

The logo features the letters 'RJE' in a white, sans-serif font. To the right of the text, a thick yellow-green line extends diagonally upwards and to the right. Below the text, there are four horizontal bars of varying colors: yellow-green, light green, teal, and blue. To the left of these bars, a thick blue line extends diagonally upwards and to the left. The entire design is set against a dark blue background.

RJE

Smarter  
Engineering

# PNG POWER GENERATION UPGRADE

SCOPE	Design, Construct & Commission two GE 2500 Power Station Balance of Plant Systems.
CLIENT NAME	PNG Power/GE
LOCATION	Port Moresby / Lae
INDUSTRY CATEGORY	Power Generation
CONTRACT TYPE	Design, Construction, Commissioning
CONTRACT DETAILS	Lump Sum Contract
UPDATES	March 2014 to February 2015

## THE CHALLENGE

To help provide the people of Port Moresby and Lae in Papua New Guinea with life changing basic utilities – whilst dealing with the country’s extreme landscape and climate conditions.

Major power shortages in the Papua New Guinea towns of Port Moresby and Lae required urgent increases in power generation.

RJE partnered with GE to install an additional 25MW of generation in each town. Given the urgency of the project, RJE designed and built much of the equipment off site and GE supplied one pre packaged TM2500 Turbine Generator to each site. RJE performed the site installation of the electrical Balance of Plant, this included the 66kV substation, Fuel System and Auxiliary systems. RJE undertook the commissioning of this equipment and worked closely assisting GE in the assembly and commissioning of the 2 sets.



RJE is an Australian-owned engineering and construction company with a reputation for delivering innovative, client-focused solutions that get the job done.

## WHAT WE DO

Established in 1996, RJE provides multi-discipline engineering and construction services to complex projects across a diverse range of industries including:

- Mining and Resources
- Power and Utilities
- Transport
- Infrastructure

With over 250 employees, we provide everything from initial ideas to full operations both within Australia and Internationally. Through our diverse service offering and products, we can provide ‘turnkey’ solutions, as well as everything in between.

RJE’s in-house service capabilities include:

- Electrical, Civil and Mechanical Engineering & Design
- Power Systems and Protection Design
- Modular Transportable Switchroom Construction
- Offsite Plant Packaging
- Industrial and Mining Construction Works
- Process Plant, Power System & Mining Equipment Testing & Commissioning
- Heavy Haulage

We deliver innovative, customised solutions for our clients.

## HOW WE DO IT

At RJE, our strong set of values underpins everything we do and have been the cornerstone of our success to date. We are proud of our reputation for building collaborative partnerships with our clients through open communication, transparency as well as our responsiveness and agility to meet the needs of each project.

This has enabled us to gain our clients trust and confidence and to deliver truly outstanding results. No problem is too large, small or difficult for our team. We are always striving to solve our clients challenges to deliver smarter engineering solutions in a pragmatic and uncomplicated manner.



# HAY POINT COAL TERMINAL UPGRADE

SCOPE	Electrical Switchrooms, Laboratories & Equipment Installation & Commissioning, Heavy Haulage
CLIENT NAME	Bechtel / BMA
LOCATION	Hay Point, Mackay North Queensland
INDUSTRY CATEGORY	Mining
CONTRACT TYPE	Design & Construct
CONTRACT DETAILS	Lump Sum Contract
UPDATES	September 2011 to March 2014

## THE CHALLENGE

How to power Hay Point, in remote sub-tropical Queensland, one of the world's largest producers of coal, while allowing for cyclonic conditions and the extremely corrosive environment.

The Hay Point project is one of the largest that RJE has undertaken in relation to the supply of transportable switchrooms.

RJE designed, constructed and delivered 14 fully commissioned High Voltage switchrooms, a sample laboratory and an amenities building to the site. Each were rated for cyclonic conditions as well as extreme heat, a rating easily achieved with RJE's purpose designed construction and cladding system.

Our heavy haulage team delivered the units to site, an 8,000km round trip through the harshest of Australian environments, many of the buildings were over 100 tonne and as long as 30m. Each of the units arrived on site on time and in perfect condition.



## OUR VALUES

- Safety in all we do
- The client is our focus
- Innovative cost effective solutions
- Our people are our strength
- Respect the community and the environment
- We are open, honest and collaborative

Safety in all we do - We let nothing compromise our safety performance. Our valued people, working all over the world, deserve to return home safely each night.

The client is our focus - We develop trusting relationships with our partners and clients. Helping them build better businesses and deliver outstanding results means we can do the same.

Our people are our strength - We prize the ability, diversity and creativity of our people and do all in our power to grow their talents. The way we care for, develop and encourage our people is a key part of our culture governed by our people's principles.

Respect the community and the environment - We encourage our people to be lifelong learners. It cultivates the creativity, flexibility and innovation we utilise to find ingenious solutions for our clients and manage change.

We are open, honest and collaborative - We respect the diversity and differences of our people, clients and stakeholders. We are straightforward and collaborative in our communication.

## OUR COMMITMENT TO SAFETY

RJE is committed to Safety, Quality and the Environment.

We are accredited to the following standards;

- ISO9001 Quality Management Systems
- OHSAS 18001 OHS Management Systems
- ISO14001 Environmental Management Systems
- AS4801 OH&S Management Systems

RJE has extensive work procedures and policies to ensure all our projects and services are of the highest quality and are undertaken in a safe and efficient manner. We are steadfast in our approach to conducting our business in a manner that ensures a safe working environment for our employees, subcontractors, clients, visitors and the communities in which we operate. This includes the preservation and enhancement of the environment.

# ARGYLE DIAMOND MINE EXPANSION

SCOPE	Underground Mine HV Network, Crushing Stations and Dewatering E&I Installation & Commissioning
CLIENT NAME	Diab / Rio Tinto
LOCATION	North Western Australia
INDUSTRY CATEGORY	Mining
CONTRACT TYPE	Construction
CONTRACT DETAILS	Lump Sum Contract
UPDATES	December 2013 to January 2015

## THE CHALLENGE

To design, engineer, construct, deliver, install, test and evaluate a full range of electrical equipment for the world's largest diamond mine - in one of the most remote parts of WA.

The Argyle Diamond Mine in Western Australia, owned by Rio Tinto, is the largest diamond producer in the world. It is currently being transitioned from an open pit mine to an underground mine.

With limited timeframes, exacerbated by the sheer scale of the project, RJE supplied and installed an entire high voltage electrical network to power the 900m deep crushing and ore handling system. RJE then undertook the electrical installation work for the two new crushing stations as well as ore handling, services and dewatering systems.

RJE maintain a crew on site assisting Rio Tinto with ongoing optimisation works.



## OUR EXPERTISE

RJE is a multi-disciplined engineering and construction services firm with a range of core competencies and expertise including engineering, management, off site construction & modular packaging, heavy construction, logistics, testing and commissioning.

## ENGINEERING AND DESIGN

The backbone of RJE has been our strong engineering expertise and capability that provides the platform for our projects.

RJE can provide engineering and design services for Electrical, Instrumentation, Communications, Mechanical, Structural and Civil works including:

- Power System Modelling
- Power Network & System Design
- Substation Primary & Secondary System Design to IEC61850
- Electrical, Instrumentation & Hazardous Area Design
- Plant Automation
- Mechanical, Piping & Fuel System Design
- Civil & Structural Design
- Outdoor HV Substation Design
- Transportable Substation & Switchroom Design

DESIGNED SMARTER

BUILT SMARTER

DELIVERED SMARTER

COMMISSIONED SMARTER

# APPIN COAL MINE VENTILATION

SCOPE	18MW Mine Ventilation System, 66kV Substation, MV Drive Systems, Design Construct & Commission
CLIENT NAME	Illawarra Coal
LOCATION	New South Wales
INDUSTRY CATEGORY	Power Systems / Mining Design & Construction
CONTRACT TYPE	Power Systems / Mining Design & Construction
CONTRACT DETAILS	Lump Sum Contract
UPDATES	February 2013 to December 2013

## THE CHALLENGE

To deliver a broad range of electrical engineering and construction services, with installation and a full testing and evaluation program - whilst meeting a critical timeline and budget.

The Appin coal mine, located some 200km south of Sydney, is one of the most productive underground coal mines in Australia. To enable a major expansion the mine required a major increase in its underground ventilation.

RJE were engaged to design and construct a system to power one of the largest single vent raise installations in Australia to date. The project required the design and construction of a new 5 bay 66kV substation, the substation was designed as a modular built system. RJE undertook all civil, structural and electrical works. RJE then undertook the design and construction of the three 6000kw drive systems to power the fan systems.



## CONSTRUCTION

RJE can provide construction and installation services for Electrical Instrumentation, Communications, Mechanical, Structural and Civil works. We have experienced Supervisors and Construction Managers who ensure RJE's standards and our clients site requirements are met.

Our construction services include:

- Surface & Underground Mining
- Underground Electrical Construction
- High Voltage Cable Installation & Terminations
- High Voltage Substation Construction
- Powerline Construction
- Structural Steel Erection & Piping Installation
- Power Station Construction
- Transportable Switchroom Construction and Installation
- Water Treatment Plant Construction
- Mining & Minerals Processing Equipment
- Oil & Gas Plant Construction

Further, in August 2009 RJE purchased a 25,000m<sup>2</sup> facility to provide a manufacturing base for the entire RJE operation and to enhance our in-house capabilities.

## LOGISTICS AND HEAVY HAULAGE

RJE has a full range of freight and heavy haulage equipment. This in-house capability compliments the construction and manufacturing work that we perform.

This enables RJE to be more efficient without having to rely on sub contractors to perform this task.

# OLYMPIC DAM MINE TAILS DISPOSAL

SCOPE	Major HV Upgrade, Switchrooms Manufacture, Site E&I Design Construct & Commission
CLIENT NAME	BHP Billiton
LOCATION	Northern South Australia
INDUSTRY CATEGORY	Minerals Processing
CONTRACT TYPE	Design & Construction
CONTRACT DETAILS	Lump Sum Contract
UPDATES	July 2010 to June 2011

## THE CHALLENGE

To construct and equip two 20m switchrooms, transport and install them, and perform a rigorous test and evaluation program for both - a very tight timeline and budget.

Olympic Dam Mine, in remote northern South Australia, is one of the worlds largest Copper & Uranium deposits. The mine recently undertook a major Tailings Disposal Upgrade Project.

RJE were engaged to design and construct two large switchrooms to house the electrical equipment for the project, each weighed over 80 tonnes. A part of the project required a major HV power system upgrade, RJE deployed the first IEC 61850 protection scheme on site. RJE also undertook the Power, Electrical and Instrumentation construction works along with a large portion of the civil works. The project was fully commissioned by RJE prior to handover to BHP.



## TESTING AND COMMISSIONING

RJE understand that commissioning on site is often difficult, time consuming and expensive.

To overcome these challenges RJE has the in-house experience, resources and equipment to simulate site conditions and thoroughly test equipment before it is transported to the site.

We have found that upfront testing of equipment can achieve significant project savings of both time and costs. Delivering a fully tested and functioning network, based on state of the art relays and interface protocols, not only saves time and money but also as importantly, reduces potential issues arising during commissioning.





# RJE

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