WE ALWAYS FIND A WAY TO DELIVER
ABOUT US

Clough Enercore is part of the Clough global family backed by 100 years of history in engineering, procurement and construction - building complex energy, mining and infrastructure projects across Australia and the world.

Clough Enercore has the skills and expertise to provide a full spectrum of services across the entire lifecycle of a project, from planning and development to conceptual design, feasibility studies, detailed engineering, EPC-EPCM, commissioning and brownfields.

At Clough Enercore we’ve created a work environment that’s synonymous with our core values: **Integrity, Respect, Trust, Quality, Team work, Commitment & Results Driven**

These core values represent our pledge to our employees, clients, contractors and partnerships and are continually a reflection of our culture, conduct and performance.

Clough Enercore is committed to safety, sustainable development and the wellbeing of people, communities and environments in which we work.
OUR PRESENCE

Murray & Roberts

Murray & Roberts (M&RB), South Africa’s leading engineering and construction services company, M&RB has delivered infrastructure throughout South and Southern Africa for more than 110 years and today employs a global workforce of over 20,000 people.

CHIV

CHIV provides consulting services to LNG asset developers, regulators, facility owners, operators and lenders to ensure assets are designed, developed, constructed and operated safely and in accordance with codes, regulations, and the project’s technical and commercial specifications.

Clough Enercore

Clough Enercore provides integrated engineering, procurement and construction solutions for Canadian greenfield and brownfield projects. The group specializes in the LNG, heavy oil/sands, conventional/upsream, midstream & waste processing and downstream oil & gas sectors, taking a production focused approach, working across the entire asset lifecycle.

e2i

e2i is Australia’s leading multidiscipline commissioning contractor. The company provides an independent commissioning solution across the entire project lifecycle.

Booth Welsh

Booth Welsh is an established in 1959, Booth Welsh is recognized as a market leader in lifecycle services for control systems, front-end engineering design, and spares and replacement.

Booth Welsh also acts as Clough’s centre of excellence for electrical, control and instrumentation engineering.

PSI Clough

PSI Clough combines worldwide resources with local Kazakhstan project delivery expertise to deliver EPC and commissioning projects for some of the world’s largest energy and resources clients across Kazakhstan.

Future Generation is a joint venture between Salini Impregilo, Clough, and Lane, currently delivering the Snowy 2.0 project. Its capability combines Salini’s hydropower and tunnelling expertise with Clough’s engineering and construction expertise.
Clough delivers challenging projects for energy, mining and infrastructure industries underpinned by a dedication to problem solving and getting the job done safely and efficiently. Today, Clough manages a global work force of almost 2,000 people from operating centres across Australia, Papua New Guinea, Asia, Africa, UK and North America that strive for the best in everything that they do, setting new safety and performance benchmarks every single day.

Clough is a wholly owned subsidiary of Murray & Roberts, a multinational group that focuses its expertise on delivering sustainable and fit-for-purpose project engineering, procurement, construction commissioning, operations and maintenance solutions. The group delivers its capabilities into three global market sectors: metals & minerals, energy and power & water.

+2,150
Projects completed to date across the globe

2,500
Global Employees

100
Years in Australia – established 1919

+148
Energy Projects successfully delivered

53
Years experience in Energy

34
Years experience in LNG

13
Years in Canada – established 2006
HEALTH, SAFETY, SECURITY & ENVIRONMENT

- Proprietary and award winning Major Accident Prevention (MAP) program
- Proactive HSSE leadership is top priority across all activities
- Positive HSSE team culture with personal responsibility for employees, contractors and clients
- Belief that all incidents and accidents are preventable
- Zero incidents & zero lost man-hours is our goal
- Safety addressed across the asset lifecycle
- Clough Enercore’s COR certification HSSE external audits have yielded top results: COR audit 6 year performance average 96%
- Commitment to environmental excellence

Nothing is more important than the safety of people, protection of the environment and compliance with regulations. Clough Enercore’s management is committed to creating a positive HSSE team culture, one where all team members take personal responsibility in achieving our company goal of safety excellence
KEY PILLARS

At Clough Enercore we focus on four key pillars of our business to successfully deliver our full asset lifecycle delivery model to our clients and partners.

Target Zero
- Award winning Safety Program (MAP)
- A walk-the-talk Company
- COR Audit - 6 year performance average 96%
- Safety addressed across the asset lifecycle
- Proactive HSSE leadership
- Environmental Excellence

Cost Efficient Services
- Lean Scalable project delivery approach
- Engineering to construct mindset
- Access to Clough’s value engineering knowledge base
- Productivity Focus
- Execution Excellence
- Performance driven Commercial Models
- Manufacturing Approach

Technology & Innovation
- Intelligent 3D engineering platforms
- Multi-disciplined engineering design services that adopt a full lifecycle approach
- Integrated and proven project management systems
- Cloud based technology

Our Commitment
- Alignment to our clients business goals
- Meaningful Indigenous Engagement
- Production Driven Solution (employ early production, facility optimization)
- Collaborative & transparent
- Building win-win relationships
- Zero Harm
- Corporate, Social Responsibility
Clough Enercore is committed to making a positive impact in our community and our place of work by adhering to strong core values in a way that connects our business decisions to ethical, social and environmental concerns. At Clough Enercore, we take action to improve the safety and quality of life among our people and their families, local communities and society at large.

**Making the world a better place by...**
- Protecting the environment and the safety of our people, our clients and our partners
- Building lasting relationships with our stakeholders
- Acting ethically and responsibly
- Supporting the needs of our communities and our people
- Providing economic and other benefits to the communities in which we operate
- Supporting diversity and inclusion

At Clough Enercore, we have a long history of supporting our internal family, our communities and those that are important and dear to us. Some causes we’ve sponsored include *The Calgary Food Bank, Mustard Seed, Canadian Red Cross, Assembly of First Nations (AFN), Canadian Council for Aboriginal Business (CCAB), Pathways Community Services, and the Alberta Children’s Hospital.*

**SIX PILLAR STRATEGY:**
All decisions made by the Clough Foundation are aligned to Clough’s existing six-pillar Corporate Social Responsibility program which supports charities and communities that represent Clough’s diverse operations:

At CEL we have developed an Indigenous Engagement Lifecycle (IEL) to outline how we deliver on our engagement efforts with Indigenous communities by providing a full spectrum of services across the entire lifecycle of a project.

Similar to the Key Pillars guiding our business operations, our approach to meaningful Indigenous engagement starts at the project planning and development stage, through engineering, procurement, construction and into operations.

We value long-term relationships based on trust, transparency, and mutual respect. We believe that by contributing to the sustainable long-term economic empowerment of Indigenous Peoples through employment, skills development, and business opportunities we can work together to find win-win relationships that align with the goals of our clients and the Indigenous communities in which we operate.
A FULL ASSET LIFECYCLE DELIVERY MODEL

Clough reduces project risk by providing a complete engineering and project services solution that spans the full asset lifecycle. We engineer to construct and construct to commission, operate, and maintain facilities, optimizing safety, productivity and cost across every phase of a project.

This project execution expertise has been developed through our work on the world’s most logistically challenging energy and resource projects, and provide a fresh approach for clients looking for a new way of contracting.

Clough Provides services across three phases of the asset lifecycle – engineering, construction and operations.

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ENERGY

Upstream, downstream, offshore, oil & gas, LNG and petrochemical.

MINING

Iron ore, coal, precious and other minerals and metals.

INFRASTRUCTURE

Public & private infrastructure including water, power, roads, bridges, pipelines and near shore marine.
Clough Enercore reduces project risk by providing a complete engineering and project services solution that spans the full asset lifecycle. We engineer to construct and construct to commission, operate and maintain facilities, optimising safety, productivity and cost across every phase of a project. This project execution expertise has been developed through our work on some of the world’s most logistically challenging energy and resources projects, and provides a fresh approach for clients looking for a new way of contracting.
OUR SERVICES

ENGINEERING

CONSULTANCY
Engineering studies and support to define and optimize assets
• Owners Engineering
• Concept Evaluation & Design
• Feasibility Studies
• Basis of Design
• Regulatory Support
• Specialized Process Engineering Design
• Process Optimization and Debottlenecking
• 3D Operational & Constructability Model Review
• Modularization Studies

CONSTRUCTION

OFFSHORE & ONSHORE CONSTRUCTION
Fully Integrated EPC, DBC, and Construct-only solutions
• Engineering & Procurement
• Integrated Partnerships & Alliance
• Small Scale LNG Facilities
• Process Facilities
• Power Generation
• Gas Plants & Compression Facilities
• Pipelines
• Logistics

OPERATIONS

COMMISSIONING
Drakefield & Offshore Hook-up and Commissioning
• Completion Services
• Hook-up Services
• Pre-Commissioning
• Commissioning
• Commissioning Assurance

NEARSHORE MARINE
Import & Export Jetties & Terminals, Port Development
• Import and Export Jetties
• Jetty Topsides
• Ports and Harbour Infrastructure
• Quay Walls
• Material Offloading Facilities (MOF)
• Intake and Outfall Structures
• Regasification Terminals
• Near Shore Pipelines
• Tug Pens
• Supply Bases
• Marine Engineering

BROWNFIELDS
Asset Operations, Maintenance and Optimization Solutions
• Sustaining Capital
• Maintenance Management and Execution
• Facility Debottlenecking & Optimization
• Operational Readiness
• Supply Chain Management
• Reliability Modelling
• Competency Assurance and Training
• Decommissioning
At Clough Enercore we engineer to construct, commission, and maintain facilities with a solid commitment to safety and sustainability, while optimizing productivity and costs at every phase of a project.

**LNG PROJECTS**

**LNG FEED Bunkering / Export Terminal**
**CONFIDENTIAL CLIENT:**
**LOCATION:** British Columbia, Canada
**SCOPE:** Full multidiscipline FEED and Cost Estimate for on-shore piping & equipment to support LNG bunkering and future export from the B.C. coast.

**HOPKINTON LNG LIQUEFACTION PEAKSHAVER UPGRADE**
**CLIENT:** Eversource
**LOCATION:** Massachusetts, USA
**SCOPE:** Owner’s Engineering Advisor, overseeing the detailed engineering for Hopkinton LNG Liquefaction Project.
- Owner’s Engineering Advisor for all Design Model Reviews
- Review of vendor supplied skids, and layouts
- Review Engineering Design
- Interaction with Operations and Maintenance

**NATURAL GAS PROJECTS**

**PEMBALTA STATIONS 1 & 2 COMPRESSER INSTALLATION**
**CLIENT:** PennWest
**LOCATION:** Alberta, Canada
**SCOPE:** Detailed Engineering for installation of new gas compressors, MCC/control buildings, new pipeline, upgrade of the flare system, addition of a new inlet separator and of new skidded office buildings.

**CONSORT GAS PLANT COMPRESSOR**
**CLIENT:** Apache
**LOCATION:** Alberta, Canada
**SCOPE:** Detailed Engineering for shutdown (and future removal) of eight 1940’s vintage Clark and Ingersoll-Rand integral compressors, and the addition of three modern Ariel JGK-4 compressors. Project was commissioned to reduce overall plant NOx emissions.

**PIPELINE, GATHERING SYSTEMS & FLOWLINES PROJECTS**

**DILUENT PIPELINE (EDL) PUMP STATION UPGRADE**
**CLIENT:** Access Pipeline
**LOCATION:** Alberta, Canada
**SCOPE:** Detailed Engineering upgrade of the power transformer from 1 MVA to 3 MVA, install new feeder and control cables from transformer to existing switchgear, and install new valves and piping to allow for series/parallel pump operation. This work will increase the current 130,000 bpd capacity of the system to 174,000 bpd.

**DRIFTWOOD LNG PIPELINE PRE-FEED**
**CLIENT:** Tellurian
**LOCATION:** Louisiana, USA
**SCOPE:** Pre-FEED for Driftwood LNG pipeline transporting natural gas to the liquefaction facility from existing interstate pipeline systems via a proposed new 96-mile long pipeline and associated compressor stations.
KEY PROJECTS

Clough Enercore provides a lean, scalable project delivery approach, supported by engineering centres and project management capabilities, structured to optimize utilization and reduce the overall cost for our clients.

GORDONDALE DISPOSAL FACILITY
CLIENT: Secure Energy
LOCATION: Alberta, Canada
SCOPE: FEED and Detailed Engineering of a sweet and sour common oilfield waste fluids (Class 1B) and produced waters (Class II) facility.

LEITCHVILLE SOUR OIL BATTERY
CLIENT: PennWest
LOCATION: Saskatchewan, Canada
SCOPE: EPCM and on-site commissioning for 2200 Grass Roots BPCD Sour Oil Battery and Gathering System Inlet manifold system; an oil treating train, heated FWKO Drum and Treater; tankage for oil product, produced water, and slop oil; vapour recovery unit; disposal water injection system; Ops building, garage, and lab.

HORIZON SUP DEBOTTLENECKING; UNIT 50 BALANCE PHASE 2B
CLIENT: Canadian Natural (CNRL)
LOCATION: Alberta, Canada
SCOPE: Detailed Engineering and Supply Chain Horizon Upgrader Oil Sands Project Addition and modifications of equipment and related systems in process Units 51, 52, 54, 56, and 73 (OSBL). Sour Water Concentrator Column, Degassing Contractor, Plate and Frame Heat Exchangers, Pumps

LINDBERGH HYDRAULICS UPGRADE & MULTI WELL TIE IN
CLIENT: Tervita
LOCATION: Alberta, Canada
SCOPE: Detailed Engineering of hydraulic upgrades and cavern tie-ins to supply suitable water volumes to meet long-term operational requirements for the Lindbergh Facility.

RED ROCK BATTERY UPGRADE
CLIENT: Encana
LOCATION: Alberta, Canada
SCOPE: FEED and Detailed Engineering for a 2,000 BOPD oil battery TO Replace existing rental equipment with permanent facility modified to process future production.

GERMAIN COMMERCIAL DEMONSTRATION PROJECT
CLIENT: Laricina Energy
LOCATION: Alberta, Canada
SCOPE: Detailed Engineering for Grass Roots SC-SAGD (Solvent-Cyclic (SC) process) CPF and 10 well pair Well pad to produce 5,000 BPCD Bitumen. Bitumen Treating, Water De-oiling and treatment, Steam Generation, Product & Diluent Storage, truck out facilities, Site infrastructure & 25kV Distribution.

CONVENTIONAL OIL PROJECTS

HEAVY OIL / OIL SANDS PROJECTS

WASTE TREATMENT, RECOVERY & DISPOSAL PROJECTS
OUR CAPABILITIES

- Import and Export Jetties
- Jetty Topsides
- Ports and Harbour Infrastructure
- Quay Walls
- MOFs
- Intake and Outfall Structures
- Regasification Terminals
- Near Shore Pipelines
- Tug Pens
- Supply Bases
- Marine Engineering

NEAR SHORE MARINE

LNG CANADA LOADOUT LINE TRESTLE

CLIENT: JFJV
Location: Kitimat, British Columbia, Canada
Entity: CPJV
Scope: Responsible for the complete design, procurement, fabrication, and installation/construction (EPC) of the LNG Loading Line Trestle. This comprises an approximately 1750m long piled trestle, supporting a roadway and free issue modular pipe-rack with 6 expansion loops at elevation, running north-south between the Plant site and LNG Berth.

MALAYSIA MANUFACTURING PROJECT

CLIENT: Vale
Location: Malaysia
Entity: Murray & Roberts Marine
Scope: Design of materials handling quay and management of construction for marine headquarters and jetty.

PNG LNG PROJECT MARINE JETTY

CLIENT: Bechtel Chiyoda JGC Joint Venture
Location: Gulf of Papua, Papua New Guinea
Entity: BAM Clough
Scope: Design and construction of a 2.4 kilometre trestle with substation platform, loading platform and single berth. Scope included fabrication and construction of the topsides.

WHEATSTONE JETTY

CLIENT: Bechtel
Location: Onslow, Western Australia, Australia
Contracting Entity: BAM Clough
Scope: Design and construction of a 1.2 kilometre jetty with operations and LNG and condensate loadout berth, and associated piping modules and piping installation.

ICHTHYS LNG PROJECT PRODUCT LOADING

CLIENT: KJC Australia LNG Pty Ltd (KJC) (a joint venture between JGC Corporation, KBR and Chiyoda Corporation)
Location: Darwin, Northern Territory, Australia
Contracting Entity: BAM Clough
Scope: Design and construction of two separate vessel load-out berths, one for LNG carriers and a second for LPG/condensate carriers, and the MDF, a key facility for offloading modules to assemble the LNG liquefaction plant.

PLUTO LNG JETTY

CLIENT: Woodside Energy Limited
Location: Karratha, Western Australia
Contracting Entity: BAM Clough
Scope: Design and construction of a 300 metre long approach LNG jetty including a 40 x 30 metre platform, four breasting dolphins, six mooring dolphins and navigational aids.
KEY PROJECTS

PETROCHEMICAL FACILITY
CLIENT: Confidential
LOCATION: Texas, USA
SCOPE: Full Engineering, Procurement and Construction (EPC) for petrochemical/refining facility in Texas.

ETHYLENE STORAGE AND DEHYDRATION SYSTEM
CLIENT: Enterprise Products
LOCATION: Mont Belvieu, Texas, USA
SCOPE: Scope of the project includes all Engineering, Procurement and Construction (EPC) necessary to install facilities and equipment. The system design for this project involves the reuse of a 5.3 million barrel high-capacity ethylene well that will accommodate the injection, and withdrawal of ethylene at a rate of approximately 491,000lb/hr. This will include a new dehydration unit as well as heaters, pumps, custody transfer meters, leak detection meters, PLC's, PEC/MCC building, and new transformers.

NAVAJO REFINERY
CLIENT: FINA-ALON USA
LOCATION: Artesia, NM
SCOPE: ROSE Unit (asphalt plant), EPC crude unit expansion, SCOT tail gas unit, Low sulphur gasoline project, FCCU modernization, FCCU expansion, Refinery low sulphur diesel project

ADDITIONAL EXPERIENCE IN NORTH AMERICA

CONDENSATE SPLITTER
CLIENT: Magellan Midstream Partners
LOCATION: Corpus Christi, Texas, USA
SCOPE:
- Construction for a 50,000 bbl per day grassroots crude oil condensate splitter
- Performed all site work, piles, foundations
- Structural steel fabrication and erection
- Equipment installations
- Installation of all piping, electrical and instrumentation firewater system

JAX LNG TRAIN 1
CLIENT: Jax LNG
LOCATION: Jacksonville, FL
SCOPE: EPC services for a grassroots 120,000 Gallons per Day facility with Marine and Truck Loading facilities in Jacksonville, Florida.

LLC TERMINAL
CLIENT: Oxy Ingleside Energy Center
LOCATION: Ingleside, TX
SCOPE: Engineering, procurement and construction for a 100,000 bbl/day HD-5 propane loading terminal. Including:
- 2–40,000 bbl spheres
- Dehydration unit and refrigeration units
- Three articulating loading arms
- Inlet gathering system
- Vapor recovery unit
- Liquid fire suppression system
Clough Enercore uses the latest engineering technology to maximise the value from engineering deliverables across the asset lifecycle. Our engineers and designers have significant experience and capability using 3D modelling and intelligent design programs while our systems, procedures and workflows enable effective and efficient project management, cost control and concurrent, multi-discipline design. By utilising 3D modelling and intelligent design programs, we maximise the benefits of data integration throughout the engineering, fabrication and construction phases of our projects.

Our global network of engineering centres use Cloud based technology to enable 24/7 engineering support for our clients.

Our multi-disciplined engineering design services adopt a full life cycle ‘Total Installed Cost’ approach to design and project implementation, to enhance project value without compromising safety, quality or schedule.

We are also recognised as a pioneer in the development of integrated project management systems that take a full asset lifecycle approach to project execution.

Clough Enercore is harnessing new mobile platforms and tools to drive information into our geographically dispersed operations, and has invested significantly in data, systems and technologies. The result is an ability to sustain field variations to less than two percent.

- Intelligent 3D engineering and new gaming technology
- Multi-disciplined engineering design services that adopt a full lifecycle approach
- Integrated and proven project management systems
- Cloud based technology
- Virtual Reality
- New Mobile platforms
OUR COMMITMENT

Alignment to our clients business goals

Meaningful Indigenous Engagement

“Production Driven Solutions” (employ early production, facility optimization)

Focused on increasing productivity and reducing Client risk

Provide transparent, timely, complete and credible reporting to the Client

An early warning culture that requires team members to report potential or actual deviations from the plan immediately

Zero Harm

Building win-win relationships

Corporate & Social Responsibility