Alstom in Australia & New Zealand

Delivering Essential Infrastructure for More Than 100 Years

Alstom’s Presence

**Key Data:**
- 1000 employees at 18 sites
- Offices in all major cities
- Manufacturing and workshop facilities

Alstom in Australia & New Zealand – January 2014

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History

1890: Babcock and Wilcox begin operations.
1894: BTH begin operations.
1928: BTH becomes part of AEI.
1967: Consolidation of EEC and AEI: GEC is born.
1979: Babcock & Wilcox became Babcock Australia.
1991: Flakt Australia becomes ABB Flakt Australia.
1992: ABB Power Plant was created after the merger of ABB Power Generation, ABB Flakt Australia and Babcock Australia.
1994: GEC Alsthom changed its name into Alstom Energy and ABB Power Plants became ABB Power Generation.
2000: AAB Alstom Power becomes ALSTOM.
2004: Alstom sells its Transmission and Distribution business to Areva.
2006: Maintenance Systems Consolidated becomes part of Alstom.
2007: Alstom sets a new world rail speed record of 574.8 km/h.
2008: Alstom unveils the AGV – the next generation of very high speed trains. Its first customer is the private Italian operator NTV.
2010: Alstom and Schnieder Electric acquire Areva T&D, the Transmission and Distribution unit sold by Alstom to Areva in 2004.
2010: Alstom re-acquires the Transmission business and creates a third sector: Alstom Grid.
2010: New power workshop opened in Morwell.
2010: Sigma Energy Solutions & Maintenance Systems Consolidated are rebranded as Alstom companies.
2011: Alstom reshapes its operational activities into four sectors: Thermal Power, Renewable Power, Grid and Transport.

Partnerships

Corporate:
- **Australian Industry Group (AiG):** AiG is a leading industry association in Australia, representing the interests of approximately 60,000 businesses – Alstom Australia & New Zealand’s Country President, Chris Raine, is the National Vice President, NSW, of the Australian Industry Group.
- **Carbon Market Institute:** Assists Australian businesses in meeting challenges and opportunities associated with national and international carbon markets.

Power:
- **Electricity Supply Association of Australia** - Alstom is a sponsoring member of ESAA, which seeks to positively influence government policy decisions to ensure that Australia enjoys the benefits of a safe, secure, reliable, sustainable and competitively priced electricity and natural gas supply.
- **Global Carbon Capture & Storage Institute (GCCSI)** - Alstom is a founding member and supports the accelerated commercialisation of carbon capture and storage technologies.
- **Clean Energy Council:** The peak body representing Australia’s Clean Energy sector, made up of more than 600 member companies engaged in clean technologies and energy efficiency.

Transport:
- **Infrastructure Partnerships Australia:** Alstom is an associate member of Australia’s flagship infrastructure association.

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GAS POWER
Alstom is the leading provider of turnkey gas power plants and has supplied major equipment to 30% of the Australian installed base of gas-fired power plants, totalling nearly 3.5GW.

Gas Power Plants
- Pelican Point, International Power, 480 MW, KA13E2-2, Combined Cycle, Turnkey Power Plant
- Swanbank E, CS Energy, 385 MW, Combined Cycle, KA 26-1
- Cockburn, Verve Energy, 240 MW, KA13E2-1, Combined Cycle, Turnkey Power Plant
- Braemar, NewGen Power, 450 MW GT13E2-3, Simple Cycle, Turnkey Power Plant
- Wagerup, Alinta, 324 MW, GT13E2-2, Component Supply
- Kwinana, NewGen Power, 320 MW KA13E2-1, Combined Cycle, Turnkey Power Plant
- Collongra Delta Electricity, 667 MW 2 x GT13E2-2, Single Cycle, Turnkey Power Plant
- Tallawarra, TRUenergy, 435 MW KA 26-1, Combined Cycle, Turnkey Power Plant
- Yarwun, Rio Tinto Alcan, 165 MW GT13E2-1 + HRSG, Cogeneration Unit, Component Supply

Installed Base
- Swanbank (Swanbank E), Stanwell Corp, 400 MW LTSA (Long Term Service Agreement)
- Collongra, Delta Electricity, 667 MW 2 x GT13E2-2, Single Cycle, Turnkey Power Plant
- Tallawarra, TRUenergy, 435 MW KA 26-1, Combined Cycle Power Plant LTSA (Long Term Service Agreement)

STEAM POWER
Alstom is a leading provider of turnkey steam power stations, with 15% of the Australian market share in steam turbines greater than 100 MW, and 36% of the Australian market in utility boilers.

Power Plants
- Bluewaters I & II, Griffin Group, 440 MW 2 x 220 MW STG Island, Component Supply
- Redbank, Redbank Power, 128 MW Thermal Turnkey Power Plant
- Collie, Verve Energy, 330 MW Turnkey Power Plant

Installed Base - Steam
- Liddell, Macquarie Gen. 2000 MW HP/IP Turbine Retrofit, Alliance for Turbine, Generator and Mills
- Five-year frame service agreement with State-owned CS Energy in Queensland to provide parts, services and upgrades to their five coal-fired generation units.

HYDRO POWER
Alstom has a long history in Australia’s hydro generation market, having supplied generators to the oldest operating power generator in Tasmania in 1907 at the Moorinah hydro power plant. The plant still operates today. Alstom has installed major equipment in 44% of Australia’s hydro fleet.

Power Plants
- Jounama, 14.4 MW

Installed Base
- Hydro Tasmania 2273MW ongoing alliance for hydro station overhauls, upgrades and modernisation
- Mt Beauty power station, West Kiewa, Victoria - 4 x 18MW, AGL, refurbishment and upgrade
Grid

Our Network Energy Management System is responsible for managing **92% of Australia’s electricity transmission network**. Through our local organization and world class products, we deliver solutions to utility customers that answer the need for smarter, more stable, more efficient and environmentally friendly electrical grids.

**Key References:**

**2012 SA:** ElectraNet: Inauguration of Adelaide City West substation contract - 275 kV GIS and 275 kV / 66 kV transformers and protection schemes

**2011 Tas:** Following successful delivery of the first project, Transend awarded Alstom with a new 110 kV GIS order for Creek Road project

**2011 NSW:** TransGrid: 2 contracts worth $100 M won for 132 kV AIS or Wallerawang and 330/132 kV AIS and GIS substations for Holroyd & Rookwood Road

**2010 WA:** Chevron: $250 M worth of contracts for pre-fabricated powerhouses for Chevron (biggest contract in history of Alstom Grid Australia)

**2009 NSW:** TransGrid: Inauguration of the 330/132/66 kV Macarthur ecological substation in the Sydney region

**2009 NT - Power & Water:** Energy Management System goes live

**2009 Tas:** Transend: 5-year framework agreement as a ‘partner’ to deliver Transend’s EU 350M network investment program, providing planning expertise, design, engineering, installation and commissioning of new and ‘brownfield’ substation and related sites

**2009 Qld:** Queensland Rail: 4 trackside pre-fabricated substations for Queensland Rail with delivery scheduled Q4 2010.

Transport

Throughout Australia, Alstom has established key references for Light Rail, Metro Trains and Signalling technology. Our current activity today focuses on rolling stock in Victoria for both Metro and Trams and Signalling systems in New South Wales.

**Key References:**

**Sydney CBD and South East Light Rail project**
- 30 coupled low floor X05 Citadis light rail vehicles
- 2 kilometre APS wire free technology

**22 six-car fully automated Metropolis train sets and CBTC signalling system.**
- Australia’s largest public transport infrastructure project being delivered in Sydney

**87 X’Trapolis suburban trains in Victoria – 44 cars delivered between 2002 & 2017**
- 5 new trainsets ordered with the first set due for delivery by November 2016
- Contract Awarded in 1999 for 29 trainsets
- New contract was awarded in 2007 for 18 trainsets
- Additional 20 currently being delivered due by mid 2012
- 7 new trainsets ordered and due for delivery by end of 2013
- Upgrade of Hillside Xtrapolis in 2011

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Citadis trams in Melbourne and Adelaide
• 36 Citadis trams in operation since 2001 and 5 Citadis Bumblebees since 2008 in Melbourne
• 6 Citadis in Adelaide 2009 (on loan from Madrid)
• Ongoing maintenance support.

European Train Control System (ETCS) signalling system for Sydney’s CityRail network
• Contract awarded in January 2011
• The first 50 newly equipped trains will begin service in 2013
• One third of CityRail’s network will be installed with ETCS technology by 2014. In total, 160 trains (one third of the network) will be fitted with the equipment, covering over 600 kilometres of track. Maintenance contracts will run until 2020

Signalling system for Melbourne’s regional network
• Contract awarded for Melbourne’s Regional Rail Link Package A in 2011

Train Subsystems & Maintenance – all states of Australia & New Zealand
• Ongoing supply and/or maintenance/renovation of traction package and train management systems for EMUs.

Corporate Social Responsibility

Fundraising Activities for Victims of 2011 Queensland and Victorian Floods, 2011
• In January and February 2011, parts of Australia were hit by the most significant flooding since 1973. The suburb of Rocklea, where Alstom employs 300 people as part of its Grid Transformer Factory, was one of the worst affected areas.
• Alstom’s local business units donated A$41,000 to the Queensland Premier’s Relief Fund.

Relief for communities touched by ‘Black Saturday Bushfires’: Callignee Eco-Friendly Community Hub 2009-2010
• The Callignee Community Centre is located near to Alstom’s Morwell Thermal Services workshop.
• The destruction of the Callignee Community Centre during the ‘Black Saturday’ bushfires in 2009 had a significant impact on the local community and Alstom’s 100 local employees.
• Alstom Foundation contributed by providing funding for solar PV cells, rain water capture, solar thermal heating system, insulation, and an environmentally friendly waste water sand filter.

Alstom Supports the Tassie Devil Appeal 2009 – 2011
• One of Australia’s iconic animals, the Tasmanian Devil, has been adopted by Alstom in partnership with Taronga Zoo. The Tasmanian Devil was declared as endangered in May 2008 due to an infectious cancer, which is killing many devils.

Alstom is a NSW Sustainability Advantage Member 2010 - 2011
• The Sustainability Advantage Program together with its members, assist organisations to understand sustainability and strengthen their environmental performance. Alstom has improved productivity and increased raw material, energy, water and waste savings.

Alstom is a Zoo Parent for the Taronga Conservation Society Australia 2007 - 2103

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Certifications

Alstom’s quality, safety and environmental management systems have been independently certified to ISO standards.

- AS/NZS ISO 14001 Environmental Management System
- AS/NZS ISO 4801 Safety Management System
- OHSAS 18001 Safety Management System