

# Forward, together

CAPABILITY STATEMENT



THIESS GROUP

**THIESS**



**FLEETco**



**PYBAR**

# Contents

**Acknowledgment**

As a global mining services provider, we acknowledge and respect the history and contributions of First Nations peoples. Across our offices and sites, we recognise and value our responsibility to live and work on country, and with communities, respectfully and with care.

This capability statement was produced on the lands of the Yuggera and Turrbal Peoples. At the Thiess Group, we honour and respect Aboriginal and Torres Strait Islander peoples as having the longest continuous culture on earth. We recognise Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of this land, and pay our respects to the Elders past, present and emerging for they embrace the memories, traditions, and culture of Australia.

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**Thiess companies partner with clients and communities across geographies, commodities and cultures to deliver bespoke and sustainable solutions, in mining and beyond.**

Our pioneering spirit drives superior performance in the face of any challenge, from autonomous mining and climate change to deep mining and rehabilitation.

We are ready to create a better future for our clients, communities, partners and people. We are ready to go

**forward, together.**

### **Trusted partnerships**

Our success over the past 90 years is built on our commitment to listen and understand the business needs of our clients, so we can safely deliver value and certainty. These partnerships are built on trust, and they empower our people and communities to be better and do better.

### **Pioneering spirit**

Curiosity is part of our DNA. We work closely with our clients to enable innovation and integrate new technology, as we continue to diversify our business across different commodities, geographies and services. It's this proactive and flexible approach that allows our clients to thrive among rapid change.

### **Sustainable solutions**

The world around us is changing rapidly. Our clients are facing new challenges and they need Thiess companies to develop effective and sustainable solutions, leading ESG practices and strong community engagement. They know that working with Thiess companies delivers positive change and creates lasting value.

# Our global business

## THIESS

Thiess delivers sustainable solutions in open cut and underground mining in Australia, Indonesia, Mongolia, and North and South America. Established in 1934, Thiess operates across diverse commodities, environments and cultures.

Thiess' specialist services include Thiess Rehabilitation, which offers world-leading mine rehabilitation services by miners who are also environmental experts and Thiess Asset Services, who provide proven, flexible asset solutions to deliver the lowest total cost of ownership.



MACA is an international contracting group providing services to the mining, infrastructure and construction sector industries. They provide tailored solutions to meet the needs of their clients and end-users.



MACA Interquip Mintrex provides engineering and construction services to the mining and mineral processing sector. Their in-house team of specialists deliver end-to-end solutions, from management of metallurgical testwork and engineering studies through to commissioning.



PYBAR is a leader in metalliferous underground hard rock mining. Founded in 1993, their success is based on safe, rapid underground infrastructure development and consistent, reliable production.



RTL Mining and Earthworks provides mining, rehabilitation, civil construction and heavy earthmoving plant hire services, as well as general and over-dimensional transport services from their base in the Latrobe Valley, Victoria, Australia. Thiess owns 88% of RTL.



FleetCo is a global dry hire equipment provider. They provide access to comprehensive plant hire and equipment ownership packages and innovative capital replacement solutions within Australia.

## Our operations

8

countries

50+

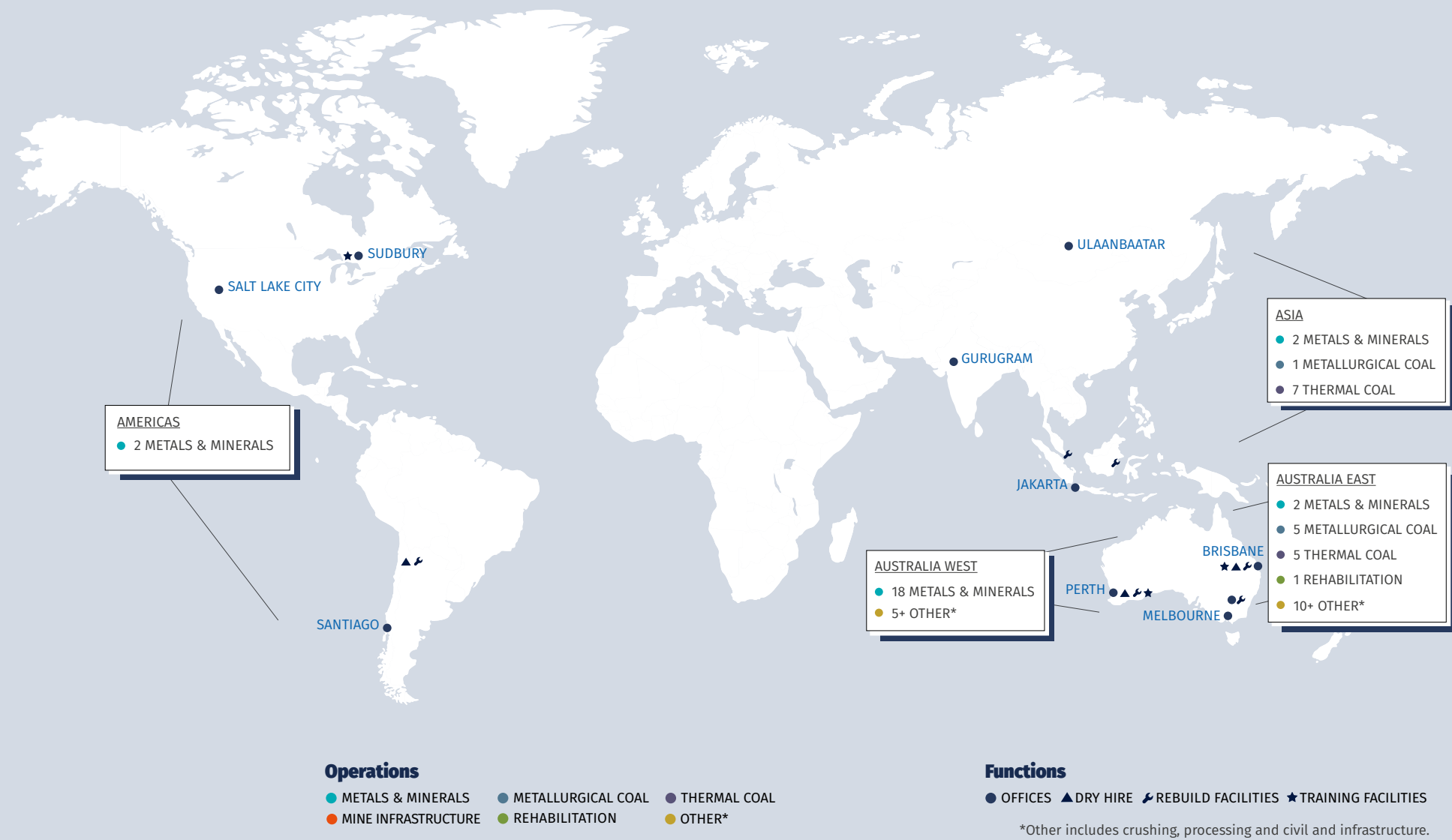
projects

6

rebuild facilities

14,000+

employees



## Our services



Mine planning



Open cut mining



Underground mining



Asset services



Mine infrastructure



Crushing & processing



Rehabilitation



Decarbonisation





# **Mine planning**

We offer a range of mine planning services for all stages of a mine's life cycle. Our life-of-mine planning provides the foundation and economic direction to support robust short-term delivery and long-term value.

## Technical studies

We leverage in-depth knowledge from decades of in-field experience across a range of commodities and mining methodologies to deliver tailored, flexible technical studies. Our study services range from high-level, early stage scoping assignments on greenfield projects, to detailed technical studies geared for immediate implementation on operational projects, to peer review of client or consultant developed studies.

## Design

Our practical, life-of-mine expertise provides the strongest foundation for operations because we design based on direct experience across the full mining lifecycle. Through mine optimisation and optioneering, we further challenge every aspect of a design to ensure short and long-term goals are based on sound, fit-for-purpose economics. Our multidisciplinary specialist skill and experience provides clients with safe, certain and efficient operations.

## Production optimisation

Our life-of-mine planning provides the foundation and economic direction to support robust short-term delivery and long-term value. We work closely with our clients to optimise production outcomes, balancing mine life, resource recovery and unit cost targets, with client priorities, schedules and market demands. Proven systems give supervisors ready access to information to make informed, agile decisions and effectively manage change on site, with remote technical support from our in-house team of multi-disciplinary experts.

## Estimation

Our robust estimating capability delivers fully costed mine plans that give clients economic certainty. Our skilled team of dedicated estimators are part of a multi-disciplinary mine planning team that tests thinking to refine strategies and identify the best options. Detailed costs are analysed and benchmarked against our extensive knowledge bank of diverse operations, further reducing unknowns and contingencies to create a total mine planning package that positions projects for long-term project performance and economic success.



CASE STUDY: PIONEERING THROUGH-SEAM BLASTING AT MOUNT OWEN

Thiess' advanced terrace mining and through-seam blasting at Mt Owen Mine in Australia successfully overcame the deposit's complexities – delivering efficient excavation, higher resource recovery and reduced costs.

The deposit comprised multiple, often steeply-dipping, coal seams mined in thicknesses between 0.3–11m. Thiess worked with specialist suppliers on an electronic initiation system that enabled larger blasts with more seam intercepts, and longer delays between smaller seam interburdens, to reduce thin coal seam loss. Combined with high precision drill guidance and strata recognition, the team achieved lower coal disruption blasts to improve coal flow scheduling and resource recovery.

Without through-seam blasting, working on the steeply-dipping strata would have made mining at Mt Owen uneconomical and significantly shortened the mine life.



# Open cut mining

## Mine production & operations

Our experienced on-site mining teams access our extensive in-house technical and functional specialists such as mine planning, drill and blast, survey, geotechnical, geological and environmental engineers, as well as asset, project controls, safety, people, environment and community management experts.

Whether a new mining operation, or a step change for an existing mine, we optimise results and empower ongoing success.

## Autonomous & digital mining services

Autonomy enables sustainable operations through enhanced safety, increased productivity and improved efficiency. Our expertise and experience span autonomous drilling and haulage systems, and semi-autonomous tractor systems.

Since our autonomy journey began over a decade ago, Thiess has combined leading-edge insight with our extensive operational experience to provide a range of autonomous services, helping our clients realise the benefits of autonomy sooner.

### CASE STUDY: MINING EXCELLENCE SINCE 2007

For almost 20 years, Thiess has worked with the Jellinbah Group to safely enhance and expand operations at Lake Vermont Mine in Central Queensland. Jellinbah awarded Thiess the first mining contract for the then greenfield mine in 2007. Thiess has been a trusted partner for Jellinbah since then, working collaboratively through multiple mine expansions and contract extensions – the most recent being an extension to 2028 worth A\$2.3 billion.

Under this award, Thiess will continue to provide full mining services, including statutory operation of the site, mine engineering and mining operations, maintenance and asset management, rehabilitation works, and operating and maintaining Jellinbah's handling and preparation plant, train load-out and mining camp.

Over the years, Thiess has introduced many advancements at Lake Vermont with Jellinbah's support – such as safety innovations, autonomous drilling and semi-autonomous dozing technology, and strategic mine

planning and resource optimisation to support Jellinbah's longer-term business outcomes. Thiess has also grown to be part of the Dysart community, with a focus on local employment and procurement, and strong partnerships with local community organisations.





# Underground mining

We have the expertise and experience to deliver fully integrated underground mining solutions, and offer a range of specialist capabilities.

## Mine development

We provide safe and efficient underground mine development services with a focus on rapid project delivery for early commencement of production. Our services include:

- boxcut and portal establishment
- decline, incline and level development
  - long round rapid development
  - deep level, intensive support access development
  - twin boom electric and single boom diesel jumbos
  - narrow vein jumbo development.
- mine infrastructure such as raise boring of raises up to 7m in diameter, primary vent installations, conveyors and crushing stations, accommodation facilities, pump stations, service holes and manways.

## Shotcreting

Backed by an extensive fleet of fit for purpose equipment, shotcreting can dramatically improve productivity and quality of mine development.

Our shotcreting services include supply of batching plants, purpose-built underground agitators and spray units that support in-cycle shotcreting, rehabilitation and highwall and portal stabilisation.

## Production mining

We are constantly refining processes and optimising productivity to deliver high performance results. Our capabilities include:

- boxhole boring machines for slots
- longhole production and slot raise drilling
- teleremote bogging with guidance technology
- emulsion explosives and electronic detonators
- production drilling and hole surveying, quality assured at regular intervals
- bulk mining methods including sub-level and block caving along with paste and Avoca filling methods.

## Raise boring

We provide conventional raise boring, uphole boxhole slot drilling and down hole slot reaming for ventilation and ore production applications. Our capabilities include:

- conventional raises and shafts up to 7m in diameter
- production boxholes
- service holes and equipping
- shaftlining - remote application of product for shaft support.

We've also expanded into servicing the renewable energy sector, through the application of raise boring for hydro power projects including intake, surge, and utility shaft excavation by raise bore methods.

Our fleet includes track mounted raise drills and mobile rig carriers, allowing for independent relocation of raise bores in mines and improved operator safety. We can also provide equipment to remove raise cuttings, as an independent solution.



## CASE STUDY: UNDERGROUND DEVELOPMENT AND PRODUCTION PROJECT

PYBAR were awarded a contract to carry out decline development and production mining in the form of a sub-level cave (SLC), including establishing a portal off a historic open pit. The SLC was intended to extract a high grade chalcocite ore body with a target of 1.6Mt. An additional scope of work was granted to include a sub-level open stoping (SLOS) block.

Over the course of the project, PYBAR mined over 2.5Mt of copper ore via the SLC and SLOS, and completed 11km of development, 299,000 production drill metres and 8.9Mtkm of haulage.

Challenges included development adjacent to historic underground workings, hot reactive ground, the management of the sub-level cave draw in and around an existing open pit, and a corrosive rock mass requiring frequent rehabilitation and replacement of the ground



support elements.

The project's mobile fleet – owned, operated, and maintained by PYBAR – has averaged 94.7% availability over the project duration, setting new standards within the business for fleet availability.





# Asset services

Thiess operates and maintains one of the world's largest and most diverse mining fleets. Our specialist offering Thiess Asset Services has the proven capabilities to provide clients with the lowest total cost of ownership and whole-of-life asset solutions.

## Maintenance services

With over 90 years of proven experience partnering with major OEMs, we understand firsthand the challenges and opportunities of owning and maintaining mixed fleets - bringing our expertise to help you optimise asset performance and maximise value. As a mining services provider, we understand what it takes to achieve the lowest total cost of ownership.

## Component rebuilds

We offer proven alternatives through our comprehensive component reconditioning and rebuild services. Our component rebuild centres are located in Indonesia and Australia. Utilising a parts exchange service model, we restore each component to meet Thiess' stringent standards and tolerances - we call this Thiess Proven.

## Machine rebuilds

Thiess provides comprehensive machine rebuild solutions through our global centres in Indonesia, South America and Australia.

## Our services

- Machine life extensions
- Machine overhauls
- Chassis and frame repairs
- Retrofit rebuilt trucks with alternate fuel technologies
- Extended life - composite carbon fibre repairs
- Dry hire.

## Equipment hire

We provide comprehensive and reliable equipment hire solutions, enabling you to meet your short and long-term objectives with tailored options to suit your needs. We deliver quality machines, expert service, and flexible support packages. Our experience and strong supplier relationships enable us to provide solutions to any client challenge, regardless of scale.

**Proven asset performance – driven by value, innovation and safety**



## CASE STUDY: SOURCING AND SUPPLYING TWO 550T EXCAVATORS ACROSS THE COUNTRY

In mid-2021, a Western Australian client requested two 550t excavators, to be on site by March 2022. FleetCo identified suitable plant in Queensland and started addressing the logistical challenge of coordinating permits and transport on both sides of the country.

More than 2,700-employee-hours were required to prepare the excavators for delivery. To move the massive equipment, 14 trucks travelled a combined total of more than 300,000km to their destination.

By listening to our client, and working closely with supply partners, FleetCo safely delivered on budget, a solution that met the client's tight deadline.



# **Mine infrastructure**

Supported by our experienced workforce and an extensive fleet of modern, well maintained plant and equipment, we deliver project solutions that are innovative, value driven and community focused.



## Mine infrastructure

Thiess companies deliver a complete mine infrastructure solution for clients including the design, construction and commissioning of buildings – such as accommodation, offices, amenities, storage, supply logistics, workshops and aerodrome facilities – and civil infrastructure – spanning road, rail, utilities, water and tailings management, and port facilities.

Our approach ensures the safe and efficient delivery of mine infrastructure with streamlined interfaces. We deliver high-quality, integrated end products that maximise efficiency and productivity and minimise operational costs for highperforming mine operations.

## Renewable energy

As the industry increasingly looks to embrace opportunities for reducing our operational carbon footprint, we are well placed to deliver key infrastructure in support of this transition, including construction of wind turbine and transmission tower foundations, access roads, construction pads for substations, NPI and general ancillary civil works, as well as in-ground services.

## Our capabilities include:

- earthworks (bulk and detailed)
- road and pavement construction
- bridge construction
- traffic management
- reinforced concrete structures
- tailings storage facility construction
- evaporation ponds
- land formations and embankments
- drainage
- services and utilities
- non-process infrastructure - including offices, maintenance warehouse facilities & associated works
- mine infrastructure
- mine airport runways.



## CASE STUDY: TRUSTED DELIVERY PARTNER ON ROY HILL

MACA was initially contracted by HanRoy in August 2021 to complete four months of earthworks to allow the client to construct two new overland conveyor systems and associated transfer stations to connect ROM 4 to the existing ROM 3.

With subsequent award of additional packages, MACA has now successfully delivered more than \$80 million of sustaining capital bulk earthworks, hydraulic structures, and civil works, including construction of a grade separated interchange at Marble Bar Road.

Through MACA's commitment to delivery excellence, quality and safety, we established ourselves as a long-term trusted partner for HanRoy.



# **Crushing & processing**

We're proud of our track record in delivering small to large scale projects, new and refurbished plant and equipment and consumables to the mineral processing, energy and resource sectors.

## Processing plant upgrades

From the engineering study to the delivery of a successful project, we have the capability of executing various contracting models depending on client requirements.

Our capabilities include:

- engineering, procurement, construction contracts
- structural, mechanical and piping (SMP) installation
- conveyor systems
- process plant upgrades
- tank build and installation
- refurbishment and recommissioning.

## Crushing & screening

We construct, build, commission projects, and maintain an extensive fleet of mobile and fixed plant machinery. We configure our plant to suit evolving operational requirements to provide our clients with tailored solutions with minimal mobilisation and lead time. Our skilled teams provide safe, innovative, and efficient services for peak production for our clients across different mines.

## Materials handling

From design to construction and delivery, our material handling experts combine their knowledge to deliver optimal mineral processing solutions, including direct shipped ores, construction aggregates, sands and rail ballasts, and recycling material such as recycled aggregated pavement.

We pride ourselves on exceeding production targets, with our mobile plants processing up to 650 tonnes per hour, and our fixed plants handling up to 2500 tonnes per hour.



### CASE STUDY: PROJECT EXCELLENCE AT IRON ORE CRUSHING AND SCREENING PLANT

MACA delivered a crushing and screening plant for BHP Billiton Iron Ore Pty Ltd in Newman, Western Australia, which produced lump and fines directly saleable ores. The project was a complete package from design phase through build to operate and maintain – designed for a nominal 12Mtpa to a sprint capacity of 15Mtpa.

MACA successfully completed the design and construction within a tight time frame and delivered it on schedule, with three years of injury-free operation.



# Rehabilitation

Mining is about value, and that value isn't fully realised until land is returned to a sustainable state. Thiess Rehabilitation offers mine rehabilitation services by miners who are also environmental experts.

**Forward together with communities**

We meaningfully engage with Traditional Owners, Indigenous businesses and communities, as well as the local communities, in the areas where we operate. We work towards genuine partnerships with our clients and project stakeholders to deliver successful rehabilitation that leaves a positive legacy for all.

**Design & development**

Thiess Rehabilitation optimises final landform designs to ensure the most efficient development and delivery of rehabilitation for our clients.

Our rehabilitation execution services include:

- large scale material excavation and haulage, including blasting services, to facilitate optimised land profiles
- bulk profiling of mine spoil
- construction of water management, erosion and sediment control structures
- final surface preparation and topsoiling
- tailored revegetation programs.

Our team embraces technology such as semi-autonomous fleet, high precision GPS, real time monitoring and conformance analysis and use of drones for seeding and fertilising to drive greater value through rehabilitation.

**Project delivery**

Our quality assurance process significantly reduces residual risk and ongoing liability for our clients. We accurately monitor rehabilitation success, reviewing vegetation health and identifying erosion, using drones to capture footage of rehabilitated areas. This technology cost-effectively provides a complete overview of large areas of land, delivering a more accurate picture of rehabilitation performance.

Clients ultimately gain a strong body of evidence of their rehabilitation outcomes, supporting progressive certification of rehabilitated land and reducing ongoing rehabilitation liabilities.



**CASE STUDY: MUSWELLBROOK COAL MINE**

Over a two-year contract with Idemitsu Australia's Muswellbrook Coal Company (MCC), Thiess Rehabilitation is delivering rehabilitation services at the Muswellbrook Coal Mine, in the upper Hunter region of New South Wales.

Thiess Rehabilitation is conducting detailed design and construction of the post-mining landform, creating a combination of native ecosystem and pasture land uses that generate approximately 180 hectares of rehabilitated land across MCC's open cut mine. Highwall blasting, truck & shovel and dozer fleets are executing the project to deliver the optimised post-mining landform design. Given our legacy at Muswellbrook Coal Mine via our founders, the Thiess Brothers, Thiess Rehabilitation is excited to be given the responsibility to deliver value to this site and to the community through the site's post-mining transition.





# Decarbonisation

As the world transitions to low carbon economies, we're investing in technologies to support our clients on their decarbonisation journey.

## Fugitive emissions capture system

Fugitive emissions refer to the methane that escapes during coal mining processes. Methane is a greenhouse gas that is 28 times more harmful to the atmosphere than carbon dioxide, and a significant contributor to the mining industry's carbon footprint.

Currently, in the open cut mining process, methane is released and lost into the atmosphere. In underground mining, methane is drained for safety reasons and then flared – converting it into carbon dioxide, or combusted as part of electricity generation – which also releases carbon dioxide.

Thiess' fugitive emissions capture system combines with commercial applications to monetise the methane from mining operations – enabling our clients to reduce both carbon emissions and operating costs. Our new system efficiently pre-drains methane from mining areas and offers multiple economic and environmental benefits.

## Other decarbonisation technologies in progress

Thiess continues to invest and trial a range of transitional lower carbon technologies, including the initiatives below:

- Hybrid fuel systems: Combinations of gas, diesel and battery for reliable and affordable energy solutions
- Diesel fuel substitution: Study to use lower emission fuel systems to displace diesel
- Low emissions gas: Alternative fuels to provide power for fleet electrification.



## CASE STUDY: PARTNERING FOR A LOW EMISSIONS FUTURE

Diesel powers most mining fleets around the world, and accounts for 37% of a mine's carbon footprint. Therefore, lower-emission fleet options, that are also safe and reliable in rugged mining environments, are essential to decarbonising mining operations.

Given the time and cost constraints of rolling out a low or zero emissions mining fleet, Thiess is leveraging partnerships to decarbonise existing diesel-fuelled fleet – providing clients with immediate emissions reductions for less upfront capital cost and less waste than replacement options.

Thiess' collaboration with machine electrification expert FLANDERS involves their OEM agnostic retrofit-friendly systems, which can be integrated into mechanical and diesel-electric trucks, offering flexibility to incorporate new trucks, or retrofit existing fleet to extend operational life. Thiess is also partnering with intelligent autonomous haulage solutions provider EACON on options to convert conventional fleet to full autonomy using EACON's OEM agnostic autonomous systems, and to trial their new lower-emission mining solutions.





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