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Executive Summary

- In 2014-15, Queensland coal exports totalled 219.33 million tonnes (Mt), a 5.3% increase on 2013-14.
- In 2015-16, Year-to-date (YTD) coal exports to 31 December 2015 total 112.81Mt – a 0.8% increase on the same period in 2014-15. December 2015 exports total 18.88Mt, a 2.1% decrease on the previous month, and a 2.1% decrease on December 2014.
- Queensland YTD coal exports (by terminal) comprise:
  - Abbot Point: 13.73Mt, a 9.3% decrease on YTD December 2014.
  - DBCT: 34.31Mt, a 5.3% decrease on YTD December 2014.
  - HPSCT: 22.95Mt, a 3.8% increase on YTD December 2014.
  - RGT&BPCT’s: 35.32Mt, a 2.1% increase on YTD December 2014.
  - WICET: 2.87Mt, compared to nil exports YTD December 2014.
  - Brisbane: 3.62Mt, a 3.7% decrease on YTD December 2014.
- TMR’s forecast for 2015-16 Queensland exports is 220Mt, a 0.4% increase on 2014-15.
- Major industry/infrastructure developments in December 2015 have included:
  - The Q1 2016 benchmark Queensland premium hard coking coal price was settled by Anglo Coal and Nippon Steel & Sumitomo Metals at US$81/t free-on-board (FOB), a 9% reduction on the Q4 2015 price. The Q1 2016 low-volatile Pulverised Coal Injection (PCI) price was settled at US$69/t FOB, a 2.8% reduction on the previous quarter.
  - Queensland Premier Annastacia Palaszczuk officially opened the new Berth 3, forming part of the BHP-Billiton Mitsubishi Alliance Hay Point Services Coal Terminal Stage 3 Expansion. This expansion increased capacity by 11Mtpa, from 44 to 55Mtpa. The project included construction of a new berth and ship-loader alongside the existing two berths. It also included the replacement of the existing jetty, trestle conveyors and surge bins and linking conveyors.
  - Adani Mining won another legal challenge against its Carmichael Coal Project in the Galilee Basin, brought by Coast and Country Land Services. The Queensland Land Court dismissed claims that Adani did not have the necessary financial capacity to develop the project, and recommended Adani be granted a mining lease. The Land Court did however add more conditions to protect the threatened black-throated finch. Issue of a mining lease or environmental authority however cannot yet proceed until a legal action brought on behalf of the Wangan and Jagalingou peoples in the Federal Court is resolved, with a further hearing scheduled for February 2016.
  - The Abbot Point Gateway Growth Project received Federal Government approval for the dredging and on-shore placement of spoil associated with Adani’s T0 Abbot Point Coal Terminal development. Dredging will only be allowed to commence once Adani achieves financial close.
  - In Paris almost 200 nations signed an historic United Nations Climate Change Agreement with the goal of holding global warming at well below 2°C (above pre-industrial levels). The agreement is likely to increase demand for Australia’s high energy, low-ash coals over the medium term, while significantly advancing the renewable energy sector.
1. Overview of Queensland Coal Transport System Performance to 31 December 2015

- In 2015-16 Year-to-date Queensland coal exports total 112.81Mt – a 0.8% increase on the same period in 2014-15. Queensland coal exports (by terminal) are summarised below:

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Nominal capacity (Mtpa)</th>
<th>Dec 2015 (Mt)</th>
<th>Change on Prev Mth %</th>
<th>Change on Dec 2014 %</th>
<th>YTD (Mt)</th>
<th>YTD change %</th>
<th>Annualised Throughput (Mtpa)</th>
</tr>
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<tbody>
<tr>
<td>AAPCT</td>
<td>50</td>
<td>2.01</td>
<td>-4.4</td>
<td>-18.1</td>
<td>13.73</td>
<td>-9.3</td>
<td>27.45</td>
</tr>
<tr>
<td>DBCT</td>
<td>85</td>
<td>5.49</td>
<td>-1.0</td>
<td>-13.5</td>
<td>34.31</td>
<td>-5.3</td>
<td>68.63</td>
</tr>
<tr>
<td>HPSCT</td>
<td>55</td>
<td>4.39</td>
<td>9.5</td>
<td>18.0</td>
<td>22.95</td>
<td>3.8</td>
<td>45.90</td>
</tr>
<tr>
<td>RGT-BPCT</td>
<td>78</td>
<td>5.88</td>
<td>-5.0</td>
<td>-3.1</td>
<td>35.32</td>
<td>2.1</td>
<td>70.65</td>
</tr>
<tr>
<td>WICET</td>
<td>27</td>
<td>0.33</td>
<td>-67.7</td>
<td>n.a.</td>
<td>2.87</td>
<td>n.a.</td>
<td>5.74</td>
</tr>
<tr>
<td>Brisbane</td>
<td>10</td>
<td>0.78</td>
<td>77.9</td>
<td>29.1</td>
<td>3.62</td>
<td>-3.7</td>
<td>7.24</td>
</tr>
<tr>
<td>Totals</td>
<td>305</td>
<td>18.88</td>
<td>-2.1%</td>
<td>-2.1%</td>
<td>112.81</td>
<td>0.8%</td>
<td>225.61</td>
</tr>
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Queensland coal export performance 2015-16 (comparative monthly)

Queensland coal export performance 2015-16 (cumulative monthly)
2. Composition of Coal Exports

Queensland metallurgical coal exports currently comprise 73.9% by volume, but 78.2% by value. Thermal coal exports comprise 26.1% by volume, and 21.8% by value.

3. Exports by Destination

In 2014-15 the Top 3 destinations for Queensland coal exports were China 56Mt (25.6% share), Japan 49.9Mt (22.8% share), and India 40.6Mt (18.5% share).

In 2015-16 YTD imports patterns reflect some notable shifts. YTD export increases include Japan 8.7%, Korea 21%, and Rest of World (ROW) 28%. **YTD export decreases include China 23.9%, India 0.9% and Taiwan 18.9%**.

As per the graph above, in 2015-16 forecast Queensland export increases include Japan 5.4%, Korea 16% and ROW 19.5%. **Forecast 2015-16 export decreases include China 19.1%, India 1.5% and Taiwan 10.9%**.
4. **Overview of Recent Coal Price Movements**

- **Hard Coking Coal (HCC):** The recent course of key benchmark Queensland HCC price settlements has been as follows: Q1 2015: US$117/t; annual Q2 2015: US$109.50/t; Q3 2015: US$93/t; Q4 2015: US$89/t. In December 2015, the Q1 2016 benchmark HCC price was settled at US$81/t FOB, a 9% decline on Q4 2015, and a 30.8% reduction on a year ago.

- **Pulverised Coal Injection (PCI) Coal:** Recent quarterly ultra-low volatile PCI price settlements have been as follows: Q1 2015: US$99/t; Q2 2015: US$92.50/t; and Q3 2015: US$73/t; Q4 2015: US$71/t. In December 2015, the Q1 2016 price settled at US$69/t, a 2.8% reduction on Q4 2015, and a 33% reduction on a year ago.

- **Thermal Coal:** Recent contract thermal coal price settlements have been as follows: Q1 2015: US$73.85/t. The 2015 annual contract thermal price was settled with Japanese utilities (starting 1 April 2015) at US$67.80/t. In September 2015, Glencore settled its annual thermal contract price with Japan’s Tohoku Electric Power for the year commencing Oct 2015 at US$64.60/t FOB. The price was down 4.7% on the April 2015 annual contract price of US$67.80/t.
5. **Indicative Value of Queensland Coal Exports 2015-16**

- Based on forecast full year exports of 220Mt, TMR's estimate of the Indicative Value of Queensland coal exports for 2015-16 is A$23.44b, a decrease of 8% on 2014-15.

6. **Global Influences Affecting Queensland Coal Export Demand and Prices**

- **2015 World Economic Growth Forecast Downgraded**: In October 2015 the International Monetary Fund in its World Economic Outlook - Update Report, downgraded its 2015 world economic growth forecast by 0.2% to 3.1%. China’s 2015 and 2016 growth rates were retained at 6.8% and 6.3%. Japan’s 2015 growth rate was downgraded by 0.2% to 0.6%. India’s 2015 growth rate was downgraded 0.2% to 7.3%, with 2016 growth retained at 7.5%.

- **World Crude Steel Production Continues to Decline (Year-On-Year)**: In November 2015 World Crude Steel Production totalled 127Mt, a 4.1% decrease on November 2014. China’s November 2015 production totalled 63.3Mt, a 1.6% decrease on November 2014. Elsewhere in Asia, Japan’s November 2015 production decreased by 4.7% year-on-year. Indian production decreased by 0.2% year-on-year. Korean production decreased by 0.5% year-on-year.
7. Individual Coal Chain Performances (by Terminal)

7.1.1 Adani Abbot Point Coal Terminal (AAPCT) - (Adani Group)

- In 2014-15 AAPCT full year exports totalled 28.69Mt.
- In 2015-16 AAPCT Year-to-date exports (to 31 Dec) total 13.73Mt, a 9.3% decrease on the same period in 2014-15. This decrease in YTD exports reflects production cut-backs at the Collinsville Coal Mine and softer demand for coal particularly in Q4 2015.
- December 2015 exports total 2.01Mt, comprising a 4.4% decrease on November 2015 and an 18.1% decrease on that achieved in December 2014.

**AAPCT Expansions** – The current AAPCT (T1) has a nominal capacity of 50Mtpa. AAPCT owner (Adani Group) plans to develop a new 70Mtpa Terminal (T0) at Abbot Point, with a 40Mtpa Stage 1 expected to be completed by December 2019. In December 2015, the Abbot Point Gateway Growth Project received Federal Government approval for the dredging and on-shore placement of spoil associated with Adani’s T0 Abbot Point Coal Terminal development. Dredging will only be allowed to commence once Adani achieves financial close.

**North Galilee Basin Rail Project** – Adani Mining plans to build a $2.2 billion 388km North Galilee Basin Railway linking to the port of Abbot Point, with completion expected by December 2019.

**GVK-Hancock Terminal 3** – GVK-Hancock plans to develop a new 60Mtpa terminal (T3) with an initial Stage 1 capacity of 30Mtpa. A new EIS covering T3 dredging and onshore dredge spoil disposal at Abbot Point will need to be undertaken to allow the T3 project to progress.
7.1.2 Dalrymple Bay Coal Terminal (DBCT) - (Brookfield Infrastructure Partners)

- In 2014-15 DBCT full year exports totalled 71.55Mt.
- In 2015-16 DBCT Year-to-date exports (to 31 Dec) total 34.31Mt, a 5.3% decrease on the same period in 2014-15. Reduced YTD exports are primarily due to reduced coal imports by China.
- December 2015 exports total 5.49Mt, comprising a 1% decrease on November 2015 and a 13.5% decrease on that achieved in December 2014.

7.1.3 Hay Point Service Coal Terminal (HPSCT) - (BHP-Billiton Mitsubishi Alliance)

- In 2014-15 HPSCT full year exports totalled 43.42Mt.
- In 2015-16 HPSCT Year-to-date exports (to 31 Dec) total 22.95Mt, a 3.8% increase on the same period in 2014-15.
- December 2015 exports total 4.39Mt, comprising a 9.5% increase on November 2015 and an 18% increase on that achieved in December 2014.
- In April 2015 BMA completed an 11Mtpa expansion at Hay Point Services Coal Terminal, increasing capacity from 44Mtpa to 55Mtpa. BMA has forecast that its 2015-16 production will total 40Mt, a 7.9% decrease due to the closure of the 5.5Mtpa Crinum Mine.
- **Goonyella Rail Expansion Project** - Aurizon has invested $130m in this key project adding 11Mtpa of rail capacity to the Goonyella System, effective from July 2015.

- The first element of the project, an $82m 6km track duplication running parallel to the existing track south of the Port of Hay Point, was completed in December 2013.

- A new feeder station at Watoonga (see photo below) and Track Section Cabins at Carborough Downs and Grosvenor, supporting the capacity upgrade, were completed in April 2014. In June 2015 Powerlink completed construction of a 132kv substation, to connect the new feeder station to the transmission network. This effectively completed the Goonyella Rail Expansion Project.

- **Central Queensland Fleet Upgrade** - Aurizon is investing $180m in 40 high-tech track machines and specialised wagons to underpin increasing coal exports. New 62 metre, 193 tonne track machines will help maintain rail sleepers and track rock ballast across the 2,670 km rail network.
7.1.4  RG Tanna & Barney Point Coal Terminals - (Gladstone Ports Corporation)

- In 2014-15 RGT-BPCT full year exports totalled 67.81Mt. (Full year other Australian shipments totalled 0.214Mt.)
- In 2015-16 RGT-BPCT Year-to-date exports (to 31 Dec) total 35.32Mt, a 2.1% increase on the same period in 2014-15. (Year-to-date other Australian shipments total 0.026Mt).
- December 2015 exports total 5.88Mt, comprising a 5% decrease on November 2015 and a 3.1% decrease on that achieved in December 2014.

![Graph of RGT & BPCT coal export performance 2015-16](image1)

![Graph of RGT & BPCT coal exports](image2)
7.1.5 Wiggins Island Coal Export Terminal (WICET) – (WICET Pty Ltd)

- In 2014-15 WICET full year exports totalled 0.46Mt.
- In 2015-16 WICET Year-to-date exports (to 31 Dec) total 2.87Mt. No exports occurred in the same period in 2014-15.
- December 2015 exports total 0.33Mt, a 67.7% decrease on November 2015.

- 27Mtpa WICET Stage 1 achieved mechanical completion in May 2015. Construction of the $3 billion terminal commenced on 12 October 2011, taking 3.5 years to complete.

- Major Aurizon Rail Upgrades – The $831m Wiggins Island Rail Project (WIRP), providing rail infrastructure and upgrades in support of the WICET coal terminal development, was completed in November 2015.
- The WIRP includes construction of a 13km WICET balloon loop, upgrades to sections of the North Coast Line, Moura System, Blackwater track duplications and Bauhinia Branch Line upgrades.
- North Coast Line components – Triplication of the North Coast Line through Yarwon was completed in November 2015. Aldoga Holding Road and two Kabra Holding Roads were completed in August 2015.
- Moura System components – East Line upgrades were commissioned in August 2013. The Bauhinia branch line upgrades were completed in May 2014. The $30m Moura West upgrades were completed in August 2015.
- The $158m Bauhinia Electrification Project (BEP), comprising a 107km electrification of the Bauhinia Rail Line, Feeder Station and associated power system infrastructure, was completed in December 2014.
- The BEP supports Glencore’s Rolleston Mine Expansion from 9.4 to 14.6Mtpa and provides operational and cost benefits enabling new high capacity electric trains to operate on the Bauhinia Line.
7.1.6 Brisbane Coal Terminal (BCT) - (Queensland Bulk Handling Pty Ltd)

- In 2014-15 BCT full year exports totalled 7.31Mt.
- In 2015-16 BCT Year-to-date exports (to 31 Dec) total 3.62Mt, a 3.7% decrease on the same period in 2014-15.
- December 2015 exports total 0.78Mt, a 77.9% increase on November 2015 and a 29.1% increase on that achieved in December 2014.

- **Coal Dust Management** – All trains using the South West Rail System use load profiling and veneering of loaded coal wagons, to reduce coal dust emissions from trains. Veneering involves the use of an environmentally friendly binding agent sprayed onto the coal surface of loaded coal wagons. The solution dries to provide a flexible “crust” over the coal and reduces dust emissions by around 75%.

![Brisbane coal export performance 2015-16](chart1)

![Brisbane Coal Terminal - Coal Exports](chart2)
8. **Queensland Coal Ships at Anchor - Current Status**

- The total Queensland Coal Ship Queue across the four major coal ports (as at 11 Jan 2016) was 17 ships. This is 18% below the Optimum Queensland Coal Ship Queue of 38 ships, reflecting weak demand.
- The coal ship queues at each major port (as at 11 Jan 2016) was as follows:
  - APCT: 1 ships (67% below the optimum queue of 3 ships).
  - DBCT: 6 ships (50% below the optimum queue of 12 ships).
  - HPSCT: 6 ships (25% below the optimum queue of 8 ships).
  - Gladstone: 4 ships (73% below the optimum queue of 15 ships).

![Queensland coal ships at anchor](image)

9. **Capesize Shipping Rate – Gladstone/Qingdao (China)**

- During December the average Capesize rate declined to US$4.32/t, a rate 37% below the rate in December 2014. **Dry bulk charter rates reached an all-time low on 16 December 2015 with the Baltic Dry Index reaching 471.** Low rates reflect a continuing decline in Chinese coal imports, a 4.1% decrease in Global Steel Output and a 1.6% decline in Chinese Steel Production in November.

![Capesize shipping rate - Gladstone/Qingdao (US$/t)](image)
10. Recent Weather Conditions and 3 Month Rainfall Outlook

10.1.1 Rainfall in Queensland coalfields – December 2015

- In December 2015 the Bowen Basin experienced low-moderate rainfall levels ranging 10mm to 50mm, maintaining good conditions for sustained coal production.

![Figure 1: Queensland Rainfall Totals (mm) – December 2015](image)

10.1.2 Strong 2015-16 El Niño Southern Oscillation appears to have peaked

- The Bureau of Meteorology advises that a number of El Niño-Southern Oscillation (ENSO) indicators suggest that the 2015-16 El Niño has peaked in recent weeks. Tropical Pacific Ocean temperatures suggest this event is one of the top three strongest El Niño events of the past 50 years. Climate models suggest the 2015-16 El Niño will decline during the coming months, with a return to ENSO neutral likely during the second quarter of 2016.

- As outlined in the chart below, the Southern Oscillation Index (SOI) at 11 Jan 2016 was -11.3.

![30 Day Moving SOI Chart](image)

- Sustained negative values below −7 typically indicate an El Niño (sustained low rainfall) period. Based on the SOI and other relevant climate models, Queensland coalfields can expect lower-than-average rainfall between January 2016 and March 2016.
11. **Forecast Queensland Coal Exports & Transport System Capacities 2015-25**

- Slower world economic growth and reduced Chinese coal demand is expected to moderate the rate of growth of Queensland coal exports between 2016 and 2019, with renewed growth emerging thereafter, driven mainly by Indian and South East Asian demand.
- In 2015-16 infrastructure capacity has increased by 38Mtpa or by 14.2%. Capacity additions include:
  - Ports: Hay Point Services Coal Terminal 11Mtpa, WICET 27Mtpa.
  - Rail: Goonyella Rail System 11Mtpa, Wiggins Island Rail Project 27Mtpa.
- In the short-term, continuing low coal prices are expected to lead to deferment of most emerging Queensland greenfield coal projects. In 2020-21 port and rail infrastructure capacity rises significantly above forecast exports. This reflects the forecast commencement of one large integrated Galilee Basin mine, rail and port project, where production ramp-up will lag infrastructure delivery.

12. **Qld Coal Port Infrastructure Capacity Expansion Program: 2015-25**

- An overview of this program is provided in Attachment 1. The Port Infrastructure Expansion Program (covering both public & private investment) outlines committed and proposed projects that could increase capacity by 13% by 2020 (from 305 to 345Mtpa), and possible projects that could increase capacity by a further 12.5% by 2025 (from 345 to 388Mtpa).

13. **Qld Coal Rail Infrastructure Capacity Expansion Program: 2015-25**

- An overview of this program is provided in Attachment 2. The Rail Infrastructure Expansion Program (covering both public & private investment) outlines Committed and Proposed Projects that could increase rail network capacity by 12.5% by 2020 (from 320 to 360Mtpa), and Possible Projects that could increase capacity by a further 12.5% by 2025 (from 360 to 405Mtpa).