

Energy Transition

Engineering the path to net-zero

Comprehensive lifecycle engineering solutions supporting the Energy Transition across hydrogen, carbon capture, renewable energy, energy storage, and gas transition projects—from feasibility to operational optimisation.

Working towards a sustainable future.

With over 30 years of experience, Verbrec delivers integrated engineering, project execution, operation and maintenance, and training services to support asset performance.

Operating across the entire asset lifecycle, we support industries in transitioning their businesses and achieving success in electrification, gas market transition, green commodities, and asset optimisation.

Our geographical footprint spans Australia, New Zealand, PNG, and the Pacific Islands, serving diverse sectors including Energy, Infrastructure, and Mining.

Key sustainable sectors:

- Gas Transition and Decarbonisation
- Low Carbon and Renewable Electricity
- Electrification and Energy Storage
- Water Security
- Sustainable Mining

Verbrec Partnership Model

Adding value to every stage in the Lifecycle of an asset



1. Early engagement



2. Value-Add Engineering



3. Construction and Commissioning



4. Operations & Maintenance



5. End of Life and Decommissioning



KEY SUSTAINABLE SECTOR & SERVICES

Core Market Ecosystem

Core Markets



Sustainable Sectors

Gas Transition & Decarbonisation

- LNG Import Facilities
- Peaking Gas Solutions
- Hydrogen
- CCS implementation
- Biogas
- Sustainable Fuels

Low Carbon and Renewable Electricity

- Geothermal
- Hydro
- Wind
- Solar

Energy

Infrastructure

Sustainable Sectors

Electrification & **Energy Storage**

- BESS
- Pumped Hydro
- New Storage technologies (EG-CAES, Gravitational)

Water Security

- Supply solutions Desalination technologies
- Integrated Water Management
- Control Systems and industrial process
- Pipeline and pumping station design

Mining

Sustainable Sectors

Sustainable Resource Development

- Owner engineering*
- Software Solutions
- Feasibility Studies

Operational Efficiency & Decarbonisation

- Asset Optimisation
- Automation and Control
- Decarbonisation Solutions
- Water and Waste Management
- Stockyard Efficiency Solutions



GAS TRANSITION AND DECARBONISATION

Verbrec are the gas transition and decarbonization market leaders. This competitive advantage is fuelled by Verbrec's full lifecycle engineering, construction, operations and management capability.

Key services include:

- LNG Import Facilities
- Biogas
- Peaking Gas Solutions
- Carbon Capture and Storage
- Sustainable Fuels
- Hydrogen
- Decarbonisation

LOW CARBON AND RENEWABLE ELECTRICITY

Verbrec is committed to advancing the energy transition with innovative low-carbon and renewable electricity solutions. Our expertise spans **geothermal**, **wind**, **solar**, **and hydro power**, ensuring reliable and sustainable energy generation.

With a proven track record in delivering complex energy projects, Verbrec helps clients navigate the technical, regulatory, and financial challenges of integrating renewable and low-carbon energy into their operations.

Decarbonisation services offer performance capability.

CRITICAL INFRASTRUCTURE

Electrification & Energy Storage:

Verbrec's expertise in critical infrastructure ensures the delivery of resilient and future-ready solutions in electrification and energy storage. From **Battery Energy Storage Systems BESS** and **pumped hydro** to **emerging storage technologies** such as CAES and gravitational systems, we provide innovative and commercially viable solutions that enhance energy security.

Water Security:

Our comprehensive approach also extends to water infrastructure, where we support water security initiatives that are essential for sustaining communities and industries. With a deep understanding of technical complexities and project risks, Verbrec is at the forefront of delivering infrastructure that facilitates a sustainable energy transition.

In Water Security, Verbrec supports sustainable solutions, including desalination technologies and water infrastructure upgrades for water authorities across Australia and New Zealand, to ensure the long-term viability of water resources. Our services encompass system integration, balance of plant design, and the implementation of advanced control systems (SCADA), driving efficiency and improved ESG outcomes across industries.

SUSTAINABLE MINING

At Verbrec, we lead the way in sustainable mining by enabling the responsible extraction of critical minerals essential for the energy transition. Our solutions drive more efficient and environmentally responsible mining operations, supporting the electrification of the industry.

Our expertise extends to optimising mining processes, improving energy efficiency, and reducing carbon footprint. This includes decarbonising metallurgical coal mining and implementing innovative strategies to drive sustainable practices across the sector.

Our advanced digital twin, **StacksOn**, optimises stockyard management for maximum operational efficiency and financial gain. We also integrate IoT, automation, and process software to enhance productivity and minimise resource consumption.

Through innovative **engineering and technology-driven solutions**, Verbrec helps mining companies meet their sustainability targets while enhancing productivity and profitability in an increasingly complex regulatory environment.



OUR COMPETITIVE ADVANTAGE

- Innovation Leadership: Advanced Digital Twins (**StacksOn**) and cutting-edge automation.
- Integrated Lifecycle Approach: End-to-end engineering for maximum asset performance.
- Automation Excellence: Implement state-of-the-art automation technologies that streamline processes, reduce costs, and drive sustainable operational growth.
- Workforce Excellence: Industry-leading Competency Training for future-ready teams.
- Safety and Compliance Leadership: Uncompromising safety standards and regulatory adherence.





ENERGY TRANSITION PROJECTS

Verbrec is actively delivering innovative projects that drive the energy transition, supporting decarbonisation, renewable energy adoption, and infrastructure optimisation. Our expertise spans LNG, hydrogen, carbon capture, wind, battery storage, biogas, and desalination, ensuring reliable and sustainable energy solutions for the future.

Enabling clients to meet sustainability goals while enhancing operational efficiency.

Some of our key energy transition projects include:

- Port Kembla LNG Import Terminal
- Batangas LNG Terminal
- Hydrogen Refuelling Station
- Pre-feasibility Energy Evolution Hub (EEH)
- Moomba CCS Operational Readiness
- Broadlands Biogas Upgrade and Biomethane Injection
- Hot Oil System Efficiency Study
- Pre-feasibility Studies for Hydroelectric Schemes
- Biogas Pre-feasibility Studies and Optioneering
- Eraring BESS Maintenance Strategy Implementation
- Long Duration Battery Energy Storage Concept Studies
- Kangaroo Island New Seawater Desalination Plant
- BHP Jimblebar Reduce train loadout times via improved stockyard management
- MidWest Pre- Feasibility Study Shared Infrastructure

VERBREC LOCATIONS

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