

# *Investor Day*

New Orleans, Louisiana,  
USA

14 September 2015

**Incitec Pivot Limited**

**DYNO**  
Dyno Nobel



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# Zero Harm



- Emergency procedure
- Emergency exit locations

# Welcome & program

## Monday, 14 September 2015

Introduction	James Fazzino	Managing Director & CEO
DNA Overview	Gary Kubera	President, Dyno Nobel Americas
Morning Tea		
Group Business Update	Frank Micallef	Chief Financial Officer
USA Ammonia Market Update	Jeff Minnis	President, Ammonia Division Trammo
USA Gas Market Update	Rob Pierce	Managing Director, Head of Energy, Americas UBS
Lunch Break		
Louisiana Project Overview	David Zelinski Morris Hofman Chris Morgan James Fazzino	President, Onshore Engineering & Construction KBR Louisiana Project Director Louisiana Plant Manager Managing Director & CEO
Break & Site Tour		

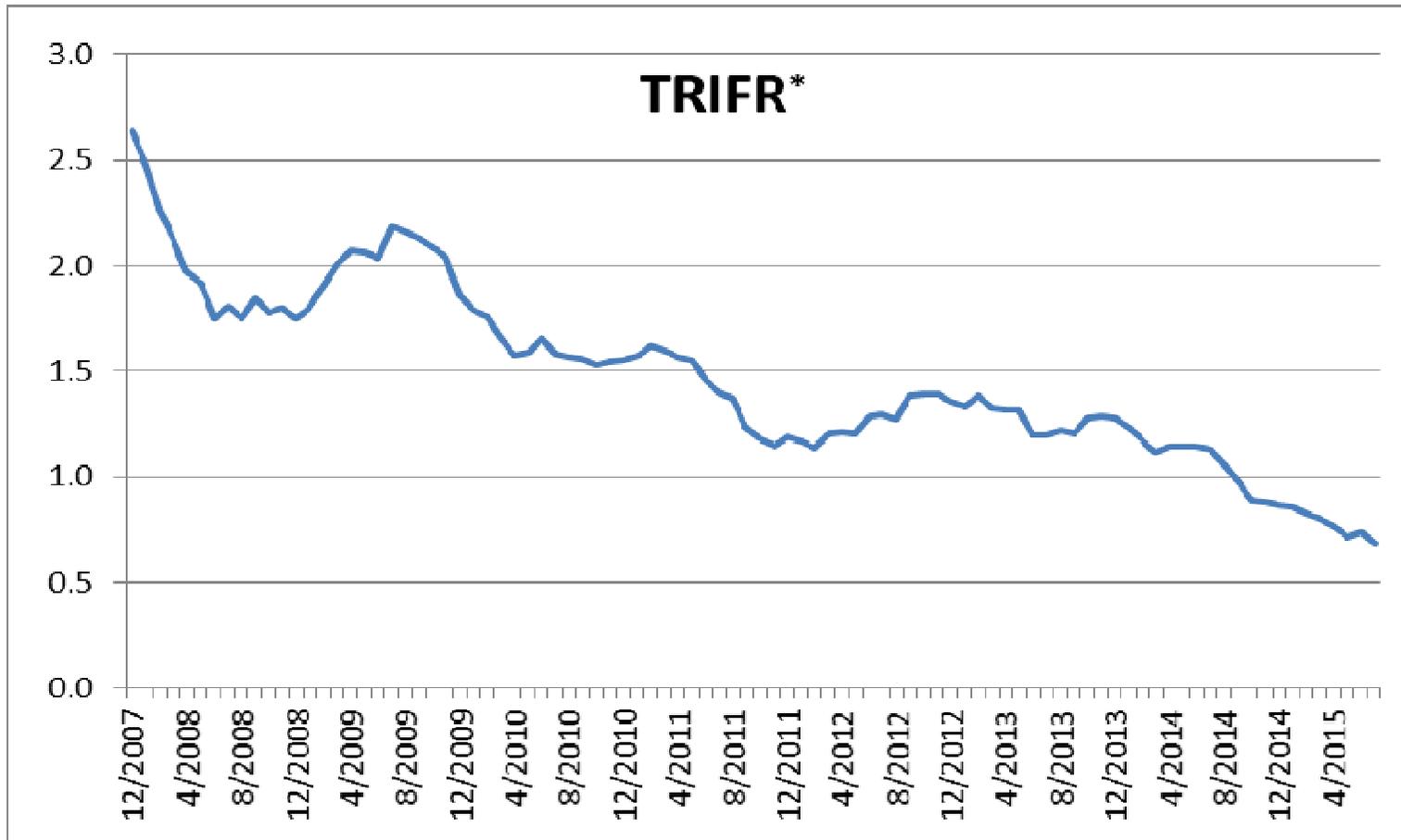
The background image shows an industrial facility, likely a refinery or chemical plant. A prominent feature is a tall, white cylindrical tower with a red band around its middle. The foreground is filled with a complex network of metal pipes, walkways, and structural steel. In the distance, there are more industrial buildings and a clear sky.

# *Strategy*

James Fazzino

Managing Director and Chief Executive Officer

# Incitec Pivot's No.1 objective: Safety



- 1 fatality in DNAP in May 2015
- TRIFR improvement reflects improved execution across the business

\* TRIFR = Total Recordable Injury Frequency Rate

# Strategy on a page

**Industrialisation  
of Asia**



**Shale gas  
revolution**



**Nitrogen  
manufacturing**



**Input side of  
value chain**

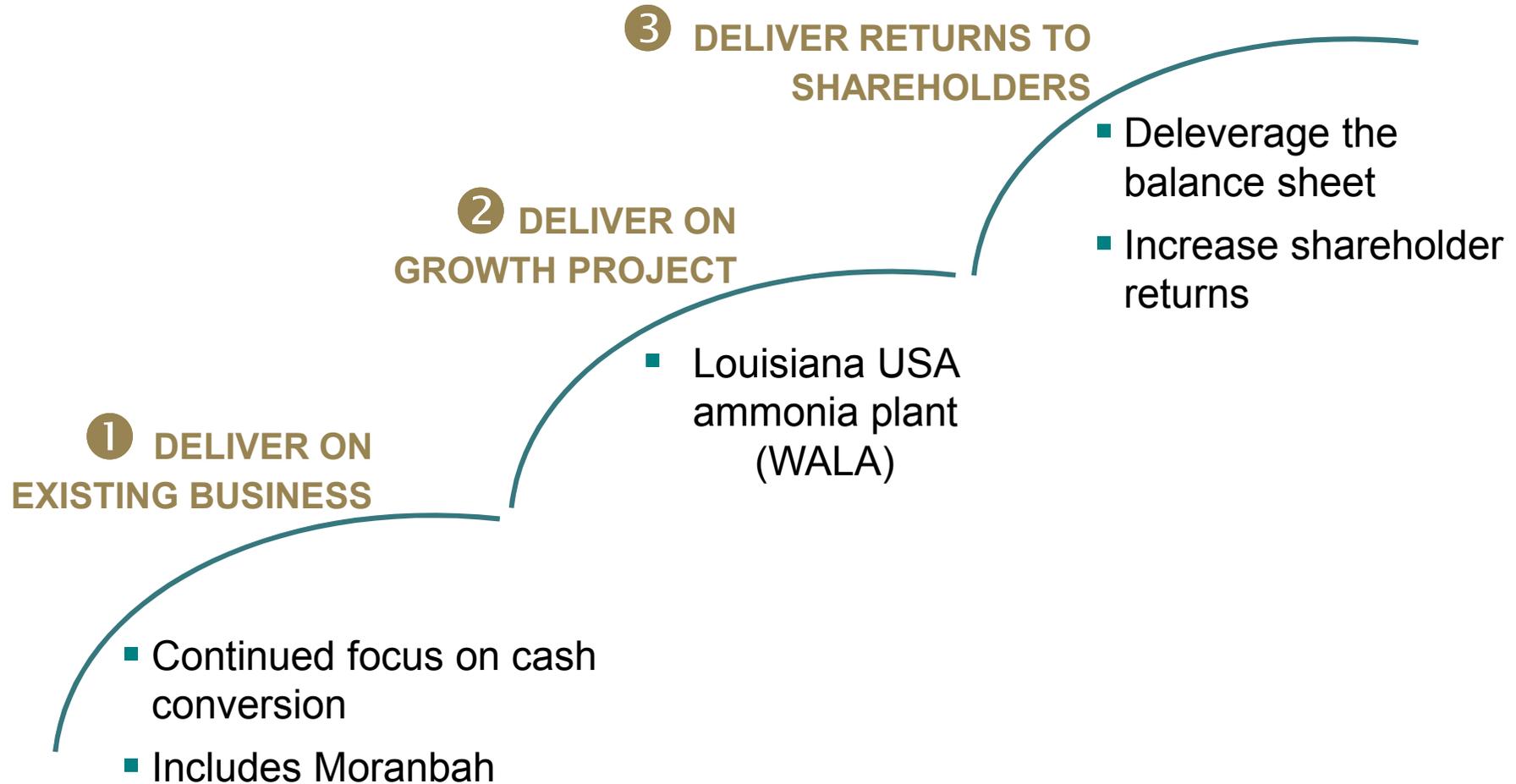


**Customer  
aligned  
downstream  
businesses**



**BEx – Superior Execution**  
*Continuous Improvement and Productivity*

# Strategy execution



**BEx – Superior Execution**  
*Continuous Improvement and Productivity*

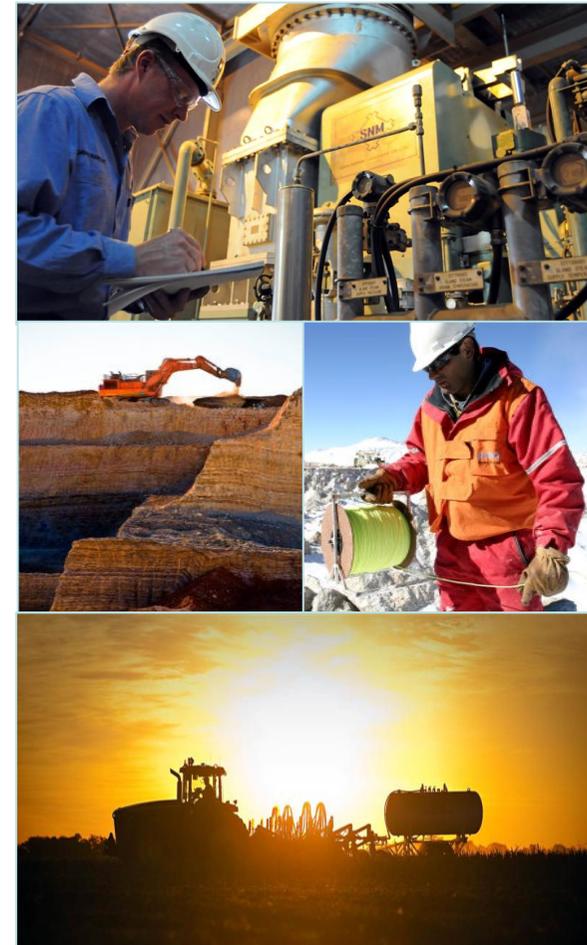
# Introduction to Business Excellence (BEx)



BEx at IPL is all about leadership, standards and rigour in continuous improvement:

- 1) Defining what's important and ensuring alignment throughout the business
- 2) A planned, disciplined approach to each day, supported by visual management tools
- 3) Documented and standardised work
- 4) Rigour and compliance is achieved via a cycle of 'Plan, Do, Check, Act'
- 5) Real leadership: Significant time is invested in reviewing, coaching, providing clarity and alignment to goals and driving the right culture via leading by example
- 6) A culture where continuous business improvement becomes the standard modus operandi

BEx is the system we use to continuously and sustainably improve the way we work and enables us to realise our shared Company Goals and Values



# Phosphate Hill Granulator



## Project Brief

### Project Title: Clean Inspect Tag Process

**Description:** The dedicated CIT process team found wear to ammonia sparger arm on the Granulator. This wear had been undetectable from initial inspections and previous 5 whys. The CIT focus uncovered the wear causing the issues which equated to a loss of production of 7 tons per hour.



Team Members : Dedicated CIT Team

## Benefits

- Increased production rate
- Improved equipment uptime rate
- Asset Care delivery of tangible bottom line benefit
- Contribution to record site production of >1Mt
- Estimated \$A4million benefit in FY15

## Project Status

	Yellow Belt					Just Do It			
	D	M	A	I	C	P	D	C	A
Date						6/15	6/15	7/15	7/15
Status						●	●	●	●

# Phosphate Hill: Safety & material handling



## Project Brief

**Project Title: Reduction in Weight for GATX Wagon Lids**

**Description:** An operator proposed reducing the weight of the lids of the loading nozzle lids of the GATX wagons. With the help of the maintenance team, the lid was redesigned and the weight reduced from 20kg to 13kg. This reduced the potential of soft tissue injuries as the lids are handled 16 times per day.



Team member with the lid wearing his PPE

## Benefits

- Reduced soft tissue injuries by reducing the lid weight from 20kg to 13kg
- Morale of the Material Handling Team (empowerment)



## Project Status

	Yellow Belt					Just Do It			
	D	M	A	I	C	P	D	C	A
Date						11/14	2/15	6/15	9/15
Status						●	●	●	

# Carthage – Maintenance



## Project Brief

**Project Title:** Replacement of Nitric Unloading Pump

**Description :** Purchase a new more reliable pump that is proven in other applications on site. Uptime will increase by 2 months over a year. This will greatly reduce the manpower and time spent in replacing the pump along with the lost production related to the previous pump model.



Project Team Members

## Benefits

- Safety – Reduction in decontamination, removal, and installation of HNO<sub>3</sub> pump.
- Cost savings - estimated to deliver a 24 month payback for the new pump at \$US15k and an additional labour savings of \$US4k pa.
- Productivity – Increasing the availability to run the process related to the HNO<sub>3</sub> pump (Mixed Acid) and thereby increasing the availability of maintenance staff to complete other tasks.
- Morale – Improved by not continually working on the same equipment (repeating tasks)

## Project Status

	Yellow Belt					Just Do It			
	D	M	A	I	C	P	D	C	A
Date	5/1 1	5/1 1	6/5	6/5	9/ 30				
Status	●	●	●	●	●				

# Mexico – Warehousing

## Project Brief

**Project Title:** Indirect Warehouse & Spares

**Description:** Consolidated all indirect supplies and spares into one central warehouse with a store person for control of inventory.

**Action Taken:** An existing garage was enclosed, shelving was set up and all the indirect materials and spares were relocated. The store is manned and all items are issued through the store keeper.



Project Team Members

## Benefits

- Controls in place for issuance of indirect supplies and spares.
- With 5S discipline in the warehouse, items are easy to find and manage.
- Annual savings of \$US172k



## Project Status

	Yellow Belt					Just Do It			
	D	M	A	I	C	P	D	C	A
Date						2/15	2/15	3/15	3/15
Status						●	●	●	●

# Investment thesis

## Favourable Industry Fundamentals

- Fertiliser & explosives remain an attractive investment
- Fundamentals support long term growth outlook

## Strong base business

- No. 1 fertiliser business in Australia<sup>(1)</sup>
- No. 2 explosives business in North America<sup>(1)</sup>
- No. 2 explosives business in Australia<sup>(1)</sup>

## Short & medium term growth

- Louisiana ammonia earnings growth
- \$A depreciation
- Strong free cashflow outlook

(1) Based on industry publications and IPL volume estimates for 2015

# *DNA Overview*

Gary Kubera  
*President Dyno Nobel Americas*

# DNA President Gary Kubera - Bio

- Former CEO of Canexus, a \$600m publicly traded Canadian chemical spin-off from Nexen
- Previously roles:
  - Marketing and Business Development VP of Canexus
  - Global Core Business VP for SC Johnson's Polymer division
  - VP for multiple divisions with McWhorter Technologies
- Education:
  - Bachelor of Arts in Chemistry from Ithaca College
  - MBA in Finance from the University of Chicago



# Zero Harm – Our never ending focus



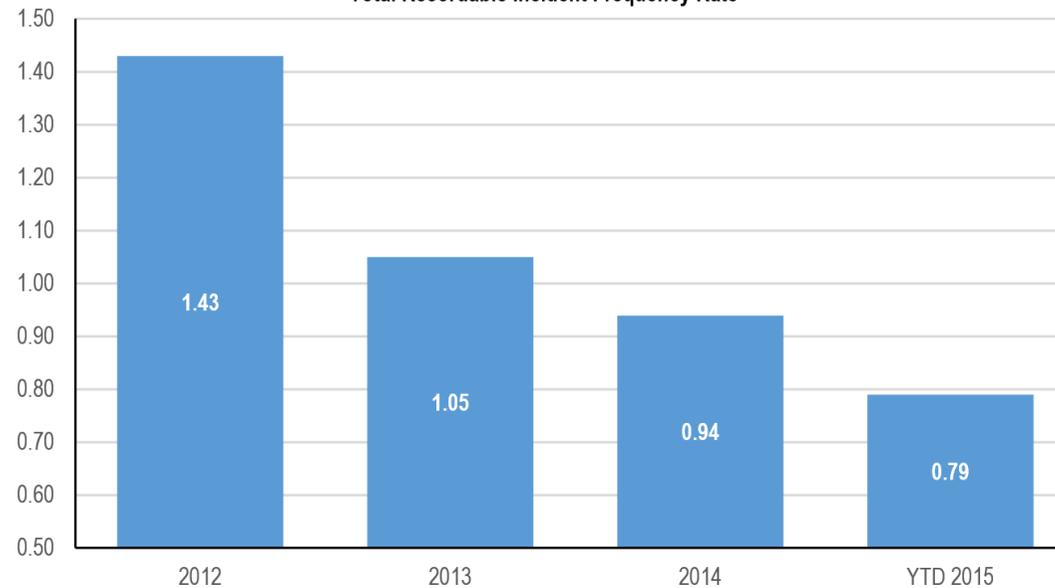
## Leadership and Personal Responsibility

- Safety excellence and business excellence are interdependent
- Leadership visibility and coaching (Safety Partners, Safe Act Observations, Job Safety Analysis, Gemba Walks, Take 5!)
- Empowering frontline employees
- Moving from independent to interdependent culture

## Key Influences on Performance

- Risk management processes
- Near miss reporting and incident investigation to root cause
- Management of change
- Process Safety Management (PSM)

Total Recordable Incident Frequency Rate



Source: DNA

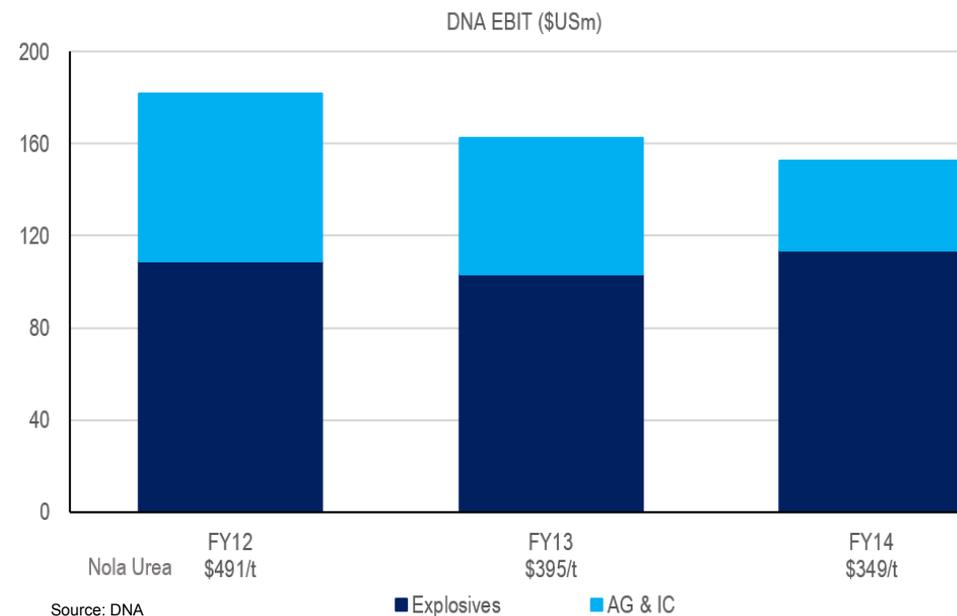
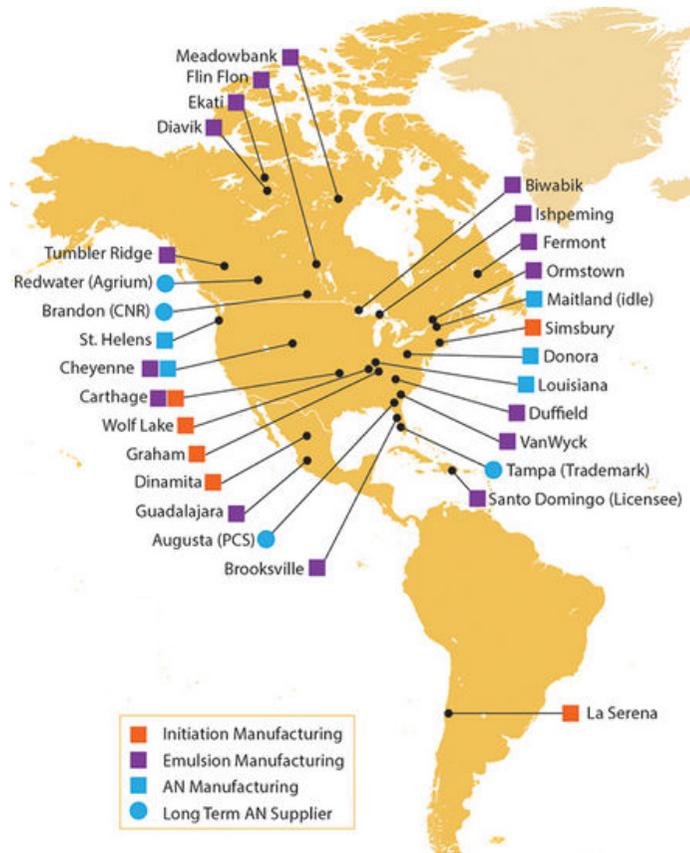
# Summary

- **Profit optimisation even in a challenging market**
  - Focus on selling our plants out in their logical footprint
  - Differentiated products
  - Q&C market growth
- **Successfully managing the commodity downturn**
  - Asset rationalisation
  - Risk management focus
  - Cost control and BEx optimization
- **Completion of transformational WALA project**

# DNA dimensions



# DNA business overview

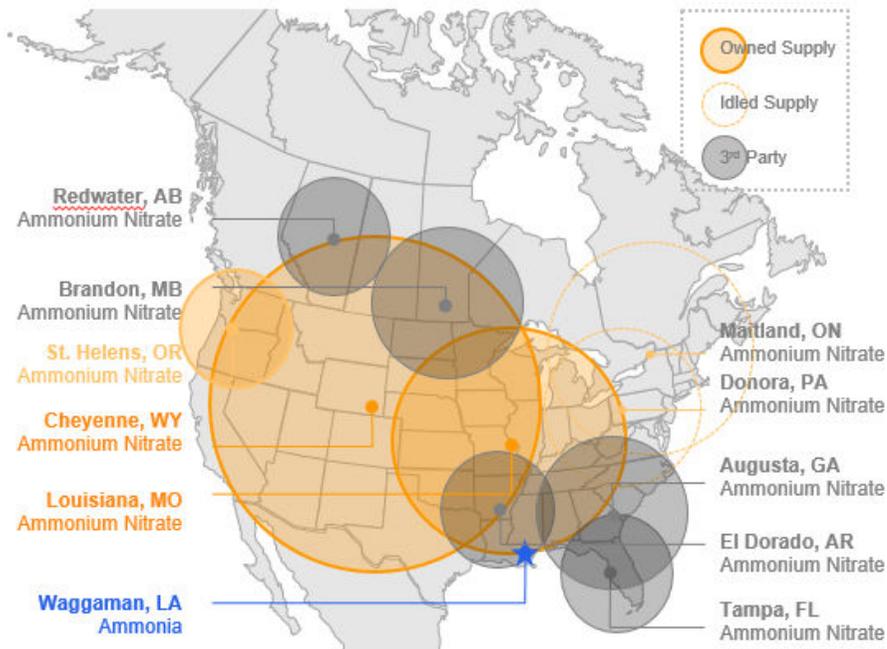


DNA has an extensive footprint in the North American market with diversified earnings. Manufacturing is core to the business

WALA to drive earnings growth from 3Q 2016

# DNA footprint – well positioned for future success

Dyno Nobel AN Supply Capacity (2016)  
(thousand short tons)



- **Rational decisions on owned AN supply made**
  - Manufacturing footprint has been right sized following Donora idling in Apr-15
  - Above industry average utilisation rates
  - Cheyenne and Louisiana Missouri well positioned on cost curve
- **Ideally located manufacturing**
- **Limited near-term contract expirations**
- **Significant focus on coal and metals to manage risk in the current market**
- **Well placed to maintain share of growing Q&C market**
- **St Helens production sells out within local footprint**

# DNA three year priorities



# DNA priorities

- Optimise profit in logical footprint
- Risk based approach to end commodity exposure
- Maximize earnings from differentiated products
- Effective cost management
- Successful WALA commissioning and integration

# DNA differentiated products – continued focus

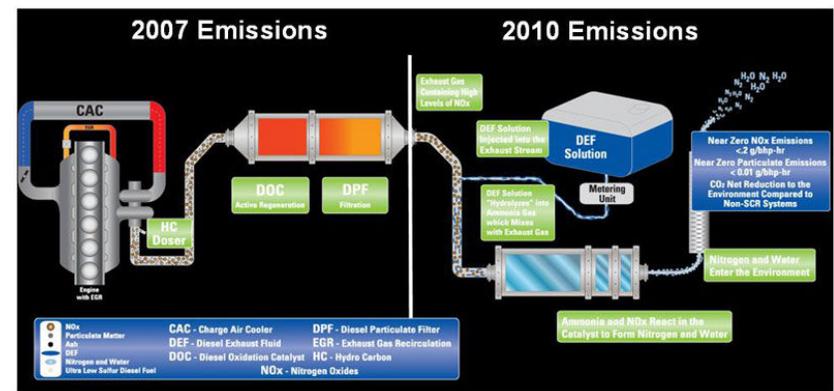
- Continued focus on driving practical innovation and differentiation
- Critical in maintaining margins and competitive advantage by delivering productivity improvements for our customers
- Examples include
  - $\Delta E$  (*Differential Energy*)  
Unique emulsion system that allows tailored energy profile that improves safety, delivers superior fragmentation, reduces NOx and provides significant cost benefits to customers



# DNA differentiated products – continued focus

## Examples include

- **Electronic Detonators**  
Enables more precise timing to deliver superior fragmentation. Continued market penetration. Next generation equipment and detonator are currently being commercialised.
- **Hybrid Detonator**  
Unique electronic detonator with the practical handling characteristics of non-electronic systems. Trials underway in 2015, with commercialisation planned for 2016. Significant value in use benefits for customers.
- **Diesel Exhaust Fluid (DEF)**  
High value NOX reduction in diesel emissions. DNA has ~150ktpa of production capacity at St Helens and Cheyenne. Strong market growth driven by EPA regulatory requirements.



# Effective cost management in DNA

- **BEx delivered in 2014 and is on track in 2015**
  - \$13m benefit in FY14 and \$6m in 1H15
  - Focusing on manufacturing, supply chain and procurement
  - Culture is being embedded across the business
  - Examples include Carthage boosters and Simsbury electronics automation
  
- **Business has continually right sized cost base**
  - Reflects reduced volume environment
  - Back office costs/efficiencies of \$10m over the last three years. Further progress made in FY15
  - Focus has shifted toward efficiencies

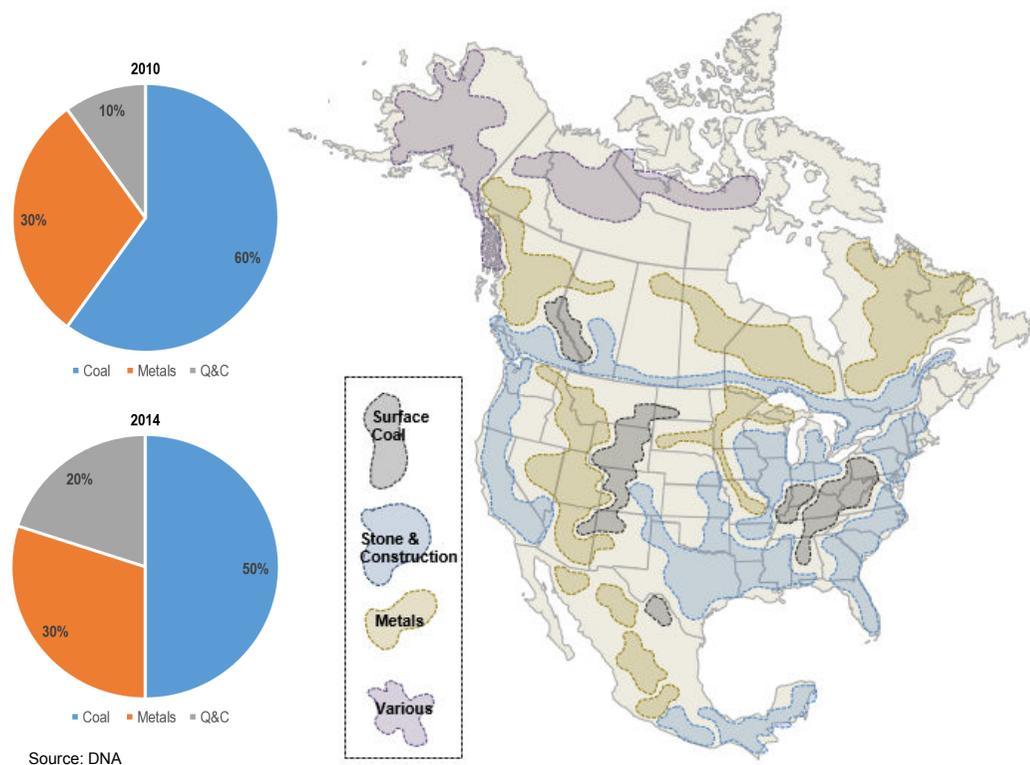
# Market overview



# Commodity markets

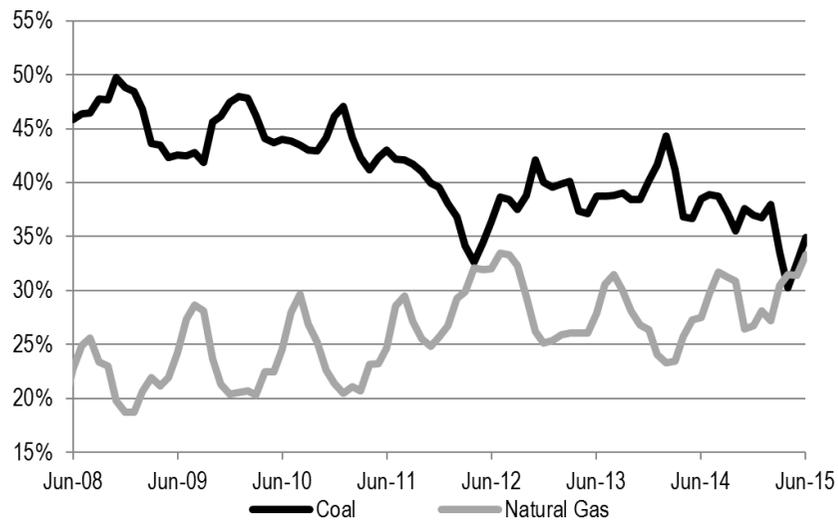
- **Short-term coal & metals recovery unlikely**
  - Significant slowdown in Chinese demand
  - Reduced demand with limited production curtailments
  - Natural gas switching in the USA
  - Elevated inventories
  - Regulatory impediments
- **Strong Q&C growth to continue**
  - Improving construction activity
  - Road and infrastructure projects
- **Weaker urea prices offset by Diesel Exhaust Fluid (DEF) growth**
  - Urea prices impacted by global oversupply
  - DEF provides an exciting opportunity

## North America Commodity Basins & DNA Revenue Exposure



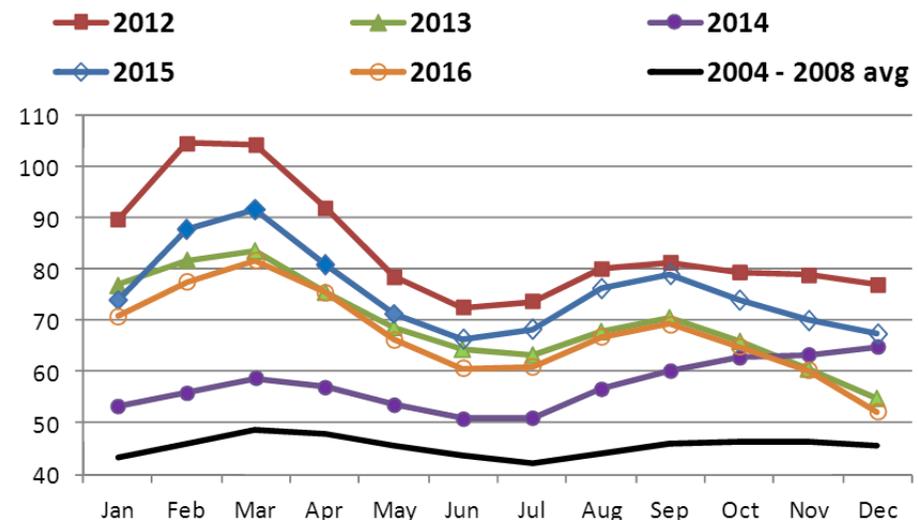
# Structural shift in US coal demand

## U.S. Power Generation Mix



Source: EIA

## Power Sector Coal Days Burn vs. 5 Year Avg



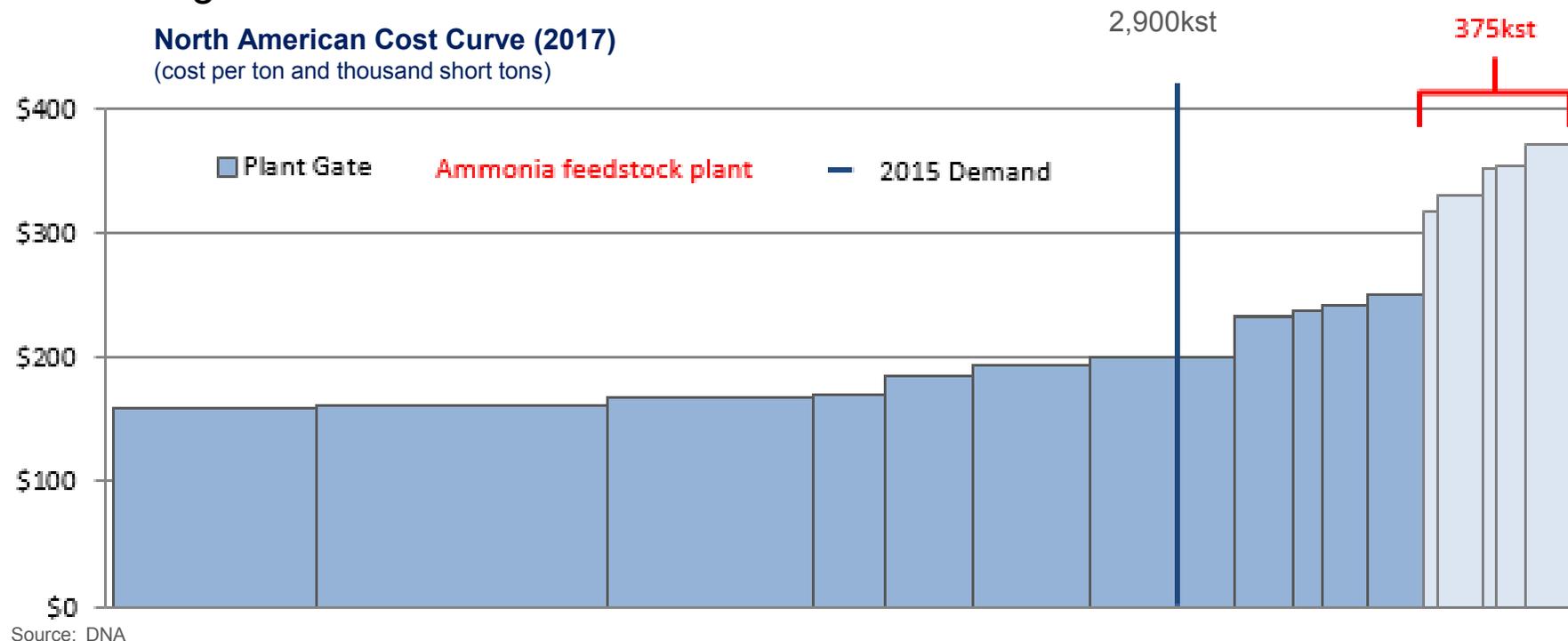
Source: PIRA

# AN markets – responding to industry challenges

- **DNA has responded to reduced demand**
  - Right sized manufacturing footprint following idling of Donora in Apr-15
  - DNA utilisation subsequently higher than industry average of 80%
  - Remaining plants are ideally positioned and low cost post WALA
- **AN demand more resilient than commodity demand**
  - Limited production curtailments
  - Rising strip ratios
  - AN margins are impacted by production volumes, not commodity prices
  - AN demand is likely to be flat at best over the short-term

# North American AN utilization

- DNA production is now sustainable following right sizing
- DNA Louisiana Missouri AN plant cost position improves post WALA commissioning
- Significant third party availability. Sourcing costs to become more favourable from 2017
- Flattening cost curve



# WALA – a transformational project



# WALA – a transformational project

## Robust Return Profile

- USA natural gas prices expected to remain low relative to global prices
- Global ammonia prices continue to be set by marginal producer in Europe
- Capacity and logistics allow for future growth

## Engineering, Procurement & Construction

- Lump-sum, turn-key basis substantially reduces risk
- Only one of its kind in the industry

## Project Delivery

- On-time and on-budget
- Timing meets business needs and retains early mover advantage

# WALA – 100% committed offtake

- **DNA**
  - ~250kt (AN, UAN, DEF) integrated supply to existing business
  - Gas-backed offtake supporting explosives and agricultural production
- **Cornerstone Chemical Company**
  - ~200kt (Melamine, Acrylonitrile) onsite supply replacing imported product
- **Trammo**
  - ~350kt (Agricultural and Industrial markets)
  - Proven ammonia trader with logistics capabilities, terminals and delivery assets and customer relationships



# WALA – logistics agility

- **Logistics agility is crucial for delivering high operating rates**
- **Logistics capability of 170% provides flexibility allows for future growth**
  - Ability to deliver warm or cold ammonia for onsite consumption (anticipated 220ktpa)
  - Pipeline capacity in excess of 450ktpa
  - Rail capacity of 200kt
  - Truck terminal capacity of ~225ktpa
  - Barge capacity of ~225ktpa
  - Usable storage of 35kt at WALA



# Questions ?





# *Business update*

Frank Micallef  
Chief Financial Officer

# Fertilisers outlook



- Phosphate Hill
  - Reliable production, consistent with first half
  - BEx productivity & efficiency gains
  - Remaining gas price increase in 2016
- SCI Industrial Chemicals EBIT - soft urea price
- Mixed external factors
  - Global fertiliser prices are mixed: DAP above the pcp and urea below the pcp
  - Positive impact of the weaker \$A
  - Distribution volume expected to be consistent with 2014 as per 1H outlook
- Distribution market remains challenging
  - Negative product mix impact & contraction in distribution margins experienced in the 1st half continues as per 1H outlook
  - Seasonal conditions increase margin pressure
- GI running at approximately 85% uptime as per 1H outlook
- IPF 2014 asset sales profit of \$13m not repeated in 2015

## ■ Explosives

- \$US Explosives EBIT expected to be roughly in line with the pcp per 1H outlook
- 2H markets:
  - Coal: Wet weather and continued low gas prices impacting volumes
  - Metals & Mining: Challenging conditions (particularly Nth America Iron Ore) continue to impact explosives volumes
  - Q&C: Strong growth trend continues in the second half
- Overall explosives volume down ~ 15%
- BEx: Continued trend of benefits being realised in manufacturing and supply

## ■ Agriculture & Industrial Chemicals

- Fertiliser prices: Average YTD Urea NOLA price down \$US40/t on the pcp
- Volume: in line with 1H outlook
- St Helens: turnaround & control systems work in September and October

## ■ Weaker \$A: positive for translation of DNA's \$US earnings

## ■ Moranbah update

- Moranbah EBIT expected ~ \$130m, in line with 8 July 2015 Moranbah Update announcement
- Arrow has expressed confidence that the gas supply reduction is not expected to persist beyond calendar year 2016

## ■ Mining markets – no change to 1H outlook; they remain challenging

- Customers continue to be cost focussed
- Product margins have also impacted by reduced powder factors, negative product mix and some contract extensions at small margin reductions
- Consistent with 1H, services margins are contracting and insourcing pressure remains
- Indonesia & Nitromak earnings down consistent with 1H outlook

## ■ Outlook: Consistent with 1H outlook, subject to adjustment for Moranbah

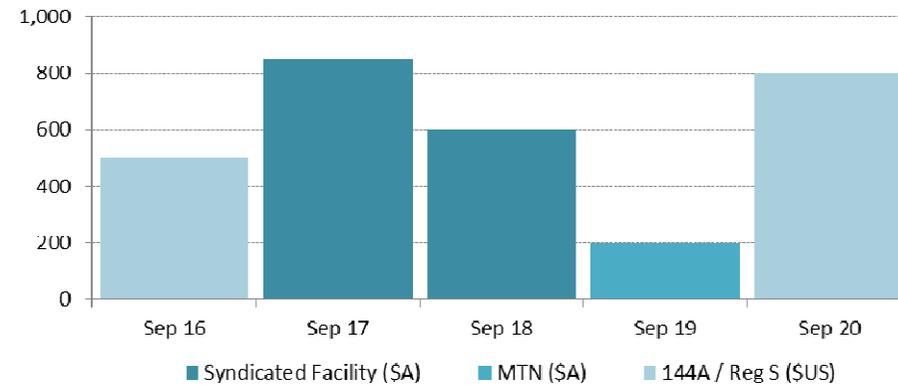
# The rest – in line with 1H outlook

- Corporate costs: no change to outlook of \$22m to \$24m
- Net borrowing costs: expected to be in \$67m to \$70m range
- Expected capital spend:
  - Base business sustenance (incl shuts): ~ \$160m
  - Louisiana: ~ \$US200m
- Hedging:
  - Full participation for fertiliser business
  - Louisiana gas: ~25% of year 1 exposure hedged between ~\$3mmbtu to ~\$4mmbtu

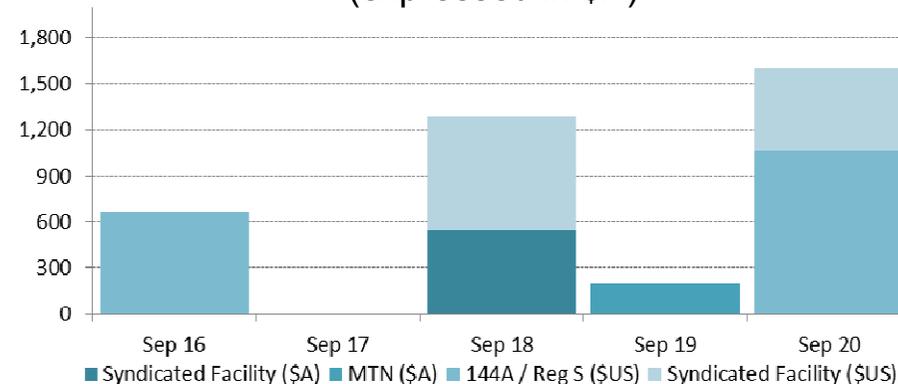
# Refinancing update

- New syndicated facilities in place
  - 3 year ~\$A0.6b
  - 3 year ~\$US0.6b
  - 5 year \$US0.4b
- \$US500m bond matures in December and will be repaid
- Post Dec 2015 bond repayment, facilities tenor increases to 4.1 years (from 2.8 years)
- Reduced interest margins which will help offset expected increased USA base rates

HY2015 Debt Facilities  
(expressed in \$A)



Current Debt Facilities  
(expressed in \$A)



# Questions ?



# *USA Ammonia Market Update*

Jeff Minnis  
Senior Vice President – Ammonia  
Trammo Inc.





# N.A. Ammonia Market Review

Presentation for Incitec Pivot, Ltd. – Investor Day

*Monday, 14 September, 2015*

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## Introduction

Jeffrey D. Minnis  
Senior Vice President  
Ammonia

Trammo, Inc.  
Trammo Commodities Division



15 years with Trammo as head of North American Ammonia, with years in Paris running Trammo's global ammonia business.

15 years prior petrochemical industry experience as an executive with BP Chemicals and BOC (Linde).

More than 18 years in the ammonia industry.

B.A. in Aerospace Engineering from Pennsylvania State University.



## Trammo Corporate Snapshot

- **Privately held company founded in 1965 by Ronald P. Stanton specializing in the international trade of ammonia.**
- **Multi-national corporation, headquartered in NYC, with over 500 employees working from more than 30 cities across the globe, managed by a stable core of highly experienced & specialized senior traders and managers.**
- **Diversified commodities merchandising company by product mix and global network, with centralized finance, legal, risk management, accounting, HR & corporate responsibility, and decentralized trading, chartering, & logistics.**
- **Product portfolio split into 3 divisions: Commodities, Gas and Chemicals**
- **Worldwide trade volume in 2014 of over 45 million MT**
- **Global turnover in 2014 of \$US 12.4 billion**
- **Strong & highly liquid capital structure, allows creative trading solutions**



## Trammo Strategic Market Approach

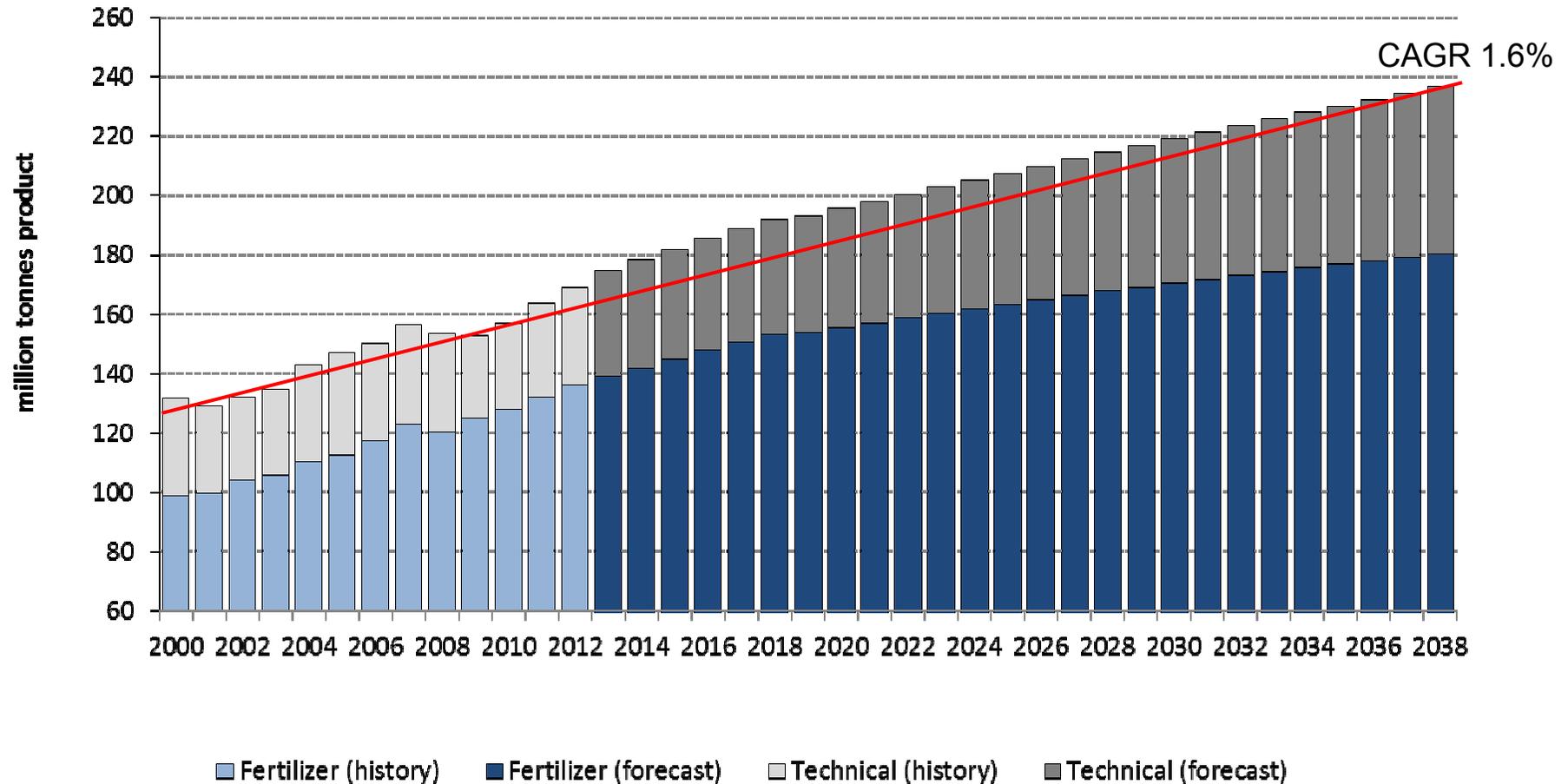
- **Global presence & diversified business relationships, provides instantaneous dissemination of global market data, and heightened trend anticipation.**
- **Focus on developing strategic and sustainable business partnerships promotes commercial optimization and minimizes risk.**
- **Sharing market intelligence with strategic business partners, adds value.**
- **Diversified product portfolio accentuates correlations between products.**
- **Sourcing and selling across geographical regions allows active participation in the evolution of global product flows.**
- **Commitment to deep market penetration through extensive domestic networks in core regions including USA, China, Europe, & Africa.**
- **Varied and creative pricing, payment & commercial models allow best opportunity for business to develop.**



# Consistent growth in global ammonia demand



## Gross ammonia demand forecast to 2038



Since 2000, approximately 3.3 million tonnes of new capacity is required every year to meet global demand

# Global Ammonia Trade Snapshot



- N.A. business based in Tampa, FL, domestic sales office in Iowa.
- Int'l trade based in Paris with offices in China, Turkey, Russia, Jordan, Dubai, India, & Indonesia.
- Largest independent ammonia vessel fleet.
- Largest merchant player w/nearly 20% of global trade.
- Long term off-take agreements from Waggaman, TT, S. America, FSU, Egypt, & Indonesia.
- Largest independent N.A. fleet of ammonia barges.
- Own 3 state-of-the-art ammonia terminals and lease 1, in the heart of the U.S. corn belt.
- Deep U.S. market penetration through integrated deepwater/midwest river terminals, pipelines, barges, rail & truck distribution network, directly linked to industrial, petrochemical, & agricultural consumers.

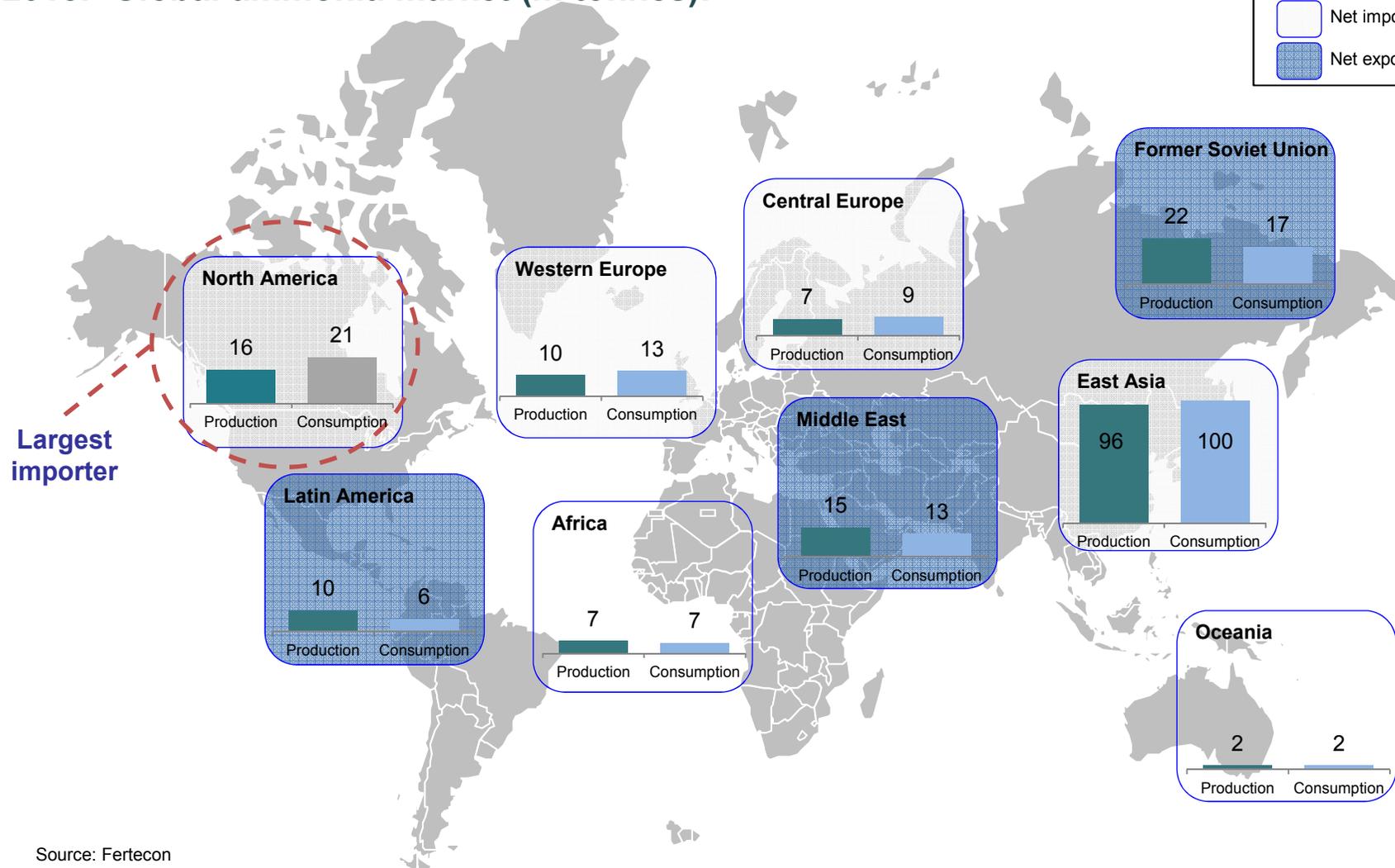
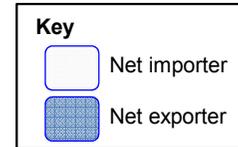


# Global ammonia market

## SUPPLY & DEMAND BALANCE FOR FREE AMMONIA



2015F Global ammonia market (m tonnes):



Source: Fertecon



## N.A. Ammonia Market Outline

- 21 million metric tons annual consumption
- 16 million metric tons annual production
- 5 million metric tons annual imports
- Most imports originate from Trinidad
- FSU quickly becoming the swing supply
- 50% used to produce nitrogen fertilizers
- 28% used to produce petrochemicals
- 22% used for direct application (DA).
- Petchem & DA demand expected to remain flat
- Leading NH<sub>3</sub> developments linked to large domestic fertilizer projects.



# North America remains a net importer of approximately 3mt, post the current build



Company	Location	Ammonia capacity (kmt)	Estimated Free Ammonia* (kmt)	Expected Timing
OCI/CF	Wever, IA	770	180	Q1 2016
CF Industries	Donaldsonville, LA	1150	220	Q1 2016
CF Industries	Port Neal, IA	770	70	2016
Dyno Nobel	Waggaman, LA	800	800	Q3 2016
LSB/El Dorado	El Dorado, AR	340	125	Q3 2016
JR Simplot	Rock Springs, WY	190	45	Q4 2016
Numerous debottlenecking	Various	580	200	now - Q3 2017
Yara/BASF	Freeport, TX	750	750	Q1 2018
		<b>5,351</b>	<b>2,390</b>	

\* ammonia not consumed in onsite downstream production

# N.A. Ammonia Distribution



*“Ammonia is a specialty chemical masquerading as a commodity.”*



- Ammonia moves via highly specialized & expensive distribution assets
- These include fully refrigerated barges, vessels, and tanks; pressurized trucks, railcars and pipelines
- Freight and distribution costs are high
- Location and market access are critical
- Logistics are everything



# Waggaman Marketing Plan

- Waggaman, LA site/market advantages
  - First mover to market
  - Full logistical flexibility
  - Freight advantaged to core markets
- Majority of product will move to existing Trammo customers
- Focus on ratable, non-seasonal consumers
- 50% expected to ship via fully refrigerated barges
- 25% expected to ship via dedicated, state-of-the-art pressurized trucks
- 25% expected to ship via pipeline





# *USA Gas Market Update*

Rob Pierce  
Managing Director, Head of  
Energy, Americas  
UBS



# Incitec Pivot Limited

## Natural Gas Market Update

Robert R. Pierce  
Managing Director, Head of Energy Americas

September 2015



Slide 59

# Abundant U.S. Natural Gas Supply

The United States has a tremendous amount of recoverable Natural Gas resource in place

**EIA estimates that total proved reserves amounted to 354 Tcf of natural gas as of 2013**

- Third party estimates of technically recoverable natural gas reserves (TRR) suggest that the U.S. possesses ~2,500 Tcf as of YE 2014
  - At 2014 dry gas output rates of ~26 Tcf, potential gas supply is ~98 years

**Shale gas reserves have reversed a long period of reserve stagnation in the United States**

- Reserves remained largely unchanged from 1990-2004 (before the shale revolution); shale gas resources were known to producers but not economically recoverable
- With the pairing of horizontal drilling and hydraulic fracturing technologies / techniques, shale resources became key driver of reserve growth

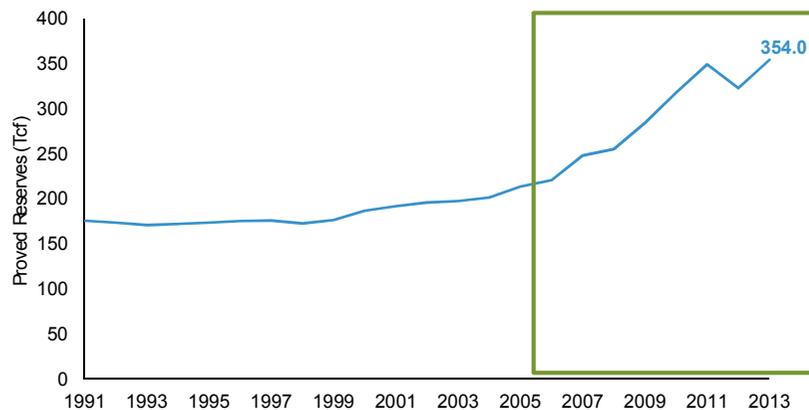
**Resource availability is regional, but infrastructure is transnational (and a gateway to the international markets)**

- Atlantic (includes Northeast) and Gulf Coast regions account for 50+% of all U.S. reserves
- Atlantic production is still in the early stages and has ~150 years of supply based on 2014 output levels and estimated TRR

**Shale gas production is now close to 50% of output**

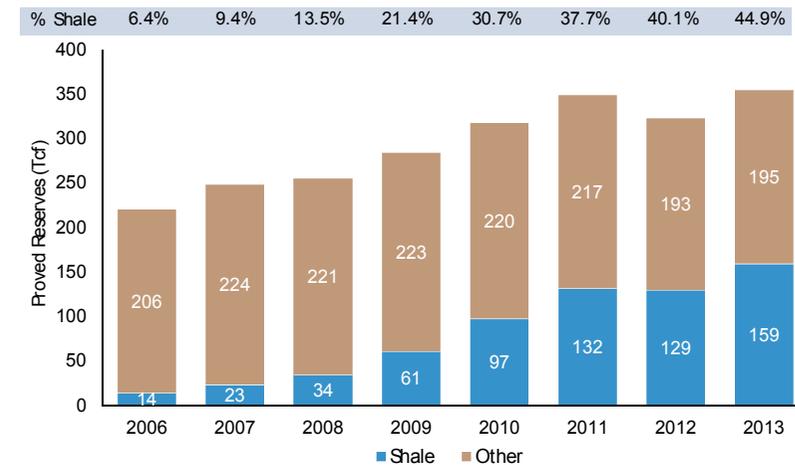
- From 2008, production of shale gas has increased ~23 Bcf/d to ~31 Bcf/d at year-end 2014, more than offsetting declines from other resources
- Associated gas from shale oil production has also contributed to growth in gas supply

**U.S. Natural Gas Proved Reserves**



Source: EIA and Potential Gas Committee

**U.S. Natural Gas Proved Reserves, 2006-2013**

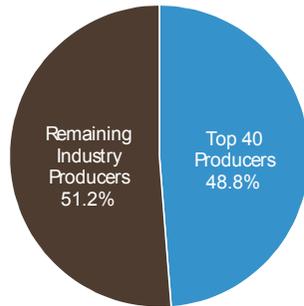


# Diversified Producers and Producing Regions

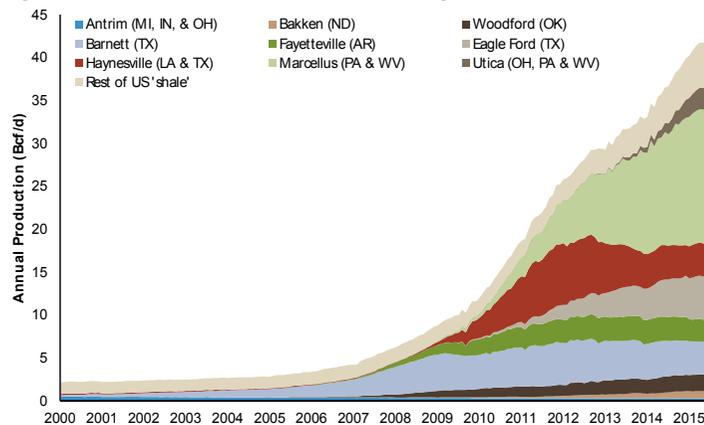
The United States has world-class natural gas resources with a diversified base of supply and producers

- Production is supplied by 7,000+ producers<sup>1</sup>, with the 40 largest contributing less than half of total dry gas production
- The share of production growth from shale and other unconventional plays has been dramatic, as unconvensionals now represent over 90% of dry gas

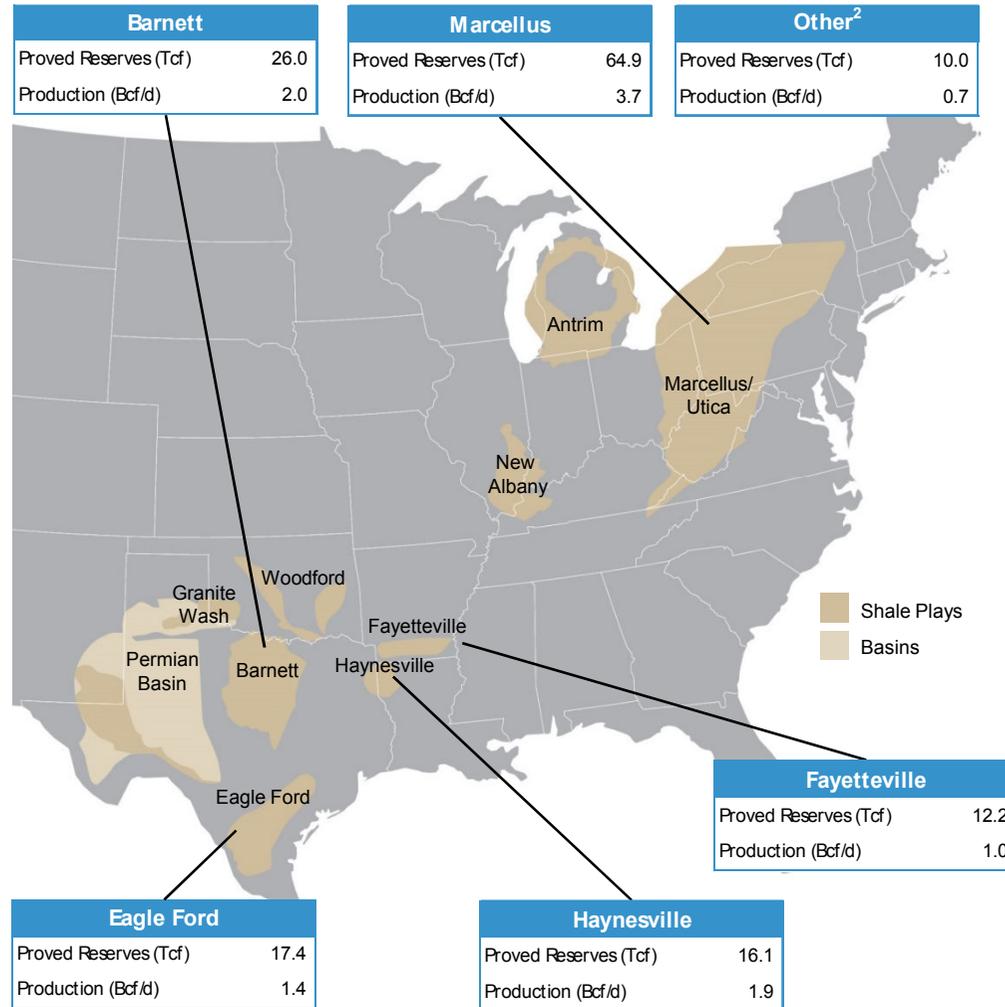
## Diversified Producer Base<sup>1</sup>



## Dry Gas Production From Shale Plays, 2000-2015 YTD



## Key U.S. Shale Gas Plays & 2013 Proved Reserves and Production



Source: EIA, Independent Petroleum Association of America ("IPAA") and Natural Gas Suppliers Association ("NGSA")

Note:

- 1 Producer count is based on well operators; % of production is based on total Q1 2015 production of 73.6 Bcf/d
- 2 Other shale gas includes fields reported as shale not assigned by EIA to the Marcellus, Barnett, Haynesville, Eagle Ford, Woodford, or Fayetteville shale gas plays

# U.S. Natural Gas Production Forecast

Gas production levels are forecast to grow, largely driven by continued exploitation of shale gas resources

**Forecast production growth is largely a result of the development of shale gas resources in the Lower 48 states, which more than offsets declines in other Lower 48 onshore production**

- In the EIA's 2015 Reference case, shale gas production grows at 5.1% CAGR from 7.9 Tcf in 2011 to 16.0 Tcf in 2025
  - Approximately half of the total increase in shale gas production over the projection period is forecast to come from the Haynesville and Marcellus formations
- Production levels also benefit from associated gas produced from tight oil formation development

**Producers continue to drive efficiencies through their development programs, enhancing well economics**

- Marcellus and Utica shale are still in the early stages of development compared to other U.S. basins, while Haynesville producers continue to show creativity
- Today's reduced service costs are cyclical, but higher IPs and EURs are structural

**Several areas within the more prolific gas basins remain economic at gas prices below \$4.00 / Mcf**

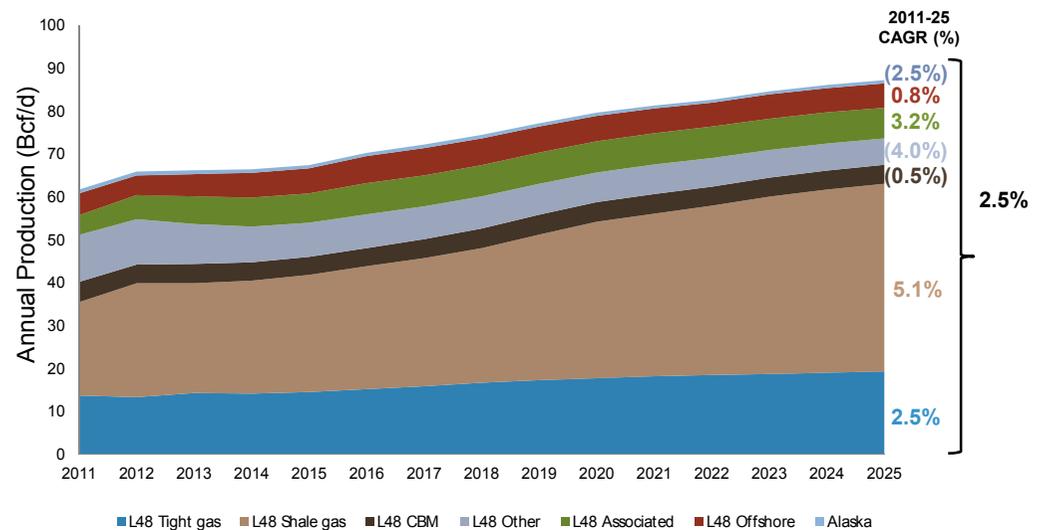
- Today's production excludes the shadow inventory of wells which will likely be brought onto production at higher commodity prices, serving as a lid for the market price

## Haynesville Producer Well Design Analysis<sup>1</sup>

(\$ in millions, except per-unit amounts)

	Old Wells	New Wells	% Δ
Estimated Well Cost	\$7.5	\$9.5 to \$10.0	30%
<b>Well Design</b>			
Lateral Length (ft)	4,600	7,500	63%
Stages	17	27	59%
<b>Production</b>			
EUR Range (Bcf / 1,000' of lateral)	1.2 to 1.3	1.9 to 2.1	60%
Total EUR Range (Bcf)	5.5 to 6.0	14.0 to 16.0	161%
Est 24-hour IP range (Mmcf/d)	9.0 to 10.0	20.0 to 26.0	142%
<b>Investment Returns</b>			
Single Well NPV10 at \$3.00/Mcf	(\$0.4)	\$4.1	NM
Single Well IRR at \$3.00/Mcf	8%	27%	19%
Single Well NPV10 at \$3.50/Mcf	\$1.0	\$7.8	680%
Single Well IRR at \$3.50/Mcf	17%	47%	30%

## Dry Gas Production Forecast, 2011-2025



Source: Comstock Resources, EIA, Wall Street research

Notes:

1 Comstock Resources Haynesville well economics as of September 2015

# Natural Gas Infrastructure Outlook

The build-out and / or reversal of midstream infrastructure will result in more favorable shale play economics

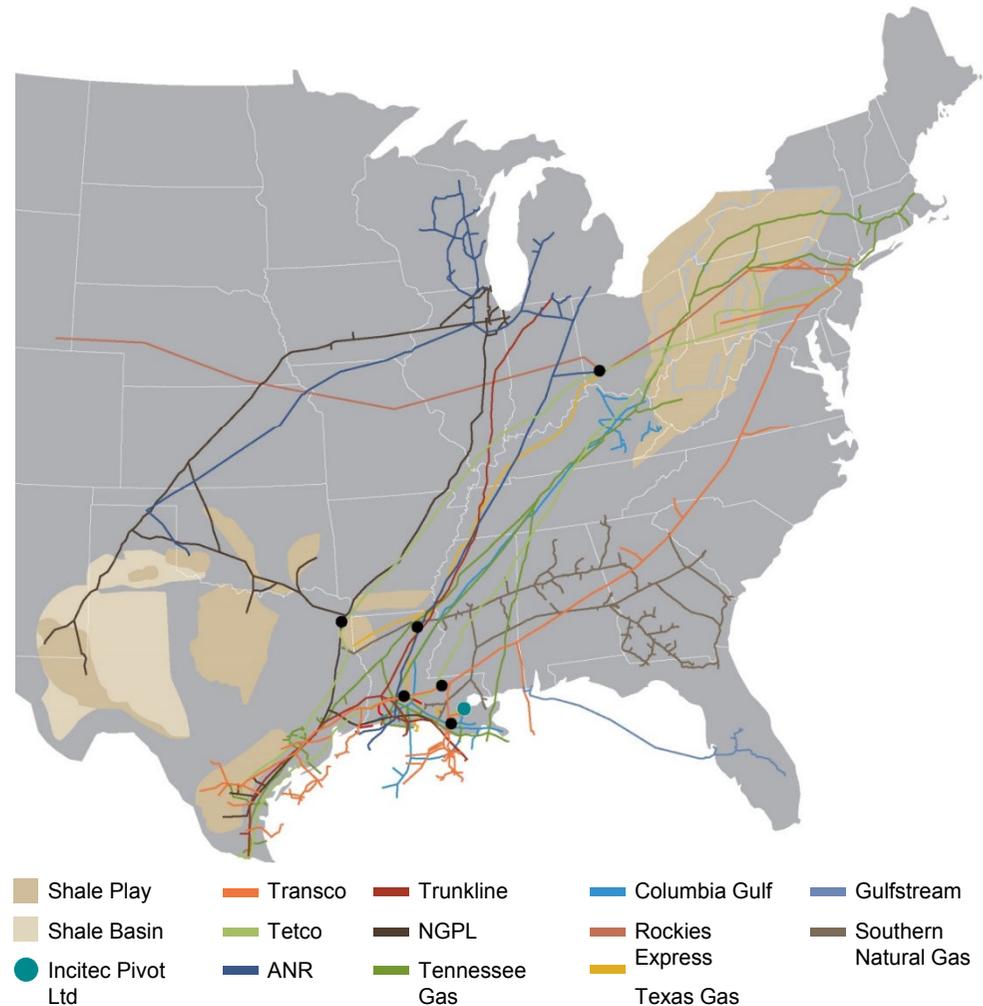
- Takeaway infrastructure additions have lagged shale development but as production grows, midstream companies have greater visibility on meeting minimum volume requirements
- Natural gas production growth will require significant investment in pipeline infrastructure and will result in narrowing price differentials and incentivize future drilling
- The midstream infrastructure sector is forecast to accommodate the production growth with substantial capex through 2035

## Natural Gas Capital Expenditure Forecast

(\$ in Billions of Real Dollars)	2014-2035 (2012\$)	Average Annual (2012\$)
Gas Transmission Mainline Pipe	\$87.2	\$4.0
Laterals to/from Power Plants, Gas Storage, and Processing Plants	45.2	2.1
Gathering Line (pipe only)	35.6	1.6
Gas Gathering Line Compression	23.5	1.1
Gas Lease Equipment	26.9	1.2
Gas Pipeline & Storage Compression	11.6	0.5
Gas Storage Fields	12.0	0.5
Gas Processing Capacity	27.4	1.2
LNG Export Facilities	43.7	2.0
<b>Total Capital Expenditure</b>	<b>\$313.1</b>	<b>\$14.2</b>

Source: INGAA Report 3/2014 and Company Materials

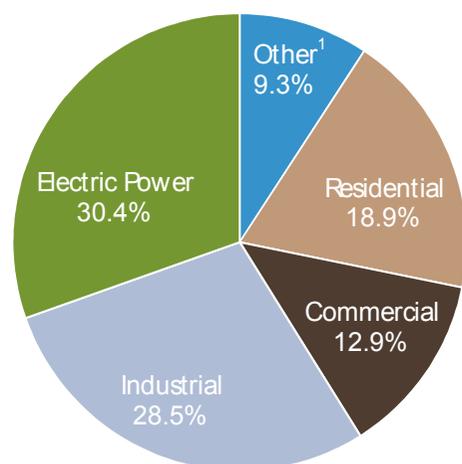
## U.S. Midstream Infrastructure Landscape Today



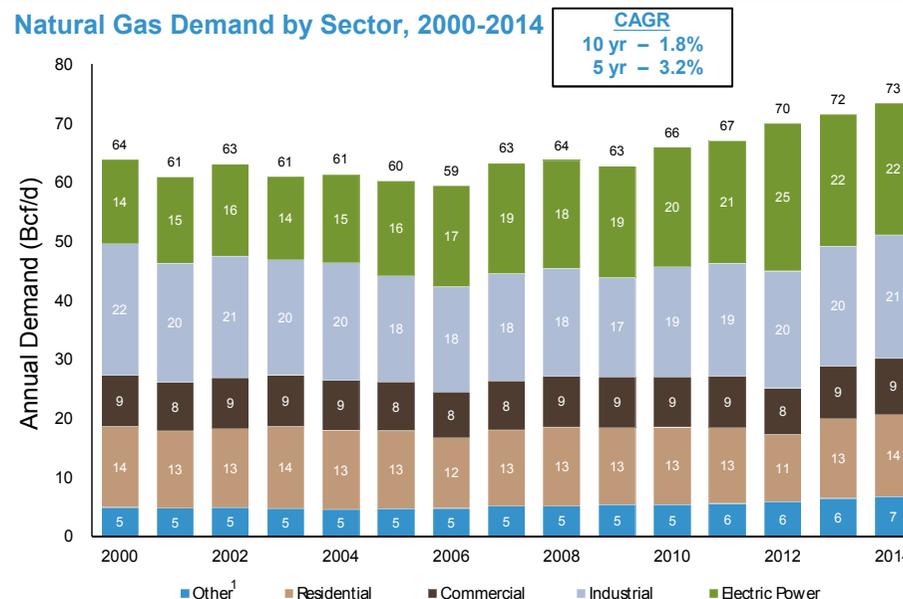
# U.S. Natural Gas Demand Overview

Sector	Key Drivers	Trend	Outlook
Residential / Commercial	Heating, conversions, household formation, conservation, seasonality / winter weather	Flat / down	Flattish
Industrial	IP, oil-to-gas ratio, capital expenditure, seasonality / winter weather	In recovery from years of structural decline	Structural growth trend, although modest in terms of total demand
Power	Regulation, emissions, seasonality / winter weather, economics	Natural gas is gaining share of declining power demand	Flattish, gains from coal switching in 2015 on the back of new federal regulations but weak load growth and renewables serve as headwinds
Export	Economics, infrastructure, regulation	Small gains to Mexico offsetting declines to Canada	Positive, large gains beyond 2015 through LNG exports and infrastructure build to Mexico

Natural Gas Demand by Sector, 2014



Natural Gas Demand by Sector, 2000-2014



Source: EIA and Wall Street Research

Note:

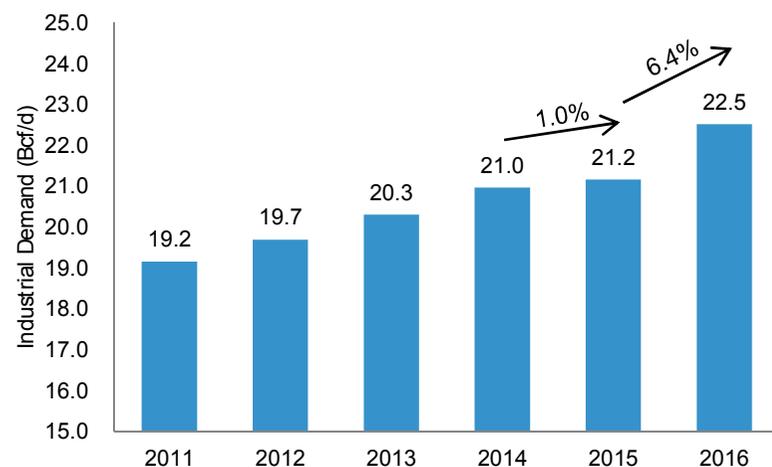
1 Other consists of Lease Fuel Consumption, Plant Fuel Consumption, and Pipeline and Distribution Use

# Industrial Gas Demand Development

Industrial natural gas demand is expected to increase by ~2.9 Bcf/d in 2025 (15% increase over 2015E demand)

- EIA forecasts natural gas consumption in the industrial sector increases rapidly through 2016 and then at a more gradual pace through 2025, benefiting from the increase in shale gas production that is accompanied by slower growth of natural gas prices
- Industries such as bulk chemicals, which use natural gas as a feedstock, are more strongly affected than others
  - Natural gas use as a feedstock in the chemical industry is primarily responsible for the increase in near-term industrial demand
  - Several new industrial facilities which use natural gas feedstocks began service this year, with additional projects scheduled to come online through 2019

## U.S. Industrial Natural Gas Demand, 2011-2016E



## North American Ethylene Capacity Expansions / Closures

Company (Metric Tonnes (000s))	Location	2014	2015	2016	2017	2018	2019
<b>U.S.</b>							
BASF/Total LLC	Port Arthur, TX	128	-	-	-	-	-
Chevron Phillips	Cedar Bayou, TX	-	-	-	750	750	-
Dow	Freeport, TX	-	-	-	600	900	-
	Plaquemine, LA	-	-	220	-	-	-
Eastman	Longview, TX	17	-	-	-	-	-
Equistar	Channelview, TX	-	27	30	250	-	-
	Channelview, TX	-	27	30	250	-	-
	Corpus Christi, TX	-	-	273	90	-	-
	La Porte, TX	193	192	-	-	-	-
ExxonMobil	Baytown, TX	-	-	-	750	750	-
Flint Hills Resources	Port Arthur, TX	-	50	50	-	-	-
FPC US	Point Comfort, TX	-	-	-	-	1,150	-
Oxy / Mexichem JV	Ingleside, TX	-	-	-	138	412	-
SASOL	Lake Charles, LA	-	-	-	-	775	775
Shin-Etsu	Plaquemine, LA	-	-	-	-	250	250
Westlake	Calvert City, KY	40	42	-	-	-	-
	Lake Charles, LA	-	55	55	-	-	-
	Lake Charles, LA	24	-	-	-	-	-
Williams / SABIC	Geismar, LA	-	129	129	-	-	-
<b>U.S. Total</b>		<b>402</b>	<b>467</b>	<b>787</b>	<b>2,883</b>	<b>4,987</b>	<b>1,025</b>
<b>U.S. Cumulative Additions</b>		<b>402</b>	<b>869</b>	<b>1,656</b>	<b>4,539</b>	<b>9,526</b>	<b>10,551</b>

# Export Market Development – LNG

The outlook for U.S. LNG export capacity is improved, but additional capacity beyond 2020 is highly uncertain

## U.S. LNG exports have an edge in meeting incremental global demand

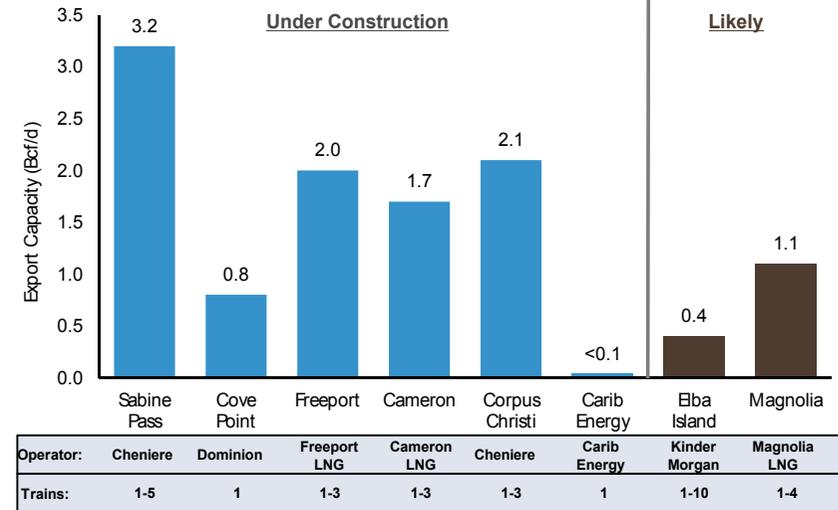
- Henry Hub spot market prices give U.S. projects a competitive advantage against international projects going forward by providing buyers with lower cost LNG and price index diversity
- U.S. liquefaction / LNG export facilities coming online in the next three to four years are in an enviable position to compete in today's highly price-competitive, low-margin LNG
  - Four of the first six projects are "brownfield" and are able to leverage sunk costs
  - For the remainder of planned / approved projects, development costs remain lower than foreign competitors because U.S. project sites are less remote
- Total export capacity of projects under construction is ~9.8 Bcf/d by 2020
- Projects planned for start-up beyond 2020 face disadvantageous economics given existing international LNG projects coupled with now-depressed commodity prices to which new contracts would be indexed

## Locations of First & Second Wave of LNG Export Facilities

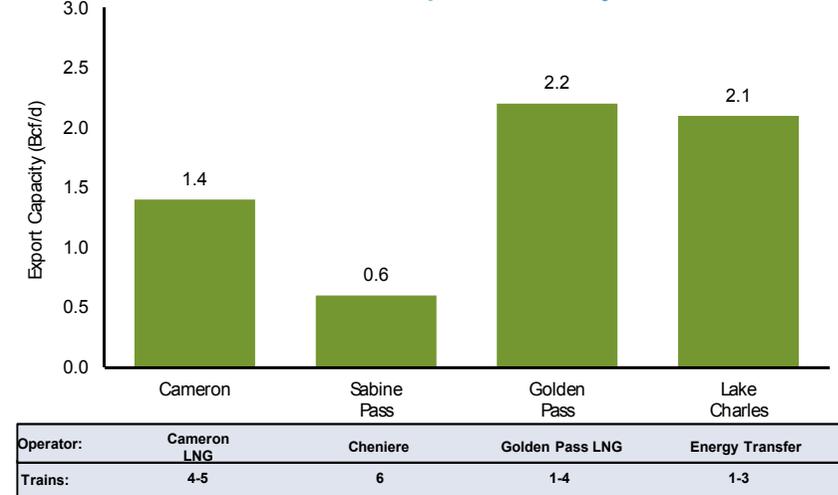


Source: NGSa and Cheniere Investor Presentation

## First Wave - U.S. LNG Projects



## Potential Second Wave - L-48 Liquefaction Projects

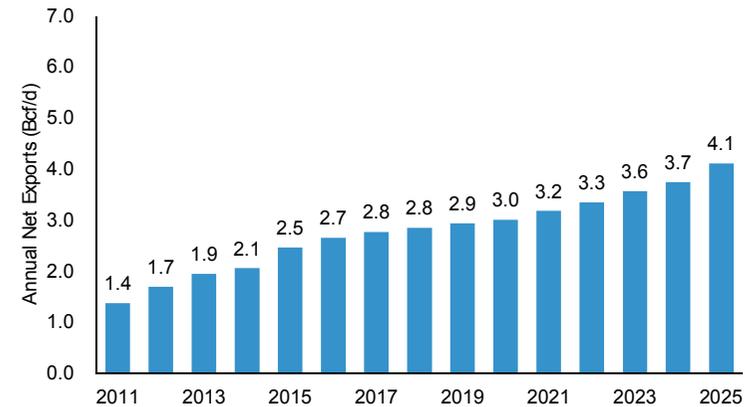


# Export Market Development – Piped Gas

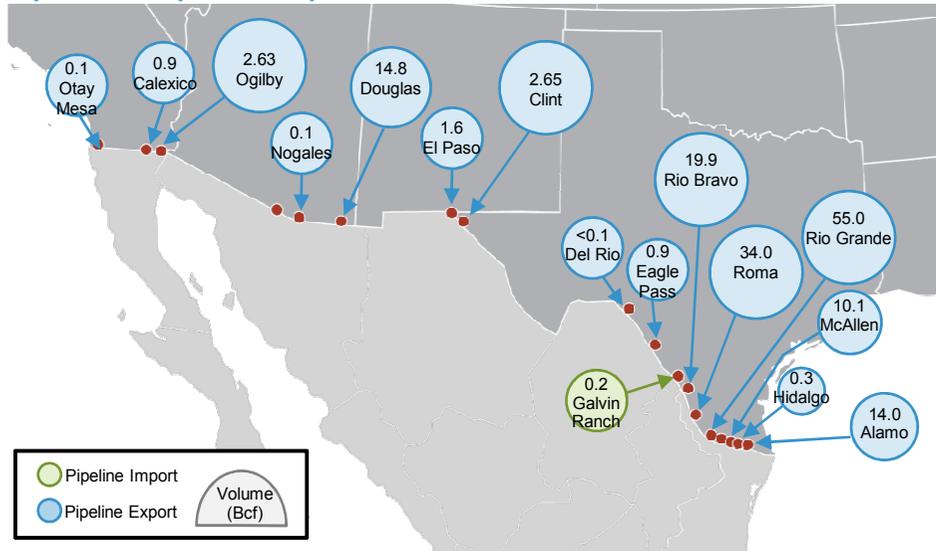
The U.S. is forecast to be a net exporter via pipelines beginning in 2021

- The United States is forecast to remain a net pipeline importer of natural gas from Canada through 2040, but at lower levels than in recent history given the forecast production growth of domestic U.S. supply and local Canadian demand growth
- U.S. pipeline exports south to Mexico have grown substantially since 2010 and the EIA projects this trend to continue, with the U.S. becoming an overall net exporter of piped gas in 2021
  - Increases in Mexico’s production are not expected to keep pace with the country’s growing demand for natural gas, primarily for electric power generation
  - Shale plays south of the border, which are estimated to hold ~500 Tcf of TRR, are said to be geologically complex and the resource regions lack the necessary road and water infrastructure

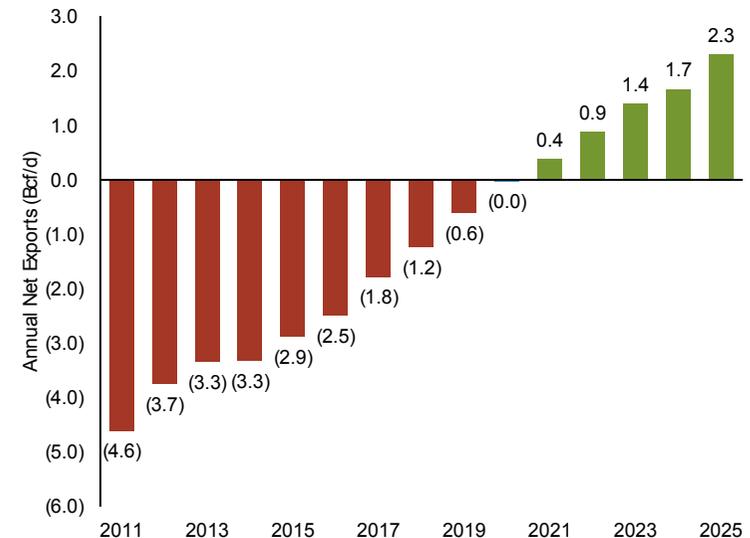
Net Piped Gas Exports to Mexico Forecast, 2011-2025



Piped Gas Exports & Imports to Mexico, Q1 2015



Net Piped Gas Exports to Mexico & Canada Forecast

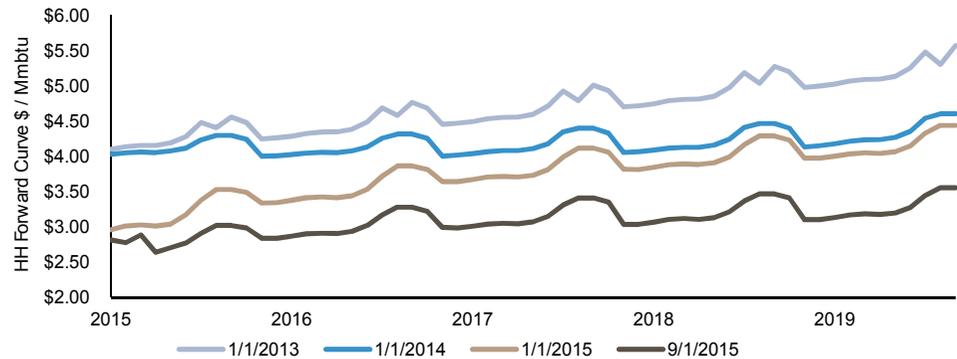


# Commodity Price Outlook

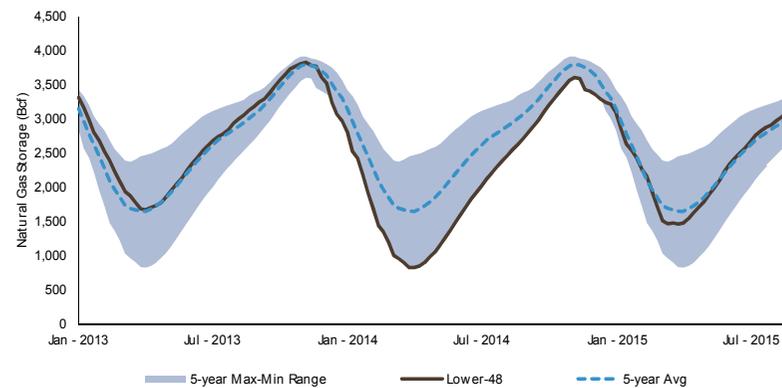
The Henry Hub natural gas forward curve is a strong indicator of a low price environment in the short term

- Today's low price environment is attributable to production levels outstripping consumer demand
- US storage levels of natural gas is reaching its 5-year maximum
- Even with the reduction in rig counts over the past three quarters, producers are focusing on more economical plays and are increasing their EUR per well through technological and process enhancements
- Operator efficiencies and oilfield service cost reductions have decreased the breakeven point for producers, thus the low price environment has not significantly altered supply
- Implied average Henry Hub price, based off futures contracts, indicates a long-term price of ~ \$3.17 / MMBtu<sup>1</sup>

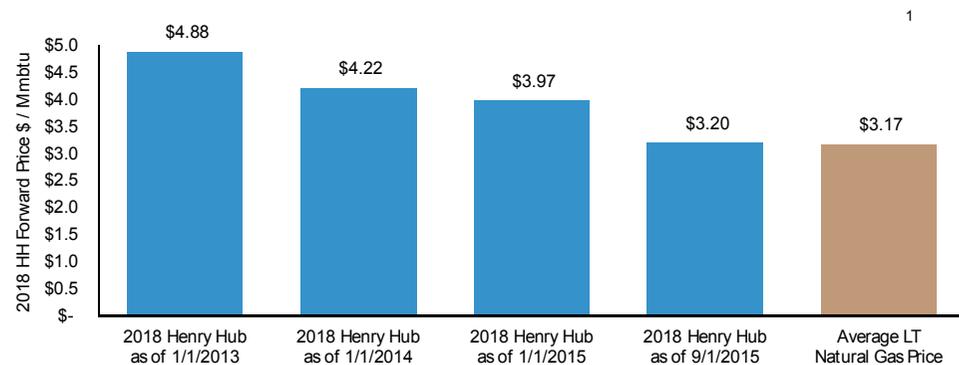
## Forward Curves



## Natural Gas Storage



## 2018 Price History of Henry Hub



Source: EIA; Factset as of 9/1/2015

Note:

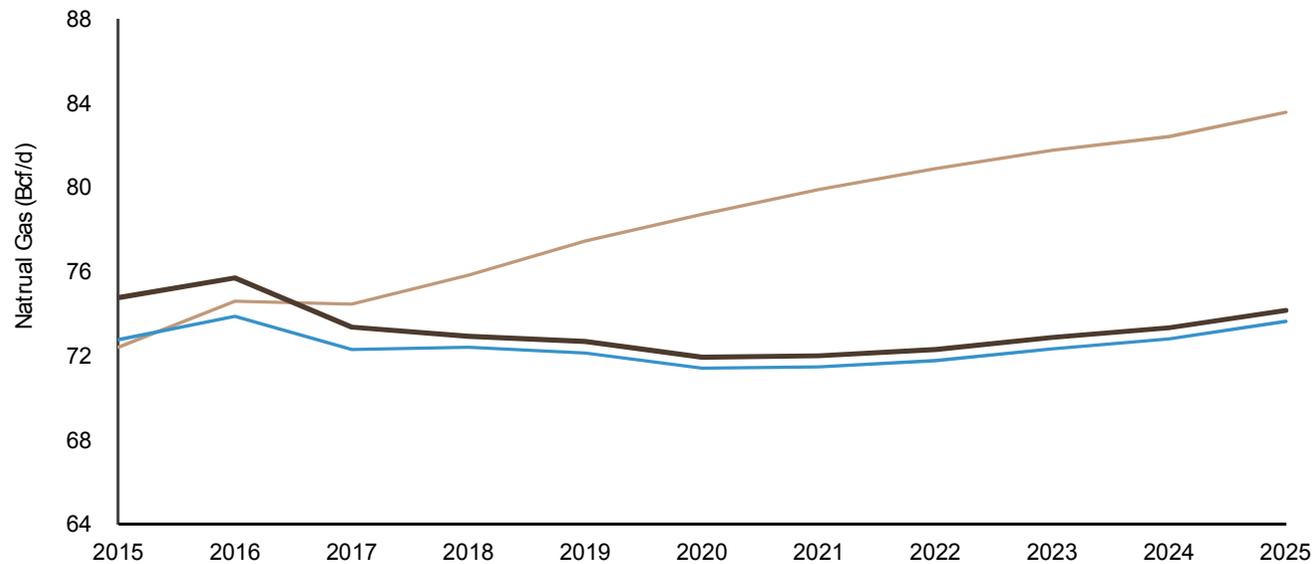
1 Based off average HH forward price 2015-2021



# Natural Gas Price Considerations

Low natural gas prices should not be considered a given, but there is a strong case for limited price appreciation

- Natural gas spot prices vary according to assumptions about the availability of domestically produced natural gas resources, overseas demand for U.S. liquefied natural gas (LNG), and trends in domestic consumption
  - In the EIA's 2015 Annual Energy Outlook Reference case, the Henry Hub spot price is \$4.88/Mcf (2013 dollars) in 2020 compared to \$3.73/Mcf realized in 2013, as increased demand in domestic and international markets requires an increased number of well completions to achieve higher levels of production
  - North America's gas resources today are believed to be "in the money" at prices of ~\$4.00/Mcf, and total supplier costs will continue to fall as producers scale the geology learning curve and infrastructure debottlenecks supply
  - EIA's 2015 Reference Case forecasts U.S. supply net of exports will exceed demand by ~0.5 Bcf/d in 2020
- Projected Natural Gas Supply and Demand, 2015-2025



Source: EIA, Wall Street research

— U.S. Dry Gas Production — U.S. Net Supply — Total U.S. Demand

# Domestic Natural Gas Outlook Summary

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- The United States is a world-class natural gas producer with a regionally diversified base of reserves
  - Over 350 Tcf of proved reserves; ~2,500 Tcf of technically recoverable reserves
  - Development of shale gas reserves is a multi-decade story – operators continue to drive efficiencies and improve their economics
  - Total dry gas production is forecast to reach ~83.6 Bcf/d by 2025, developed by a deep pool of domestic and international producers
- Exports to international markets, including to Mexico and by way of LNG, will help producers find a market for excess supply
  - Domestic net supply after exports is forecast to reach ~74.2 Bcf/d by 2025
- Growth in domestic demand will be led by segments of the industrials sector which aim to capitalize on relatively cheap natural gas feedstocks, and less so coal-to-gas switching in the power sector
  - Industrials are forecast to serve as the "wedge" of domestic consumption growth but are not expected to offset the continued growth in domestic natural gas supply
  - Overall domestic demand is forecast to reach ~73.6 Bcf/d by 2025
- Although much of the excess supply will ultimately find a market, consensus expectations are for the United States to remain "long" natural gas for the foreseeable future
  - Current futures market expectations are for an average natural gas price of below \$3.50 through 2020

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*Break for  
Lunch*

# *Louisiana Ammonia Plant Project Overview*



The background of the slide is a photograph of an industrial facility, likely a refinery or chemical plant. It features a complex network of grey pipes, metal walkways, and large cylindrical storage tanks. In the upper right, a prominent red and white vertical structure is visible. The sky is overcast.

# *WALA – KBR Update*

David Zelinski  
President, Onshore  
Engineering & Construction –  
Americas - KBR

# KBR

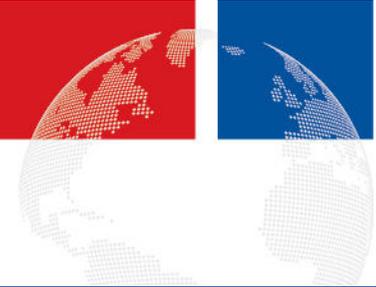


## Incitec Pivot Investor Day

KBR Update on the  
WALA Project

September 14, 2015

# Agenda



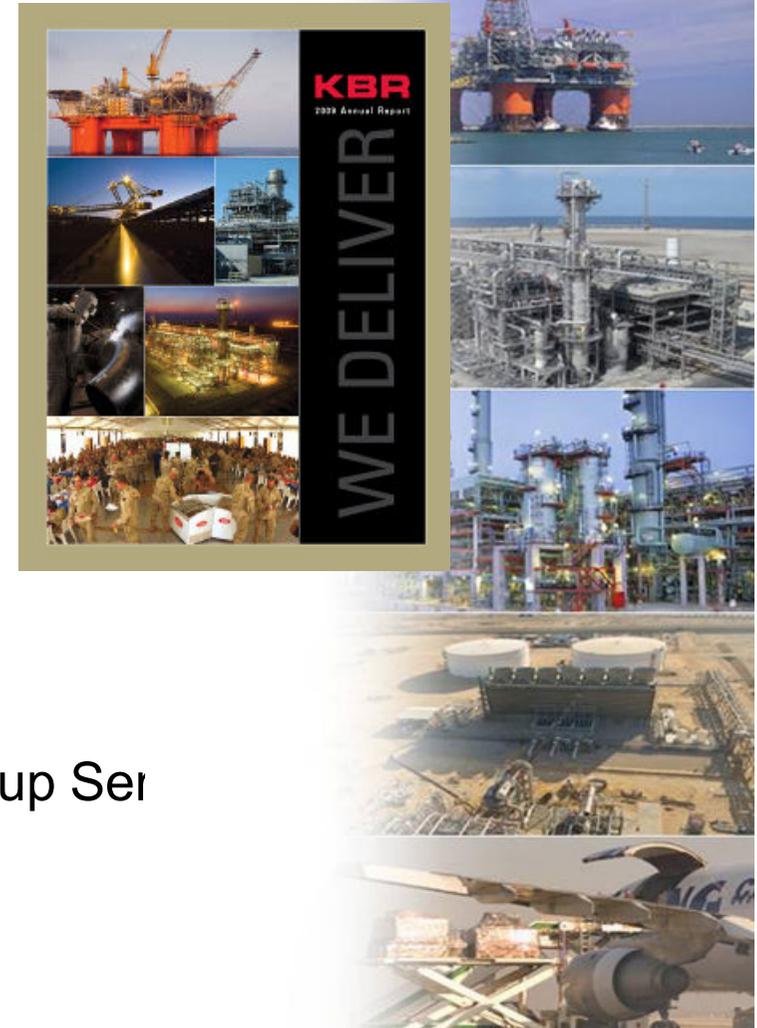
- An Overview of KBR and Our Role on the WALA Project
- The KBR Advantage Applied to the WALA Project
- Project Status and Keys to Success



First onshore ammonia plant built on the US Gulf Coast in the past 20 years. The first ammonia plant built in Louisiana in a quarter century.

# An Overview of KBR

- Headquarters in Houston, Texas
- 2014 Revenue: \$US6.4 Billion
- 100+ years of operating history
- 25,000+ employees
- 40+ countries
- Extensive capabilities:
  - Technology & Consulting
  - Engineering and Construction
    - Including Commissioning and Start-up Ser
  - Government Services



# KBR's Role on the WALA Project



## Our Turn-key solution includes:

- Technology – KBR's Industry Leading Purifier Technology
- Proprietary Equipment – Key components are part of KBR's Technology Package
- Engineering, Procurement and Construction
  - Engineering from our Houston headquarters
  - Global procurement from world-class vendors
  - Construction self-performed and supported by specialty sub-contractors
- Operator Training and Commissioning and Start-up through the plant performance test



KBR is providing a turn-key solution, including Technology, Proprietary Equipment, Engineering, Construction and Commissioning

# Why KBR for the WALA Project?

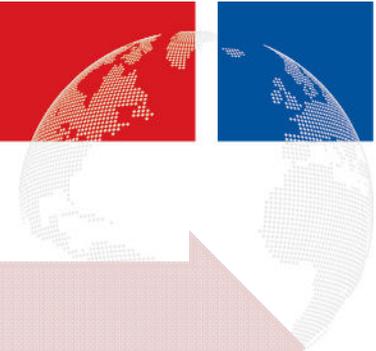
## Our Integration Solution for the WALA project includes:

- Industry Leading Technology
  - Over 200 plants operating globally
- Reference Plant
  - Demonstrated reliability and performance
- Self-perform Engineering through Construction and Commissioning
  - Schedule assurance and single point accountability



Material for the plant was sourced from vendors around the globe by KBR's procurement and logistics team.

# Why KBR? – Leading Purifier Technology



## Lowest Energy Consumption

- Low energy consumption of 6.5 Gcal/MT
- Reduced CO<sub>2</sub> and NO<sub>x</sub> emissions

## Reliable Performance

- Greater than 97% availability
- Typical 3-4 years runs without maintenance turnarounds
- Flexibility and greater stability

## Lowest CAPEX

- Synthesis equipment 10-15% smaller
- Up to 30% less reformer tubes in radiant section, fewer burners
- Plot plan is 25-30% smaller

## Life Cycle Support

- On-going technology development and improvement program
- Expanded service portfolio
- Performance monitoring and operations support

# Why KBR? - Burrup, Australia Reference Project



The BFPL plant served as the reference design for WALA. A 2200 MTPD KBR Purifier™ facility, it is now running at higher capacities with no major modifications.

Burrup Fertilisers Pty Ltd (BFPL) completed construction and started up in 2006, a 2200 MTPD Ammonia Plant – at that time, the world’s largest single train Purifier™ based ammonia plant

“Reference Plant” for the WALA Project

KBR was involved from technology specification through start-up and commissioning

The plant has achieved higher capacity without modifications of the original design

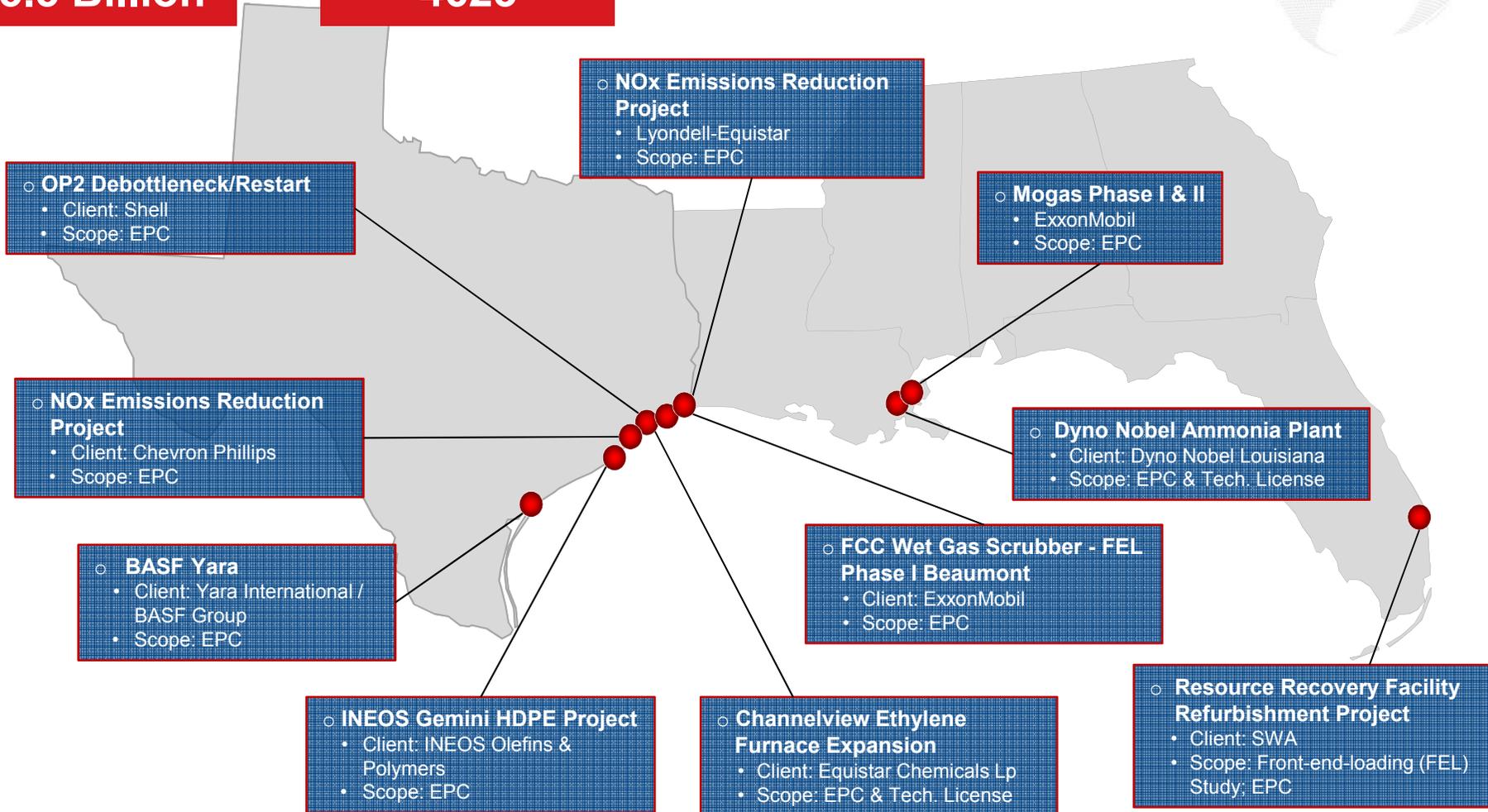
– **(Today running at 2500 - 2525 mt/d)**

# Why KBR? – Proven Gulf Coast EPC Delivery



Total KBR Gulf Coast Region Work Past 10 Years:  
**\$5.5 Billion**

Total KBR Craft Currently Working in the Gulf Coast:  
**4623**



# WALA Project Status and Keys to Success



## Current Status

- >90% complete and achieving plan in accordance with the original schedule
- All permanent equipment has been delivered and is set in place
- Major Subcontracts (Tanks, Cooling Tower, Buildings) are complete
- 85% of piping installed and beginning completions process
- >70% of electrical and instrument cable installed
- Main control system delivered and going through field check-out
- 2 of 4 temporary boilers installed to support commissioning.



The WALA Project is on track for completion in accordance with the original schedule.

The project recently celebrated 3mm safe workhours.

## To Complete

- Mechanical completion of piping and E&I
- Insulation, paving, painting
- Pre-commissioning of equipment and plant systems

# WALA – Keys to Success



## Safety

- KBR is committed to Zero Harm to all of our workers and to the environment
- 3.4mm man-hours with no Loss Time Incidents spanning almost 2 ½ years
- 1mm man-hours since the last recordable injury
- No significant environmental incidents

## Quality

- Major equipment has been sourced from world-class vendors and has been successfully shop-tested
- Over 7,000 tons of heavy lifts made without incident or error in setting
- Nearly 41 miles of piping, including very thick wall, high pressure steam lines, with no major quality issues



The plant's 900-ton ammonia converter, designed by KBR, arrived in the Port of New Orleans from India.

## Schedule

- Project remains on track and in line with the original timetable

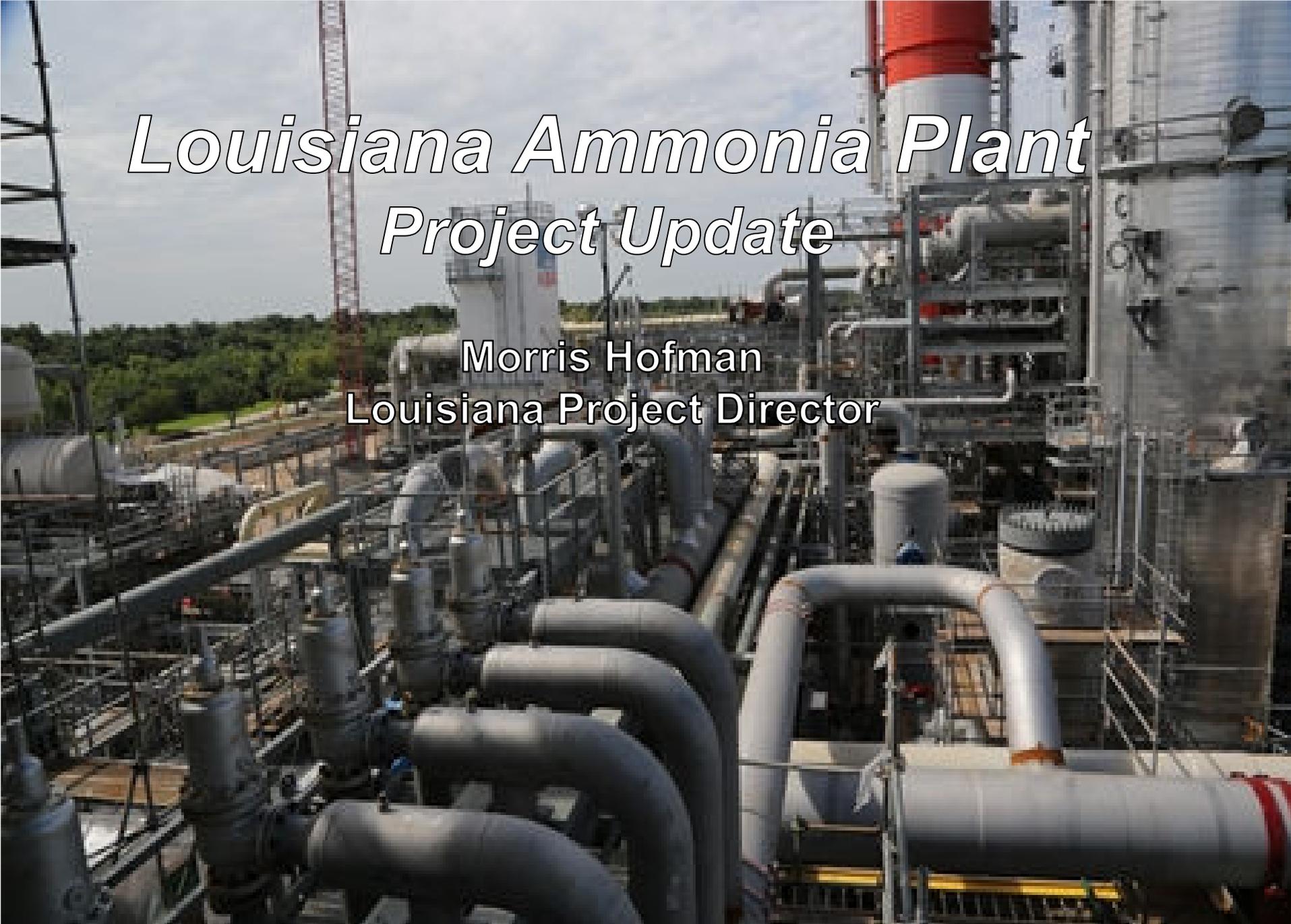
# Keys to Success - Commissioning and Start-up



- **KBR is leading the plant commissioning and start-up, with operators provided by Dyno Nobel**
  - Started early in the engineering design phase, in early 2014
  - Training of operators is ongoing
  - Combination of class-room and field training, supported by custom-built plant simulator
- **Purifier technology and ammonia plant operations experts to lead the start-up process**
  - Lessons learned from other plants being considered in the start-up activities.
  - Dyno Nobel experiences also being provided to the integrated team.
- **Vendor representatives will be on-site during the pre-commissioning, commissioning and start-up of key equipment**
- **Pre-commissioning has started with the cooling water system flushing and startup of the cooling tower area and pumps**
  - 133 Operating Systems have been identified and are being tracked on a weekly basis.



All major equipment is now set and commissioning activities are beginning.



# *Louisiana Ammonia Plant Project Update*

Morris Hofman  
Louisiana Project Director

# Zero Harm and IPL owners team

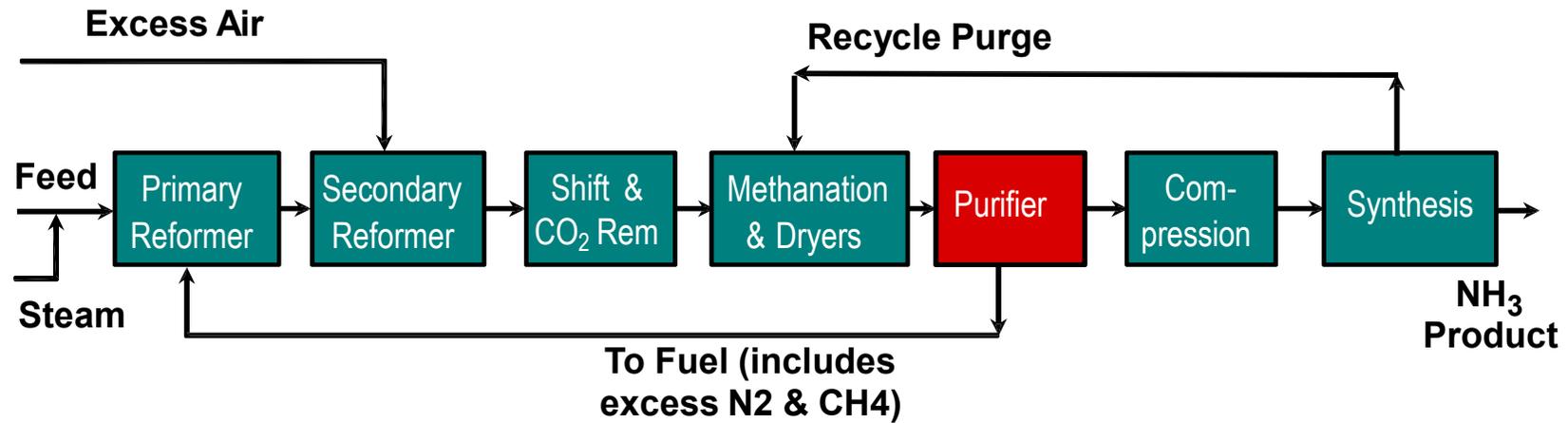
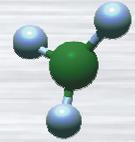
## Zero Harm

- Zero Harm is number 1 priority with Project TRIFR target of 1.05
- Over 1,000 workers on site between day/night shifts
- Almost 3 million man hours worked by KBR with TRIFR of 0.27

## IPL owners team

- Demolition commenced Sept 2013 as part of KBR's Lump Sum Turn Key execution contract
- IPL Project Management Office established on-site.
- Established Project Operations Readiness Team

# Ammonia 101: The production process



# The project is on track >85% complete

## Inside Battery Limits (IBL)

IBL consists of the main ammonia manufacturing plant along with a large ammonia storage tank.

Progress update provided by KBR.

## Outside Battery Limits (OBL)

OBL this part of the project consists of the input connection of the gas pipeline and the output delivery facilities such as road, rail and river services necessary to make the site function.

Progress update on key items:

- Port upgrade & barge loading complete – support 5,000 ton ammonia barges
- Rail loading complete for ammonia transport
- Additional rail car storage completed
- Ammonia gas pipeline connecting to the NuStar pipeline– tested and in service
- Ammonia truck out loading facility – under construction

# From groundbreaking in 2013 to now

WALA VIDEO



# Next steps to plant commissioning in 2016

## Inside Battery Limits (IBL)

- Piping, electrical/instrument and system preparation for start up ie flushing, blowing lines clean
- KBR mechanical completion and pre-commissioning
- Completion of training
- Commissioning of ammonia plant systems

## Outside Battery Limits (OBL)

- OBL truck out-loading to be completed
- Completion of training

# Major risks through to project completion

Major risk	Management
Key priority - Zero Harm for Everyone Everywhere	Continue to ensure safe practices are adhered to and the safety processes are implemented
Weather – Hurricane season Sept-Nov	Safety plans in place for employees and site
Installation of piping	Pipe all on site & 85% complete and in progress with KBR
Failure of major mechanical equipment would create delays in commissioning	KBR manage commissioning



# *Louisiana Ammonia Plant Operation Readiness*

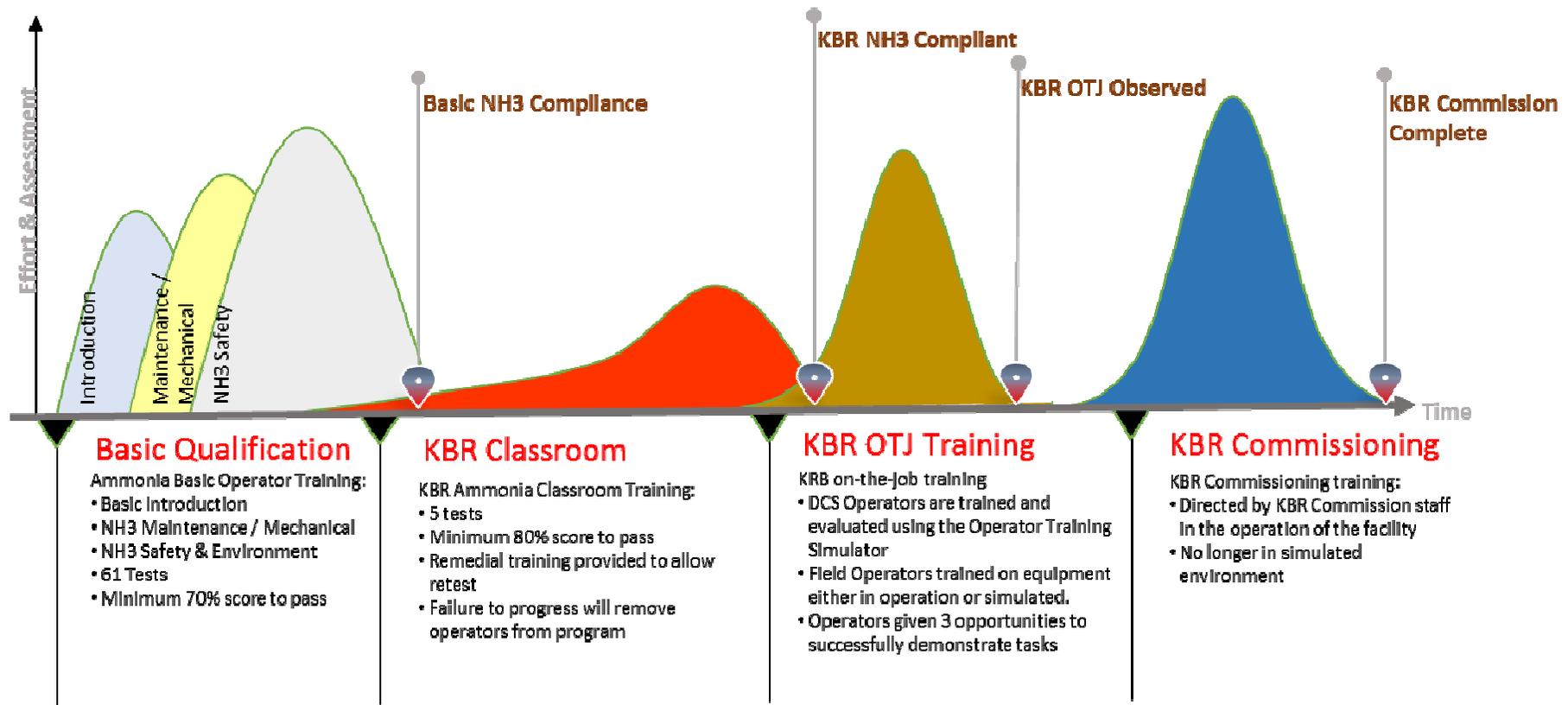
Chris Morgan  
Louisiana Plant Manager

# Building the team

- Total team consists of 70 personnel
- All operating staff are now recruited & operator training in progress
- Team increased by 10 FTEs for first year to reduce startup risk
- Normal operating shift will comprise of 6 operators

Role	Role description
Board Operator	Leads the crew and operates the plant from central control system
Compressor Operator	Responsible for the 4 major plant compressors
CO2 Removal Operator	Responsible for the BASF-licensed CO2 removal system
Prep and Purification Operator	Responsible for reforming and shift conversion section of facility
Utilities Operator	Responsible for plant utility systems, ammonia tank and water treatment plant
Shift Relief Operator	Support Board Operator with control systems

# Comprehensive training framework



# Running WALA the IPL way, using BEx

- Key principles
  - Ensure safety systems and processes are aligned
  - Set up systems and processes using BEx methodologies
  - Apply IPL plant maintenance & reliability standards at WALA
  - Maintain compliance reporting to meet IPL standards
  - Deliver an integrated business model supported by the broader functional teams with clear direction and accountability





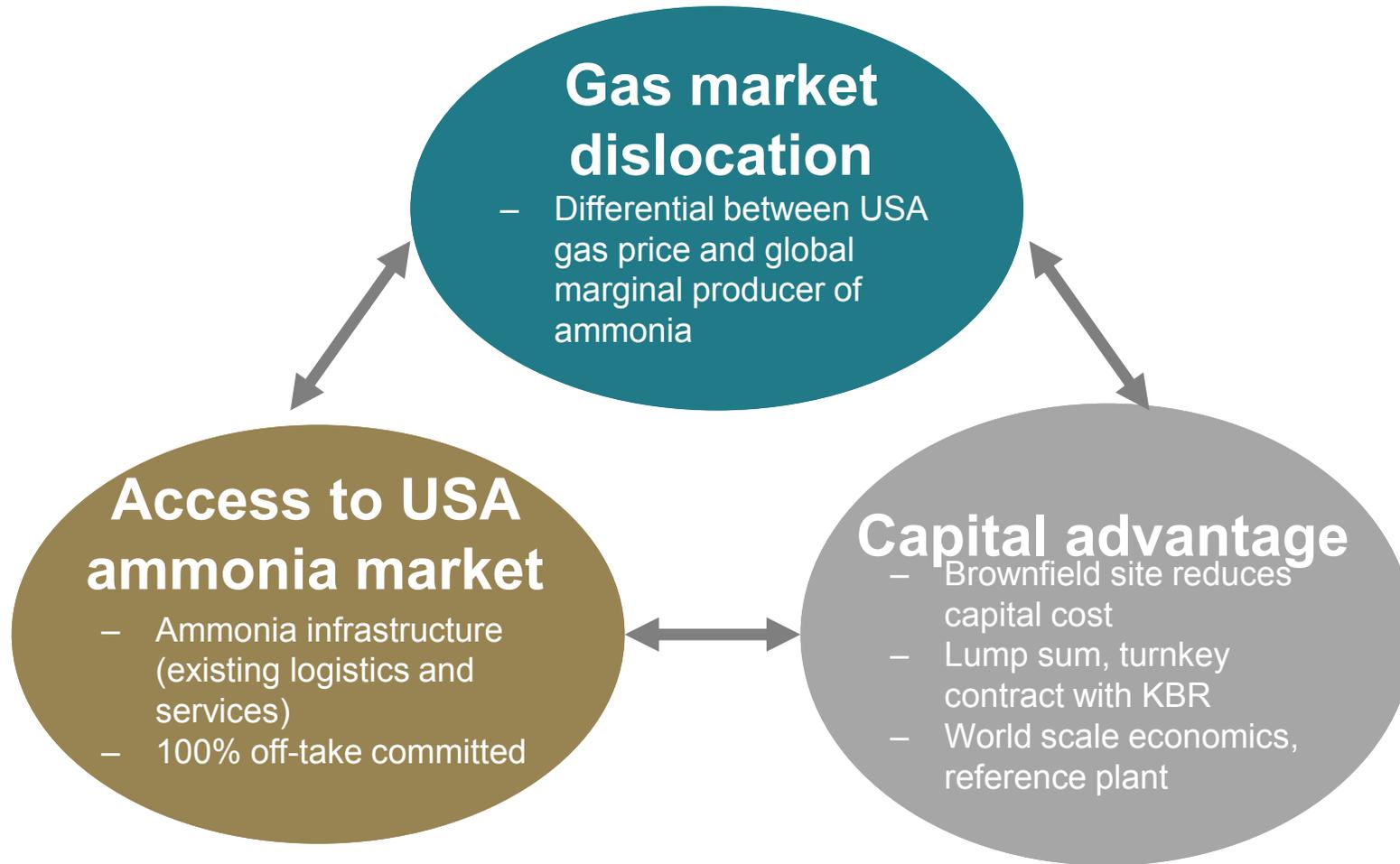
# *Louisiana Ammonia Plant Project Overview*

James Fazzino  
Managing Director and Chief Executive Officer

# Louisiana ammonia plant - investment overview

- **Construction of a world scale ammonia plant (800kmt p.a.) for a capital cost of \$US850m**
  - Fully funded by debt and internally generated cash flow
- **Investment thesis**
  - Gas market dislocation
  - Access to USA ammonia market
  - Capital advantage
- **KBR is the engineering, procurement, construction and commissioning contractor under a lump sum turnkey arrangement**
- **Plant sold out**
  - Dyno Nobel = 250kmt per annum
  - Cornerstone Chemicals = 200kmt per annum
  - Trammo = 350kmt per annum
- **Business Case - Financial returns**
  - 15% IRR
  - Simple payback ~ 5 years

# Louisiana ammonia plant - investment thesis

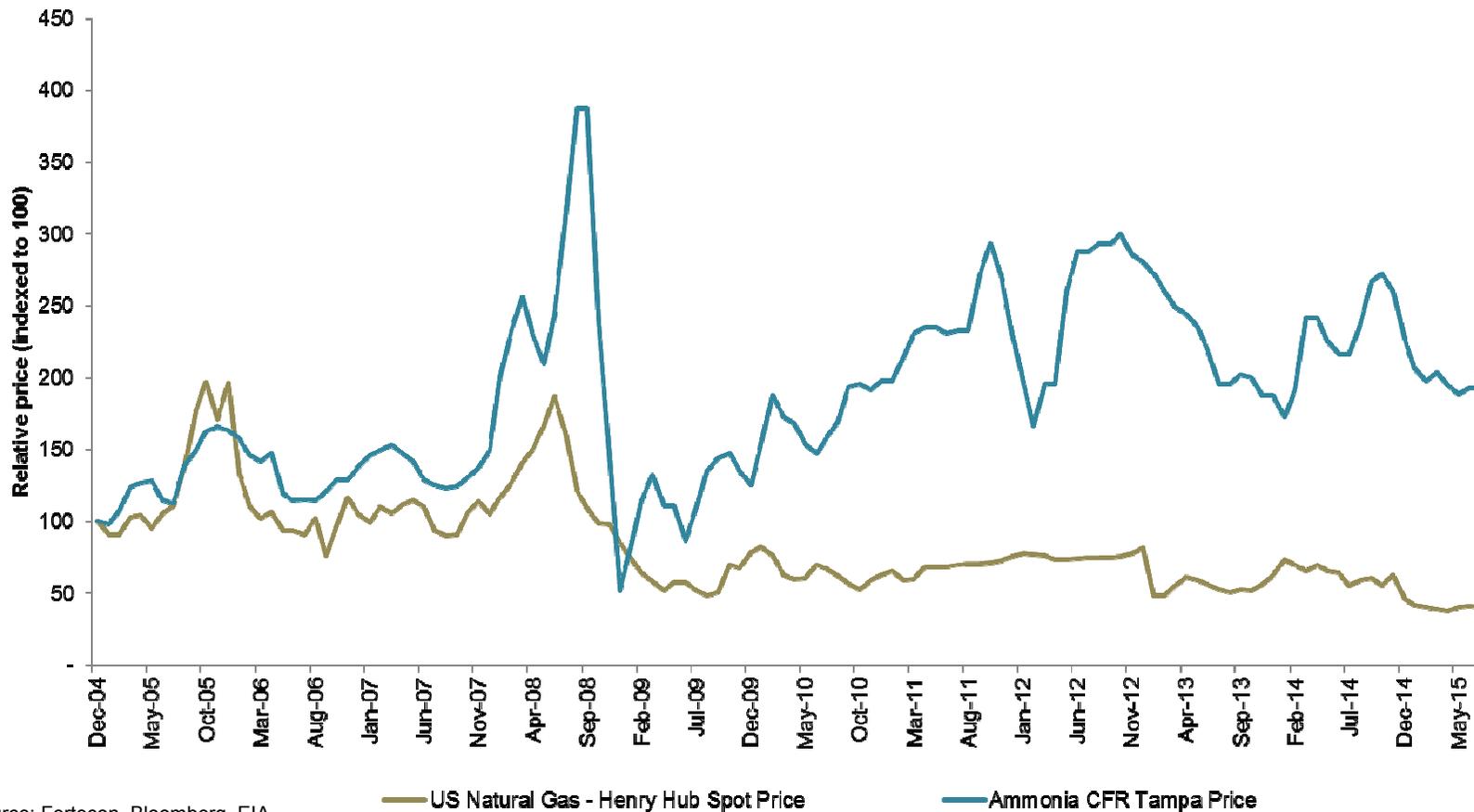


***Compelling financial returns***

# USA ammonia margin

Global ammonia price has historically trended closely with cash costs of marginal production, currently from European producers

**Ammonia CFR Tampa vs. USA gas price:**



Source: Fertecon, Bloomberg, EIA

# Questions ?





*Thank you  
for your  
attendance*

*We will be  
departing  
for site  
shortly*