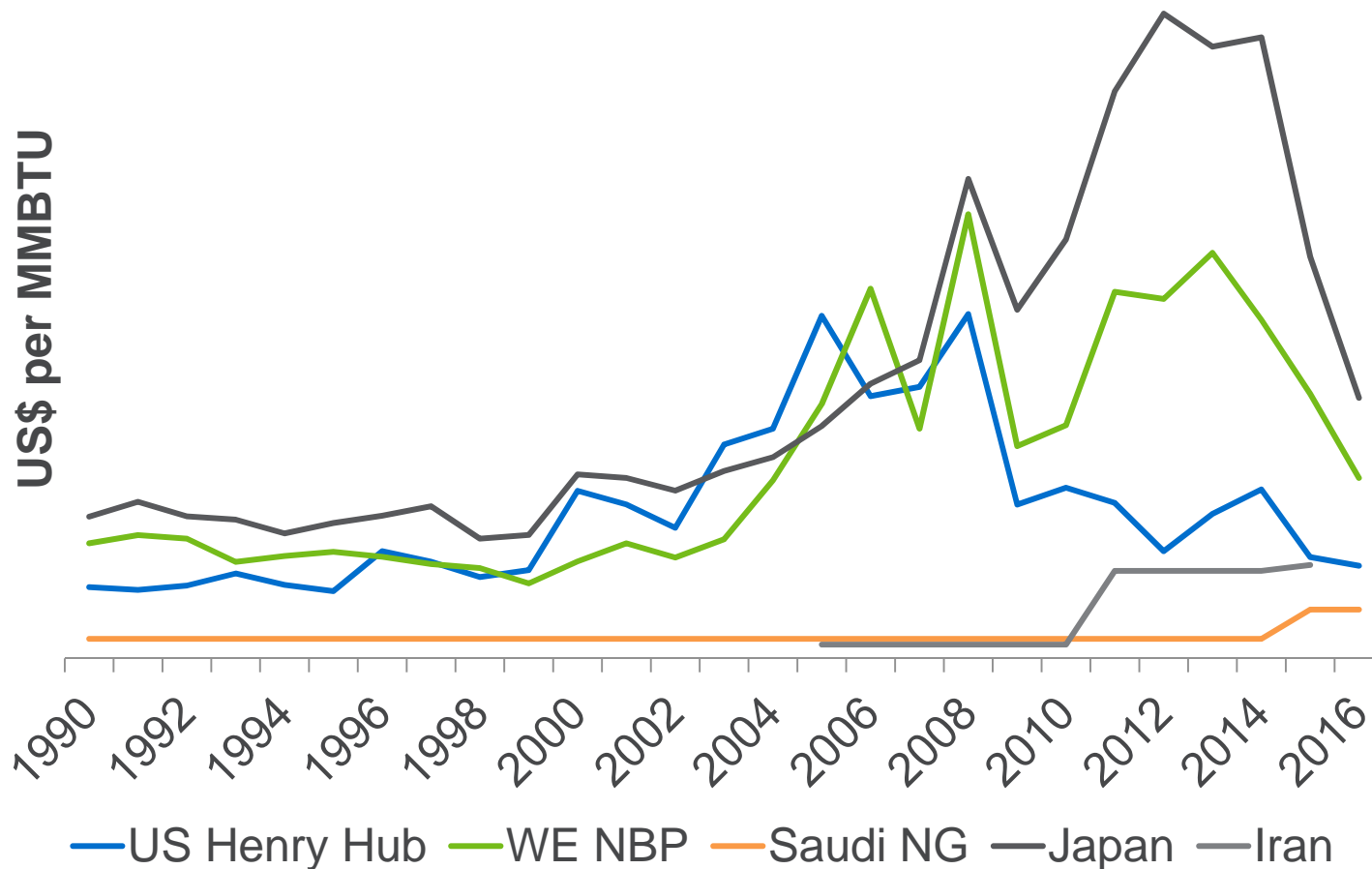
***Despite these surpluses, some commodity petrochemicals remain in deficit such as polypropylene***

# Petrochemical product prices are strongly driven by crude oil prices, which are no longer expected to breach \$100 per barrel



**Current financing is often around a \$60 - \$80 base case with downside sensitivity as low as \$30 per barrel requested by some Lenders**

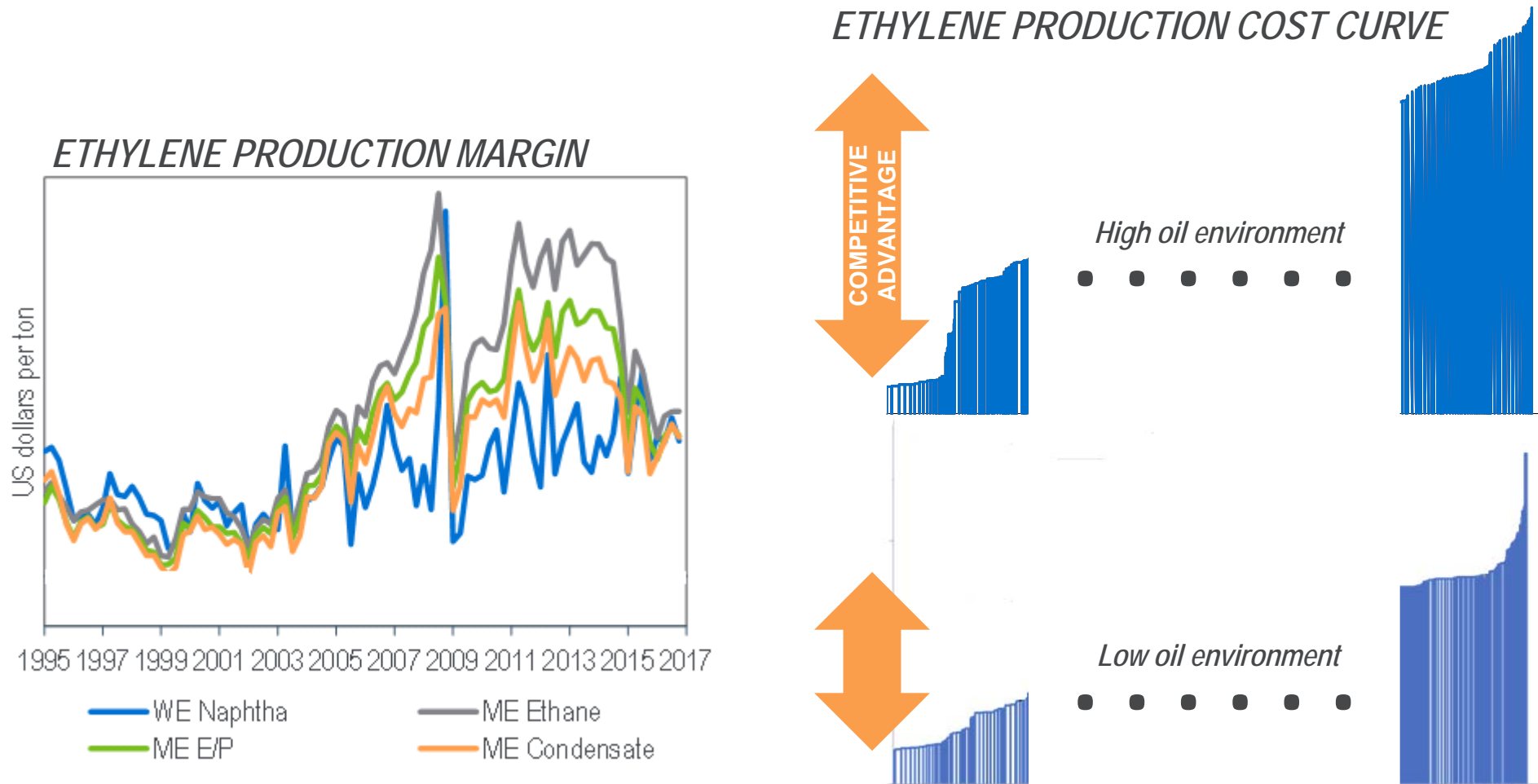
# Gas price is a strong driver for petrochemical competitiveness; China has also exploited from low value coal feedstock



**Current Iranian Gas Valuations are not as attractive as those seen during the previous investment wave – this has direct impact on competitiveness**

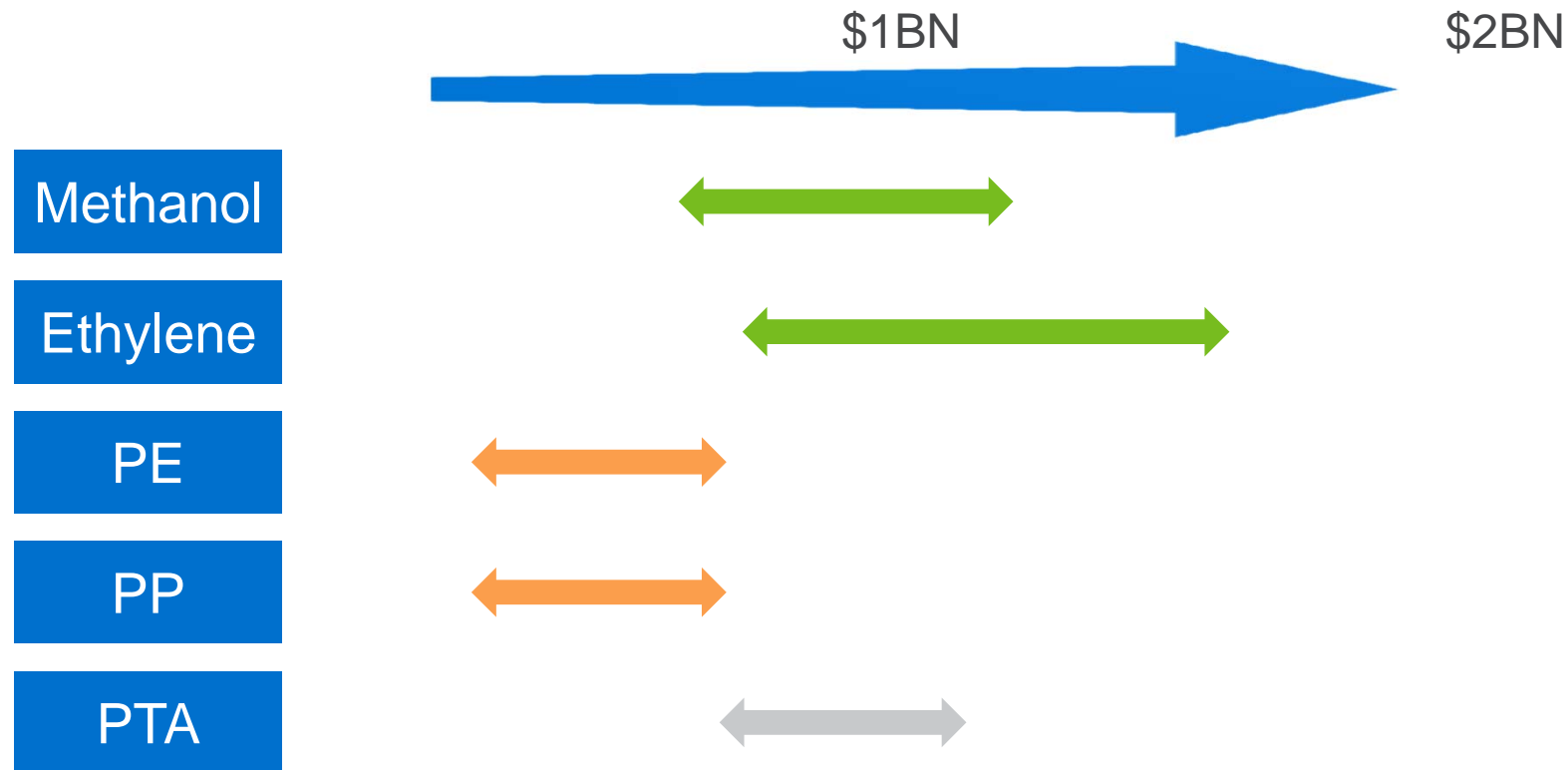


# Lower oil prices make it harder to gain competitive advantage from feedstock alone



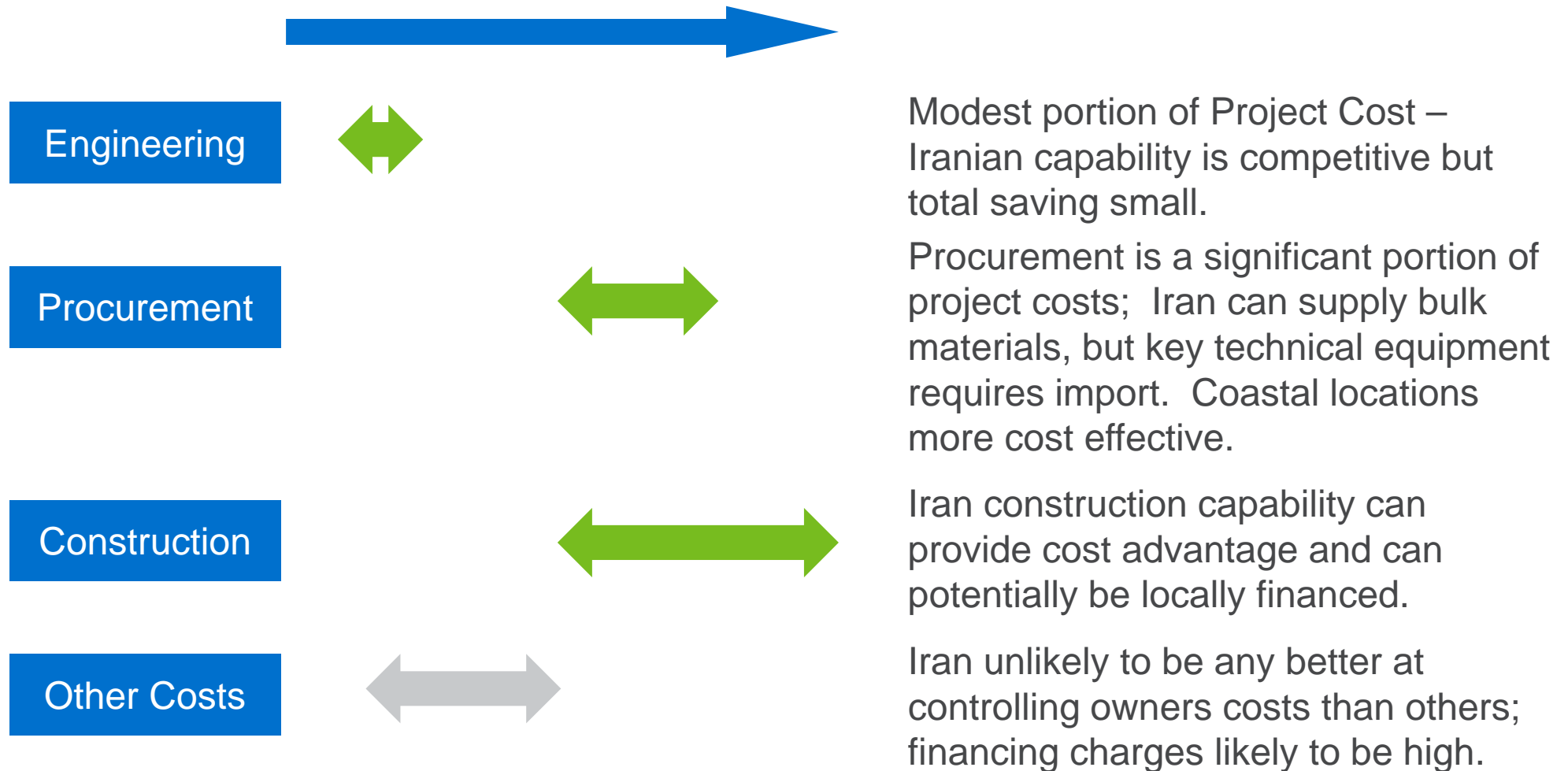
**New investments must show a significant cost advantage over existing producers to support debt repayment – this is more challenging when oil is low**

# Capital cost issues are challenging projects around the world, but Iran is especially impacted due to financing issues



***Any investment in commodity petrochemicals will require SIGNIFICANT financing  
This represents a key constraint on new project development***

# Iran has some opportunity to use the strength of local industries to bring capital costs down, but the reduction is only modest.



***The construction phase provides the best opportunity for cost control on Iranian Projects.***



# Based on the above a simple SWOT can be derived for Iranian Petrochemicals

	C1/C2 Derivatives	C2+ Derivatives
Strengths	<ul style="list-style-type: none"> <li>■ Cost Competitiveness</li> <li>■ Experience and existing assets</li> <li>■ Coastal Location</li> </ul>	<ul style="list-style-type: none"> <li>■ Import Substitution</li> <li>■ Potentially reduced capex due to smaller scale</li> </ul>
Weaknesses	<ul style="list-style-type: none"> <li>■ Saturation</li> </ul>	<ul style="list-style-type: none"> <li>■ Competitiveness is modest aside from serving local market</li> <li>■ Technology access</li> </ul>
Opportunities	<ul style="list-style-type: none"> <li>■ Most suitable for external financing</li> <li>■ Improvement of existing assets</li> </ul>	<ul style="list-style-type: none"> <li>■ Economic value add</li> <li>■ Can be located inland to spread investment spend</li> </ul>
Threats	<ul style="list-style-type: none"> <li>■ Too many projects competing for the same funds</li> </ul>	<ul style="list-style-type: none"> <li>■ Saudi Arabia has already moved downstream</li> </ul>

The analysis below is included in detail in a recent Nexant Multi Client report on Iran



**All these factors will impact on developments in the Iranian Petrochemical Sector**

# Nexant is pleased to support Iran and has offerings that are integrated through the Energy and Chemicals Value Chain

## Energy

## Chemicals

### POWER & RENEWABLES



- Grid Management
- Distribution Software
- Energy Efficiency
- Demand Side Management
- Renewables
  - Solar
  - Biomass
  - Municipal Waste
  - Wind
  - Clean Coal

### GAS



- Gas Market Analytics
- Gas Monetization
- LNG & Gas Pipelines
- Gas Project Due Diligence
- Gas Regulation
- Gas Pricing & Tariffs

### DOWNSTREAM OIL



- Petroleum Refining
- Storage & Distribution
- Biofuels
- Oxygenates
- Coal to Liquids
- Gas to Liquids
- Base Oils
- Lubricants

### C1 CHEMICALS & FERTILIZERS



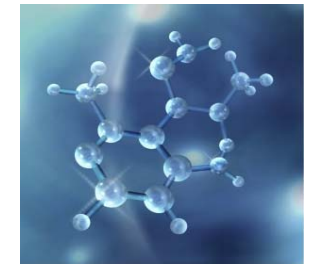
- Ammonia
- Urea
- Melamine
- Ammonium Nitrates
- Phosphate & NPK Fertilizers
- Methanol
- Formaldehyde
- Acetyls
- Other syngas derivatives

### BASE PETROCHEMICALS & POLYMERS



- Olefins
- Aromatics
- Polyolefins
- Vinyls
- Styrenics
- Polyesters
- Polyamides
- Acrylates
- Rubbers
- Other olefin and aromatic derivatives

### INTERMEDIATE & SPECIALITY CHEMICALS



- Surfactants
- Oleochemicals
- Engineering & Speciality Polymers
- Coatings, Adhesives, Sealants & Elastomers (CASE)
- Polyurethanes
- Resins
- Biochemicals
- Speciality & Fine Chemicals

**Nexant Capability**





# THANK YOU

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