



# Net Zero Solutions Center of Excellence



Mining companies have developed considerable carbon reduction targets to face the challenge of global climate change head on. The roadmap can be very complex to design and implement a Net-Zero program within the short timeframe required to meet or exceed the terms of the Paris Climate Agreement.

There is no one-size-fits-all approach to achieving decarbonisation targets. Goals are met by implementing a range of design, technology, construction, and operations solutions. Having the ability to accurately determine the overall cost/benefit impacts when planning a complex project design or retrofit of an existing facility is key to executing a successful improvement program.

Having the capability to accurately forecast carbon emissions in current and future operations will help determine what carbon reduction efforts will be the most effective for each unique situation.

Bechtel works across all project development phases to ensure projects are defined, developed and optimised to meet your decarbonisation, commercial, risk and schedule goals.

One of the key advantages of working with Bechtel is we are technology agnostic and work across the industry and supply chain to find the best solutions to suit the unique needs of each project.

## The Bechtel Difference

Achieving your decarbonisation goals requires working within a new industry-wide paradigm - an industry which favours low risk investment. Decarbonisation of assets within the Paris Agreement timeframes demands that we work in an environment with greater levels of ambiguity, which in turn adds risk.

## Value for our Customers

GHG source Identification	Technology Selection	CAPEX Estimates	Sustainable Delivery	Master Planning
Expert knowledge of refining and processing facilities	Technology neutral and ability to access best solutions	Robust estimating tools based on real-world project execution	A focus on delivering our projects sustainably and as carbon-neutral as possible	Deliver master plans across multiple assets

At Bechtel we pride ourselves on delivering certainty in execution, and we continue to do so as our projects evolve to meet our collective decarbonisation needs.

Selection of the best decarbonisation pathway and technology solutions can be complicated and needs a holistic view to manage these risks to achieve your net zero goals. Specifically, we need to do more than understand the technical. We also need to evaluate a range of external drivers including:

- Technology and commercial readiness
- Supply chain maturity
- Future alternative technologies
- Supporting industries and future availability of fuels and consumables
- Competition for raw materials
- Workforce and skill availability

## Expertise and Experience

Our team of decarbonisation subject matter experts combine experience in energy transition technologies with a background in mining projects.

Our team combines experience in energy transition technologies with those from traditional mine process, mechanical and electrical disciplines. This skillset allows us to develop pragmatic, implementable solutions for your existing and future operations and help you develop pathways for the hard to abate areas inherent with the mining and metals industry.

We evaluate the application of proven technologies, emerging technologies, and innovative combinations of both, to reduce greenhouse gas emissions of new and existing assets. Bechtel specialists are continually tracking developments in energy technologies to establish a framework for full techno-economic evaluation.

## Capabilities

Every project is unique, and so tapping into Bechtel's vast array of execution capabilities can help each project realise its full potential. The key to designing and executing an effective decarbonisation pathway is to implement project solutions that incrementally reduce greenhouse gas emissions over time.

Bechtel technical specialists help our customers identify a phased approach which matches the project goals and budget, taking into consideration the advancement of emerging technologies and the specific time constraints for the facility (turnarounds, design life, and alignment with other capital programs).

Our approach is based on actionable plans which can be implemented to yield real world emission reductions in line with business requirements.

### Master Planning

Bechtel develops decarbonisation master plans using a bottom up and top down approach to assess site readiness and implementation complexities together to support delivery of overall strategic decarbonisation goals.

### Expert Technical Solutions

Concept selection can be highly impactful in delivering results for decarbonisation pathways. Bechtel's technical specialists bring decades of technology experience and are continually shaping the next generation of low-carbon solutions for greener, cleaner, and safer facilities.

### Framework Study Approach

Bechtel specialists are actively engaged in framework studies that can support the development of a capital project roadmap designed to meet low-carbon objectives.

### Project Delivery Focus

Bechtel delivers optimised solutions to help our customers realise lower capital costs, shorter times-to-market, and projects with lower carbon emissions.

A sound capital project roadmap requires well developed plans from early concept planning through to closure and rehabilitation, including robust decarbonisation plans. Our technical specialists bring their skills, experience and lessons learned from successful project delivery around the world to optimise solutions across all phases of the project lifecycle.

## Embodied Carbon Assessment

Bechtel estimates and manages the greenhouse gas emission footprints from our projects through application of standard CO<sub>2</sub> estimation and management processes over the project lifecycle. This approach allows us to establish project emission budgets, identify opportunities for reductions, and track and trend emissions throughout the project development life cycle to meet project goals.

We consider embodied carbon as part of the broader decarbonisation pathway assessment to facilitate complete life cycle emissions analysis. Our processes ensure that the facility's embodied carbon footprint is documented and controlled, as an important part of managing your Scope 3 emissions.

## Scope 3 Emissions Reduction

Understanding opportunities to reduce Scope 3 emissions can be challenging. Our analysis approach considers emissions from the whole value chain, including assessment of the maturity of upstream suppliers and waste generation streams.

## The Right Partner

### Class-leading Project Delivery

We believe our customers' projects are an investment in the future.

We help our customers deliver projects of purpose that create a lasting positive legacy. These are projects that create jobs and grow economies; improve the resiliency of the world's infrastructure; connect communities to resources and opportunity; take us closer to Net-Zero; tackle critical environmental challenges to protect people and the planet; and accelerate progress to make the world a cleaner, greener, and safer place.



## Contact

Thomas Hicks  
M&M Manager of  
Decarbonisation  
T +61 07 3167 5000  
E [tjhicks@Bechtel.com](mailto:tjhicks@Bechtel.com)  
540 Wickham Street  
Fortitude Valley, Brisbane  
Queensland 4006 Australia



Net Zero Solutions  
Center of Excellence



[bechtel.com](http://bechtel.com)