AUSTRALIA PACIFIC LNG EPC PIPELINES PROJECT

2015 AUSTRALIAN CONSTRUCTION ACHIEVEMENT AWARD
MCJV TECHNICAL SUBMISSION

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McCONNELL DOWELL
CREATIVE CONSTRUCTION™

DRIVING PROGRESS

THE AUSTRALIA PACIFIC LNG EPC PIPELINE PROJECT
SUCCESS THROUGH COLLABORATION

Effective collaboration has been the key to successful delivery of the Australia Pacific LNG EPC Pipeline Project; one of the largest and most complex pipeline projects ever constructed in Australia. Management commitment along with the project contract model and cultural framework has provided a supportive environment for diverse stakeholders to come together and meet or exceed target outcomes.

Australia Pacific LNG Pty Limited – an incorporated joint venture between Origin, ConocoPhillips and Sinopec – is delivering a world-scale coal seam gas (CSG) to liquefied natural gas (LNG) project in Queensland, Australia.

As Upstream operator, Origin is responsible for the development and operation of the gas fields, and the construction and operation of the gas gathering networks, gas processing facilities and high pressure gas transmission pipelines. A key project component has been the construction of approximately 720 km of high pressure gas transmission pipelines and associated facilities to transport CSG from the gas fields in the Surat and Bowen Basins to an LNG processing plant on Curtis Island, offshore from Gladstone.

In 2010, MCJV – a 50/50 Joint Venture consisting of McConnell Dowell Constructors (Aust) Pty Ltd and Consolidated Contracting Company Australia Pty Ltd – was engaged by Origin as the Early Works Contractor during the front end engineering design (FEED) stage of the project to undertake preliminary works.

In 2011, MCJV was appointed engineer, procure and construct (EPC) contractor, with engineering and procurement responsibility for the entire scope of works and construction responsibility for the main transmission pipeline section of the project, the scope of which is shown on the following page.

Early collaboration between MCJV and Origin enabled the client to leverage the contractor's specialised construction expertise to inform the design and identify and solve potential construction challenges before construction commenced. It also enabled proactive consideration of the best cultural framework and management approach on which to base the project.

"It amazes me how a group of 'contractors' from diverse backgrounds and generally no prior connection have developed such a great esprit de corps to focus on achieving success in such a complex project. The atmosphere of 'best for project' is real and is a real pleasure to be a part of"

Australia Pacific LNG Pipelines Project staff member

In June 2014, MCJV reached Ready for Commissioning Completion of the scope of works to achieve:

- **Outstanding outcomes that exceeded targets** – Industry-leading performance resulted in targets in Key Result Areas for safety, environment, quality, and cultural heritage being met or exceeded.
- **Optimised construction with a lasting legacy for the industry and community** – Early contractor involvement and collaborative project management strategies enabled the team to develop innovative construction solutions to successfully overcome logistical, stakeholder, environmental, terrain and resource constraints to the satisfaction of all stakeholders.
- **Exceptional leadership and best practice project management** – A collaborative cultural framework aligned with early contractor involvement raised the benchmark for best practice project management. Best-for-project decision making was institutionalised and a unified culture optimised management and workforce performance. This leadership and management approach provides a model for future projects seeking to emulate the success of this project.

SCOPE OF WORKS FOR AUSTRALIA PACIFIC LNG MAIN TRANSMISSION PIPELINE

- **Scope** – Engineering, procurement and construction contract for delivery of the main export pipeline, associated facilities and lateral pipelines, consisting of 510km of large diameter, high pressure gas pipeline between the CSG fields in the Surat Basin and Bowen Basins and Curtis Island, offshore from Gladstone in Queensland.
- **Total Length** – 366km main transmission pipeline, 56km Condabri lateral and 88km Woleebee lateral
- **Diameter** – 1,050mm, 900mm and 750mm
- **Steel Grade** – X70
- **Major Facilities** – Midline launcher/receiver station, Australia Pacific LNG hub (launcher/receiver stations for the mainlines), receiver for Condabri and Woleebee Laterals, receiver station on Curtis Island, four mainline valves, tie-ins to other lines, GPFs and compressor stations, Condabri Hub (Condabri Launcher) and Woleebee Launcher at Spring Gully Hub.
- **Crossings** – 819, including watercourses, roads, rail lines and utilities
- **Key Dates** – Commenced August 2011, completed August 2014
- **Value** – Multi-Million dollar contract

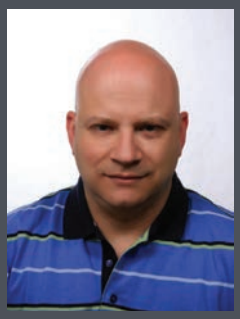
PROJECT LEADERSHIP TEAM

MARK BARROWS

MCJV PROJECT MANAGER

Mark Barrows is Managing Director for the Dutco McConnell Dowell Joint Venture business based in Dubai. He is a qualified Civil Engineer with more than 30 years experience in the pipeline industry constructing major gas, oil, water and slurry pipelines in Australasia, Asia and the United Kingdom.

Mark is a long-term staff member of McConnell Dowell. Before taking up his current role, Mark was seconded to MCJV as Project Manager on the Australia Pacific LNG Pipelines Project. He was accountable for the successful Early Works and EPC delivery of the high pressure, large diameter pipeline system to transfer coal seam gas from Queensland's Bowen and Surat Basins to Curtis Island for LNG production destined for Asian customers.



ZAHI GHANTOUS

MCJV DEPUTY PROJECT MANAGER

Zahi Ghantous is a Project Manager with Consolidated Contracting Company (CCC) Australia. After qualifying as a Mechanical Engineer he has spent more than 22 years in the pipeline and plant industry constructing major gas, oil, water, wastewater and slurry pipelines and plants in the Middle East, Africa and Australia.

Zahi was Deputy Project Manager on the Australia Pacific LNG Pipelines Project where he was responsible for the successful Early Works and EPC delivery of the high pressure, large diameter pipeline system to transfer coal seam gas from Queensland's Bowen and Surat Basins to Curtis Island for LNG production destined for Asian customers.

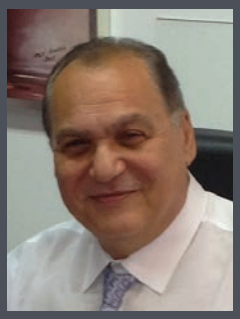
JIM FRITH

MCJV STEERING COMMITTEE REPRESENTATIVE, MCD

DIRECTOR & GENERAL MANAGER – PIPELINES, McCONNELL DOWELL

Jim is a Director of McConnell Dowell and the International Pipe Line and Offshore Contractors Association (IPLOCA) and Australian Pipeline Industry Association (APIA) boards. Jim joined McConnell Dowell as a project manager in 1989 and has developed an impressive track record in the delivery of design and construct projects across all operational business units in numerous locations across Australia and South East Asia.

He excels in understanding project business cases and working with a team to achieve exceptional project outcomes. Throughout his career with McConnell Dowell and subsidiary Built Environs, he has proven his ability to collaborate with clients to understand their unique project drivers and negotiate business solutions to the satisfaction of all parties.



MOUJALLY JABARA

MCJV STEERING COMMITTEE REPRESENTATIVE, CCC

MANAGING DIRECTOR OPERATIONS AFRICA, ASIA, PACIFIC AND LATIN AMERICA

With a Master of Science in Civil Engineering, Moujally joined CCC in 1984. He is based at CCC Headquarters in Athens from where he has established and successfully initiated new operations in areas such as Africa, the Caribbean and Asia Pacific.

With over three decades of experience in the Engineering, Procurement and Construction (EPC) industry, Moujally provides strategic leadership and management of CCC's existing business relationships and new opportunities in Africa, Asia, Latin America, Australia and Papua New Guinea to ensure that both the client and CCC business objectives are met or exceeded.

PROJECT TEAM

The project team represents a range of highly skilled people with diverse backgrounds from countries including Australia, New Zealand, India, Jordan, Lebanon, the Netherlands and Indonesia. They include:

Site Manager
Prashant Modak

Engineering Manager
Craig Bentley

Safety Manager
Wayne Hargrave

Environmental Manager
Brett O'Donovan

Superintendent
Neil Scoble

Project Engineers
Clint Kellar
Samer Yousef
Omar Ashour

Supervisors
Gordon Slattery
Jusman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