

Gladstone region population report, 2016

Introduction

The *Gladstone region population report, 2016* provides estimates of the non-resident population of the Gladstone region during the last week of June 2016, based on surveys conducted by Queensland Government Statistician's Office (QGSO). Information regarding the supply and take-up of commercial accommodation by non-resident workers is also summarised.

The non-resident population represents the number of fly-in/fly-out and drive-in/drive-out (FIFO/DIDO) workers who were on-shift in the region at the time of collection. This group includes those involved in the production, construction, and maintenance of mining and gas industry operations, projects and related infrastructure.

Non-resident workers are not included in estimated resident population (ERP) data released annually by the Australian Bureau of Statistics. As a result, the full-time equivalent (FTE) population estimates presented in this report, which combine the resident and non-resident populations, provide a more complete indicator of total demand for certain services than either measure used alone.

Key findings

Key findings of this report include:

- The non-resident population of the Gladstone region was estimated at 1,540 persons at the end of June 2016, around 3,890 persons or 72% lower than in June 2015.
- Gladstone region's non-resident population in 2015–16 largely comprised FIFO/DIDO workers engaged in construction of three liquefied natural gas (LNG) plants. As these projects reached production status during the year, the size of their non-resident construction workforces rapidly declined.
- Around 71% of the non-resident population of Gladstone region in June 2016 consisted of FIFO/DIDO workers housed on Curtis Island while on-shift (1,095 persons). The remainder (445 persons, or 29%) were accommodated on the mainland.
- The FTE population of Gladstone (R) was estimated at 70,875 persons in June 2016, with non-resident workers accounting for just 2% of that total.
- In terms of resident population, Gladstone (R) is one of Queensland's fastest growing LGAs. At the end of June 2016, its resident population was estimated at 69,335 persons, an increase of 1,870 persons (or 3%) from June 2015.
- Around 95% of non-resident workers in Gladstone region (1,470 persons) stayed in worker accommodation villages (WAVs) while on-shift in June 2016. A further 70 non-resident workers (or 5%) were counted in other forms of accommodation, including hotels/motels and caravan parks.
- Total WAV bed capacity in Gladstone (R) fell from 7,815 beds in June 2015 to 5,480 beds in June 2016. Most of this fall resulted from the decommissioning of temporary WAV facilities on Curtis Island, which had been used exclusively for accommodating non-resident construction workforces of the LNG projects.
- Around 61% of hotel/motel rooms in Gladstone (R) were vacant and available in June 2016, compared with 57% in June 2015 and 39% in June 2014.
- Construction of the second train of the Australia Pacific LNG (APLNG) plant was completed in October 2016, after data for this report were compiled. As all LNG plants transition into production in 2016–17, the non-resident population of Gladstone region is expected to contract further.

Figure 1 Gladstone region



The Gladstone region – at a glance

The Gladstone region comprises the local government area (LGA) of Gladstone (R), which includes the city and port of Gladstone, as well as other residential centres and the rural hinterland. In this report, data are reported for Gladstone city, Curtis Island, and Gladstone (R) balance (see notes for details on statistical geography).

Population at June 2016:

| | |
|--------------------------------------|--------|
| Non-resident population..... | 1,540 |
| Resident population..... | 69,335 |
| Full-time equivalent population..... | 70,875 |



Gladstone region update, 2015–16

The LGA of Gladstone (R) is a major industrial hub and includes Queensland's largest multi-commodity port. In June 2016, around 5,700 production workers were engaged in local resource-related industries such as alumina refining, aluminium smelting, power generation, cement, chemicals and LNG production, rail transport and coal handling (QGSO, 2016a). Gladstone is also home to a large number of contractors who provide construction, mining and engineering services throughout regional Queensland, including to mines in the Bowen Basin.

Exports from the Port of Gladstone exceeded 93.4 million tonnes (Mt) for the 2015–16 financial year. Coal exports from the Bowen Basin made up 72.2 Mt of this total; up from 68.6 Mt in the previous year (Gladstone Ports Corporation, 2016a, DTMR, 2016).

Much of the increased export volume from the Port of Gladstone in 2015–16 was due to newly completed coal export infrastructure and LNG processing facilities. Coal exports from the Wiggins Island Coal Terminal (WICET) contributed 8.0 Mt of the 2015–16 total (DTMR, 2016). The commencement of continuous coal exports from WICET enabled a cessation of coal operations from the Barney Point Terminal in May 2016, in line with the commitment made by the Gladstone Port Corporation and the Queensland Government to focus the terminal's operations on dry bulk goods and potential new trade opportunities (Gladstone Ports Corporation, 2016b).

LNG exports from Curtis Island made up around 12.0 Mt of total exports from the Port of Gladstone in 2015–16 (QRC, 2016). This volume was just under half of the total 25Mt production and export capacity of all three LNG plants when they become fully operational (Bechtel, 2016). By the end of June 2016, five of the six gas processing trains from three LNG projects were in production and were exporting gas:

- Commercial production from the second train of the **Queensland Curtis LNG (QCLNG)** project (Queensland Gas Company (BG Group)) began in November 2015. Production from both trains was expected to plateau by around mid-2016 (QGC, 2015).
- The first cargo of LNG from the **Gladstone LNG (GLNG)** plant (Santos, Petronas, Total and Kogas) was exported from Gladstone on 16 October 2015. First LNG production from the second train was produced in May 2016 (Santos, 2016).
- The **Australia Pacific LNG (APLNG)** project (Origin Energy, ConocoPhillips and Sinopec) exported its first LNG cargo in January 2016 (APLNG, 2016a). Construction of the second train of the APLNG project was substantially completed in late 2016, and the plant commenced initial production in October 2016 (APLNG, 2016b).

As construction of the three LNG plants wound down during 2015–16, their predominantly non-resident construction workforces diminished rapidly. By June 2016, the non-resident population of Gladstone consisted largely of workers engaged in the construction of the second train of the APLNG project.

With both trains of the APLNG project transitioning into production in late 2016, the non-resident population of Gladstone is expected to contract further in 2016–17 (QGSO, 2016b). The production workforces of the completed LNG plant and port projects will be largely resident rather than FIFO/DIDO (QGSO, 2016a).

Non-resident population

The non-resident population of Gladstone (R) was estimated at 1,540 at the end of June 2016 (Table 1). Around seven in ten non-resident workers were counted on Curtis Island (1,095 persons or 71% of the total). The remaining non-resident population was located on the mainland, shared across Gladstone (R) balance (375 persons or 24%) and Gladstone city (70 persons or 5%).

The non-resident population of Gladstone (R) fell by 3,890 persons or –72% between June 2015 and June 2016. Most of this decline occurred on Curtis Island (–3,765 persons or –77%), with the balance of losses in Gladstone city (–75 persons or –52%) and Gladstone (R) balance (–50 persons or –12%).

The downturn in the region's non-resident population in the year to June 2016 reflects the substantial completion of construction for the first five trains of the three LNG processing plants during that period, and their transition into the production/export phase.

Non-resident population

The non-resident population is the number of fly-in/fly-out or drive-in/drive-out (FIFO/DIDO) workers who are living in the area of their workplace at a given point in time, but who have their usual place of residence elsewhere.

Due to shift arrangements, not all members of the non-resident workforce are present in the local area at one time. For that reason, the non-resident **population** refers to the number of non-resident workers on-shift at a given point in time, rather than the total non-resident workforce.

Table 1 Non-resident population, Gladstone (R), June

| Location | 2015 | 2016 | Change, 2015 to 2016 | |
|----------------------------|--------------|--------------|----------------------|------------|
| | — persons — | | persons | % |
| Curtis Island | 4,860 | 1,095 | -3,765 | -77 |
| Gladstone city | 145 | 70 | -75 | -52 |
| Gladstone (R) balance | 425 | 375 | -50 | -12 |
| GLADSTONE (R) TOTAL | 5,430 | 1,540 | -3,890 | -72 |

Figures in tables have been rounded to the nearest five; see Notes at end of report for details.

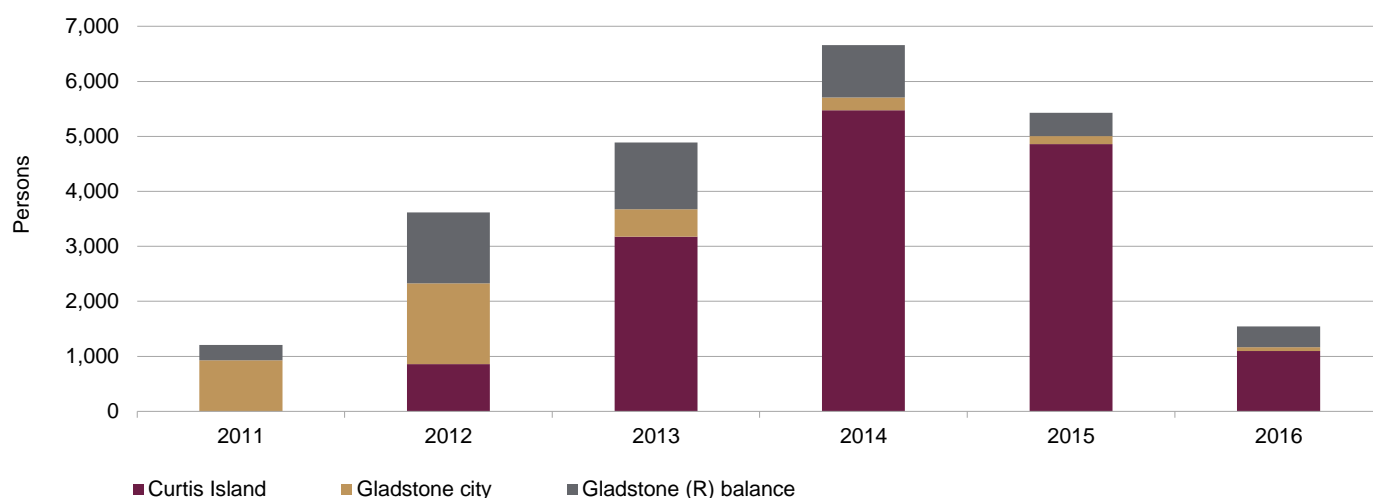
Source: QGSO estimates

QGSO commenced monitoring the non-resident population of Gladstone region in 2011. Prior to that, the region's non-resident population comprised a relatively small number of FIFO/DIDO construction workers engaged in expansion of the Yarwun Alumina Refinery and upgrades to Boyne Smelter.

With construction of three LNG processing plant projects, the Wiggins Island Coal Export Terminal (WICET) and associated rail and port projects under way in 2011, the non-resident population of Gladstone region grew rapidly from 1,205 persons in 2011 to a peak of 6,655 persons in 2014 (Figure 2). Almost all of these non-residents were FIFO/DIDO workers engaged in construction activities, rather than in production. As these projects transitioned from construction towards production/export from 2014 onward, the size of the region's non-resident population decreased accordingly.

As time series data show, the geographical distribution of the non-resident population within the region has changed considerably since 2011. The non-resident populations of Gladstone city and Gladstone (R) balance, which included FIFO/DIDO workers building non-LNG projects, declined after 2014 as these projects reached operational status. The number of non-resident workers on-shift accommodated on Curtis Island grew from 855 persons in June 2012 to a peak of 5,475 persons in June 2014, and then declined rapidly in 2015 as construction of the LNG plants began to wind down. By June 2016, around 71% of the 1,540 non-resident workers on-shift in the region were accommodated on Curtis Island.

It is anticipated that the non-resident population of Gladstone region will continue to decline in the year to June 2017, as construction of all current major projects reaches completion in late 2016 (QGSO, 2016b). Most production workforces for completed port, rail and LNG plant operations are expected to reside locally in Gladstone, and will not contain significant numbers of non-resident workers.

Figure 2 Non-resident population by location, Gladstone (R), June

Source: QGSO estimates

FTE population estimates

In June 2016, Gladstone (R) had an estimated FTE population of 70,875 persons, comprising 69,335 residents and 1,540 non-resident workers on-shift (Table 2). Non-resident workers on-shift accounted for just 2% of the total FTE population.

The FTE population of Gladstone (R) fell by 2,015 persons or 3% in the year to June 2016. This net decline was due largely to the non-resident population decreasing by 3,890 persons, which was offset by strong gains in the region's resident population (an additional 1,870 persons or 3%).

In terms of resident population growth, Gladstone (R) was the second fastest growing LGA in Queensland in 2014–15, with a growth rate of 2.1% for that year¹ (QGSO, 2016c).

Full-time equivalent population

The FTE population measure is the sum of the resident population (people who live in the area permanently) and the non-resident population (i.e. the number of non-resident workers on-shift).

The FTE population measure provides a more complete estimate of total demand for certain services and infrastructure in regions with a high incidence of FIFO/DIDO workers.

Table 2 FTE population estimates, Gladstone (R), June

| | 2015 | 2016 | Change, 2015 to 2016 | |
|------------------------------------|---------------|---------------|----------------------|-----------|
| | — persons — | | persons | % |
| Resident population ^(a) | 67,465 | 69,335 | 1,870 | 3 |
| Non-resident population | 5,430 | 1,540 | -3,890 | -72 |
| FTE population estimate | 72,895 | 70,875 | -2,015 | -3 |

(a) ABS estimate, 2015; QGSO unpublished data, 2016

Source: ABS 3218.0, *Regional Population Growth, Australia, 2014–15*; QGSO estimates

Non-resident worker accommodation

WAVs were the predominant form of non-resident worker accommodation in Gladstone (R) in June 2016, housing 1,470 workers (or 95% of the total) (Table 3). The remaining 70 persons (or 5%) occupied other forms of accommodation, including hotels/motels and caravan parks.

All 1,095 non-resident workers counted on Curtis Island in June 2016 were staying in WAVs, as this was the only type of worker accommodation available on the island. WAVs also housed all 375 non-resident workers in Gladstone (R) balance. In contrast, all 70 non-resident workers in Gladstone city stayed in other accommodation, as no WAVs were located in this area.

Worker accommodation villages (WAVs)

WAVs are commonly used to house unaccompanied non-resident workers. WAVs typically consist of demountable dwellings arranged in a village, with common messing, laundry and recreational facilities.

Table 3 Non-resident population by accommodation type, Gladstone (R), June 2016

| Location | WAVs | Other ^(a) | Total | WAVs | Other ^(a) | Total |
|----------------------------|--------------|----------------------|--------------|-----------|----------------------|------------|
| | — persons — | | | — % — | | |
| Curtis Island | 1,095 | 0 | 1,095 | 100 | 0 | 100 |
| Gladstone city | 0 | 70 | 70 | 0 | 100 | 100 |
| Gladstone (R) balance | 375 | 0 | 375 | 100 | 0 | 100 |
| GLADSTONE (R) TOTAL | 1,470 | 70 | 1,540 | 95 | 5 | 100 |

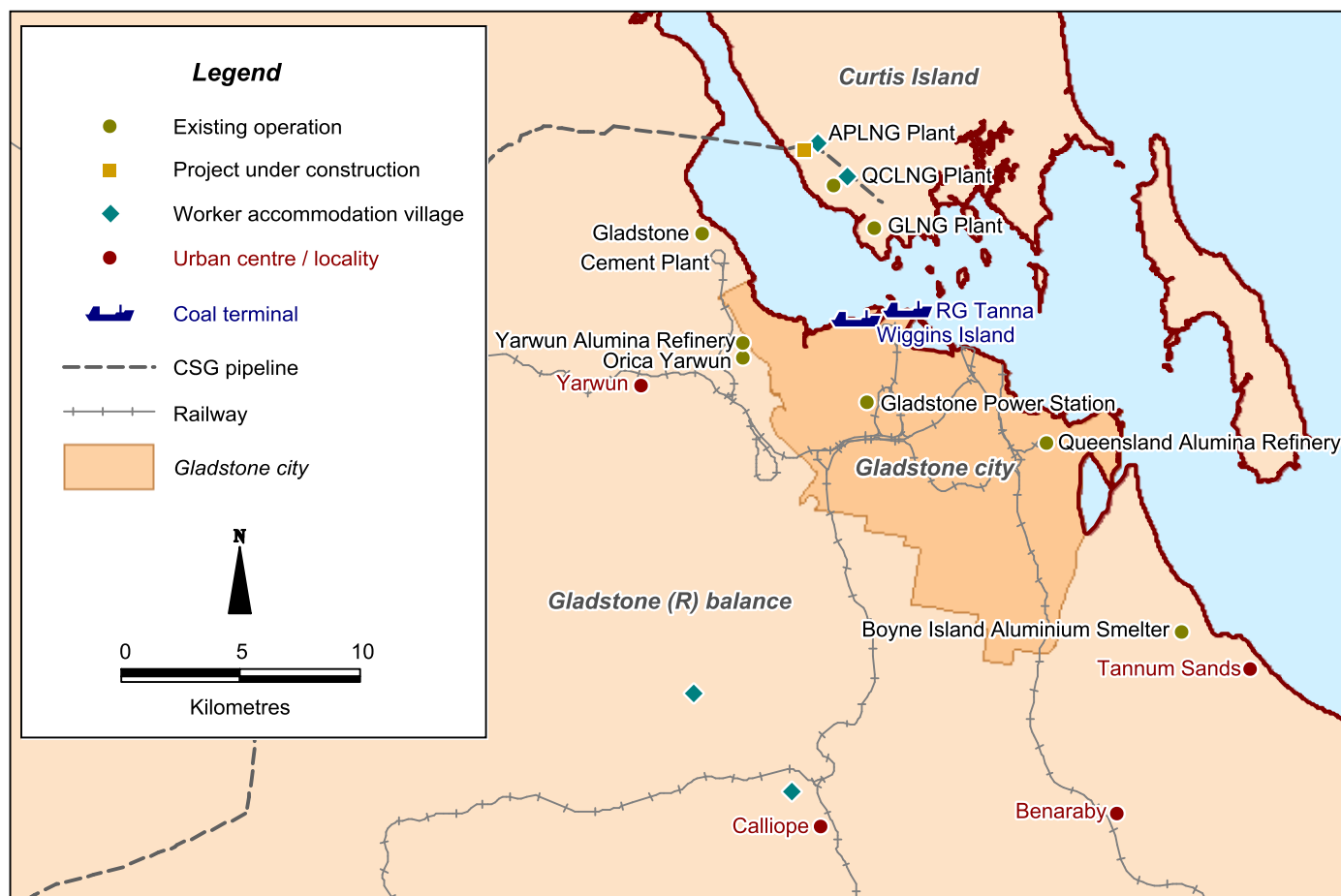
(a) 'Other' includes hotels/motels, caravan parks and other accommodation. Refer to Notes at end of report for additional information.

Source: QGSO estimates

At the end of June 2016 there were four WAVs operating in Gladstone (R), comprising two centres on Curtis Island and two facilities located in Gladstone (R) balance (Figure 3). During 2015–16, one WAV on Curtis Island closed, while another began decommissioning rooms. The remaining WAV facilities on Curtis Island, which were built to accommodate construction workers for the LNG plant projects, are expected to be progressively decommissioned and removed as these projects reach production status.

¹ Based on LGAs with a resident population of 5,000 or more as at 30 June 2015.

Figure 3 WAVs, existing operations and projects under construction, Gladstone (R), June 2016



Note: WAV locations and projects under construction are current as at June 2016. Pipeline routes and operation, project and WAV locations are indicative only.

Source: QGSO 2016

In June 2016, the total capacity of all four WAVs operating in the Gladstone region was 5,480 beds (Table 4). Just over two-thirds of this capacity (3,790 beds or 69% of the total) was in two Curtis Island WAVs, with the remaining bed capacity in two mainland WAVs (1,690 beds or 31% of the total).

Total WAV bed capacity in Gladstone (R) fell from 7,815 beds in June 2015 to 5,480 beds in June 2016, as LNG project construction neared completion and facilities on Curtis Island were closed or progressively downsized. Following the transition of all three LNG projects to production in late 2016, the requirement for construction accommodation on Curtis Island will rapidly diminish. When these centres are eventually decommissioned, the remaining capacity of WAVs in the Gladstone region will be limited to mainland facilities.

Table 4 WAV bed capacity, Gladstone (R), June

| Location ^(a) | — beds — | | | | | |
|----------------------------|-----------|--------------|--------------|--------------|--------------|--------------|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Curtis Island | 0 | 1,255 | 6,100 | 6,125 | 6,125 | 3,790 |
| Gladstone (R) balance | 80 | 1,300 | 2,090 | 1,940 | 1,690 | 1,690 |
| GLADSTONE (R) TOTAL | 80 | 2,555 | 8,190 | 8,065 | 7,815 | 5,480 |

(a) There were no WAVs located in Gladstone city over this period.

Source: QGSO estimates



Queensland Government Statistician's Office

In June 2016, 61% of hotel/motel rooms in Gladstone (R) were vacant and available, compared with 57% in June 2015 and 39% in June 2014 (Table 5). Vacancy rates were similar in Gladstone city (61%) and Gladstone (R) balance (62%).

Table 5 Vacant and available hotel/motel rooms, Gladstone (R), June

| Location ^(a) | Occupied by non-resident workers | Vacant and available ^(b) | Balance ^(b) | Total hotel/motel rooms ^(a) | Vacant and available hotel/motel rooms | | | | |
|----------------------------|--|--|------------------------|--|--|-----------|-----------|------|------|
| | | | | | 2016 | | 2014 | 2015 | 2016 |
| | | | | | — rooms — | | — % — | | |
| Gladstone city | 70 | 495 | 245 | 810 | 39 | 57 | 61 | | |
| Gladstone (R) balance | 0 | 40 | 25 | 60 | 39 | 65 | 62 | | |
| GLADSTONE (R) TOTAL | 70 | 530 | 270 | 870 | 39 | 57 | 61 | | |

(a) There are no hotels/motels located on Curtis Island.

(b) Refer to Notes at end of report for additional information on hotels/motels and explanation of 'vacant and available' and 'balance'.

Source: QGSO estimates



Notes

(R) – Regional Council

Data in this report are derived from surveys conducted by QGSO in 2016 and other sources. The Survey of Accommodation Providers counted non-resident workers staying in worker accommodation villages (WAVs), hotels, motels, caravan parks and other commercial accommodation on a medium to long-term basis during the last week of June 2016. Short-term and overnight visitors are not regarded as non-resident workers. The Resource Operations Employment Survey collected workforce information from all resource companies with existing operations in the Gladstone region as at June 2016.

Non-resident workers are people who fly-in/fly-out or drive-in/drive-out (FIFO/DIDO) to work and live in the area temporarily while rostered on, and who have their usual place of residence elsewhere. Non-resident workers include FIFO/DIDO mining and gas industry employees and contractors, construction workers and associated sub-contractors. Figures in this report refer to the number of non-resident workers on-shift, or present in the area at a given point in time, and should not be confused with total non-resident workforce numbers.

Non-resident population data presented in this report are a point in time measure, based on best information available at the time of survey. Non-resident worker numbers may vary in response to changing production demands, prevailing weather and industrial disputes. At the time of the 2016 survey, the number of non-resident workers on-shift in the Gladstone region was unaffected by adverse weather events or industrial actions.

Resident population estimates for 2016 are QGSO estimates.

'Gladstone city' comprises the statistical areas level 2 (SA2s) of Callemondah, Gladstone, Clinton–New Auckland, Kin Kora–Sun Valley, South Trees, Telina–Toolooa, and West Gladstone. 'Gladstone (R) balance' comprises the SA2s of Agnes Water–Miriam Vale, Boyne Island–Tannum Sands, and Gladstone Hinterland (excluding Curtis Island).

Hotels/motels include serviced apartments and caravan parks include other rental accommodation occupied by non-resident workers.

'Vacant and available' refers to hotel/motel rooms that were not occupied by non-resident workers or other guests, and were vacant and available on the night of the survey. 'Balance' includes hotel/motel rooms occupied by short-term visitors, held for non-resident workers under permanent booking arrangements but not actually occupied on the night of the survey, or otherwise unavailable to prospective guests.

Figures in tables have been rounded to the nearest five. As a result of rounding, discrepancies may occur between sums of the component items and totals. Percentages and other calculations are made prior to rounding of figures and discrepancies might therefore exist between these calculations and those that could be derived from the rounded figures.

References

APLNG (2016a) *Australia Pacific LNG exports first LNG from Curtis Island* <http://www.aplng.com.au/content/dam/aplng/media-release/2016/11012016%20APLNG%20First%20Export%20Media%20Release%20FINAL.pdf>

APLNG (2016b) *Australia Pacific LNG second train starts production* <https://www.aplng.com.au/content/dam/aplng/media-release/2016/10102016%20Media%20Release%20APLNG%20Train%202%20FINAL.pdf>

Bechtel (2016) *Bechtel delivers largest greenfield program in its 118-year history* <http://www.bechtel.com/newsroom/releases/2016/10/delivers-largest-greenfield-program-curtis-island/>

Gladstone Ports Corporation (2016a) *Origin & Destination of Cargoes: Totals for Financial Year 2016* <http://content1.gpcl.com.au/viewcontent/CargoComparisonsSelection/CargoOriginDestination.aspx?View=G&Durat=F&Key=2016>

Gladstone Ports Corporation (2016b) *BPT Coal closure* <http://www.gpcl.com.au/Pages/BPT-Coal-Closure.aspx>

Department of Trade and Main Roads (DTMR) (2016) *unpublished trade statistics*

QGC (2015) *BG Group starts commercial operations from QCLNG Train 2 in Australia 25 November 2015* <http://www.bg-group.com/737/news-&-publications/media-releases/>

QGSO (2016a) *Resource Operations Employment Survey (unpublished data)*

QGSO (2016b) *Gladstone region non-resident population projections, 2016 to 2022* <http://www.qgso.qld.gov.au/subjects/demography/population-projections/tables/gladstone-region-non-resident-pop-proj/index.php>

QGSO (2016c) *Population growth, regional Queensland, 2014–15* <http://www.qgso.qld.gov.au/products/reports/pop-growth-reg-qld/pop-growth-reg-qld-2014-15.pdf>

QRC (2016) *Shiploads of Queensland LNG exports* <http://www.resourcinginnovation.com.au/education/shiploads-of-queensland-lng-exports/>

Santos (2016) *First LNG from GLNG train 2 26 May 2016* <http://www.santoslng.com/media-centre/media-releases/first-lng-from-glng-train-2.aspx>