



pursuit of excellence

Engineered Excellence



Agenda



Market Overview

Business Overview

Services

Contracting Models

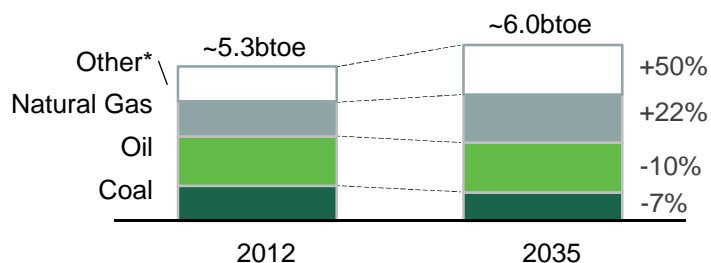
Strategy and Outlook



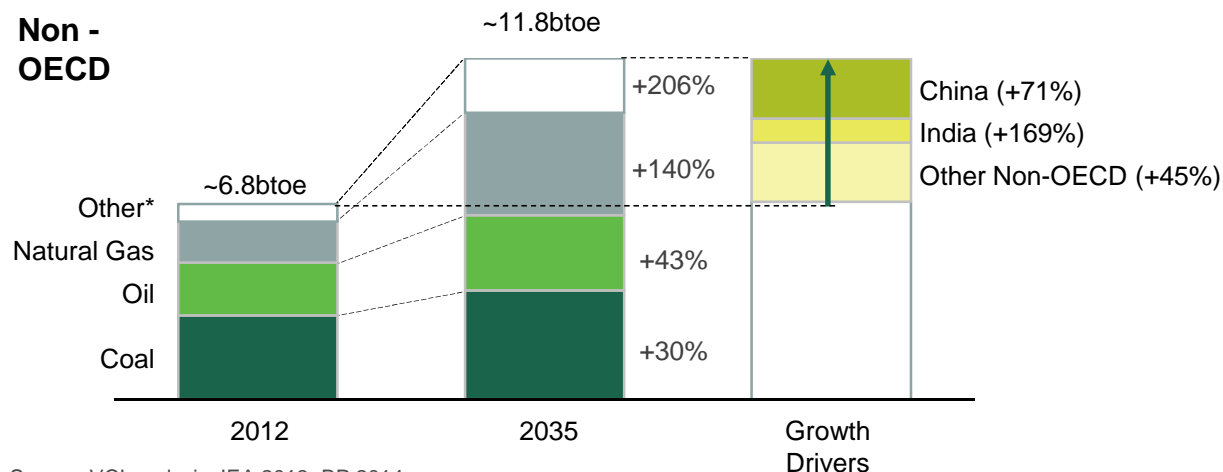
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World Projected Energy Mix In 2035

OECD



Non - OECD



Source: VCI analysis, IEA 2013, BP 2014

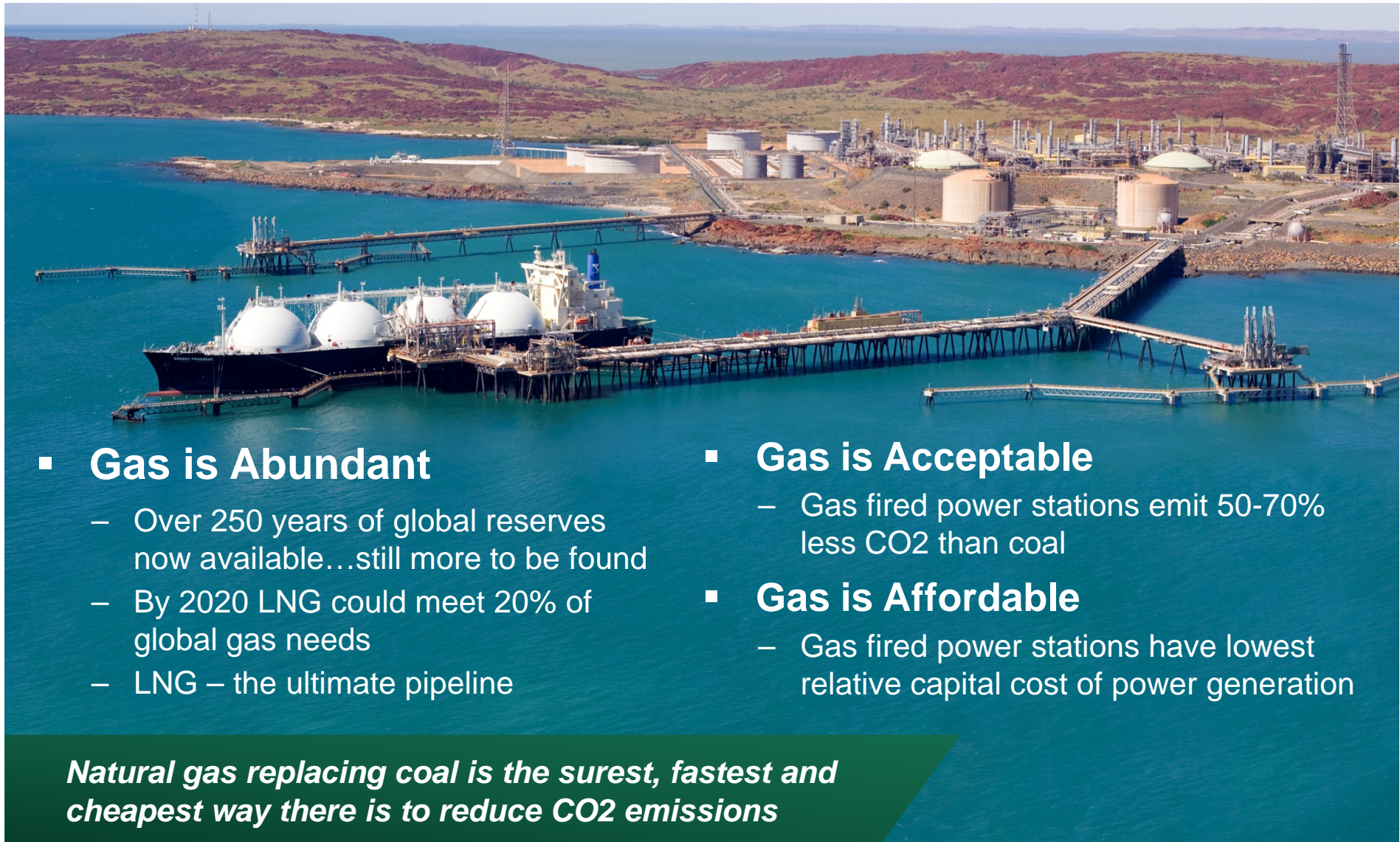
* Note: Renewables, nuclear, and hydro

Commentary

- Population and income growth are the key drivers to increasing energy demand
- Non-OECD countries will account for 88% of total energy demand growth to 2035
- Natural gas is forecast to make up an increasing share of energy mix
- Global energy demand growth is generally smoother than mining

Growth in world energy demand is driven by non-OECD countries

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■ Gas is Abundant

- Over 250 years of global reserves now available...still more to be found
- By 2020 LNG could meet 20% of global gas needs
- LNG – the ultimate pipeline

■ Gas is Acceptable

- Gas fired power stations emit 50-70% less CO₂ than coal

■ Gas is Affordable

- Gas fired power stations have lowest relative capital cost of power generation

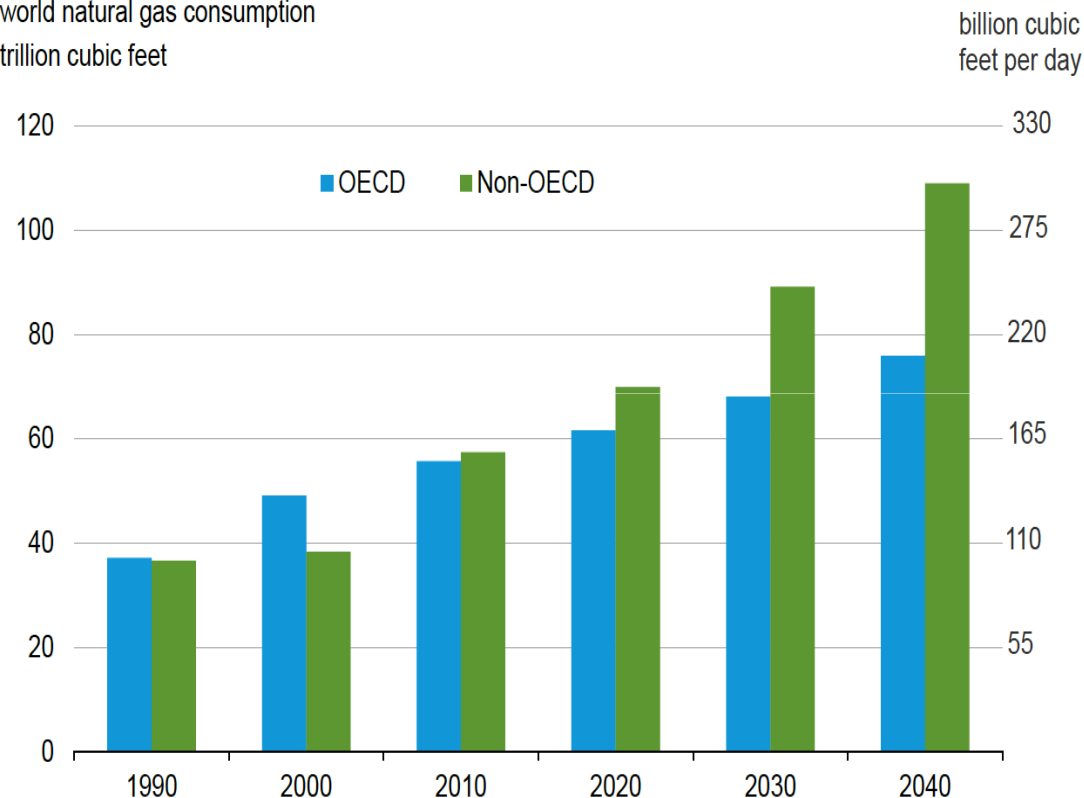
Natural gas replacing coal is the surest, fastest and cheapest way there is to reduce CO₂ emissions



Gas Demand Forecast



world natural gas consumption
trillion cubic feet



Source: EIA, International Energy Outlook 2013

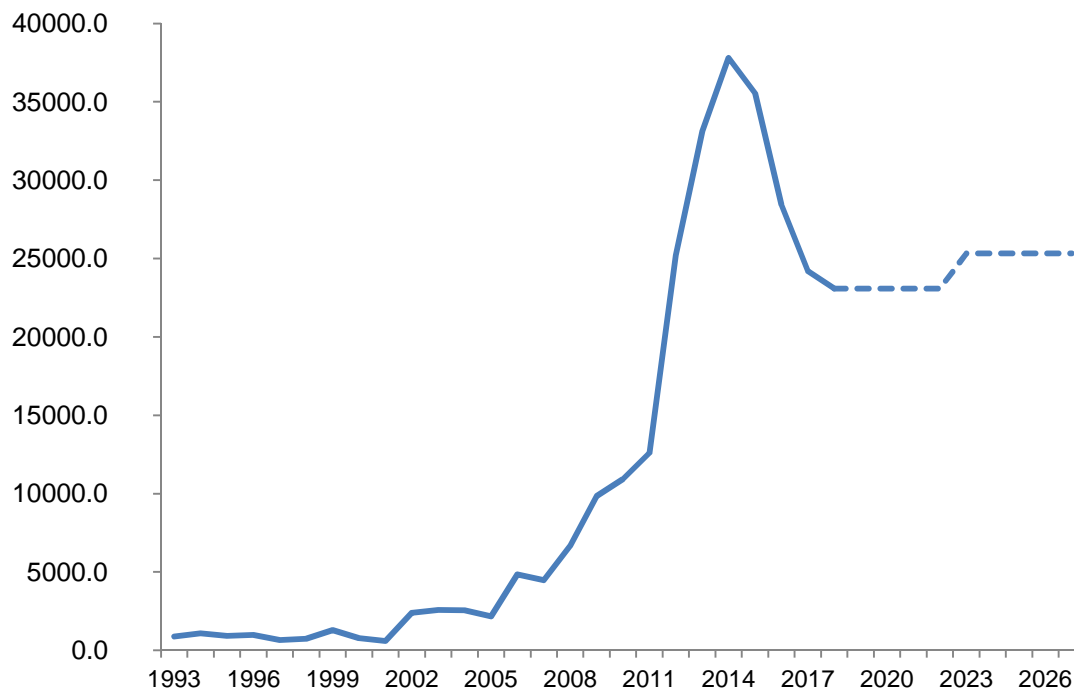
Gas Trends

- Non OECD countries account for 70% of growth in natural gas
- Technology shifts unlocking unconventional gas reserves
- The move away from Nuclear power in Japan and Europe
- Increasing use of gas as a transportation fuel
- Climate stress will increase demand for cleaner fuels
- Gas is increasingly being seen as a destination fuel rather than transition fuel

***The world will need twice as much energy but
half the amount of CO2 emissions***

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Oil, gas and other hydrocarbons –
Capex spend (\$m)



Source: BIS Shrapnel

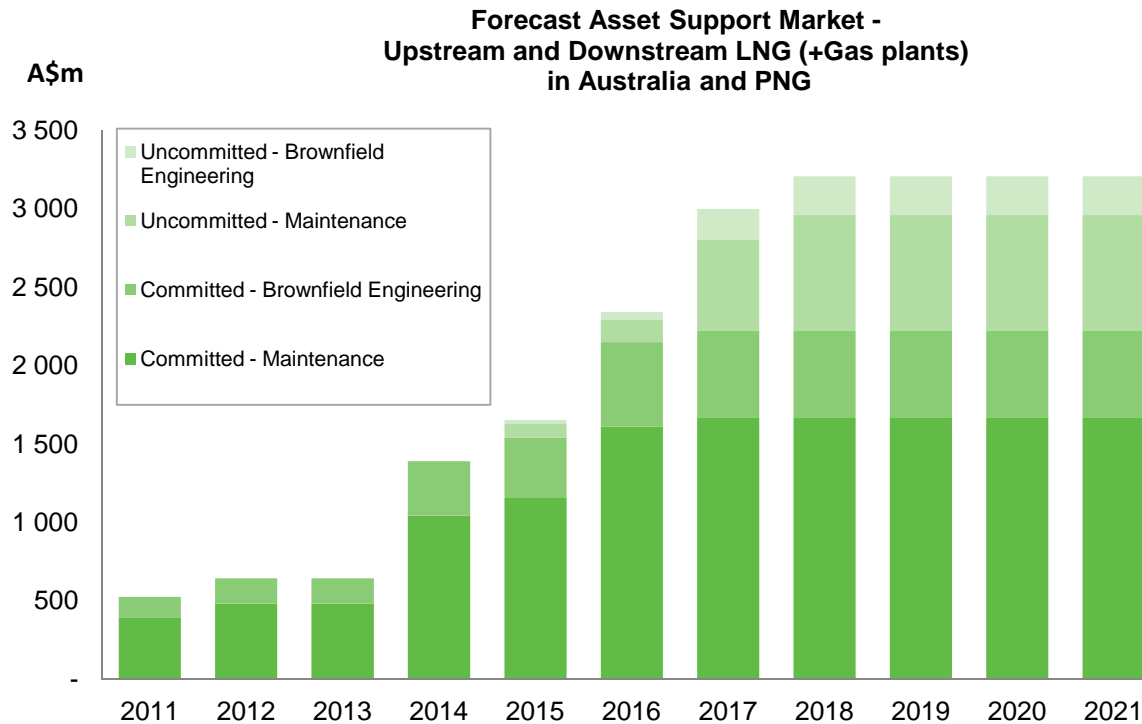
- Currently \$277B of energy and chemical projects are under construction in Australia, with a further \$297B at the feasibility stage.
- Of the projects under construction, \$205B of investment is from LNG projects.
- Australia accounts for more than 70% of LNG projects under construction globally.
- Investment in the Australian LNG market will start to decrease in 2014 though will stabilise in 2017.

Significant long term investment

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Opportunities: Transition to Brownfields



Source: Clough
internal estimate

- A step change in installed capacity will result in increased demand for production operations support services and small to medium capital works projects from 2014 onwards.
- Estimated annual expenditure on brownfield maintenance support for LNG plants is approximately 1.1% of the initial capital investment.

Increased market for production operations support services

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Clough: Established in 1919



1919 1950 1960 1970 1980 1990 2000 2010

95 years in Australia
Established in 1919



55 years of major engineering & construction projects
1957 Narrows Bridge Project awarded



50 years of jetty design and construction
1964 Hamersley Iron Parker Point load out jetty awarded



49 years of oil and gas project execution
1966 Barrow Island Oil Field Development awarded



30 years in PNG
1983 Kutubu Project awarded



28 years in LNG
1985 Built Australia's first LNG Jetty



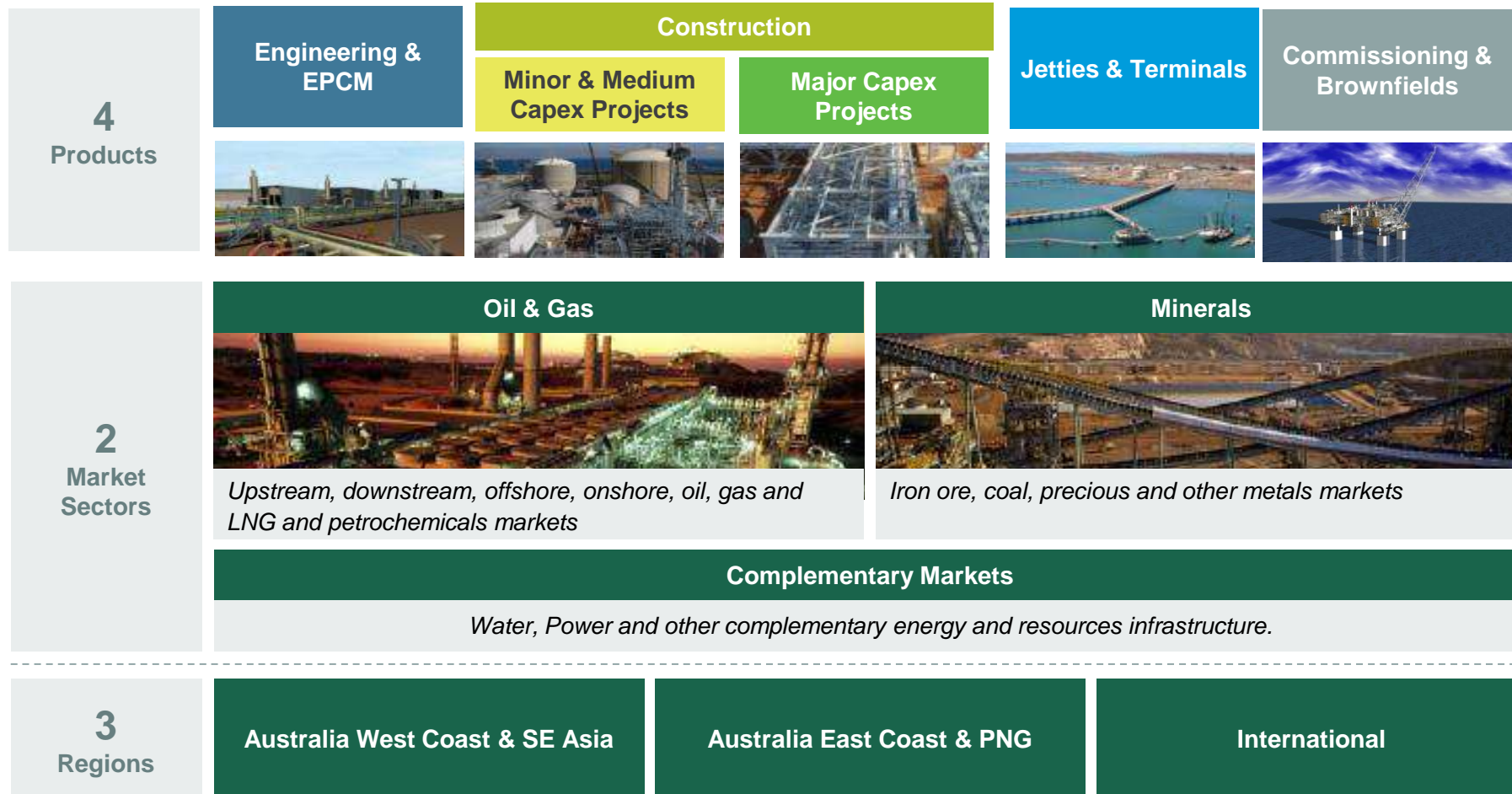
10 years in
Operations &
Maintenance

Clough AMEC
Established
2004





Clough Today – 4 + 2 + 3



Structured for selected expansion of global services whilst leveraging Australia & PNG position

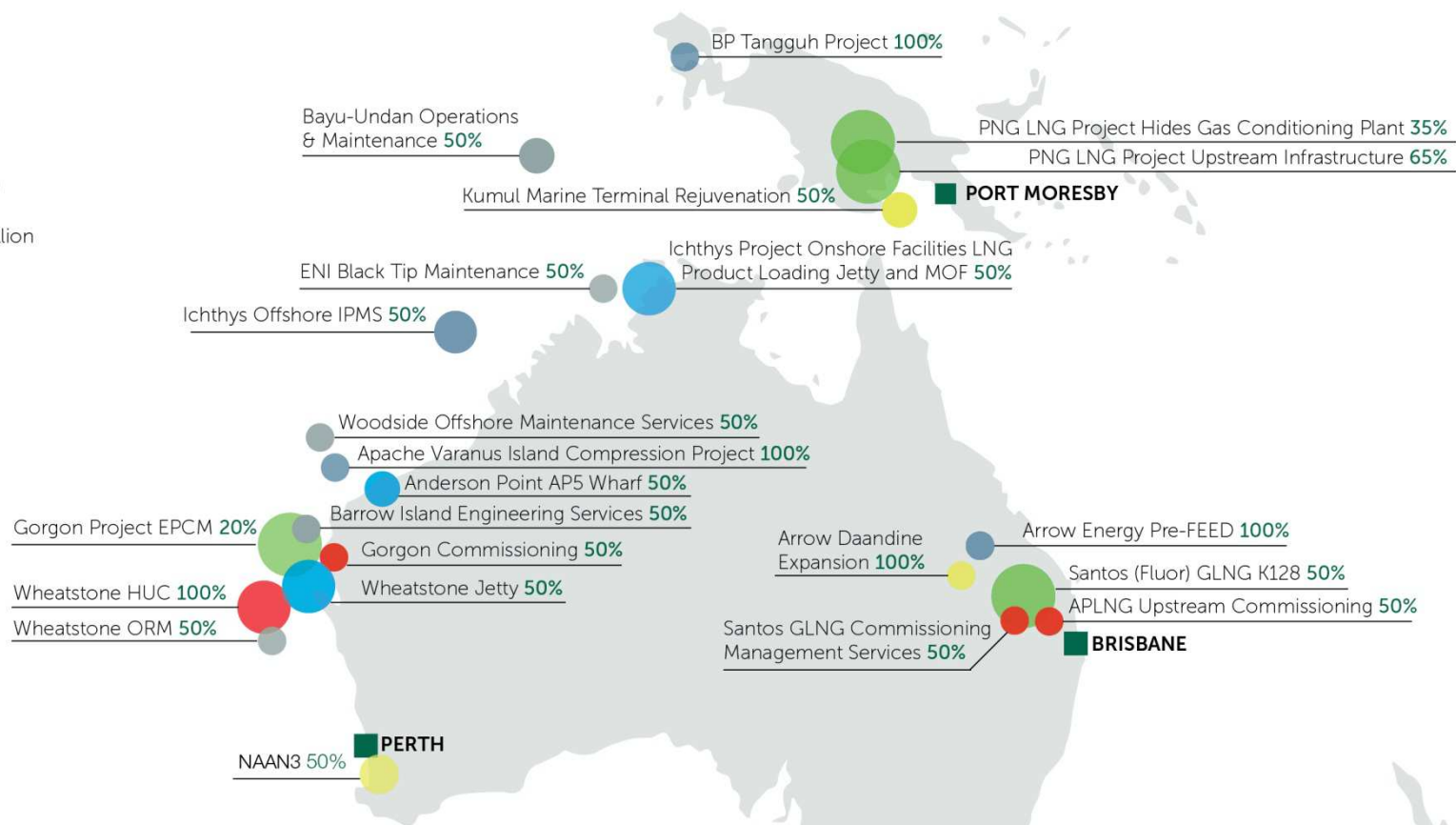
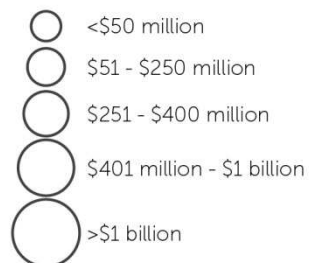
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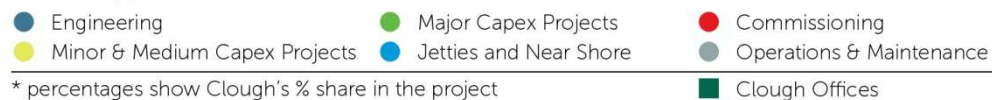
Current Projects



Contract Value



Contract Type



Active on every major LNG project in Australia & PNG



Services across the project lifecycle



We engineer to construct and construct to commission, operate and maintain

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Engineering & EPCM



Capabilities include:

- Concept Evaluation
- Project Feasibility Studies
- Basis of Design
- Front End Engineering Design
- Detailed Design
- Specialised Process Engineering Design
- Engineering, Procurement, Construction and Project Management (EPCM)
- Project Management Consultant (and Services)
- Process Optimisation and Debottlenecking
- Brownfield Engineering



Engineering excellence across every phase

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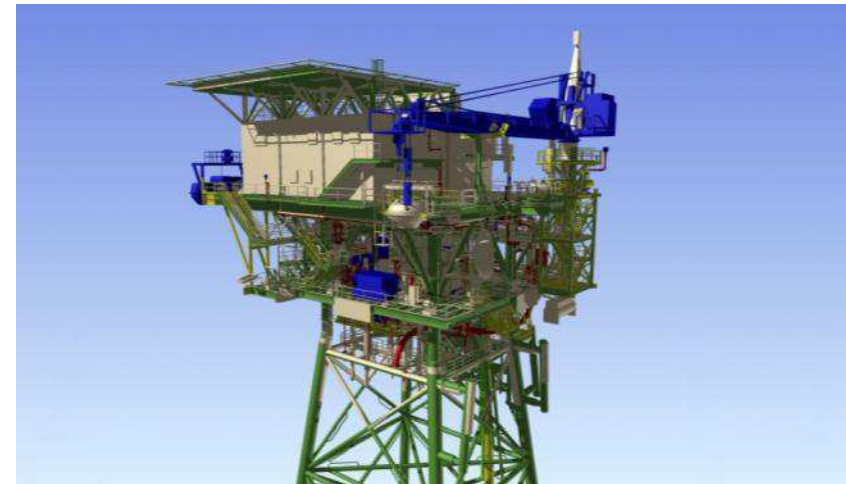


CONSTRUCTION: Minor & Medium Capex Projects



Capabilities include:

- Brownfield Expansion and Modification Projects
- Process Facilities
- Balance of Plant Infrastructure
- Power Generation
- Compression Facilities and Infield Pipelines
- Offshore Fabrication



A lean delivery model across the project lifecycle

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CONSTRUCTION: Major Capex Projects



Capabilities include:

- Process Facilities
- Power Generation
- Compression Facilities
- Pipelines
- Civil Infrastructure
- Roads and Bridges
- Camps
- Offshore Fabrication



Integrated EPC Services

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Jetties & Terminals



Capabilities include:

- Oil, Gas and Minerals Import and Export Jetties
- Ports and Port Development
- Import and Export Terminals
- Berthing Structures, Quay Walls and Breakwaters
- Intake and Outfall Structures / Pipelines
- In-house Design and Construct Capability



The Market Leader in Jetties and Terminals

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Commissioning & Brownfields



Clough's Commissioning Services:

- Bridge the gap between the construction phase and the operations phase
- Integrate with client project execution teams
- Apply sophisticated engineering techniques that identify and schedule commissioning requirements early in the project
- Detect and intervene early on potential schedule delays
- Develop commissioning procedures in line with client operating needs
- Independently check, inspect and test every operational component of the asset prior to handover



An attractive alternative to traditional commissioning models

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Commissioning & Brownfields



Clough Coens:

- Offers an attractive alternative to the traditional commissioning model
- Brings a skilled Korean workforce, training and development expertise, and extensive knowledge in the delivery of commissioning projects Korean & Chinese fabrication yards.
- Global resources that hook up and commission projects in their final location – database of 6000 personnel in Asia and Australia
- An extensive track record in the delivery of commissioning projects in Australia, Korea and China



Independent commissioning services for the world's largest fabrication yards

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Commissioning & Brownfields



Operations & Maintenance capabilities include:

- Operations Engineering
- Reliability Modelling
- Maintenance Management and Execution
- Shutdowns and Turnarounds
- Operational Readiness
- Supply Chain Management
- Operators Maintenance Staff
- Competency Assurance and Training (classroom and e-training)
- Decommissioning



Maximising Asset Value

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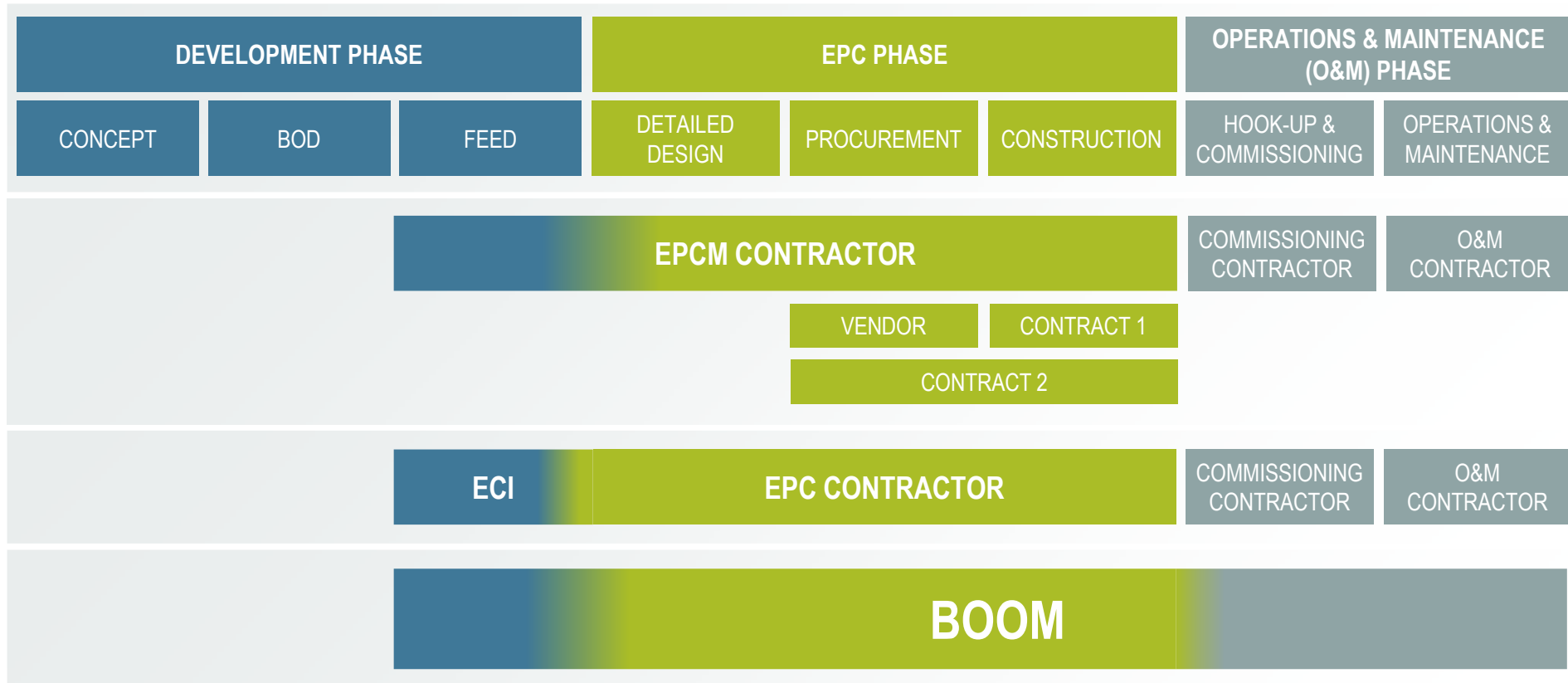
Current Contracting Models



	Benefits	Issues
EPCM	<ul style="list-style-type: none">• Owner involvement• Early owner engagement at technical definition• Owner controlled team	<ul style="list-style-type: none">• No single-point accountability for contractor• Owner retains interface risk• Limited risk to contractor for cost & schedule outcomes• Large owner's team required to manage EPCM contractor• Extensive administration
EPC	<ul style="list-style-type: none">• Contractor retains single-point accountability• Contractor retains interface risk• Transfer of risk to contractor for cost, schedule and performance	<ul style="list-style-type: none">• Requires high technical maturity• Owner scope impact on contractor• Change management• Limits innovation and value adding• Contractor has no commercial driver to consider operations



Contracts across the Project Lifecycle

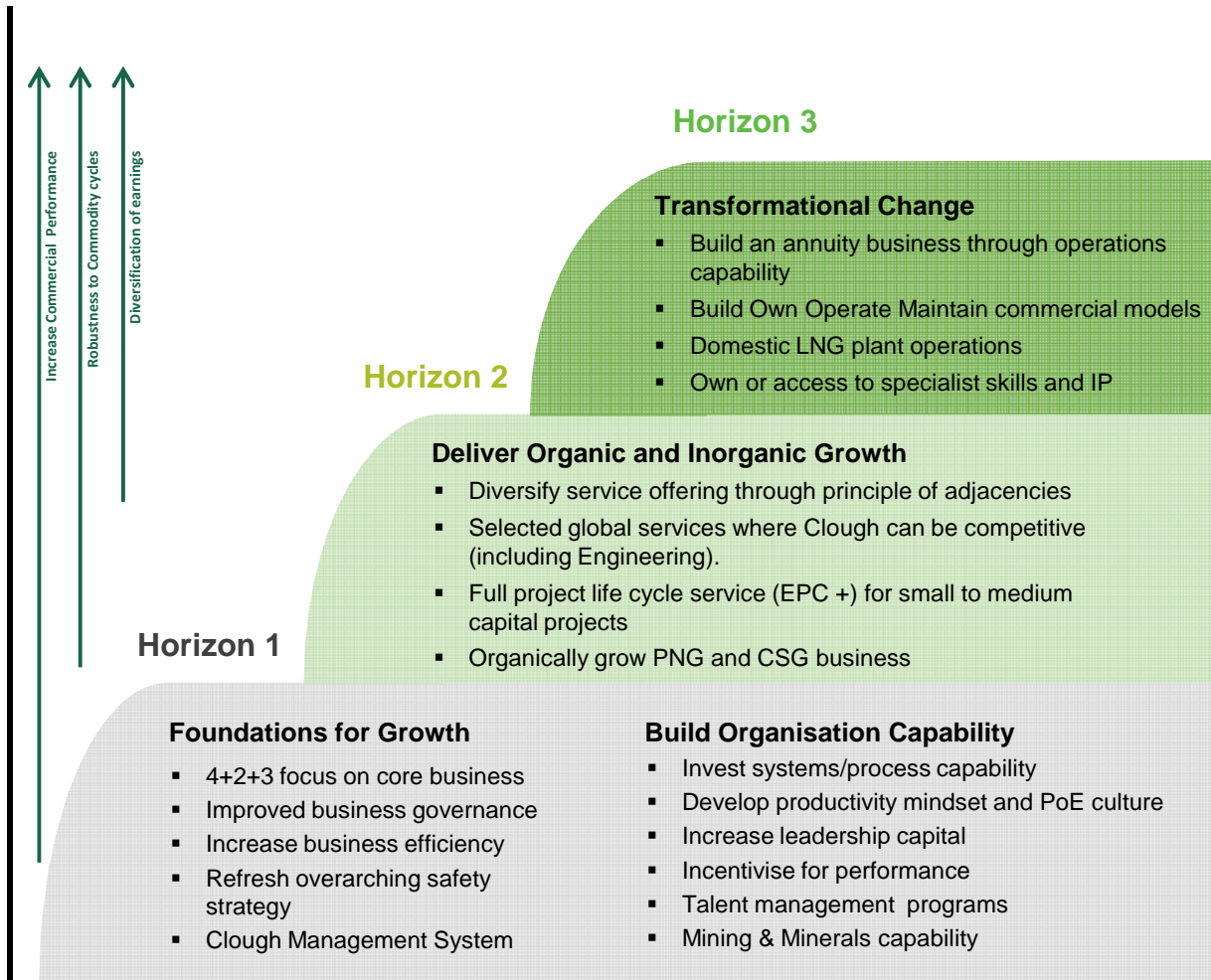


Boom contracting model reduces the number of contract interfaces

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Strategic Growth



Commentary

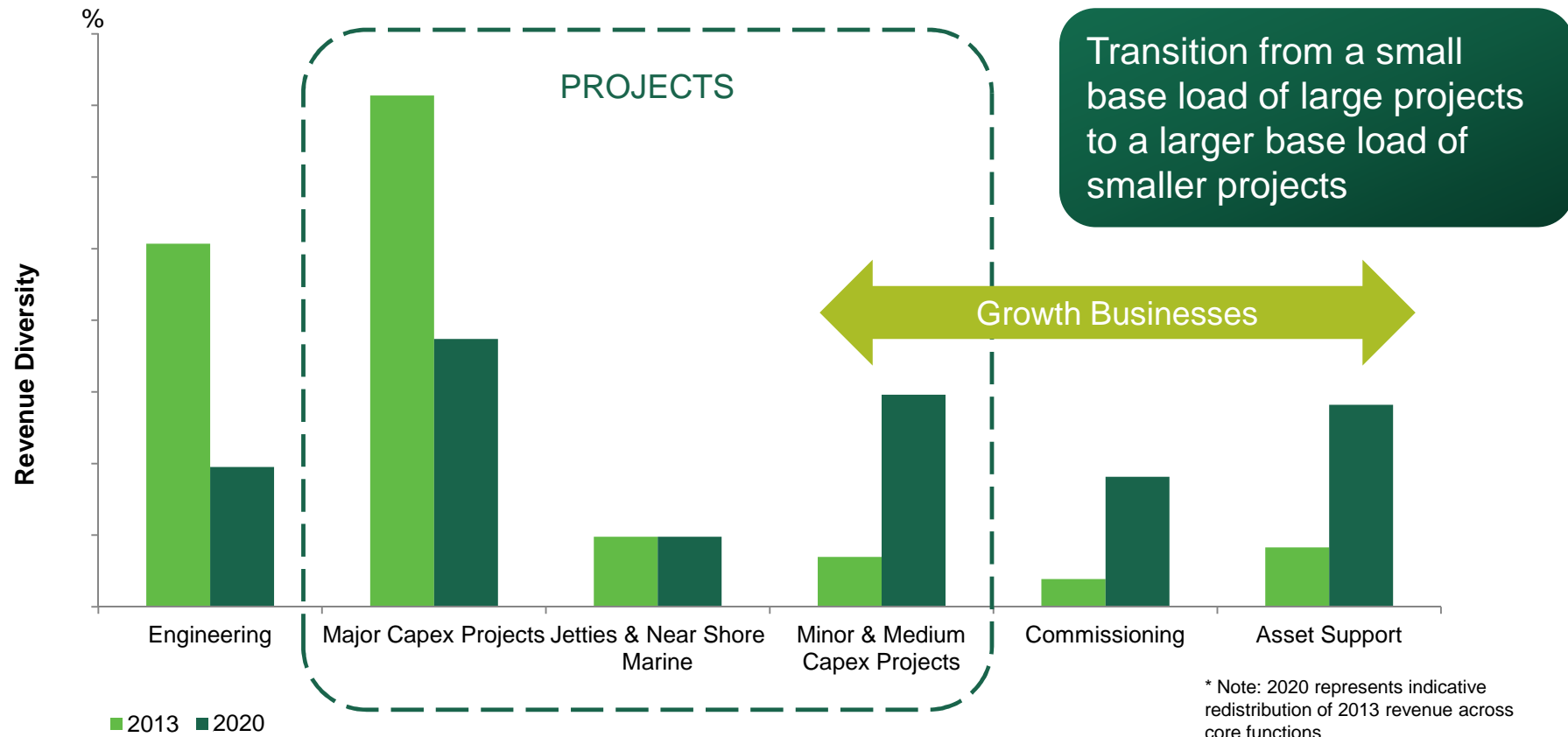
- Governance systems and robustness have been vastly improved
- Now targeting selected services led international expansion
- Leveraging competitive advantages (eg. Local market relationships/ insight)
- Organisational capability shift, but more to be done

Clough continues to progress against the current strategy

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Revenue Diversity: 2013-2020



Revenue distribution across core business areas will evolve over time

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Summary



- The global oil & gas industry is a growth market; gas is affordable, abundant and acceptable
- The oil & gas industry in Australia transitioning to Brownfields but significant ongoing capex opportunities remain
- The mining industry is transitioning from large scale projects to large scale operations
- We have refreshed 4+2+3, strategy and vision from last year
- Two pronged strategy to provide balance between current returns and future growth:
 - Integrated EPC contractor focusing on Australia and PNG
 - Selected service offerings capable of competing globally
- Integrating processes and systems throughout the company and projects
- Focused key initiatives to drive business forward

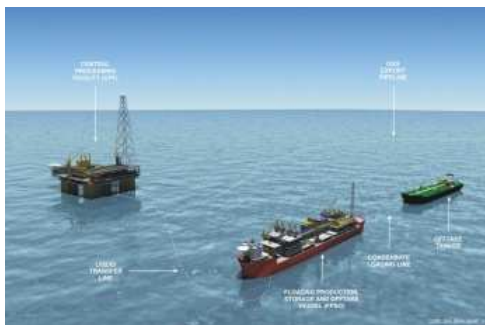
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Appendices



Engineering Key Projects



Ichthys Integrated Project Management Services

Client	INPEX
Location	Offshore Darwin, Northern Territory
Contracting entity	Clough Doris
Scope	Integrated Project Management Services overseeing the detailed design, procurement, fabrication, commissioning, tow to site, and offshore hook-up of the Central Processing Facility and FPSO.



Arrow Upstream FEED

Client	Arrow Energy Limited
Location	Queensland
Contracting entity	Clough AMEC
Scope	FEED for the full upstream development for Arrow CSG to LNG development. Includes gathering, field compression, central compression and associated pipelines and infrastructure.



Tangguh Expansion Project

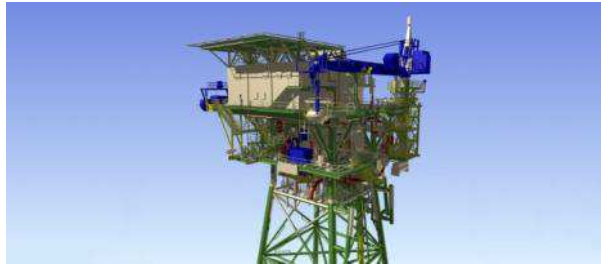
Client	BP Berau
Location	Bintuni Bay, West Papua, Indonesia
Contracting entity	Clough
Scope	Basis of Design for a 3rd LNG train (T3), mechanical engineering studies and supporting scope development, definition and procurement.

Engineering excellence across every phase

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Minor & Medium Capex Projects - Key Projects



Project	Kumul Terminal Rejuvenation Project
Client	Oil Search PNG
Location	Offshore Papua New Guinea
Contracting entity	Clough AMEC
Scope	Construction management and execution services for the rejuvenation of the Kumul Marine Terminal, located approximately 40km off the southern coast of PNG.

Ammonium Nitrate/Nitric Acid Plant Number 3

Client	CSBP Limited
Location	Kwinana, Western Australia
Contracting entity	Downer Clough
Scope	Project management, engineering, procurement, pre-fabrication, construction and pre-commissioning for the NAAN3 Ammonium Nitrate plant. The contract was awarded after successful completion of the ECI phase.

A lean delivery model across the project lifecycle

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Major Capex Projects

Key Projects



Gorgon Project

Client	Chevron Australia
Location	Barrow Island, Western Australia
Contracting entity	Kellogg Joint Venture Gorgon (KJVG)
Scope	EPCM, as part of KJVG, for all downstream facilities on the Chevron-operated Gorgon Project – one of the world's largest natural gas projects.



K128 Upstream Facilities

Client	Santos / Fluor Australia
Location	Surat Basin, Queensland
Contracting entity	Clough Downer JV
Scope	Construction of more than 400 kilometres of gas and water transmission pipelines, two compression facilities, six water storage dams an 800-person camp and expansion of the existing Fairview compression facilities.



PNG LNG Gas Conditioning Plant / Upstream Infrastructure

Client	ExxonMobil PNG Limited
Location	Hela Province and Southern Highlands, Papua New Guinea
Contracting entity	Clough Curtain JV
Scope	Engineering, procurement and construction work for the gas conditioning plant, nearby wellpads and associated piping, in addition to construction of critical upstream infrastructure across 12 geographically dispersed sites in PNG.

Integrated EPC Services

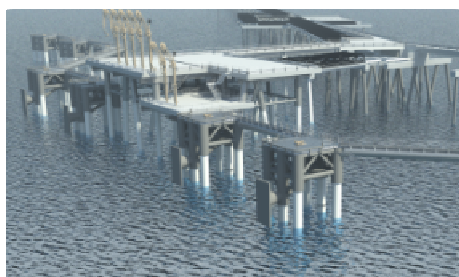
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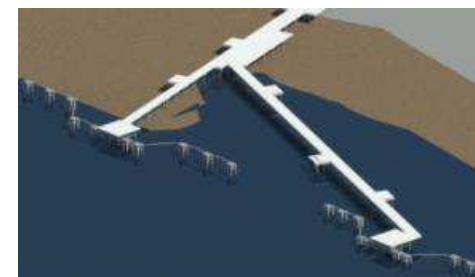
Jetties, Near Shore Marine & Terminals – Key Projects



Anderson Point Facility (AP5)



Wheatstone Project Jetty



Ichthys Project Onshore Facilities LNG Product Loading Jetty and Onshore Module Offloading Facility (MOF)

Client	Fortescue Metals Group	Bechtel	JGC Corporation
Location	Port Hedland, Western Australia	Onslow, Western Australia	Darwin, Northern Territory
Contracting entity	BAM Clough	BAM Clough	BAM Clough
Scope	Design and construction of a 306-metre long wharf extension, seven berthing dolphins, and the supply and installation of wharf conveyor modules.	Design and construction of a 1.2 kilometre jetty with operations and product loading platforms, a single LNG and condensate loadout berth, and associated piping modules and piping installation.	Design and construction of two separate vessel load-out berths, one for LNG carriers and a second for LPG / condensate carriers, in addition to the MOF - a key facility for offloading modules to assemble the LNG liquefaction plant

The Market Leader in Jetties and Near Shore Marine

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Commissioning & Brownfields Key Projects



Wheatstone HUC

Client	Chevron Australia
Location	200km North of Onslow, Western Australia
Contracting entity	Clough
Scope	Developing the maintenance database, assuring operational readiness for the offshore facilities, development of operations procedures and training and development programs, and engineering and support services



Bayu-Undan Operations and Maintenance

Client	ConocoPhillips Australia
Location	Timor Sea
Contracting entity	Clough AMEC
Scope	Operations and maintenance services for ConocoPhillips Bayu-Undan facilities consisting of a floating storage, offloading facility and three fixed platforms.



Blacktip

Client	ENI Australia
Location	Northern Territory and Western Australia
Contracting entity	Clough AMEC
Scope	Provision of trades labour to support routine and campaign maintenance and supporting services including specialist consultancy services, multidiscipline engineering, procurement, and management of subcontractors and fabrication.

Maximising Asset Value

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