

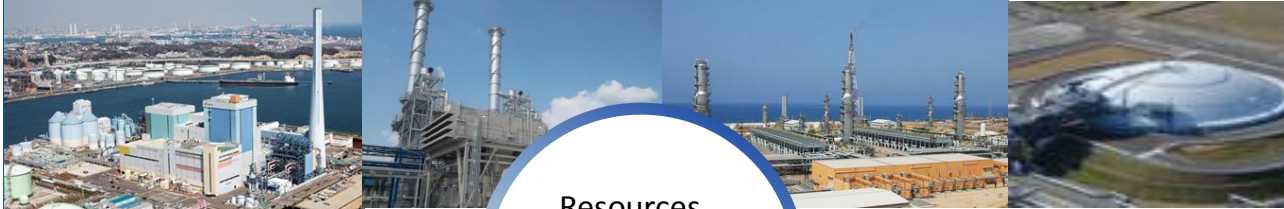
Introduction to IHI Engineering Australia



- 1. Introduction of IHI Engineering Australia Pty. Ltd. (IEA)**
- 2. Power Plant Projects (New)**
- 3. Material Handling System**
- 4. Iron & Steel Plant**
- 5. Non Ferrous Plant & Tank**
- 6. Shipbuilding**

1. IHI Corporation – Business Areas

Resources, Energy and Environment
(Boiler, Gas Turbine/Gas Engine, LNG Terminal, Process Plant, Nuclear Equipment, etc.)



Resources,
Energy and
Environment

Aero Engines and Space
(Jet Engine, Rocket)



Aero, Engines
and Space

Social Infrastructure and Offshore Facilities
(Bridge, Transportation System, Security, etc.)



Social Infrastructure
and
Offshore Facilities

General-Purpose Machinery
(Compressor, Separator, Turbo charger, etc.)

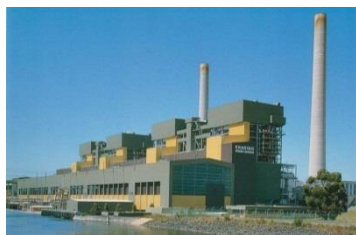


Industrial Systems
and
General-Purpose
Machinery

Industrial Systems
(Steel Manufacturing Furnaces, Heat/Surface Treatment
Equipment, Logistics Systems, Material Handling Equipment, etc.)



- ◆ Established September 1971 in Sydney as subsidiary of IHI Corporation
- ◆ Headquarters: 111 Pacific Highway, North Sydney, NSW
- ◆ Other Locations: Perth City Office, West Perth and Perth Service Centre, Malaga
- ◆ Full OEM supplier, EPC contractor and Maintenance Service Provider for power plants
- ◆ Project history in Australia and New Zealand includes:
 - Total of 16 LM-6000 (710MW total) gas turbine units in Open and Combined Cycle
 - Constructed a total capacity of 8,300MW coal-fired boiler units
 - Maintenance and spare parts for boilers, gas turbines and IHI products
 - Processing equipment for mines and ports as well as steel and aluminium mill plants



Eraring PVC Boiler
4 x 660 MW (1984)



Bayswater PVC Boiler
4 x 660 MW (1986)



Mt Piper PVC Boiler
2 x 660 MW (1987)



Callide SOVR Boiler
2 x 420 MW (2001)



Tarong North SOVR Boiler
1 x 450 MW (2003)



Parkstone LM6000 GT
3 x 36 MW (1996)



Bairnsdale LM6000 GT
2 x 46 MW (2001)



Paraburdoo LM6000 GT
3 x 45 MW (2009)



Bluewaters PVC Boiler
2 x 229 MW (2009)



Dampier LM6000 GT
5 x 45 MW (2013)

IHI's Activities in Australia

IHI



GT Plant



Space Development
(Hayabusa landing)



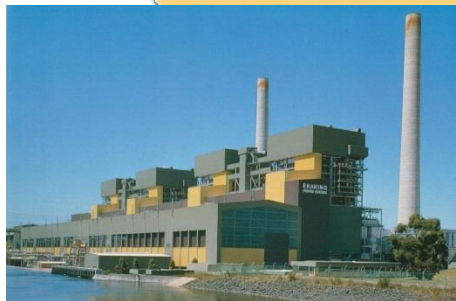
Bulk Material
Handling Equipment



LPG / LNG
FPSO



Turbochargers



Thermal Power Plant



Bulk Carrier

IHI's Activities in NSW



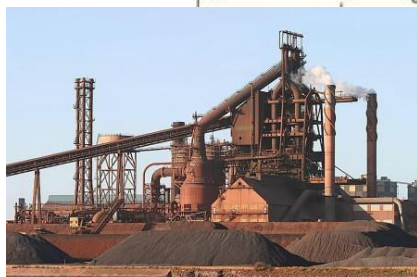
Mt. Piper Power Station (for Energy Australia) 2x660MW (Portland, NSW)



Bayswater Power Station (for AGL Macquarie) 4x660MW (Hunter Valley, NSW)



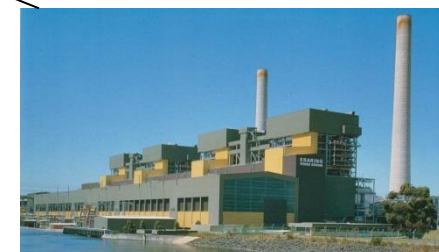
Port Waratah Coal Service (PWCS) Kooragang Coal Terminal Stacker & Reclaimer



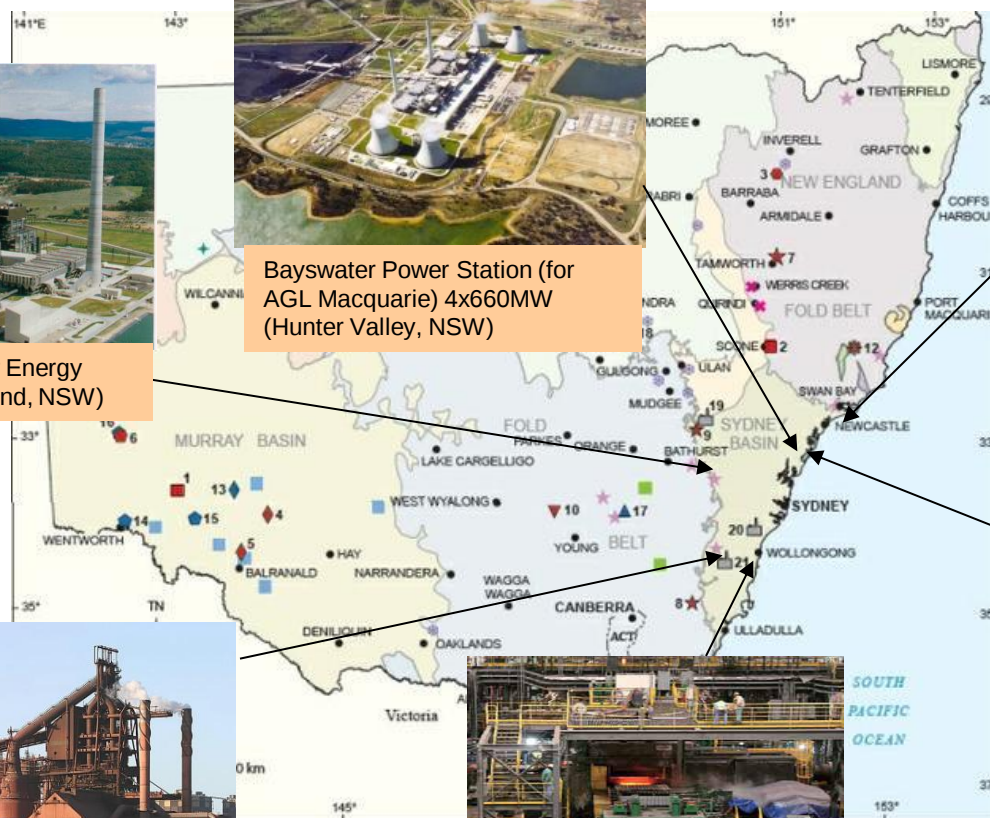
BlueScope Steel (Port Kembla Works) No.5 Blast Furnace



Jointly developed "Strip Caster (Castrip)" Technology with BlueScope Steel & Nucor Corporation (USA)



Eraring Power Station (for Origin Energy) 4 x 660MW (Dora Creek, NSW)



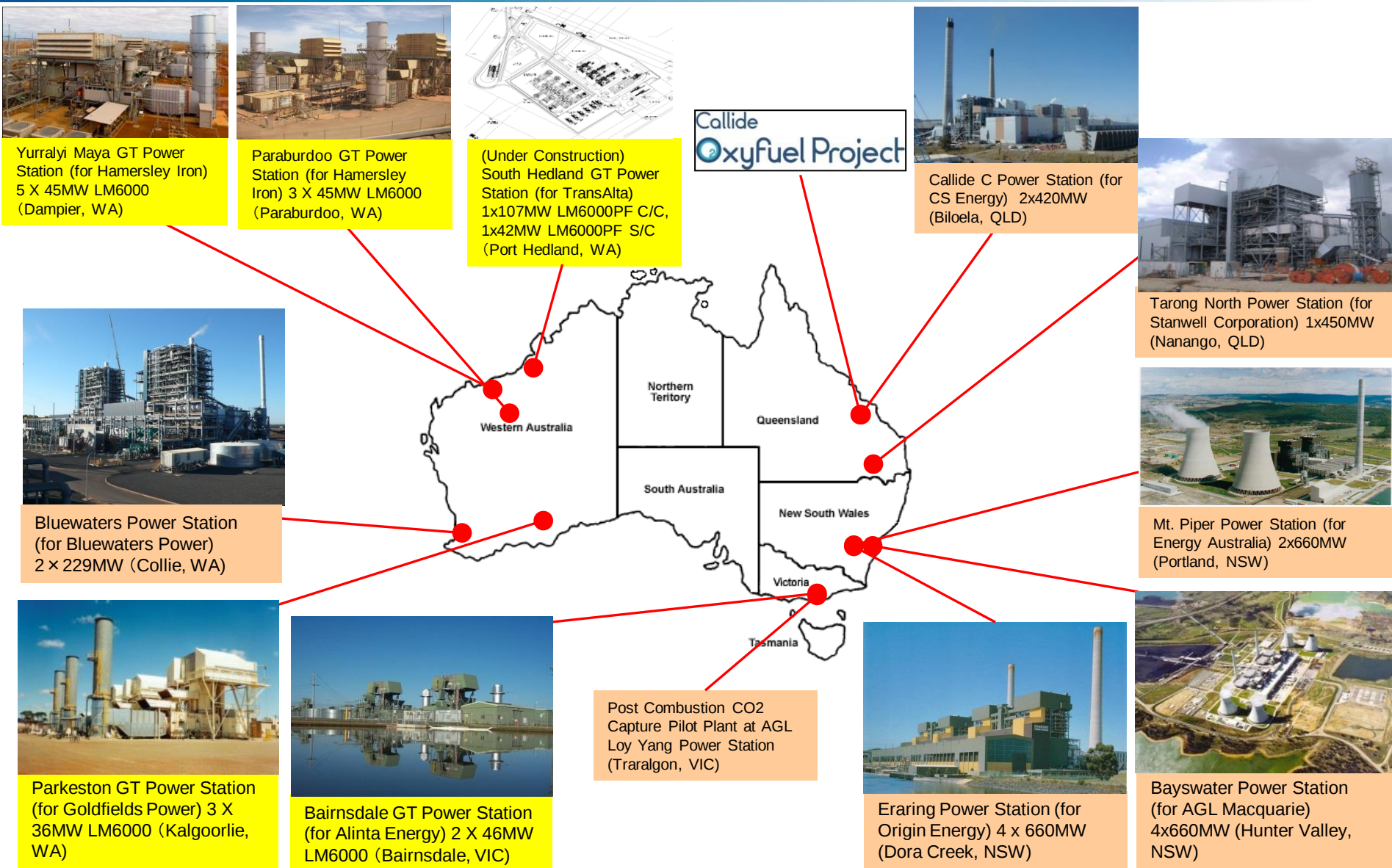
2. Power Plant Projects (New) 1970-99

Project	Plant Details	Completion
Groote Eylandt Mining (BHP)	4 MW Diesel Power Plant 1 x 4 MW Unit	1980
Ranger Uranium Mine (Jabiru, NT)	26 MW Diesel Power Plant 5 x 5.2 MW Units (26 MW)	1981
Electricity Commission of NSW (Eraring, Lake Macquarie)	2,640 MW Coal Fired Boiler Plant EPC 4 x 660 MW Units	1984
Electricity Commission of NSW (Bayswater, Hunter Valley)	2,640 MW Coal Fired Boiler Plant EPC 4 x 660 MW Units	1986
Electricity Commission of NSW (Mt Piper, Portland)	1,320 MW Coal Fired Boiler Plant EPC 2 x 660 MW Units	1987
Goldfields Power Pty. Ltd. (Parkeston, Kalgoorlie)	108 MW Gas Turbine Power Plant EPC 3 x 36 MW Units	1996

2. Power Plant Projects (New) 2000s

Project	Details	Completion
Duke Energy International (Bairnsdale)	92 MW Gas Turbine Power Plant EPC 2 x 46 MW Units	2001
CS Energy/Shell Coal JV (Callide, Biloela)	840 MW Supercritical Boiler EPC 2 x 420 MW Units	2001
Tarong Energy (Tarong North, Nanago)	450 MW Supercritical Boiler EPC 1 x 450MW Unit	2003
Rio Tinto Iron Ore (Paraburdoo)	135 MW Gas Turbine Power Plant EPC 3 x 45 MW Units	2007, 2009
Griffin Coal (Bluewaters, Collie)	458 MW Coal Fired Power Plant EPC 2 x 229 MW Units	2009
Rio Tinto Iron Ore (Seven Mile, Dampier)	225 MW Gas Turbine Power Plant EPC 5 x 45 MW Units	2010, 2013
TransAlta Australia (South Hedland)	149 MW Gas Turbine Power Plant EPC 107MW LM6000PF 2-2-1 C/C 1x42MW LM6000PF S/C	2017
Total	~9,100 MW	

IHI Major Power Plant Projects Map (New)



3. Material Handling System

Project	Details	Completion
BHP Minerals (Pt Headland)	8000 T/H Shiploader for Iron Ore	1966
Queensland Alumina Ltd. (Gladstone)	1200 T/H Unloader for Bauxite (2 Units)	1970
BHP Steel (Kwinana)	2000 T/H Loader/ Unloader for Coal & Ore	1970
Hamersley Iron Pty. Ltd. (Parker Point)	7500 T/H Stacker for Iron Ore	1979
Hamersley Iron Pty. Ltd. (Tom Price)	3000 T/H + 3750 T/H Stackers for Iron Ore	1979
Worsley Alumina Pty. Ltd.	2050 T/H Stacker, for Bauxite (2 Units)	1983
Kooragang Coal Loader Ltd.	6600 T/H Stacker, for Coal (4 Units)	1984
Kooragang Coal Loader Ltd.	8000 T/H Reclaimer, for Coal (2 Units)	1984
Darwin Port Corporation.	35 T Multi-Purpose Container Crane	1984

Port Headland Shiploader (Pilbara,WA)



Parker Point Stacker (Pilbara, WA)



Mt Tom Price Stackers (Pilbara, WA)





4. Iron & Steel Plant

Project	Details	Completion
BHP Steel (Pt Kembla)	4Hi Reversing Skin Pass Mill	1968
BHP Steel (Westernport)	4Hi Temper Mill	1972
BHP Steel (Whyalla)	Blast Furnace No. 2	1972
BHP Steel (Pt Kembla)	Blast Furnace, No. 5 (3,656 m3)	1972
BHP Steel (Pt Kembla)	Blast Furnace, No. 2 (1,125 m3) Relining	1972
BHP Steel (Newcastle)	Blast Furnace, No. 4 (1,255 m3) Relining	1973
BHP Steel (Whyalla)	220 T/H Reheating Furnace,	1975
BHP Steel (Pt Kembla)	Blast Furnace No 5, Cooling and Cast House	1978
BHP Steel (New Zealand)	Hot & Cold Strip Mill	1987
BHP Steel (New Zealand)	Shape Control Systems for 4Hi and 6Hi CRM	1997
BHP Steel (Kalama USA)	4Hi Reversing Cold Roll Mill	1998
BHP Steel (Rayong Thailand)	4Hi Reversing Cold Roll Mill	1998

5. Non Ferrous Plant & Tank

Project	Details	Completion
Queensland Alumina Ltd. (Gladstone)	Tanks & Vessels 178 Units	1964
Australian Fertilizers Ltd. (Pt Kembla)	12,200 T Liquified Ammonia Tank	1966
KAAL Australia (Geelong)	Non Reversing Cold Mill for Aluminum	1968
KAAL Australia (Sydney)	Non Reversing Cold Mill for Aluminum	1972

6. Shipbuilding

Project	Details	Completion
BHP Transport	107, 140 DWT Bulk Carrier	1979
Bulk Ship Ltd.	22,093 DWT Bulk Carrier	1979
BHP Transport	141,435 DWT Bulk Carrier	1981
BHP Transport	141,757 DWT Bulk Carrier	1981
BHP Transport	21,740 DWT Bulk Carrier	1981
BHP Transport	148,140 DWT Bulk Carrier	1985
BHP Transport	148,150 DWT Bulk Carrier	1986
BHP Petroleum (Jabiru Venture)	144,000 MT Tanker Conversion to FPSO	1986
BHP Transport	87,241 DWT Tanker	1989
BHP Petroleum (Challis Venture)	115,000 MT FPSO	1989
BHP Petroleum (Liverpool Bay)	145,000 M3 FSO	1995





Challis Venture FPSO – Timor Sea

