Celebrating 60 years of transformer manufacturing in Perth
1955-2015
Congratulations on 60 successful years!

ABB has been part of the Australian energy landscape for over 100 years. In 2015, I am pleased to celebrate 60 years of transformer manufacturing in Perth.

From the emerging mining landscape of the Pilbara to the expanding urban growth of Perth and Western Australia, ABB and its predecessor companies have been steadfastly serving the energy needs of Western Australia since the mid 1950’s.

In this commemorative booklet, we recognise the history and successes of the ABB Perth transformer manufacturing facility, and most importantly, the many people who have contributed to its success.

Over the years ABB has been proud to support the community of Perth and Western Australia through our presence here. Hundreds of people have been employed and trained by ABB and many more have had the chance to learn about manufacturing and transformers through our relationships with local colleges and universities. We are also very proud of our commitment to the indigenous community.

Thank you to our loyal customers and our local suppliers who have ensured our ongoing sustainability. ABB’s Distribution Transformer factory in Perth is proof that high-quality manufacturing can succeed in so-called high cost countries. ABB has invested in that premise for 60 years, and hopes to continue its strong relationship with customers and the community of Western Australia for many more years to come.

Axel Kuhr
Managing Director
ABB Australia
“Transformers are at the core of ABB’s power offering and our operations in Perth have made an important contribution in establishing ABB as the global leader in transformer production and service. On the 60th anniversary of transformer manufacturing in Perth, I would like to congratulate the local team for its energy, commitment and hard work. Creating value for our customers is a priority for ABB, as is being an integral part of the local community, and the Perth team has been successful in achieving both. Thank you, and keep up the good work.”

- Ulrich Spiesshofer, CEO of the ABB Group

“Congratulations to ABB Australia on 60 years of continuous transformer manufacturing in Western Australia.

Our distribution transformer manufacturing facility in Malaga is an important part of ABB’s global manufacturing capabilities, and in particular, for the reliable supply of transformers in the South Asia region. ABB’s exacting global standards of safety and quality are reflected in the Malaga factory, and I congratulate our team in Australia for its ongoing commitment to maintaining these high standards.

A special thanks is also extended to our many customers for ensuring our transformer manufacturing business in Malaga remains an important part of ABB’s global portfolio.”

- Markus Heimbach, Global head of transformers, ABB
Thank you to our customers and suppliers

Thank you to all our valued suppliers and customers from across the utility, resources, industrial and commercial building sectors. It is due to your ongoing support and trust in our products and local design, engineering and manufacturing capabilities that ABB is able to celebrate this significant milestone of 60 years of transformer manufacturing in Western Australia.

Our dedicated team is proud of this accomplishment and the contribution our locally manufactured transformers have made in satisfying the power infrastructure and energy security needs of Western Australia. With our innovative spirit and constant drive to enhance our technologies and processes, we are confident our factory can remain competitive and continue serving your requirements for high standard, locally designed and manufactured distribution transformers for many years to come.

Again, on behalf of the ABB transformer manufacturing facility in Malaga, I extend our warmest appreciation to you - our customers - for your loyalty and business.

Giuseppe (Joe) Russo, Operations Manager, Distribution Transformers
MESSAGE FROM DR MIKE NAHAN MLA
MINISTER FOR ENERGY

I congratulate ABB Australia on reaching the major milestone of 60 years of manufacturing transformers at the company’s operations based in Malaga. In my role as the Minister for Energy, I am pleased this locally based manufacturing capability has continued to provide an important contribution not only to the security of electricity supplies for the State, but also to the overall prosperity of Western Australia.

The continued investments made by ABB in the current facilities at Malaga and in previous operations are a clear demonstration of the company’s commitment to local utility and industry customers, and to the manufacturing sector in Western Australia. These initiatives have ensured that this global company has a real presence in the State, providing power technology production capacity, project management and engineering capabilities to satisfy specific customer requirements.

ABB has also continued to play a major role in assisting customers and partners to improve energy efficiency and industrial productivity through the adoption of power and automation technologies. Enabling the efficient use of electricity provides direct economic benefits to energy consumers and also has positive environmental effects. The investments made by ABB in Malaga are a major part of this commitment.

I commend ABB for its continued commitment to the energy sector and manufacturing industry within Western Australia and wish the company every success for its future operations in Malaga and throughout Australia.

DR MIKE NAHAN MLA
TREASURER; MINISTER FOR ENERGY;
CITIZENSHIP AND MULTICULTURAL INTERESTS
Congratulations from our customers and suppliers

Western Power congratulates ABB on 60 years of manufacturing in WA. ABB and Western Power have worked together for many years, responding to the changing electricity needs of the West Australian community. Their business has grown alongside ours as we continued to supply safe, reliable and affordable power to the WA community. We have been proud to be associated with ABB and the quality products they provide.

Paul Italiano
CEO, Western Power

The Western Australian Chapter of the Electrical Energy Society of Australia (EESA) congratulates ABB on achieving 60 years of continuous manufacturing in Western Australia.

ABB has for many years provided great support to the technical program and seminars we offer to companies and members of the power and electric industries, government bodies and supporting organisations.

Education support to our members is invaluable with hands on demonstration of transformer technology. Offering factory tours to showcase your manufacturing capabilities and to see the extensive local investment in transformer manufacturing has been excellent and unparalleled in WA.

Offers for sponsorship, student work experience and seminar involvement has been encouraged by our Society and always supported by management and staff at ABB.

We look forward to your involvement and support to the WA power and electricity energy industries for many years to come.

Russell Ellen
Chapter Chair, EESA WA Chapter

On behalf of CMP Controls Pty Ltd, we extend our heartiest congratulations to ABB Australia Pty Ltd for completing 60 glorious years of successful manufacturing in Perth, Western Australia, 30 of such years of which we have been business partners, first as Atco Magnet Wire Pty Ltd and now as CMP Controls Pty Ltd.

Companies like ABB with a brilliant team of dedicated workers and with a friendly work environment can only aim for the highest results. Working with your company has always been a real honour and we value each and every transaction.

Steve Christodoulou
CMP Controls Pty Ltd

We at Print N Etch wish to congratulate ABB for reaching 60 years of continuous operation in Perth. This is a milestone that all ABB personnel can be proud of and we hope to see many more years of operation.

Des Bain
Print N Etch
Congratulations from our customers and suppliers

Stemar Electrical Products would like to offer Congratulations to a very highly respected customer in achieving the milestone of 60 years manufacturing in Western Australia.

Our respect for ABB as a customer is paramount in the way your business is conducted from the enquiry stage through engineering to payment on time and would like to think our customer / supplier relationship will continue to our mutual benefit for a lengthy time to come in this now difficult time of imported product into Australia and off-shore manufacturing of many products in the engineering field.

Jim Churchill
Product Manager, Stemar Electrical Products

ABB has been an integral supplier for us over the last 15+ years. One of the most notable divisions we work with in our business is the ABB transformer division at Malaga and previously at Osborne Park. We have found specifying an ABB transformer is a selling point and gives us an edge over our competitors. We have comfort developing our business knowing we can supply a quality and reliable ABB transformer as part of our product range.

ABB is one of our most valued suppliers and have a reputation to provide a superior product, good technical support, excellent backup service whilst being competitively priced. Having this support and service Perth based simplifies our complete procurement process as we can deal with works on a personal level.

We have developed good personal relationships with the ABB team we work with, which are always willing to discuss our needs and support our project requirements from design to delivery.

We congratulate ABB on reaching their 60 year milestone and look forward to further developing our personal and business relationships.

Craig Shales
Paul Farquhar – Murray Engineering

Congratulations on achieving this significant landmark of 60 years manufacturing in Western Australia.

Nynas are proud to be associated with ABB and value the excellent relationship that we have with ABB Perth having supplied transformer oil to first Osborne Park and then Malaga since 1996.

All the best for the next 60 years!

Lauren Rocher
NYNAS (Australia) Pty Ltd
Customer success story

Bulk ABB transformer order facilitates temporary power at Roy Hill

ABB has successfully provided 43 distribution transformers for Western Australia’s Roy Hill iron ore project at a competitive price and with minimal lead-time.

The 3750kVA 0.415/33kV transformers are key to the infrastructure built to provide back-up power for the Roy Hill mine, north of Newman, as well as providing the only power source to stockpile and transfer iron ore from mine to ships at Port Hedland.

Both the mine and port power facilities were designed, engineered, constructed and commissioned by Energy Power Systems Australia (EPSA). EPSA also provide a full power station build, own, operate solution to Roy Hill for the port facility.

The 43 transformers were delivered by ABB’s distribution transformer manufacturing facility based in Malaga, Perth. Operating since 1955, the factory has supplied over 100,000 units to local industrial customers – including the state’s largest utility, Western Power.

“Being a local manufacturer with such a long history in Western Australia means we have a good, strong history and rapport with our customers,” said Anton de Lange, product marketing manager for distribution transformers for ABB in Australia. “They are able to work with us on a deeper level than simply product supply, and we can work with them on a consulting level, supporting them from design, through installation, and in after-sales support.”

Customer benefits

EPSA engineering and commissioning manager for Roy Hill, Brad Fox, said the Malaga factory’s ability to meet Roy Hill’s cost requirements was a crucial element in the team’s decision to award the contract to ABB.

“ABB has a strong reputation for high-quality product, and they were also able to produce the large quantity of transformers in the short time-frame required for the project,” Fox explained.

EPSA’s project manager at the time, Tony Boddice, said local manufacturing and product support were key criteria set by the project team.

“ABB provided the product to the scheduled timeline, and were proactive in keeping EPSA informed on progress,” Boddice said.

“EPSA enjoyed a good working relationship with ABB during the delivery of the project, and would have no hesitation in working with ABB on future similar projects that may result in similar successful outcomes.”
History

Celebrating 60 years of transformer manufacturing in Perth

With a presence in over 100 countries, more than 75 production units and 40 service centres, ABB is the world’s largest transformer manufacturer and service provider.

In 1893, the company delivered one of the world’s first transformers, and has continued to develop transformer technology as we know it for the past 120 years.

In Australia, ABB transformer manufacturing dates back 60 years – under the well-recognised ABB company name from 1987, and in the form of its predecessor operations for many years before that.

In 2015, ABB celebrates 60 years of transformer manufacturing in Perth. The company’s purpose-built, state-of-the-art operations are located in Malaga, Western Australia – north-east of Perth.

With nearly 100 employees, the 9,100-square-metre Malaga facility specialises in producing distribution transformers up to 10MVA and 33kV. The operation serves the power needs of a breadth of utility and industry customers – not only in Australia, but also across the South East Asia region.

Why are transformers so important?

Transformers can be found wherever electricity is generated, transported and consumed – in power plants, substations, industrial complexes, skyscrapers, shopping malls, ships, oil platforms, locomotives, railway lines, wind parks, solar fields and water treatment plants.

A transformer’s most important function is to transform or adapt voltage levels – ‘stepping them up’ for long-distance, high-voltage transmission from the power plant, and ‘stepping them down’ for distribution to consumers.

Every day, countless ABB transformers contribute to grid stability and power reliability across the region. They also ensure the safest standards, while striving to increase energy efficiency and reduce environmental impact.

A brief history of ABB in Perth

Following is a short history of ABB transformer manufacturing in Australia. The information required to put together this timeline was kindly provided by a number of ABB managers – past and present – and we thank them for their gracious contributions.
History

While this is by no means a complete history, it is a meaningful one – with each memory forming an indispensable stepping-stone in the creation of the Malaga facility, and the world-class products and services it provides to industry today.

Above all, we thank you – the customer – for coming along with us on this journey. It is our relationships with each of you and your confidence in our processes and expertise that have facilitated the evolution of our business over the past 60 years, and will continue to do so for many more years to come.

1950s – 1980s

ABB’s long history in Australia dates back to the 1950s, when Bill Tyree (now Sir William Tyree) and John Fairchild began operating a small transformer business called Fay Transformers from a suburban Sydney garage.

The duo’s new transformer product enjoyed limited success in its local Sydney market, propelling the business-owners to head west to try their luck in Perth.

So, in 1955, Fairchild, accompanied by a young mechanical engineer named Eric Krause, along with his friend Gavin (Wally) Fisher, proceeded to dismantle their equipment, load it on to a second-hand ‘lorry’, and head to Western Australia.

Once there, the team secured a rented premises on Howe Street in Osborne Park, where it began manufacturing power and distribution transformers under the name of Westralian Transformers (WT) – a company that would go on to enjoy great success in its local market, leading to its acquisition by Switzerland-based ABB some 30 years later.

The WT business in Osborne Park was headed-up by Fairchild as managing director with a minority share-holding, while Tyree of Fay Transformers – who remained in Sydney, where he subsequently established Tyree Electrical Company (TEC), specialising in the manufacture of large power transformers – acted as an East-based director, holding the majority interest. A gentleman by the name of D Yates was also involved in WT’s emergence in Perth, along with a sole Western Australian sales agent.

The early years of WT’s manufacture were mainly in the distribution transformer ranges, demand for which grew quickly. The company was driven by the desire to remain the sole Western Australian transformer manufacturer, and began efforts to also be able to accommodate customer requirements for larger transformers.
History

In the early-to-mid 1960s, WT began producing power transformers. In the late 1960s and early 1970s, the company provided a large number of these for the rapidly-expanding iron ore activities in the Pilbara, which included power station transformers for Dampier and Cape Lambert.

In 1970, WT manufactured its first 132kV transformers for the State Electricity Commission of Western Australia (SECWA – later to become Western Power Corporation, and later again, Synergy), and remained SECWA’s sole distribution transformer supplier for many years. By this time, WT held an overall market share for transformers in the region – a position it managed to defend right up until the late 1990s.

As the company developed and its requirement for skilled workers grew, WT began providing on-the-job training for local workers that had not previously worked in transformer manufacturing. WT looked after its workers and occupational health and safety was afforded a good deal of attention from very early on – with a high degree of formality in evidence from the early 1970s. New employee induction and safety training programs became standard practice around this time, and formalised safe-working procedures for many defined work routines were put into place.

Until now, all manufacturing operations had been conducted in-house. However, in the mid-1970s, WT began outsourcing transformer tank welding operations to local contractors and, in time, complete tanks were sourced externally, as well as other activities – allowing WT to focus on its key technologies and areas of competitive advantage.

In 1976, the owners of WT sold their interests in the organisation to Tyree Industries, which was 67% owned by Westinghouse Corporation of USA.

1980s – 2000

In the early-to-mid 1980s, WT was responsible for supplying the total transformer requirements for the Alcoa Wagerup and Worsley Alumina refineries, and won orders to supply all the Zone Substation power transformers for the Eastern Goldfield’s Electrification Project. In 1984, the company supplied the total transformer requirements for the Argyle Diamond Venture.

In 1987, the Swedish ASEA and Swiss BBS companies merged, forming ABB. Shortly afterward, ABB acquired the transformer manufacturing parts of Westinghouse in the US – and therefore, also acquired WT.

Upon appraisal of the transformer business formerly known as WT, ABB concluded that operations had the potential to perform even better if they were split, separately-managed and more focussed –
with a drive towards more standardised products. ABB also decided to restrict power transformer operations to a size appropriate to that incorporating sheet-wound coil technology (also known as ‘compact winding’) – to the 10MVA we see today.

Throughout the 1980s and 1990s, ABB participated in almost every mining and resources development project in Western Australia, and clearly established itself for the quality of its products and service, and as a supplier of preference for transformers designed and manufactured to suit the rigours of long distance transport and harsh operating conditions.

Importantly, WT and later ABB were responsible for employing and training hundreds of workers during these years, bringing new skills and growth to the Western Australian economy.

**2000 – present**

While the suburb of Osborne Park had been a light industrial area in the 1960s, by the turn of the century it had transitioned into a major retail strip, featuring several car yards. Plans commenced to look for a new location – a base more easily-accessible for the company’s industrial customers, while also allowing for future growth.

The opportunity to start with a greenfield site enabled the ABB team to design a brand-new, state-of-the-art manufacturing facility, based entirely around the company’s ‘focused factory concept’. This was based on a product range of 100kVA to 10,000kVA to a maximum of 33kV.

ABB partnered with a local land developer, and together found an ideal site at 2 Metal Circuit, Malaga. The location ticked all the boxes: it was based in a light industrial area with plenty of industry support, offered easy access to major freeways, was in close proximity to Perth’s domestic and international airports and – at 20,000 square metres – offered plenty of vacant land.

Operations were relocated to the state-of-the-art Malaga facility in 2009. The new building consisted of approximately 2,700 square metres of office space, along with a 6,900-square-metre manufacturing area. The site was to house not only the transformer business unit, but also many other ABB local business units, therefore creating a brand new Western Australian ABB ‘super site’.

Once settled-in to its new premises, ABB began focussing on the manufacturing technology used on-site, which at this point was coil manufacture, by the process of winding on mandrel. ABB super plants around the world have introduced wind-on core leg technology, which was also introduced at Malaga.
Wind-on core leg technology represents a new age in transformer manufacturing, facilitating a number of process improvements including waste minimisation, labour reduction and – as the restriction of designing to mandrels is no longer a constraint – the ability to optimise designs.

Approvals were granted for a 3MUSD upgrade of winding machines and assembly tables, which allowed the change in technology to winding coils on core legs. This was a major change for the business, which had been using the previous technology for approximately 20 years.

Along with this new process, the team also introduced some smart front-end tools, which are part of ABB’s Global Product Group platform. This included automated mechanical design, with the ability to perform structural analysis automatically, automating the loading of all materials from the electrical and mechanical design systems into SAP – without the need for intervention by engineers.

ABB also introduced a new planning tool ‘drummer’, which links all material labour resources to the SAP/MRP system, allowing the visibility of all materials and resource allocations and therefore improving the planning and the ability to match materials and resources in a finite planning tool.

Today, the business continues to introduce new front-end processes, which all link back to SAP. The key technology used is ABB’s Enterprise Connectivity Solution (ECS). This provides the mapping of objects between manufacturing and business systems, by coupling the properties and aspect objects within any system or device connected to the platform, in order to establish a real-time connection to the corresponding objects in the plant. ECS provides a single, highly-flexible interface.

ABB’s modern-day Malaga factory is a true state-of-the-art, lean manufacturing enterprise. Though the technology has changed exponentially over the past 60 years of manufacturing in Australia, the company’s goal has not changed; ABB’s local transformer business still prides itself on meeting market and customer needs, and maintaining key relationships.
History

Supporting the West Australian economy

Over the last 60 years, the ABB transformer factory in Perth has provided hundreds of employees with training and employment. ABB continues to reinvest back into the local community from both a financial and citizenship perspective.

Each year, ABB directly contributes over $6 million to the Western Australian economy, in addition to the tens of millions it spends with local suppliers.

Learning and training not only extends to ABB employees, but the Malaga factory regularly hosts and trains students and graduates from Curtin University, local TAFEs and community colleges, and Western Power.

In 2013, ABB Australia signed a Reconciliation Action Plan (RAP) as part of its commitment to help close the gap between Indigenous and non-Indigenous communities. The ABB Malaga factory is a strong champion of the RAP through its support of the Nyoongar Sports Association (NSA), which provides school holiday activities for indigenous children in regional towns across the Wheatbelt and South West region, and other education and engagement activities.

ABB’s Distribution Transformer factory in Perth is proof that high-quality manufacturing can succeed in so-called high cost countries. ABB has invested in that premise for 60 years, and hopes to continue its strong relationship with customers and the community of Western Australia for many more years to come.
Eric Krause, founding engineer

Eric Krause, one of the four people who travelled across the country in 1955 to establish the transformer manufacturing facility in Western Australia, visited the Malaga factory recently and was happy to share his memories. Now in his 90’s, Eric has been retired for nearly 30 years.

“The initial trip over from Sydney to Perth was the most memorable because we had 26 tons of equipment when we departed Sydney for Perth and we made the journey on what was just a dirt road, in an old army truck that we purchased for the trip,” said Eric.

“It took six weeks to get across and we had only made it to the gates of the Sydney University before it broke down the first of many times.”

Eric was instrumental in building the original factory in Osborne Park - from erecting the steelworks that supported the factory to making the machines that made the transformers. “I also made a pressure breaker out of some old gear that I’d gotten out of the disposals and used old aircraft to make a metal guillotine for the oil tanks. So at this time we were building machinery and building transformers,” he added.

In the early years, the teams mainly did repair and service work. “We then established ourselves by setting up the manufacturing facility to build transformers for the State Electricity Commission and the various Roads Boards. They wanted to see us succeed and we wanted to see us succeed.

“We ended up playing a very significant role in supporting them in the development of the electricity network as we were really the only transformer manufacturing company in Western Australia that became established,” explained Eric.

Joe Russo, Malaga operations manager, was pleased to take Eric on a tour of the current factory and compare notes of how manufacturing has changed. “I am completely amazed that you are able to produce so many transformers with so few people,” exclaimed Eric.

Eric was delighted to be invited back into the business he started in 60 years ago and shared his congratulations with Joe and the team on reaching this significant milestone.
Staff memories

Barry Ferguson, 40-year ABB veteran (now retired)

When I was 18 I was conscripted into the army for training to go to Vietnam. At that time the transformer factory was Westralian Transformers PTY LTD and it was owned by John Fairchild.

After I received the conscription letter I informed the management of the situation. Luckily at that time the law stated that anyone who was called up would keep their job for when they came back, and thankfully I did.

Just before I was to leave I was told that John Fairchild wanted to see me. In those days when the big boss wanted to see you, as a young lad it was a bit scary.

To my surprise he gave me a gold signet ring and shook my hand and wished me all the best, as I was the only one in the factory to be called up.

I remember the day I went back to the factory after returning from Vietnam in my uniform and as I entered the coil winding shop, Alan, Graham and all the others cheered and clapped.

I remembered feeling so happy at that time. To this day I have fond memories of working in the transformer factory, ABB as it is now.

From apprentice to senior manager, Steve Shearing’s journey

Steve Shearing, sales manager for the West Australian business, fondly remembers his journey as an apprentice in the transformer factory in the 1970’s to now, a senior manager.

"Whatever your current situation, and whatever you choose to do, it is more important than ever that you continue to learn," said Steve.

"I can still remember my parents saying to me – ‘son, you need to get an apprenticeship; you need to get a trade behind you’. This was a common area of counsel from parents in the 1970’s and 1980’s and Westralian Transformers was a leader in the private sector, hiring 27 apprentices during this period.

"Apprenticeships by nature are a structured training arrangement of usually 3.5 or 4 years duration. The training combines practical experience at work with complementary life skills provided by ex-apprentices whom are now called tradesmen. So the young apprentice eventually becomes the trainer," added Steve.

Currently the ABB business has three remaining apprentices, and not surprisingly all three hold key positions in the ABB Business - Gerard Tilinger who is responsible for Electrical Testing of transformers at Malaga, Steve Shearing who manages the Western Australian Sales Business and Giuseppe (Joe) Russo who is currently the operations manager for the Malaga facility.

"To all the apprentices who travelled through the doors of Westralian Transformers and now ABB, well done. You have contributed to a wonderful organisation that is now ABB," said Steve. “ABB has given me the opportunity to not only learn a trade, but manage a business.”
Our people