



In this briefing paper, the US Institute for Energy Economics and Financial Analysis (IEEFA) provides a summary of the latest Queensland coal infrastructure development, the Wiggins Island Coal Export Terminal.

Queensland's A\$4.2bn Wiggins Island Export Coal Rail & Port Facility

In Feb'2014 it was confirmed that the A\$3.27bn, 27Mtpa stage I Wiggins Island Coal Export Terminal (WICET) and Aurizon's associated A\$867m Wiggins Island Rail Project (WIRP) will not be fully commissioned until Dec'2015. This nine months delay reflects delays in financing and construction of a number of mines by the eight coal mining companies who jointly own this greenfield coal port. Analysts have warned that the port is likely to see operating rates of only 40-60% over 2015-2017, well below the company's cash breakeven after funding costs. Given the construction cost, the port is likely to have to charge well above industry rates, and the take-or-pay contracts turn infrastructure access into a major contingent liability.

Given the poor medium term coal market outlook, the experience of WICET raises serious questions about the financial case for building a further two new coal terminals at Abbot Point.

Executive Summary

- WICET committed to build a greenfields development of a 27Mtpa coal export terminal in Queensland at the height of the coal sector boom of 2011-2012, and has had to compete for construction resources against the massive \$70bn LNG build-out of three projects concurrently at Curtis Island.
- As a result, the construction cost of WICET was announced at \$2.5bn, but by full commissioning in 2015, the total cost is likely to be up to \$3.27bn inclusive of capitalised interest charges.
- To facilitate WICET, Aurizon has undertaken a concurrent rail upgrade (WIRP) with a project cost of A\$867m, taking the entire rail and port cost to A\$4.2bn.
- Per tonne of export capacity, this equates to A\$121/t, almost three times the A\$44/t port cost that the Adani Group valued Abbot Point T1 in Mar'2013. The likely operating cost is therefore likely to be up to twice the Australian coal industry average of A\$5-6/t.
- WICET and WIRP are covered by take-or-pay (ToP) port and rail contracts with the consortium of eight coal mining companies that own WICET. The various mine developments that were planned in 2011-2012 to come on-stream concurrently with WICET have struggled to raise funding due to reduced viability. As such, the entire project has seen a nine month delay and port utilisation rates are expected to be only 40-60% through to 2017.
- The ToP contracts represent a material contingent liability to the eight miners, and the value of WICET is likely to see a material write-down.
- Given the poor medium term coal market outlook, the experience of WICET combines with Abbot Point still operating at only 44% (12 month annual total to Mar'2014) raises serious questions about the financial case for building a further two new coal terminals at Abbot Point, and the planned Stage II and III expansions at WICET.

Background - A\$2.5bn Investment in WICET

WICET is at Golding Point, to the west of the existing RG Tanna Coal Terminal in the Port of Gladstone. This is an A\$2.5bn (A\$3.27bn fully funded) greenfields coal export facility currently under construction. Stage I coal export capacity is 27Mtpa, representing a further 10% expansion to Queensland's coal export capacity which sits at 264Mtpa at the start of 2014. Stage II and III could provide a further uncommitted expansion to a total terminal capacity of 84Mtpa post 2018.ⁱ

In Oct'2008, the WICET consortium was appointed by the Queensland Government as Preferred Proponent to finance and build a new coal Terminal. The Framework Deed with the State and Gladstone Ports Corporation (GPC) was executed in Dec'2009 and outlined the roles of WICET as owner, developer and lessee of the Terminal. GPC has leased the land to WICET and undertakes the operation of the Terminal post commissioning.

WICET is owned by a consortium of coal industry firms and this privately funded delivery model was a first for a major infrastructure project in Queensland.

Figure 1: Queensland Coal Export Ports

Port	Asset Description	Owner	Operator / Lessee	Coal Capacity (Mtpa)
Abbot Point	Abbot Point Coal Terminal (T1)	North Queensland Bulk Ports Corp. Ltd	The Adani Group (99 year lease)	50
Hay Point	Hay Point Services Coal Terminal	BHP Billiton-Mitsubishi Alliance (BMA)	Hay Point Services Coal Terminal (1)	44
Hay Point	Dalrymple Bay Coal Terminal	North Queensland Bulk Ports Corp. Ltd	DBCT P/L (2) (99 year lease to 2100)	85
Brisbane	Fisherman Islands Coal Terminal	Queensland Bulk Handling (New Hope)	Port of Brisbane Pty Ltd (3) (99 year lease)	10
Gladstone	RG Tanna Coal Terminal	Gladstone Ports Corp.	Gladstone Ports Corp.	68
Gladstone	Barney Point Coal Terminal (4)	Gladstone Ports Corp.	Gladstone Ports Corp.	7
Gladstone	Wiggins Island Coal Export Terminal (WICET - Stage I)	Gladstone Ports Corp.	Gladstone Ports Corp. (5)	Nil (27Mtpa target)
Total Queensland Coal Export Capacity - 2013				264

(1) BMA is upgrading Hay Point terminal by 11Mtpa to 55Mtpa, completion April 2014. Aurizon is supporting this with a \$130m Goonyella System rail upgrade.

(2) Dalrymple Bay Coal Terminal Pty Ltd (DBCT) is the Australian subsidiary of the Canadian listed Brookfield Asset Management Limited.

(3) The Port of Brisbane is jointly owned by IFM, QIC, Global Infrastructure Partners and Abu Dhabi Investment Authority.

(4) Gladstone Port's Barney Point Coal Terminal is in the process of being converted to other products

(5) WICET in total is projected at 80Mtpa, with Phase I of 27Mtpa due for commissioning in end 2015 at a A\$2.5bn cost.

Aurizon's A\$867m Investment in WIRP

In Sept'2011 Aurizon signed an agreement with the consortium of coal companies to construct the Wiggins Island Rail Project (WIRP) to service the new WICET. The WIRP leverages Aurizon's existing rail infrastructure and aims to boost coal exports from the Southern End of the Bowen Basin by 30%. The WIRP involves construction of a 13km balloon loop near Gladstone, upgrades to sections of the North Coast Line, the Moura System and the Bauhinia branch line, plus duplication of the Blackwater System. The rail project was costed at A\$900mⁱⁱ and is reported to be on track for a lower \$867m revised budget (due to exclusion of Moura West system works) despite timing delays.ⁱⁱⁱ

We note that this particular project is covered by rail take-or-pay commitments and in isolation will have no material adverse consequences for Aurizon Holdings.

Project Timing Delays

In Sept'2011, WICET announced financial closure, allowing construction to commence on Stage I. Also in Sept'2011 Aurizon signed a rail agreement with each of the consortium members to underwrite Aurizon's cost of construction of the WIRP. Rail construction began in March 2012 with timeframes aligned to the coal export terminal and related coal mining projects. The Queensland Competition Authority approved the WIRP in May 2012.^{iv} First railings of coal were initially scheduled for mid-2014 and overall project completion was scheduled for March 2015. In Aug'2013 Aurizon confirmed the WIRP construction schedule had been delayed by 9 months and as a result the WIRP was expected to be fully commissioned by end CY2015.^{v,vi} In Feb'2014 Aurizon confirmed an agreed, revised delivery timetable with WIRP customers. With the terminal 80% complete as of Feb'2014^{vii}, first coal shipments are due Oct'2014 to test the export facility. A full ramp up of WIRP and hence WICET volumes is not expected until FY2017.

Delays in Mine Ramp-Up Result in Take-or-Pay Exposures

As part of the financing of WICET each of the eight equity owners are understood to have also signed rail and port take-or-pay (ToP) contracts, which oblige them to still pay for any unused export allocation. Figure 2 details the eight mine developments that are tied-in to WICET and our estimates of their port ToP obligations at the time this A\$3.27bn port project was commenced.

Figure 2: WICET Shareholders and Port Take-or-Pay Exposures

Company	Port ToP Mtpa	Coal Mines
Glencore Xstrata Plc	10.9	Rolleston Coal upgrade to 17Mtpa
Wesfarmers	1.5	Currugh Coal 7.5-8.5Mtpa shipped through Gladstone Looking at a 1.5Mtpa expansion to 10Mt for WICET
Yancoal Australia	1.5	Yarrabee Mine
Aquila Resources Ltd	1.6	Washpool (100% owned), 2.6Mtpa at peak, DFS done 50:50 JV with Vale SA, Eagle Downs , U/G, Coking coal, Under construction, first coal sales June 2016, 4.5Mtpa
Bandanna Energy Ltd	4.0	Springsure Creek thermal, 4Mtpa (A\$700m, stage 1)
Cockatoo Coal Ltd	3.0	BARALABA Expansion from 0.8Mt to 3.5Mtpa
Caledon Resources (1)	4.0	Minyango Coal 7Mtpa export coal, EIS lodged mid-2013
New Hope Corp.	0.5	Colton coking coal mine 0.5Mtpa, yet to be approved
Total - Stage I	27.0	

(1) owned by Guangdong Rising Assets Management Co. (GRAM)

In Oct'2013 it was reported that Glencore Xstrata was trying to off-load 5Mtpa of its 10.9Mtpa take-or-pay allocation from WICET "due to changed market circumstances".^{viii} As of end Jan'2014, there had been no takers of this ToP allocation.^{ix} This may relate to the delays to the second stage expansion of the Glencore led-Rolleston coal mine from 14Mtpa to 19Mtpa.^x In Mar'2013 Glencore announced a mine expansion to take Rolleston's production from 9.4mtpa to 14.6mtpa by end-2014,^{xi} and in Sept'2013 Glencore revised the phase 2 down to 17Mtpa. In isolation, this project will have no material impact on Glencore overall. In Apr'2014 it was reported that Glencore was also looking to sell its 33% stake in the Port Kembla Coal Terminal in Wollongong, NSW.^{xii}

Wood Mackenzie was reported as stating:

“Over the opening years of the terminal, between 2015 and 2017, we’d expect capacity utilisation between 40-60%. That is a result primarily of projects that are due to be feeding Wiggins Island not being developed on the original timeframe that was planned.”^{xiii}

In Wesfarmers’ Feb’2014 interim result, there was no discussion of the 2012 proposal to expand Curragh Coal from 7.5-8.5Mtpa currently to 10Mtpa, nor the implications of take or pay contracts for this extra 1.5Mtpa which at say A\$10/t would result in a pretax penalty of \$15m pa if the Curragh ToP was not used. In isolation, this is immaterial to Wesfarmers overall.

Bandanna states in its 2012/13 annual report:

“However, the timing of availability of port and rail capacity dictates the timetable for development of the (mine) project in order to meet our capacity commitments.”^{xiv}

GRAM’s Caledon Resource’s proposed 7Mtpa coal project lodged its Environmental Impact Statement in Jun’2013. As of Apr’2014 the corporate website still reports that:

“the mining lease application has been lodged for the Minyango Project and is currently undergoing environmental impact assessment (EIA)”^{xv}

The Feb’2014 "Queensland Major Projects Report" states:

“In particular, a number of producers with allocations to the WICET remain unable to access finance and further delays cannot be ruled out. In this Report, it is assumed that several of the delayed coal projects will be revived late in the forecast period under more favourable Australian dollar prices and local cost structures, but it is not guaranteed.”^{xvi}

An Expensive Coal Export Port

In an AFR article, a CLSA report was quoted as saying that WICET was a:

“peak-demand, peak-price port ... volume shortages identified could impact on the sustainability of financing at WICET. We believe it is possible to conclude that volumes might never get to the 24Mtpa needed with the producers currently contracted.”^{xvii}

We note that the Adani Group invested A\$2.2bn to acquire the Adani Abbot Point Coal Terminal (T1, AAPCT) in Mar’2013.^{xviii} With a targeted capacity of 50Mtpa, this equates to a EV/Mt of capacity of A\$44m. At a final construction and all in working capital cost of A\$3.27bn for 27Mtpa capacity, WICET equates to A\$121m per million tonnes –triple the cost of AAPCT. As such, with consideration to the interest, land and operating costs of WICET, it is reasonable to assume the ToP obligations are likely to be 1.5-2.0x the A\$5-6/t historic industry standard for coal port export loading charges. Should these ToP contracts not be enforced, the banks are likely to face significant loan write-downs if only normal industry port charges were to be applied.

Figure 3: Total Investment at WICET vs Adani Abbott Point Coal Terminal (EV/t)

	AAPCT T1	WICET
Enterprise Value (A\$m)	2,200	3,275
Mtpa capacity	50	27
EV/t of capacity	44	121

WICET's A\$3.27bn of Funding Facilities

Bloomberg^{xix} reports that WICET will have syndicated debt facilities totaling A\$3.0bn on commencement of operations – Figure 4. The financial syndicate was arranged by ANZ Banking Group. This facility includes a 3 year \$2.4bn non-recourse construction loan, a \$350m cost-overrun facility, a \$100m equity bridge loan (since repaid/refinanced), plus \$50m working capital and \$100m L/C facilities – Figure 6.

Figure 4: WICET's debt facilities

Seven year term loan	2,850
Working Capital facility	50
Letter of credit	100
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Total Debt facilities (A\$m)	3,000
Wiggins Island Pref. Shares	275
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Total Enterprise Value (A\$m)	3,275

Given a reported the project cost of A\$2.5bn, this suggests a significant amount of interest will have been capitalised into the principal exposures of the banks by the 2015 commissioning.

Westpac specifically excluded the WICET loan when it purchased Lloyd's Australian corporate loan portfolio.^{xx}

Should volume throughput be in the order of 40-60% of capacity, this would make very difficult any refinancing of the expensive project financing post completion.

In addition to a nominal ordinary equity contribution (<\$10,000 in total), WICET has raised preference share capital from its equity investors. The total cumulating preference share equity (capital and interest is repayable Sept'2020) at issue in Sept'2011 was A\$275m.

Glencore Xstrata is the major owner of these preference shares, holding A\$183m as at Dec'2011.^{xxi} In addition, each shareholder had to provide bank guarantees to cover their ToP liabilities.

Bandanna Energy sold its 14% preference shareholding in July 2013 to a global infrastructure investor for A\$47m, giving rise to a net gain of \$6m (we assume, reflective of accumulated interest coupons).^{xxii} This dramatically reduces the risks associated with WICET for Bandanna Energy. We note this valuation is inconsistent with our conclusion of the diminished value of WICET.

Coal Prices Continue to Decline

The 40% decline in coal prices since the 2011 peak has continued in 1Q2014. Thermal coal prices have been reported in Feb'2014 to be at US\$80/t^{xxiii} (Newcastle FOB, 6,000kcal). Wesfarmers in Feb'2014 reported that 1QCY2014 coking coal settlements were down some 5% qoq and 36% year-on-year, with a further softening in the 2QCY2014,^{xxiv} with Feb'2014 prices at US\$130/t.^{xxv}

WICET Confirmed Capacity Commitments for the 32Mtpa Stage II

In Jun'2012 WICET executed Capacity Commitment Deeds with four coal producers for 32.2Mtpa of additional export capacity to support the proposed Stage II of the terminal (WEXP1), initially planned for completion in 2016.^{xxvi} The four coal producers and their respective source mines were: Aquila Coal (the Washpool mine); Cockatoo Coal (Collingwood mine, part of the North Surat Joint Venture (JV)); Stanmore Coal (ASX: SMR); and Glencore Xstrata Coal (on behalf of the Wandoan JV).

With Glencore's 30Mtpa (run-of-mine) Wandoan coal proposal put on hold in Sept'2013, the entire Stage II development has not been mentioned since this press release on Jun'2012. Stanmore Coal confirmed it has no take-or-pay infrastructure obligations, and it's first coking coal mine proposal at Belview in the Bowen Basin has an indicative coal shipment date of 4QCY2018.

Too Many Coal Export Ports in Queensland

As detailed by Laura Eadie in “Too Many Ports in a Storm: The risks of Queensland’s Port Duplication”^{xxvii}, the Australian coal industry has a history of overestimating export expansions and as a result the average Queensland coal export facility has operated at only 63% utilisation rates over 2010-2012. With 38Mtpa of new coal export capacity coming online in 2014-2015, and another 65Mtpa expected from Stage I of the Adani ‘T0’ and GVK ‘T3’ greenfield expansions at Abbot Point due in 2017, excess capacity remains a key risk.

Lend Lease’s decision to pull out of its consortium bid to build the Abbott Point NorthHub AP-X in Feb’2014 was explained by referencing to many competing project proposals.^{xxviii} Anglo-American likewise announced it had pulled out of the AP-X development proposal in Mar’2014.^{xxix}

Aurizon in its Feb’2014 interim result forecast coal volumes in Queensland would be up in FY2014 to 190Mt, but then contracted volumes would be slightly down at 186Mt for FY2015 and down again to 183Mt in FY2016.^{xxx} Wesfarmers, Peabody and Glencore have all forecast further coal mine closures over 2014.^{xxxi}

Figure 5: Queensland Coal Port Expansions in Planning

Port	Owner	Status	Capacity addition (Mtpa)	Likely Completion
Hay Point	BMA	Under construction (1)	11	2014
Gladstone	WICET - Stage 1 (2)	Under construction	27	2015
Abbot Point	Adani T0 - Stage I	EIS review	35	2018
Abbot Point	GVK T3 - Stage I	EIS complete	30	2018
Abbot Point	NorthHub AP-X (3)	In planning	n.a.	n.a.
Gladstone	WICET - Stage 2 (4)	In planning	32	n.a.
Total			135	

Source: Queensland Department of Transport and Main Roads, IEEFA estimates

- (1) The BMA port expansion is being supported by Aurizon's \$185m Goonyella Rail Expansion.
- (2) The WICET is being supported by Aurizon's A\$867m Wiggins Island Rail Project to expand rail connections in the Southern Bowen Basin, due on line end 2015.
- (3) In April 2013 Aurizon (75%) and Lend Lease (25%) announced they had been shortlisted alongside AngloCoal by the Queensland Government to consider building AP-X, a multi-user coal export facility. Lend Lease withdrew from this project in Feb'2014.
- (4) WICET - Stage 2 was planned to coincide with Glencore's Wondoan Coal development and the associated 210km greenfield Surat Basin Rail - on hold as of September 2013.
- (5) In May 2013 Glencore Xstrata announced they had scrapped plans to build a A\$1bn 35Mtpa coal export facility at Balaclava Island, 40km North of Gladstone.

The port specifications of the WICET

WICET initially sourced its procurement and construction management (PCM) from WorleyParsons and in 3QCY2013 took this function in-house. The construction for the coal loading functions of Stage One of the terminal was awarded to John Holland in Feb'2012^{xxxii}. WICET includes:

- A rail receival facility designed to handle 7,600 tonnes per hour
- A 5.5km long overland covered conveyor from the WIRP rail balloon loop
- 140 ha of land
- Stockyard area for 1.9 million tonnes of coal
- Materials handling and sampling systems feeding the 2km long jetty conveyor
- Single berth with a travelling ship loader to fill ships at 8,250 tonnes per hour
- Channels and wharf to accept a range of vessels from 40,000dwt to 220,000dwt
- 132kV substation, access roads, workshops, administration offices and amenities.

Figure 6: Three Year Non-Recourse Construction Loan (US\$ LIBOR +300bps) and total Facility exposure

Lenders (A\$m)	Construction loan	Total Exposure
Commonwealth Bank of Australia	237	286
Korea Development Bank	209	239
DBS Bank	167	191
National Australia Bank	138	193
Banco Santander	125	143
ING Bank	125	143
China Development Bank	229	262
Bank of China	167	191
Sumitomo Mitsui Banking Corp	167	191
ANZ	125	193
BOS (International) Australia	125	143
Industrial & Commercial Bank of China	93	106
Bank of Tokyo-Mitsubishi UFJ	84	96
Export Finance & Insurance Corp - EFIC	84	96
Export Development Canada	42	48
KfW IPEX Bank	93	106
Westpac Banking Group	42	98
BNP Paribas	63	72
Mizuho Corporate Bank	84	96
Total Loan	2,400	2,900

Note: This \$2.9bn of total debt facilities excludes a A\$100m equity bridge loan – funding details unknown.

Source: <http://www.marketforces.org.au/banks/map/#wiggins-coal>

Important Information

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ⁱ http://www.bandannaenergy.com.au/assets/documents/reports/Annual_Report_2013_Bandanna_Energy.pdf

ⁱⁱ <http://www.aurizon.com.au/investors/asx-announcements> announced 5/9/2011.

ⁱⁱⁱ <http://www.aurizon.com.au/Downloads/Aurizon%202014%20Interim%20Results.pdf> p.65.

^{iv} <http://www.aurizon.com.au/investors/asx-announcements> announced 28/5/2012.

^v <http://www.aurizon.com.au/Downloads/Aurizon%20Full%20Year%20Results%202013.pdf> p.40.

^{vi} <http://www.aurizon.com.au/Downloads/Aurizon%202014%20Interim%20Results.pdf> p.65.

^{vii} <http://www.wicet.com.au/assets/docs/Rail%20receival%20area%20milestone%20at%20WICET.pdf>

^{viii} <http://www.businessweek.com/news/2013-10-14/coal-slump-leaves-aussie-port-half-used-and-bank-lenders-at-risk#p1>

^{ix} <http://www.gladstoneobserver.com.au/news/glencores-wicet-woes/2153383/>

^x <http://www.xstratacoal.com/EN/Operations/Pages/Rolleston.aspx> (accessed 25/2/2014)

^{xi} http://www.theajmonline.com.au/mining_news/news/2013/march/march-14-2013/supplier-news/aurizon-signs-with-xstrata-for-rolleston-haulage

^{xii} <http://www.afr.com/Page/Uuid/f1ba83cc-cf35-11e3-8be2-b3389efb4ba1>

^{xiii} <http://www.businessweek.com/news/2013-10-14/coal-slump-leaves-aussie-port-half-used-and-bank-lenders-at-risk#p1>

^{xiv} http://www.bandannaenergy.com.au/assets/documents/reports/Annual_Report_2013_Bandanna_Energy.pdf

^{xv} <http://www.caledon.com.au/minyango-coal-deposit>

^{xvi} http://www.qmca.com.au/files/documents/QMCA_2013Report_LowRes.pdf

^{xvii} Matthew Stevens, 26 Nov'2013, The Australian Financial Review, "Sticky WICET"

^{xviii} Adani Ports Prospectus 5/6/2013 page 33

^{xix} <http://www.businessweek.com/news/2013-10-14/coal-slump-leaves-aussie-port-half-used-and-bank-lenders-at-risk#p1>

^{xx} <http://www.bloomberg.com/news/2013-10-14/coal-slump-leaves-aussie-port-half-used-and-bank-lenders-at-risk.html>

^{xxi} <http://www.glencorexstrata.com/investors/reports-and-results/xstrata/2012/annual-report-2012/> p.107

^{xxii} <http://clients.weblink.com.au/clients/bandannaenergy/article.asp?asx=BND&view=2743923>

^{xxiii} <http://in.reuters.com/article/2014/02/07/coal-asia-idINL3N0LCOW420140207>

^{xxiv} <http://ir.wesfarmers.com.au/phoenix.zhtml?c=144042&p=irol-presentations> 19/2/2014

^{xxv} <http://www.mining.com/commodity-outlook-2014-63730/>

^{xxvi} http://www.wicet.com.au/assets/docs/120628_WEXP1%20CCDs%20media%20statement_FINAL.pdf

^{xxvii} https://cpd.org.au/wp-content/uploads/2013/11/CPD_OP32_Too_Many_Ports-2013.pdf

^{xxviii} <http://www.brisbanetimes.com.au/queensland/lend-lease-pulls-out-of-bid-for-abbot-point-coal-terminal-expansion-20140226-33i9z.html>

^{xxix} <http://www.bloomberg.com/news/2014-03-06/anglo-coal-port-exit-sees-indian-billionaires-last-men-standing.html>

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^{xxxi} http://www.afr.com/p/business/companies/wesfarmers_issues_warning_following_sa4ispow7wLfm6Hq3iFKFL

^{xxxii} http://www.wicet.com.au/assets/docs/120209_John%20Holland%20contract%20award_FINAL.pdf