

engineering
innovation and
integrity in
partnership



Our company

BEC Engineering is a wholly Australian owned engineering consultancy providing professional services to the mining, utilities, materials handling, oil and gas, industrial and petrochemical industries.

Since its establishment in 1996, BEC has completed projects for major clients throughout Australia, North and South America, Africa, Asia, Europe and the Pacific.

We have proven capabilities across all aspects of project management, power generation, power systems, control systems, automation, plant integrity and operations support.

Steady growth has seen BEC develop into a respected partner of many of the world's premier companies.

'Applied expertise' is the BEC difference – our clients are served by a team of dedicated people with the most appropriate and relevant experience.

Our vision

To be the company of choice for our clients and employees.

Our mission

Engineering innovation and integrity in partnership.

Our values

Safe systems, employee recognition, continuous improvement, client satisfaction.

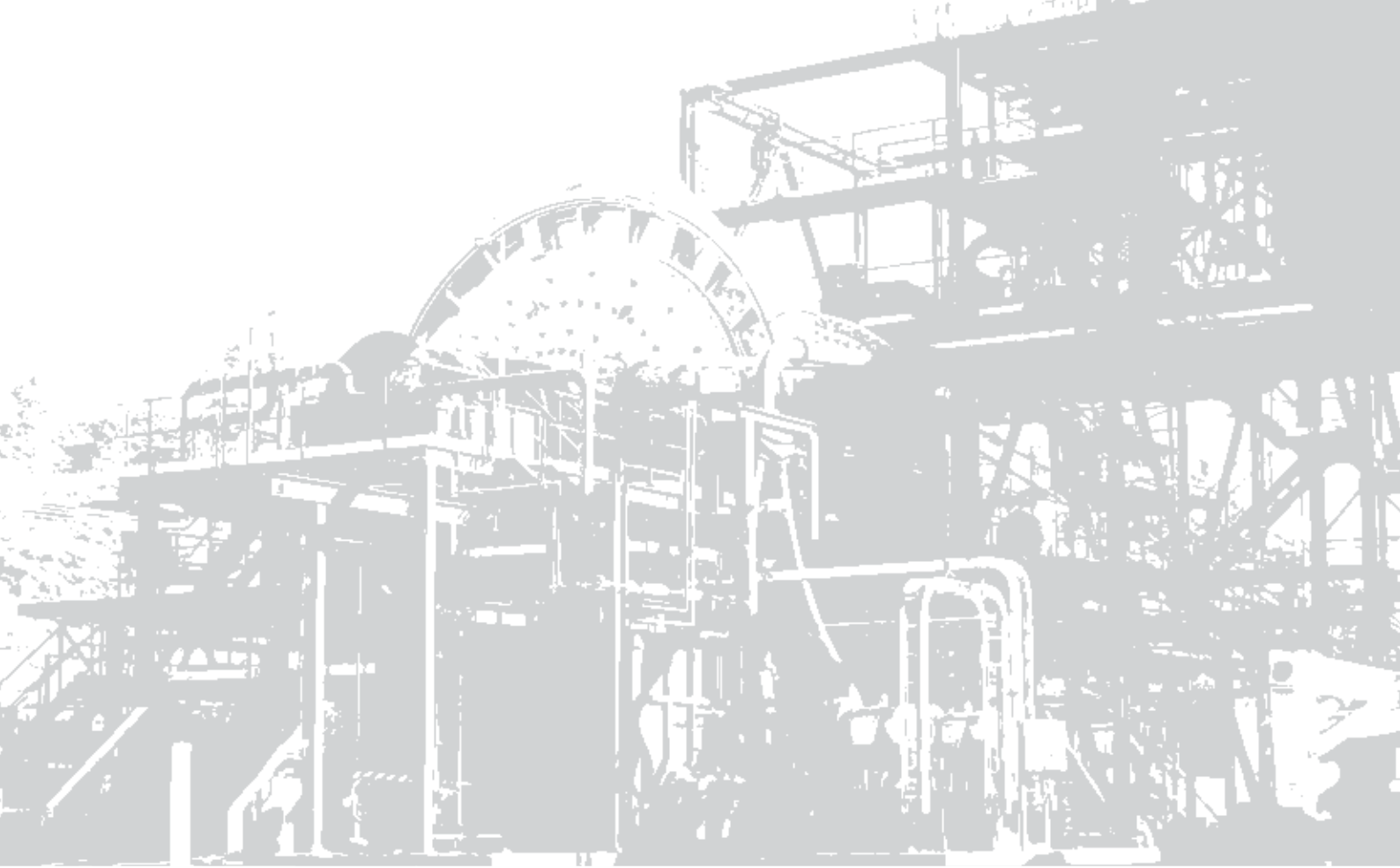
Our philosophy

BEC seamlessly integrates its services into total project delivery – it's our competitive advantage.

We are an engineering partner that exceeds client expectations with innovation and integrity by employing the highest standards of service and communication.



BEC Engineering is a member of the Association of Consulting Engineers Australia (ACEA). We offer integrity, high levels of service, engineering innovation, team leadership, management expertise and support for ethical business practices.



Our Structure

Managing Director Geoff Bailey leads a highly experienced management group which has responsibility for dedicated line of business teams.

These teams support the business areas outlined in the following pages. Additionally, BEC has in-house expertise and experience in a diverse range of industry sectors.

We offer our individual clients specialised teams with the knowledge and experience to deliver quality outcomes without the learning curve expense.

Our People

BEC prides itself on attracting, retaining and developing the most talented and dedicated personnel.

Our Business Team leaders can draw upon a large pool of talent to create dedicated project teams incorporating the following skills as necessary:

- Principal Engineers
- Lead Engineers
- Senior Engineers
- Project Engineers
- Commissioning Engineers
- Project Managers
- Design Draftspersons
- CAD Operators
- Site Construction Supervisors
- Management and Administrative Support

Our capabilities

BEC undertakes and completes projects from feasibility through to implementation with a commitment to ongoing technical support.

Project Management

BEC has the project management capability and experience to undertake all aspects of your next project.

To get the greatest value from our resources don't wait to have a project before you contact us.

Our experience across a range of industries and projects means we can offer significant and valuable expertise at all project stages. Share the risk with BEC providing an EPCM contract.

Our Services Portfolio includes:

- Feasibility studies
- Engineering design, drafting and CAD services
- Construction supervision, commissioning and training services
- Engineering, Procurement and Construction Management (EPCM) contracts
- Lump Sum EPC contracts
- Alliance arrangements
- Onshore, offshore, local, national and international project experience

Power Generation

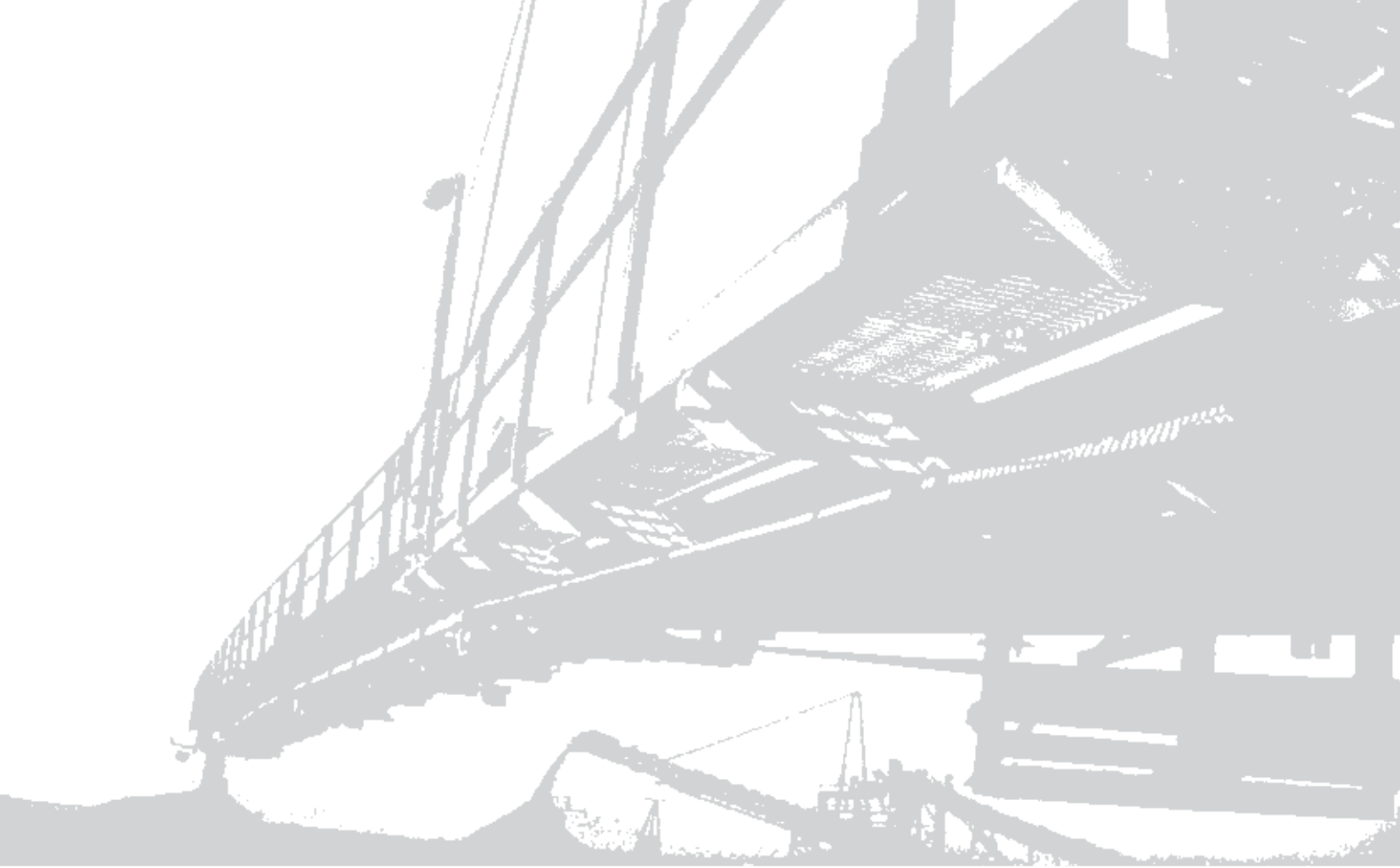
Whether you need to increase your power capacity, maximise efficiency or design a new power station in the most remote location, BEC has the expertise and the personnel to deliver a turnkey solution for your existing plant or new project.

BEC has an enviable record on power station projects for mining companies and regional centres throughout Australia and overseas.

We bring direct and relevant experience to bear on your requirements.

Contact us early and you will benefit most. If you are in the conceptual stage, let us do your feasibility study and identify the simplest, most effective solution.

- Power generation plants
- Power station audits
- Generation control systems and operator interfaces
- Automation and engine management systems
- Project management
- Turnkey packages



Power Systems

All projects are dependent on power system reliability and safety.

The BEC Power Systems team is dedicated to providing total engineering services for your network, be it in the resources, industrial or public utilities sector.

We make it our business to keep abreast of technological change and this is reflected in our system designs which routinely set industry standards and are always tailored to meet your individual needs.

- Electrical power system design for generation, transmission and distribution
- Power system studies and fault analysis
- Protection schemes
- Harmonic distortion analysis
- Electrical safety audits
- Energy management
- Power factor correction
- Insurance and accident investigation
- Earthing system audits and design

Control Systems

BEC's strong reputation as a process controls systems specialist results from our expertise and track record in a variety of processes across a wide range of plants.

This experience allows us to quickly comprehend your process and its variables and apply our knowledge to optimise the response of your plant to changing conditions.

Onshore or offshore – whether it's a new project or you need to optimise your existing production processes, contact BEC. We will deliver the improvement you require with simple and effective solutions.

- PLC, DCS and SCADA technology
- Advanced process control systems
- Multivariable control for grinding mills
- Plant control system audits
- Process optimisation
- Telemetry
- Communications
- Training



Automation

BEC is experienced in all aspects of automation for existing plants.

For mobile or fixed equipment using any proprietary system we will use the latest technology to deliver customised automated systems where cost benefits are highly visible.

- Instrumentation
- Operator interface terminals
- Retrofitting of PLC and SCADA systems
- Automation feasibility studies
- Field installation audits
- Process control system optimisation
- Remote site support

Plant Integrity

BEC understands the safety, reliability and operational requirements of upstream and downstream oil and gas process plants.

Our design teams ensure that power and control systems are correctly specified and engineered utilising equipment and materials that meet the highest standards and offer clients the value they seek.

Onshore or offshore, BEC provides professional, experienced skills to engineer your next project or upgrade for intrinsic safety and reliability.

- Local generation
- Power systems
- Control systems
- Fault finding and commissioning
- HAZOP risk analysis
- Safety audits
- Hazardous area classification
- Instrumentation audits
- Safety related systems

Information and Communication Technology (ICT)

BEC has the experience, expertise and resources to provide innovative ICT solutions across a range of industries and projects.

- ICT Project Management
- Network and systems programming and configuration

BEC's pool of engineers offers clients specialist experience and capabilities covering:

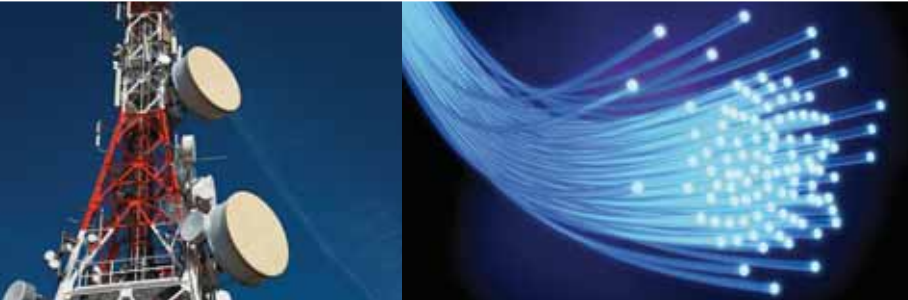
- Operating systems and network protocols
- High level language programming
- Database systems programming
- Network design
- Robotics and automated vehicle design
- Data, satellite, mobile, fibre, RF and microwave communications
- Site maintenance and support

- Wired and wireless communication tools
- Voice and data networks
- Radio and satellite link planning
- Radio frequency technology design
- Fibre optic networks

Voice and Data Networks

BEC is experienced in providing specialist independent advice across all voice and data systems:

- Corporate WAN, LAN and VLAN
- Ethernet
- CCTV
- Security systems
- Telephony systems including voice over IP (VOIP)
- MATV
- Entertainment systems including triple and quad play
- Public address systems
- Early warning systems
- Telemetry systems



Operations Support

BEC supports clients through the life of their assets by providing ongoing services to the Operations and Maintenance functions and seamlessly integrating our engineering assistance.

For isolated needs or on an ongoing basis, BEC can provide practical, effective solutions.

- Project engineering, construction supervision and commissioning of plant modifications
- Maintenance planning
- Optimisation of control systems on critical plant items
- Electrical safety audits for surface and underground plant and equipment
- Power station audits and corrective action
- Training on plant and electrical control systems
- Operating and maintenance manuals
- On-site engineers, technicians, draftspersons and supervisors to undertake specific duties
- Insurance appraisals covering auditing claim assessment and accident investigations

Industry Groups

BEC has experience across a range of industry sectors.

The skills and in-house expertise this has developed enable us to deliver high standard outcomes based on practical, specialised knowledge.

Oil and Gas

Onshore, offshore, upstream, downstream, greenfield, brownfield – BEC has recent, relevant practical experience.

Our history in this sector is impressive at all levels with OEMs, operators and contractors.

BEC is an active participant in the development of national and international technical standards for electrical equipment in hazardous areas and in respect to potentially explosive atmospheres.

Mining

Gold, copper, nickel, iron ore and diamonds are just some of the mining projects BEC has worked on.

We've travelled from the searing heat of the desert to the frozen tundra both north and south of the equator and handled the challenges of demanding projects and environments.

Utilities

In recent years, BEC has been called upon to provide specialist engineering services for traditional power generation utilities, independent power producers, customer-owned generation, co-generation, embedded generation and renewable energy companies.

We have ongoing involvements with water transport and treatment plants, gas transmission pipelines, compressors and delivery stations.



Materials Handling

BEC is experienced in the electrical design of materials handling systems for mining, grain, salt, and fertilizer plants among others. Our involvement includes conveying systems, mobile and OEM machinery, stockyard control, machine positioning and anti-collision control and material tracking.

Industrial

BEC has extensive experience with a wide and varied range of electrical and control equipment used in industrial facilities.

This includes large rectifiers, furnaces, mills, kilns and welding machines. Our expertise is particularly valuable in overcoming associated power quality issues.

Petrochemical

BEC works with a range of organisations in the petrochemical field at fuel depots, petroleum refineries, fertilizer plants and other facilities.

Our petrochemical industry experience includes a wide range of engineering services such as: instrument engineering, emergency stop systems, vapour recovery switches, pressure switches, hazardous area audits, board design and wiring, electrical fault finding and booster pumps.

Our commitment to the future

BEC Engineering is committed to attracting high-quality staff and offering opportunities which will exceed their expectations and challenge their abilities.

The company offers job satisfaction, a favourable working environment and a variety of stimulating work within a highly professional team.

BEC is also committed to professional development, career progression and maintaining a balance between work aspirations and family needs.

BEC operate a graduate development program which creates a framework for accelerated career development.

Our Commitment to Our Clients

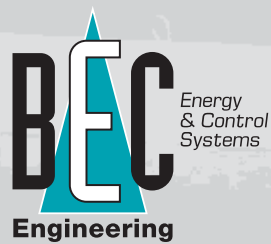
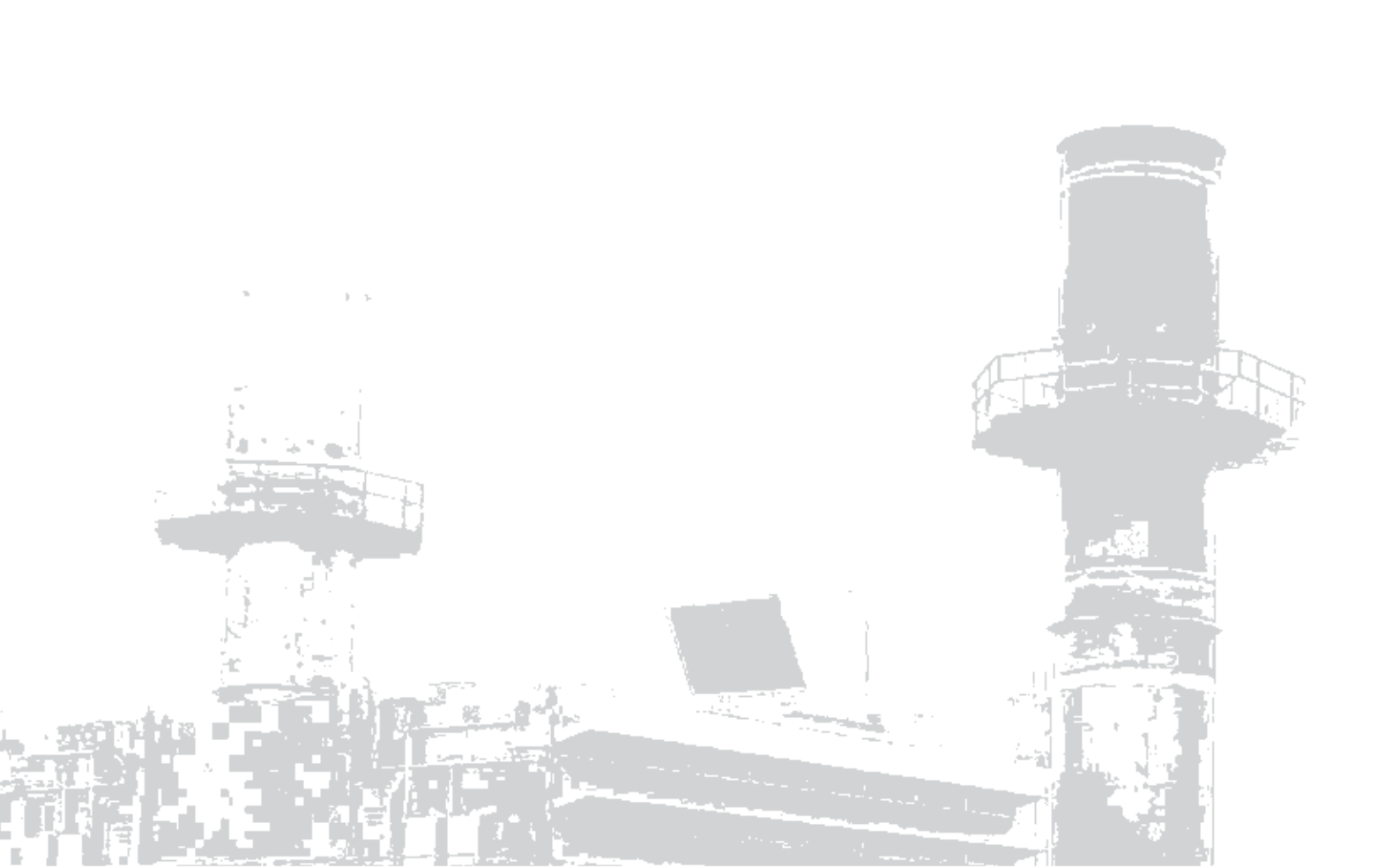
BEC's mission is engineering innovation and integrity in partnership.

We will achieve this by constantly improving our professional standards and technological sophistication.

Integrity and ethics are cornerstones to all we do – as indeed are communication and the highest standards of service.

Enter a relationship with BEC Engineering and you are beginning a partnership.

Throughout its duration we will constantly strive to exceed your expectations and deliver professional services that are seamlessly integrated with your operations.



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