

# Surat Basin non-resident population projections, 2018 to 2024

## Introduction

With the use of fly-in/fly-out and drive-in/drive-out (FIFO/DIDO) work practices now common, many resource regions have a large population of non-resident workers who live in the area only while on-shift. This non-resident population is not included in the Australian Bureau of Statistics' (ABS) official resident population estimates for these areas.

To bridge this information gap, *Surat Basin non-resident population projections, 2018 to 2024* provides projected numbers of non-resident workers on-shift for local government areas (LGAs) in the Surat Basin region (Figure 1). The report presents two projection series for the region, based on information provided by industry regarding existing operations and future projects. Data tables to supplement the report are available on the Queensland Government Statistician's Office (QGSO) website ([www.qgso.qld.gov.au](http://www.qgso.qld.gov.au)).

Figure 1 Surat Basin region

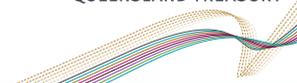


In this publication, the Surat Basin region is defined as the local government areas (LGAs) of Maranoa (R), Western Downs (R) and Toowoomba (R).

## Key points

Key points of this report include:

- The non-resident population of the Surat Basin was 3,810 persons in June 2017, largely unchanged from June 2016. This population largely comprised FIFO/DIDO workers associated with the coal seam gas (CSG) industry, coal mining and construction of resource-related infrastructure.
- The CSG industry will continue to be the primary influence on the region's non-resident population out to 2024. New projects and expansions that are approved or in the development pipeline will focus on increasing gas supply through drilling, making best use of existing surface infrastructure to minimise the need for additional construction.
- Two projection series are presented for the Surat Basin. The Series A projection, which represents all existing operations plus projects that have reached financial close, indicates that the region's non-resident population will decline to 3,250 persons by 2019, and then fluctuate between 3,210 persons and 3,350 persons out to 2024.
- The Series B projection for the Surat Basin, which also factors in the impact of projects that have been approved but are yet to reach financial close, anticipates that the region's non-resident population will increase to 3,910 persons in 2018. It is then projected to fall to 3,760 persons in 2019, before gradually increasing to 4,530 persons by 2024.
- Western Downs (R) will host the majority of resource industry activity in the Surat Basin, and will continue to have the largest non-resident population of all LGAs in the region. Under Series A, the non-resident population of Western Downs (R) is projected to decline from 2,400 persons in 2017 to 1,890 persons by 2019, and then vary between 1,850 persons and 1,980 persons. The Series B projection sees a slower decline to 2,060 persons in 2019, before gradually increasing to 2,520 persons by 2024.
- Under the Series A projection, the non-resident population of Maranoa (R) will range between 1,220 persons and 1,260 persons from 2019 to 2024, following a temporary increase to 1,360 persons in 2018. Series B sees overall growth over the projections period, with the non-resident population reaching 1,420 persons by 2022 before increasing to 1,780 persons by 2024.
- The non-resident population of Toowoomba (R) is projected to remain around 140 persons from 2018 to 2024 according to Series A. The Series B projection indicates that the non-resident population will reach 230 persons in 2024, following a temporary peak of 450 persons in 2021.
- None of the projection series for the Surat Basin take into account proposed projects where financial close has been delayed indefinitely, or where it is not possible to give consideration to indicative workforce data or sequencing.



### Surat Basin – future influences

The Surat Basin in Southern Queensland is now a major energy province, based on CSG production, coal mining, and electricity generation from coal and gas-fired power stations. Alternative energy generation is an emerging industry, with several solar and wind power projects currently under construction or in the development approval pipeline (Table 5, page 8).

The CSG industry continues to be the major source of resource-related employment in the Surat Basin, and the primary influence on the size of the region's non-resident population. With construction of major infrastructure and pipeline networks now largely complete, future CSG-related activity will focus on increasing gas supply for domestic and overseas markets. This will be achieved through expanded drilling programs for existing projects, and new drilling projects that make best use of existing infrastructure to minimise the need for additional construction.

The focus of **Queensland Curtis LNG's (QCLNG)** gas field expansion shifted to tenements south of Chinchilla in 2017 (Figure 2), with up to 161 additional wells to be brought on-line (QGC, 2017). **Australia Pacific LNG (APLNG)** is seeking approval to further develop its resource at Spring Gully east of Injune, with an additional 114 wells to be drilled and connected to existing surface infrastructure (Origin Energy, 2017). **Gladstone LNG (GLNG)** will increase its drilling program to around 250 wells in 2018, and will expand drilling in its Roma acreage during the next phase of development (Santos, 2017).

Senex Energy completed **Phase 2** of its **Western Surat Gas Project** in 2017, involving a 30-well drilling program north of Roma (Senex Energy, 2017; Senex Energy, 2018). The company is now progressing **Phase 3** of the project, following receipt of its environmental authority (EA) in December 2017. Around 425 new wells are planned over the next 20 years, along with construction of gas and water gathering networks, compression facilities, and water management infrastructure. Senex anticipates receiving all remaining regulatory approvals by mid-2018, with financial close expected soon after. Drilling of the first 40 to 50 wells is targeted to begin in the second half of 2018.

In late 2017, Senex Energy submitted an EA application for **Project Atlas** near Miles, following award of the CSG acreage by the Queensland Government in September of that year (Senex Energy, 2018). The proposed project, which comprises the drilling of around 100 wells and construction of supporting infrastructure, will supply gas exclusively to the domestic market. Senex anticipates receiving remaining regulatory approvals by mid-2018, with first gas due in 2019.

Arrow Energy announced in December 2017 that it will progress the **Surat Gas Project**, following negotiation of a 27-year agreement to supply gas to QCLNG (Arrow Energy, 2017). The project, which received approval for its environmental impact statement in 2013, predominantly involves the drilling and completion of approximately 2,500 new wells. Collaborative utilisation of QGC-operated gas infrastructure, such as compression stations, pipelines and water treatment facilities, will reduce the need for construction of new facilities from that originally proposed. Subject to receiving final approvals, phased development of the project is expected to commence in 2019 with an expansion of existing gas assets in Western Downs (R) and Toowoomba (R).

During 2017, construction commenced on the **Darling Downs Solar Farm** (APA Group, 2017), **Oakey Solar Farm** (Queensland Government, 2017) and the **Coopers Gap Wind Farm** (AGL, 2017). Other solar projects are in the development pipeline, including the **Wandoan South Solar Project** (WDRC, 2017a), **Western Downs Solar Farm** (WDRC, 2017c), **Beelbee Solar Farm** (WDRC, 2017d), **Columboola Solar Farm** (WDRC, 2017b) and **Yarranlea Solar Farm** (Yarranlea Solar, 2017).

## Projection methodology

QGSO's 2018 to 2024 non-resident population projection methodology comprises four different series, which represent a range of possible outcomes arising from the future development of resource projects and operations in the Surat Basin. Each series estimates the non-resident population that would be present in each LGA at 30 June of each year to 2024, should the listed operations and projects proceed according to advised timeframes and workforce numbers.

The four projection series represent the estimated non-resident workforces of existing operations and future projects. Projects are categorised according to their standing in the approvals pipeline, including stages of the environmental impact statement (EIS) process<sup>1</sup>, and progress towards achieving financial close.

- **Series A** projection is based on the number of non-resident workers on-shift who were engaged in existing resource operations at June 2017. The projection takes into account future changes to those operational workforces as advised by company sources, as well as the estimated construction and operational workforces of Category A projects (i.e. those that are approved and have reached financial close).
- **Series B** projection includes the Series A projection plus projected growth in the non-resident population arising from Category B projects (those that are approved but have yet to reach financial close).

<sup>1</sup> The projections also include some projects where an EIS is not or may not be mandatory. Such projects are still subject to other statutory approvals.

- **Series C** projection includes the Series A and B projections, plus projected growth in the non-resident population arising from Category C projects (those that have lodged an EIS, but have yet to proceed through to final approval).
- **Series D** projection includes the Series A, B and C projections, plus projected growth in the non-resident population from Category D projects (those that have yet to publish an EIS, including projects that have lodged an initial advice statement (IAS) as well as projects that have yet to begin the approvals process).

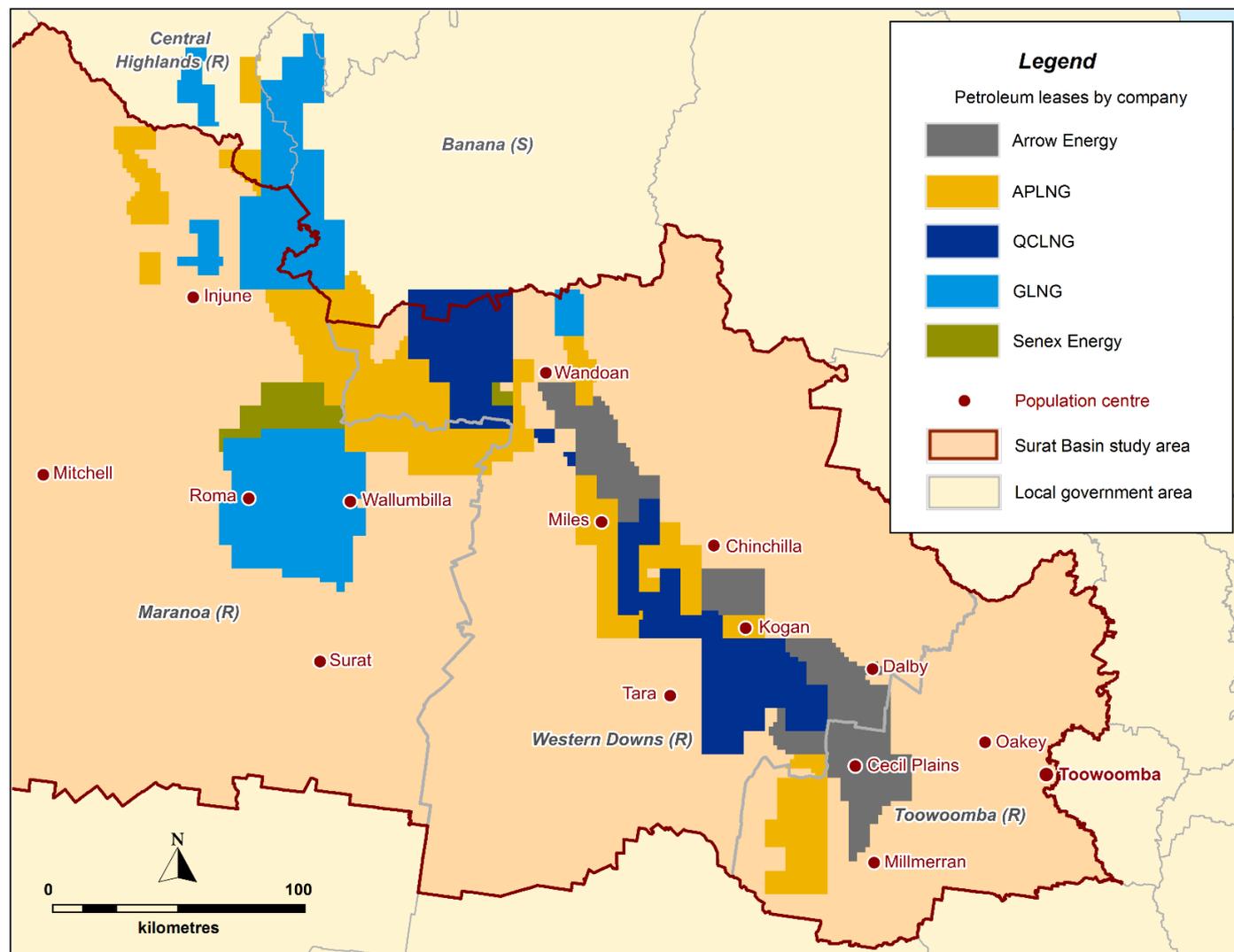
There are no Series C or D projections for the Surat Basin in this edition, as there are no projects in Categories C or D.

Where financial close for an approved project has been delayed indefinitely, or where it is not possible to give consideration to indicative workforce data or sequencing, the project is designated as **Category E** and is not included in any of the four projection series. Other projects that are dependent on Category E projects in order to commence are also designated as Category E, and are excluded from consideration in the projections.

Users of these projections should note that there is a degree of uncertainty about the likelihood of these projects proceeding as assumed and, as such, the projections should be regarded as being indicative scenarios rather than probabilistic predictions. QGSO does not advocate any of the projection series as being the most likely or favoured outcome. See caveats on page 9 of this report for further details.

A full list of existing operations and projects included in each category is available in Table 5 (page 8). A map of petroleum leases by company in the Surat Basin is shown in Figure 2.

**Figure 2 Petroleum leases by company<sup>(a)</sup>, Surat Basin**



(a) Includes petroleum lease applications and petroleum leases granted. Does not include petroleum leases held by other companies.  
 Source: DNRME, 2018; QGSO, 2018

## Projected non-resident population, Surat Basin

The non-resident population of the Surat Basin was 3,810 persons in June 2017, similar to that reported for June 2016. This population largely comprised FIFO/DIDO workers involved in CSG construction, maintenance and drilling activities, as well as those associated with coal mining and resource-related infrastructure (QGSO, 2017).

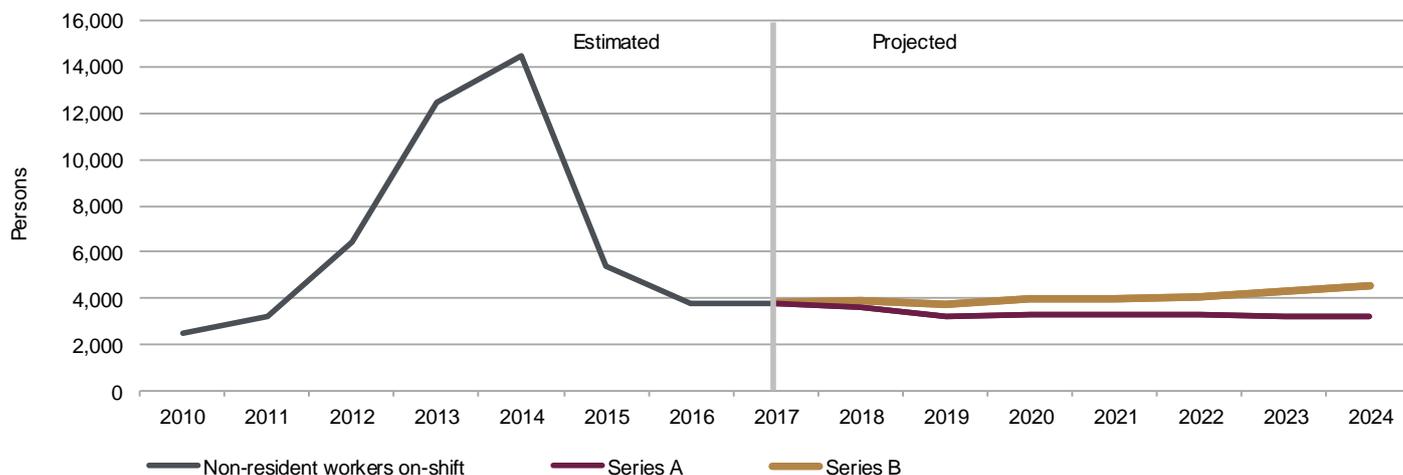
The CSG industry will continue to be the primary influence on the Surat Basin's non-resident population to 2024, with new gas projects and expansions proposed for the region, as well as several alternative energy projects (Table 5, page 8). Should they proceed, these projects are expected to increase the number of non-resident workers on-shift in the region. Despite these influences, the non-resident population is not expected to approach levels experienced during the height of CSG construction, where it reached a peak of 14,490 persons in 2014 (Figure 3). There are two key reasons for this:

- Much of the gas field infrastructure needed to support new CSG projects and expansions of existing projects already exists, thereby reducing the need for new construction. As a result, these projects will have a greater focus on drilling and completions, and will require fewer workers than large greenfield gas projects.
- The construction workforces required for alternative energy projects will be of a relatively short duration. Compared with other resource projects, alternative energy projects will have small operational workforces.

Two projection series are presented for the Surat Basin. Under the Series A projection, the region's non-resident population will decline to 3,250 persons by 2019, and then fluctuate between 3,210 persons and 3,350 persons out to 2024 (Table 1). This series includes the non-resident production workforces for ongoing CSG, coal mining and power station operations, as well as workforces for projects that are currently under construction in the region.

The Series B projection also factors in the impact of projects that have been approved but have yet to reach financial close. Under this series, the Surat Basin's non-resident population would increase to 3,910 persons in 2018, before falling to 3,760 persons in 2019. The region's non-resident population is then projected to gradually increase, reaching 4,530 persons by 2024.

**Figure 3 Past and projected non-resident population, Surat Basin**



Source: QGSO estimates, 2010 to 2017; QGSO projections, 2018 to 2024

**Table 1 Projected non-resident population, Surat Basin**

Projection series	Number of non-resident workers on-shift at 30 June							
	Estimated		Projected					
	2017	2018	2019	2020	2021	2022	2023	2024
Series A	3,810	3,650	3,250	3,310	3,310	3,350	3,260	3,210
Series B	3,810	3,910	3,760	3,960	3,980	4,080	4,290	4,530

Figures in all tables have been rounded to the nearest 10; see Notes at end of report for details.

Source: QGSO estimates, 2017; QGSO projections, 2018 to 2024

### Maranoa (R)

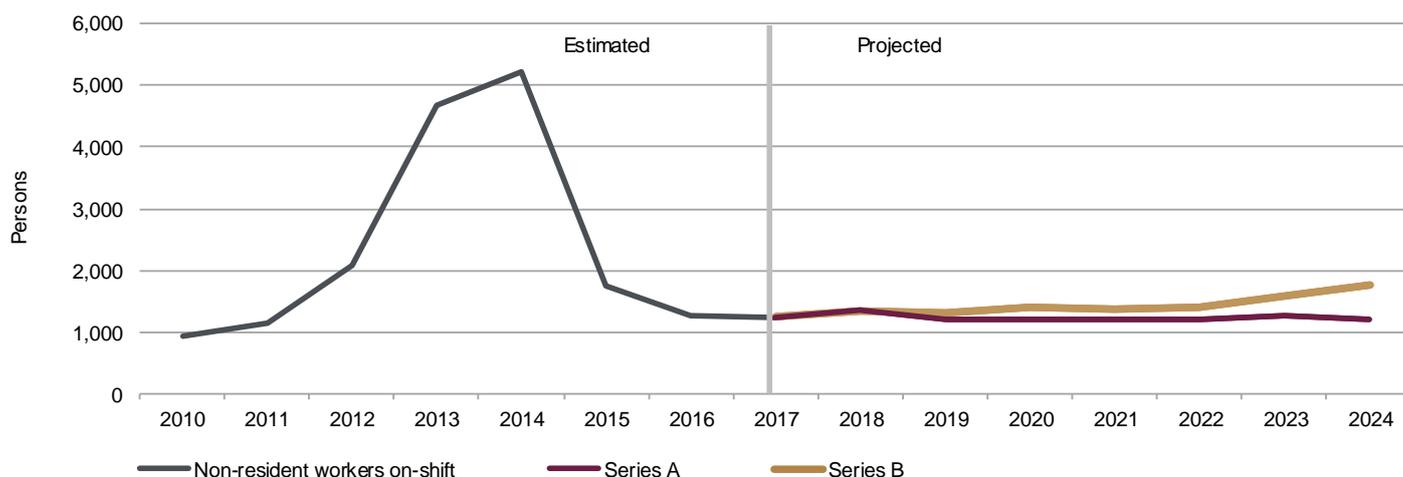
The non-resident population of Maranoa (R) is primarily associated with the CSG industry (Table 5, page 8). Current and future CSG developments in Maranoa (R) are located a considerable distance from large population centres, and will continue to utilise non-resident workforces for project construction and ongoing operations.

The non-resident population of Maranoa (R) declined to 1,260 persons in June 2017, a decrease of 20 persons from the preceding year (Figure 4). The relatively unchanged size of the LGA's non-resident population from 2016 to 2017 reflects the transition of CSG projects into the production phase, following an intensive period of pipeline and surface infrastructure construction that peaked in June 2014 (QGSO, 2017).

Two projection series are presented for Maranoa (R). Under the Series A projection, the non-resident population of Maranoa (R) will range between 1,220 persons and 1,260 persons from 2019 to 2024, following a temporary increase to 1,360 persons in 2018 (Table 2). This series includes consideration of the ongoing gas gathering, drilling and completions workforces of the APLNG and GLNG projects, as well as Senex Energy's Western Surat Gas Project Phase 1 and 2. It also includes the construction workforces for GLNG's Wallumbilla Gas Treatment Facility and APA's Reedy Creek Wallumbilla Pipeline.

The Series B projection, which takes into account the non-resident population impacts of Senex Energy's Western Surat Gas Project Phase 3 and the GLNG Gas Field Development Project, sees overall growth in the non-resident population of Maranoa (R) from 2017 to 2024. Under this scenario, the non-resident population would reach 1,420 persons by 2022, then increase to 1,780 persons by 2024.

**Figure 4 Past and projected non-resident population, Maranoa (R)**



Source: QGSO estimates, 2010 to 2017; QGSO projections, 2018 to 2024

**Table 2 Projected non-resident population, Maranoa (R)**

Projection series	Number of non-resident workers on-shift at 30 June							
	Estimated		Projected					
	2017	2018	2019	2020	2021	2022	2023	2024
Series A	1,260	1,360	1,220	1,220	1,220	1,220	1,260	1,220
Series B	1,260	1,360	1,320	1,420	1,380	1,420	1,580	1,780

Source: QGSO estimates, 2017; QGSO projections, 2018 to 2024

## Western Downs (R)

The LGA of Western Downs (R) is the location of most resource industry activity in the Surat Basin, consisting of coal mines, CSG projects and operations as well as coal and gas fired power stations. An emerging trend in the LGA is the construction of alternative energy generation projects, utilising wind and solar technologies (Table 5, page 8).

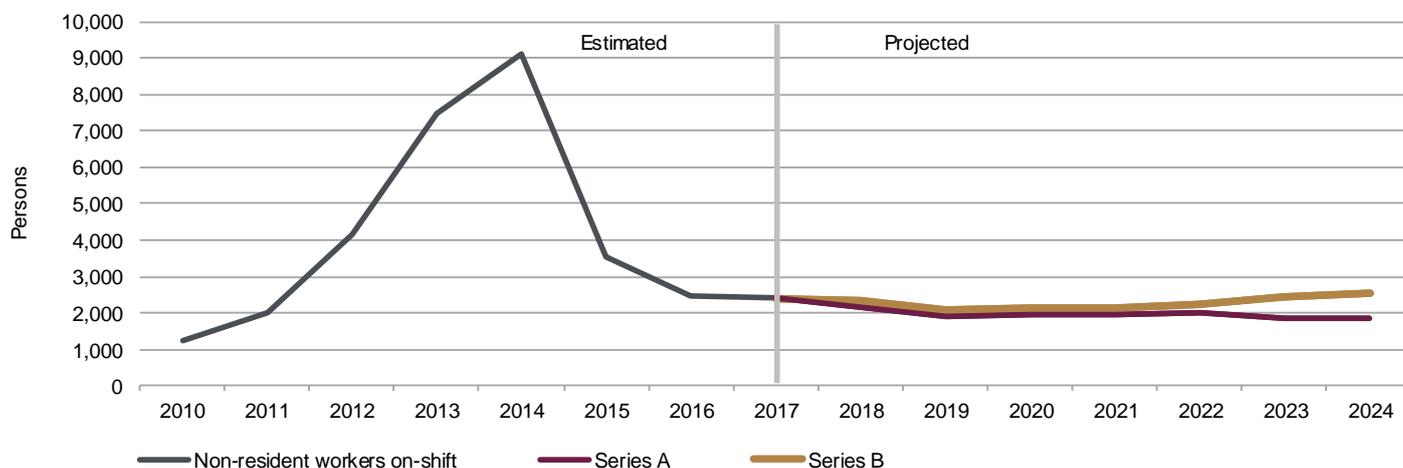
The non-resident population of Western Downs (R) was 2,400 persons in June 2017, a decrease of 60 persons from the preceding year (Figure 5). Although the size of the LGA's non-resident population was relatively stable between 2016 and 2017, there was a shift in its composition. With the construction phase of CSG expansions winding down in 2017, the number of non-resident workers on-shift engaged in operations and gas gathering declined. These losses were largely offset by an increase in the number of non-resident workers involved in drilling and completions, reflecting the CSG industry's emphasis on ensuring gas supply (QGSO, 2017).

Two projection series are presented for Western Downs (R). The Series A projection reflects the ongoing production workforces of resource operations and projects currently active in the area, as well as the construction workforces for the Coopers Gap Wind Farm and the Darling Downs Solar Farm. Under Series A, the non-resident population of Western Downs (R) is projected to decline to 1,890 persons by 2019, and then vary between 1,850 persons and 1,980 persons (Table 3).

The Series B projection sees a slower decline to 2,060 persons in 2019, before gradually increasing to 2,520 persons by 2024. This projection reflects the additional influence of the workforces for Arrow Energy's Surat Gas Project, the GLNG Gas Field Development Project, and Braemar 3 Power Station. It also includes the construction workforces for the Wandoan South Solar Project, Western Downs Solar Farm, Beelbee Solar Farm and Columboola Solar Farm.

Neither of the projection series for Western Downs (R) include consideration of the Surat Basin Rail or proposed coal mining projects, which are classified as Category E (refer Table 5, page 8). At the time the projections were finalised it was not possible to give consideration to workforce data or sequencing for Senex Energy's Project Atlas and, as such, this is not included in any of the projections series.

**Figure 5 Past and projected non-resident population, Western Downs (R)**



Source: QGSO estimates, 2010 to 2017; QGSO projections, 2018 to 2024

**Table 3 Projected non-resident population, Western Downs (R)**

Projection series	Number of non-resident workers on-shift at 30 June							
	Estimated		Projected					
	2017	2018	2019	2020	2021	2022	2023	2024
Series A	2,400	2,140	1,890	1,940	1,940	1,980	1,860	1,850
Series B	2,400	2,320	2,060	2,120	2,140	2,240	2,430	2,520

Source: QGSO estimates, 2017; QGSO projections, 2018 to 2024

### Toowoomba (R)

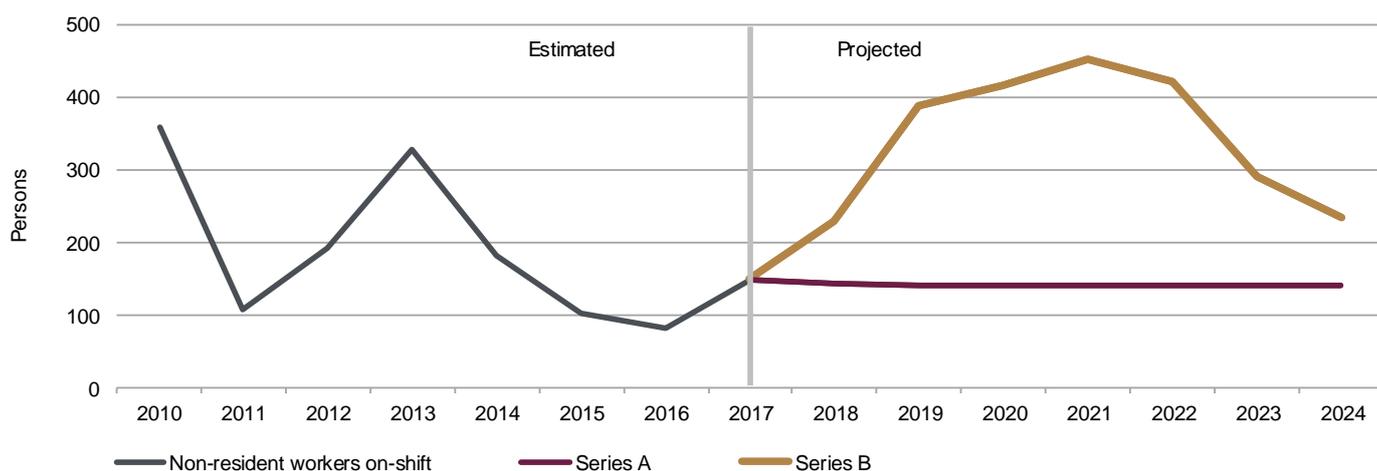
The LGA of Toowoomba (R) has a relatively small resource industry base compared with other Surat Basin LGAs, with two coal mining operations and construction of a solar farm underway in December 2017 (Table 5, page 8). The non-resident population of Toowoomba (R) was 150 persons in June 2017, an increase of 60 persons from the preceding year (Figure 6).

Two projection series are presented for Toowoomba (R) (Table 4). According to Series A, the non-resident population of Toowoomba (R) is projected to remain stable at around 140 persons from 2018 to 2024. This population includes non-resident workers associated with existing resource operations in the LGA, as well as the construction workforce for Oakey Solar Farm.

The Series B projection includes the anticipated non-resident population impacts of Arrow Energy's Surat Gas Project, the New Acland Coal Mine Stage 3 Project and the construction of Yarranlea Solar Farm. Under this scenario the number of non-resident workers on-shift in Toowoomba (R) would increase to 450 persons by 2021, before declining to 230 persons in 2024. The proximity to the large population centre of Toowoomba will influence the number of non-resident workers employed by these projects, as a sizeable proportion of their workforces is likely to reside within the local area.

The non-resident population of Toowoomba (R) often fluctuates due to the temporary presence of workers engaged in associated infrastructure projects, including scheduled maintenance for Millmerran and Oakey power stations and civil construction crews (QGSO, 2017). These temporary workforces have not been factored into either projection series.

**Figure 6 Past and projected non-resident population, Toowoomba (R)**



Source: QGSO estimates, 2010 to 2017; QGSO projections, 2018 to 2024

**Table 4 Projected non-resident population, Toowoomba (R)**

Projection series	Number of non-resident workers on-shift at 30 June							
	Estimated	Projected						
	2017	2018	2019	2020	2021	2022	2023	2024
Series A	150	140	140	140	140	140	140	140
Series B	150	230	390	420	450	420	290	230

Source: QGSO estimates, 2017; QGSO projections, 2018 to 2024

**Table 5 Resource operations and projects, Surat Basin**

Category <sup>(a)</sup>	Project / operation name	Company name	LGA
A	APLNG Drilling and Completions	APLNG <sup>(b)</sup>	Maranoa (R), Western Downs (R)
A	APLNG Surat Operations and Gas Gathering	APLNG	Maranoa (R), Western Downs (R)
A	Arrow Energy Surat Operations	Arrow Energy	Western Downs (R)
A	Cameby Downs Mine	Yancoal Australia	Western Downs (R)
A	Commodore Mine	Millmerran Power Partners	Toowoomba (R)
A	Coopers Gap Wind Farm	AGL Energy Limited	Western Downs (R)
A	Darling Downs Solar Farm	APA	Western Downs (R)
A	GLNG Drilling and Completions	GLNG <sup>(c)</sup>	Maranoa (R), Western Downs (R)
A	GLNG Surat Operations and Gas Gathering	GLNG	Maranoa (R), Western Downs (R)
A	Kogan Creek Mine	CS Energy	Western Downs (R)
A	Kogan Creek Power Station	CS Energy	Western Downs (R)
A	New Acland Mine	New Hope Group	Toowoomba (R)
A	Oakey Solar Farm	Canadian Solar (Australia)	Toowoomba (R)
A	QCLNG Drilling and Completions	QCLNG <sup>(d)</sup>	Western Downs (R)
A	QCLNG Gas Gathering	QCLNG	Western Downs (R)
A	QCLNG Surat Operations	QCLNG	Western Downs (R)
A	Reedy Creek Wallumbilla Pipeline	APA	Maranoa (R)
A	Wallumbilla Gas Treatment Facility	GLNG	Maranoa (R)
A	Western Surat Gas Project Phase 1 and 2	Senex Energy	Maranoa (R)
B	Beelbee Solar Farm	APA	Western Downs (R)
B	Braemar 3 Power Station	ERM Power	Western Downs (R)
B	Columboola Solar Farm	Luminous Energy	Western Downs (R)
B	GLNG Gas Field Development Project	GLNG	Maranoa (R), Western Downs (R)
B	New Acland Coal Mine Stage 3 Project	New Hope Group	Toowoomba (R)
B	Surat Gas Project	Arrow Energy	Toowoomba (R), Western Downs (R)
B	Wandoan South Solar Project	Equis Energy	Western Downs (R)
B	Western Downs Solar Farm	Tilt Renewables	Western Downs (R)
B	Western Surat Gas Project Phase 3	Senex Energy	Maranoa (R)
B	Yarranlea Solar Farm	Yarranlea Solar	Toowoomba (R)
E	Elimatta Coal	New Hope Group	Western Downs (R)
E	Project Atlas	Senex Energy	Western Downs (R)
E	Surat Basin Rail	Surat Basin Rail	Western Downs (R)
E	The Range Coal	Stanmore Coal	Western Downs (R)
E	Wandoan Coal	Wandoan Joint Venture	Western Downs (R)

(a) The four categories include existing operations and projects, grouped according to their status in the EIS process as at December 2017. Operations that are in care and maintenance mode, including Wilkie Creek coal mine in Western Downs (R), are not included in this list or the projections. See methodology (page 2) and caveats (page 9) for further details. There are no Category C or D projects in the Surat Basin.

(b) Australia Pacific LNG (APLNG) is a joint venture between Origin Energy, ConocoPhillips and Sinopec.

(c) Santos Gladstone LNG (GLNG) is a joint venture between Santos, PETRONAS, Total and KOGAS.

(d) Queensland Curtis LNG (QCLNG) is a joint venture between QGC, CNOOC and Tokyo Gas.

Source: QGSO, 2017



## Caveats

QGSO's non-resident population projections provide an estimate of the number of non-resident workers on-shift by LGA. They are based on the on-shift non-resident worker population estimates established in previous years and consider future workforce growth arising from resource industry and infrastructure projects planned for the region, as reported directly by resource companies.

Projections are based on the best available data and advice at the time of preparation. Non-resident populations are projected for the period to 2024 only, as it is considered that the reliability of information regarding future projects diminishes considerably beyond that point. Projected numbers of non-resident workers on-shift presented in this report represent an estimate for 30 June of the indicated year. Temporary peaks and falls in project workforces may occur in between these mid-year estimates for successive years.

The four projection series represent a range of possible outcomes based on the status of projects in the EIS process at the time of production in December 2017 (see the projection methodology, page 2, for further details). These outcomes are subject to change over time as projects proceed through the approvals process. Projections reflect the cumulative impacts of multiple projects at a given point in time, and changes to any individual project will affect the projected cumulative outcome.

Category E comprises projects that have completed the approvals process but where financial close has been delayed indefinitely; projects where it is not possible to give consideration to indicative workforce data or sequencing; and other projects that are dependent on the commencement of projects in this category. These projects could not be allocated to a projection series at the time of preparation. Changes in the status of these projects could substantially alter any or all of the possible outcomes represented by the four projection series.

The projections reflect certain assumptions about the likelihood of projects advancing according to advised commencement dates, sequencing of project stages and timing of workforce peaks. Changes to any of these factors can make a significant difference to the cumulative non-resident workforce at a given point in time, particularly during construction phases. Short-term influences such as extreme weather events, industrial action, and supply chain delays can all result in changes to project scheduling and to these projections.

QGSO does not advocate any one series as being the most likely or favoured outcome and users should consider the assumptions affecting each potential scenario. Given the volatile nature of the resource sector and the inherent uncertainty about the likelihood of projects proceeding as indicated, these projections should be considered as being indicative of the range of potential outcomes rather than literal accounts of future growth.

## Notes

(R) – Regional Council

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.

Data in this report are derived from surveys conducted by QGSO in 2017 and other sources. The Survey of Accommodation Providers counted the number of non-resident workers on-shift during the last week of June 2017. See the *Surat Basin population report, 2017* <http://www.qgso.qld.gov.au/products/publications/surat-basin-pop-report/index.php> for further details. The Resource Operations Employment Survey and the Resource Projects Employment Survey gathered workforce information from companies with existing operations or future projects in the Surat Basin at June 2017. A full list of existing operations and projects is available in Table 5 of this report.

The total number of non-resident workers on-shift for the Surat Basin represents the aggregate non-resident populations of all LGAs in the region. This total may include a small number of non-resident workers in each LGA who live elsewhere within the Surat Basin.

Figures in tables have been rounded to the nearest 10. 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.

Data tables to supplement this report are available on-line at <http://www.qgso.qld.gov.au/products/tables/index.php>.



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