# 2018-22
# POWERLINK QUEENSLAND REVENUE PROPOSAL

## APPENDIX 7.02

## BIS Shrapnel
## Real Labour Cost Escalation Forecasts to 2021/22

Delivering better value

# Real Labour Cost Escalation Forecasts to 2021/22

## – Australia & Queensland

> FINAL REPORT • JULY 2015


Powerlink Queensland

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BIS Shrapnel
BUSINESS RESEARCH AND FORECASTING

*BIS Shrapnel welcomes any feedback concerning the forecasts or methodology used in this report as well as any suggestions for future improvement.*



Job no: E6257

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## SUMMARY


- In May 2015, BIS Shrapnel was engaged by Powerlink Queensland to provide an expert opinion on the outlook for labour cost escalators relevant to electricity transmission networks in Queensland over a seven year period from 2014/15 to 2021/22 inclusive (ie from 1 July 2015 to 30 June 2022). The labour cost escalators will be used by Powerlink Queensland to develop the level of operating and capital expenditure required to fulfil the opex and capex objectives (as set out under the Rules) over their next revenue reset period.
- BIS Shrapnel expects total wage costs for the Australian Electricity, Gas, Water and Waste Services (EGWWS or 'Utilities) sector — expressed in wage price index (WPI) terms — will average of 4 per cent per annum (0.3 percentage points higher than the national 'All Industries' WPI average of 3.7 per cent per annum) over the seven years to 2021/22.
- We forecast utilities wage inflation in Queensland to dip below the national average over the next two years as employment growth in the sector eases due to contraction in the utilities construction. That said, we expect wages growth to pick up pace from 2017/18 due to increased demand for labour from the states' utilities sector as utilities-related engineering construction ramps up again.
- Overall, Queensland's utilities WPI growth is forecast to average 4 per cent per annum over the five years from 2017/18 to 2021/22 inclusive (ie over Powerlink Queensland's next regulatory period).
- Meanwhile, overall construction activity in Queensland is expected to decline sharply for another year driven by a large fall in engineering construction before picking up later in the decade. Dwellings building is expected to continue on its upward curve for at least another year while non-dwelling building is largely expected to track sideways over the forecast period. Given our construction outlook, we expect Queensland construction industry WPI growth to average 3.9 per cent per annum over the five years from 2017/18 to 2021/22 inclusive.


**Labour Cost Escalators: Australian and Queensland**

*(per cent change, year average, year ended June)*

| | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 | 2018/19 | 2019/20 | 2020/21 | 2021/22 | 5 yr Avg (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Actuals | | | | Estimate | Forecast | | Next Regulatory Period | | | | | |
| **NOMINAL PRICE CHANGES** | | | | | | | | | | | | | |
| **1. EGWWS WPI - Queensland (a)** | **4.5** | **3.7** | **4.3** | **3.4** | **3.0** | **3.1** | **3.3** | **3.6** | **3.8** | **4.1** | **4.3** | **4.4** | **4.0** |
| EGWWS WPI - Australia (b) | 4.2 | 3.5 | 4.2 | 3.3 | 3.0 | 3.2 | 3.5 | 3.9 | 3.8 | 4.0 | 4.2 | 4.3 | 4.0 |
| EGWWS AWOTE - Australia (b) | 9.1 | 2.5 | 6.1 | 2.0 | 2.6 | 3.7 | 4.1 | 4.5 | 4.6 | 4.8 | 4.9 | 5.0 | 4.8 |
| **2. Construction WPI Queensland (c)** | **3.6** | **5.4** | **2.9** | **3.0** | **1.9** | **2.2** | **2.8** | **3.2** | **3.3** | **4.0** | **4.5** | **4.5** | **3.9** |
| Construction WPI - Australia (b) | 4.0 | 4.1 | 3.3 | 3.0 | 2.2 | 2.9 | 3.5 | 3.6 | 3.4 | 3.9 | 4.3 | 4.3 | 3.9 |
| Construction AWOTE - Australia (b) | 5.0 | 3.5 | 4.3 | 2.1 | 2.3 | 3.4 | 4.1 | 4.2 | 3.9 | 4.2 | 4.9 | 5.2 | 4.5 |
| **3. Australian Wages** | | | | | | | | | | | | | |
| All Industries - WPI (d) | 3.8 | 3.6 | 3.3 | 2.6 | 2.4 | 2.8 | 3.3 | 3.7 | 3.4 | 3.6 | 3.9 | 4.0 | 3.7 |
| All Industries - AWOTE (d) | 4.2 | 4.3 | 4.6 | 3.0 | 3.1 | 3.8 | 4.4 | 4.9 | 4.4 | 4.7 | 5.1 | 5.2 | 4.9 |
| Consumer Price Index (headline) (e) | 3.1 | 2.3 | 2.3 | 2.7 | 1.8 | 2.4 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| **REAL PRICE CHANGES (f)** | | | | | | | | | | | | | |
| **1. EGWWS WPI - Queensland** | **1.4** | **1.4** | **2.0** | **0.7** | **1.2** | **0.7** | **0.7** | **1.1** | **1.3** | **1.6** | **1.8** | **1.9** | **1.5** |
| EGWWS WPI - Australia | 1.1 | 1.2 | 1.9 | 0.5 | 1.2 | 0.8 | 0.9 | 1.4 | 1.3 | 1.5 | 1.7 | 1.8 | **1.5** |
| EGWWS AWOTE - Australia | 6.0 | 0.1 | 3.9 | -0.7 | 0.9 | 1.3 | 1.5 | 2.0 | 2.1 | 2.3 | 2.4 | 2.5 | **2.3** |
| **2. Construction WPI Queensland** | **0.5** | **3.1** | **0.6** | **0.3** | **0.2** | **-0.2** | **0.2** | **0.7** | **0.8** | **1.5** | **2.0** | **2.0** | **1.4** |
| Construction WPI - Australia | 0.9 | 1.7 | 1.1 | 0.3 | 0.4 | 0.5 | 0.9 | 1.1 | 0.9 | 1.4 | 1.8 | 1.8 | **1.4** |
| Construction AWOTE - Australia | 1.9 | 1.2 | 2.0 | -0.6 | 0.5 | 1.0 | 1.5 | 1.7 | 1.4 | 1.7 | 2.4 | 2.7 | **2.0** |
| **3. Australian Wages** | | | | | | | | | | | | | |
| All Industries - WPI | 0.7 | 1.3 | 1.0 | -0.1 | 0.7 | 0.4 | 0.7 | 1.2 | 0.9 | 1.1 | 1.4 | 1.5 | **1.2** |
| All Industries - AWOTE | 1.0 | 2.0 | 2.4 | 0.3 | 1.4 | 1.4 | 1.8 | 2.4 | 1.9 | 2.2 | 2.6 | 2.7 | **2.4** |

Source: BIS Shrapnel, ABS and RBA

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for Queensland.
(b) Australian sector wage forecasts provided for comparison.
(c) Construction Sector WPI for Queensland.
(d) Australian All Industries Average Weekly Ordinary Time Earnings (AWOTE) and WPI provided for comparison.
(e) Headline CPI forecasts based on Reserve Bank of Australia forecasts to June quarter 2017 and then Commonwealth Treasury medium term projections.
(f) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(g) Average Annual Growth Rate for 2017/18 to 2021/22 inclusive

# 1. INTRODUCTION, OUTLINE OF REPORT & DATA SOURCES

In May 2015, BIS Shrapnel was engaged by Powerlink Queensland to provide an expert opinion on the outlook for labour cost escalators relevant to electricity transmission networks in Queensland over a seven year period from 2014/15 to 2021/22 inclusive (ie from 1 July 2015 to 30 June 2022). The labour cost escalators will be used by Powerlink Queensland to develop the level of operating and capital expenditure required to fulfil the opex and capex objectives (as set out under the Rules) over their next regulatory period.

In keeping with my instructions, I Dr Kishti Sen, Senior Economist at BIS Shrapnel, confirm that I have undertaken this engagement having regard to the Guidelines for Expert Witnesses in Proceedings in the Federal Court of Australia and the requisite statement to this effect is included in Appendix C. I have been assisted in the preparation of this report by Richard Robinson, Senior Economist at BIS Shrapnel, and Jehanesan Konesan, Research Associate at BIS Shrapnel. Curriculum vitas of all relevant personnel are attached in Appendix D. Notwithstanding the assistance from the other two economists, the opinions in this report are my own and I take full responsibility for them. A brief description of the material upon which I have relied for the preparation of this report follows.

The Australian Bureau of Statistics (ABS) is the primary data source for the consumer price index, wages, employment, real gross value added and investment (including engineering construction) data, and for a range of other economic variables shown in table 2.1. The most recent inflation and wages data is March 2015 quarter and the most up-to-date industry employment data is May 2015. The March 2015 quarter was the latest available data for real gross value added (at the Australian level only), investment and indeed most of the economic variables in table 2.1. The detailed engineering construction data (by state and by category) have data up to March 2015 quarter. The latest data for Gross State Product (GSP) and real gross value added for state industry sectors was 2013/14. Other inflation and interest rates data were sourced from the Reserve Bank of Australia. Finally, data and information concerning enterprise agreements was obtained from the Department of Employment.

Forecasts of the economic variables in this report were mostly sourced from BIS Shrapnel reports, including *Economic Outlook, Long Term Forecasts: 2015 – 2030* report (currently in production)*, Engineering Construction: 2014/15 to 2028/29 and Long Term Building Work Done Forecasts*, plus other unpublished forecasts and from BIS Shrapnel internal research.

The structure of this report is as follows:

- The **Summary** section presents an overview of our relevant labour cost forecasts at the Australian and Queensland level. Both nominal and real labour cost escalators are provided in a summary table.
- **Section 2** sets the scene for our wage forecasts for Australia and Queensland by providing an overview of the macroeconomic outlook, including a brief commentary of the logic and key drivers, assumptions and forecasts of key economic variables at both Australia and Queensland level.
- **Section 3** discusses BIS Shrapnel's model of wage determination and provides forecasts of national ('all industries') wages and CPI inflation, with the Reserve Bank of Australia and Treasury medium-term projections of CPI inflation. The latter is used to deflate the nominal escalators provided in this report.
- **Section 4** provides forecasts for the Electricity, Gas, Water and Waste Services industry wage price index forecasts at the Australian and Queensland level.

- **Section 5** provides forecasts for the Construction industry wage price index forecasts, again at both the Australian and Queensland level.
- **Appendices,** which includes description of BIS Shrapnel's wage model.

# 2. MACROECONOMIC FORECASTS: AUSTRALIA AND QUEENSLAND

## 2.1 Overview of the Australian economy

The Australian economy is on the threshold of a major transition phase. It will involve a slow adjustment from an economy tilted towards servicing the mining boom over the past 10 years to broadly based growth. We'll need business growth and investment in the non-mining sectors to pick up and tilt the economy back into balance, as it was prior to the start of the mining boom.

There is little choice. It's only a question of the speed of adjustment and the damage done in the transition. Mining investment has just begun to fall, with the major shock to growth over the next three years. That will be offset by strong dwellings building and continued growth in resources exports. It will require recovery in non-mining business investment and a structural change back towards balanced growth. And that involves:

- a competitive exchange rate to underwrite structural change, and
- recovery in non-mining growth and profitability, with absorption of excess capacity allowing a shift from the cost-cutting and investment deferring psychology of businesses — a legacy of the GFC — to one of increased appetite for growth and investment.

We are delighted with the fall in the Australian dollar. It is the single most important driver of structural change and growth. We think that the Australian dollar needs to be below US 70 cents for our export and import-competing industries to be competitive on average. Already, we have seen an initial recovery in tourism, both inbound and domestic. That will be joined by education, agriculture, business services and even mining and manufacturing. The fall in the dollar has helped. But more is required.

However, given sluggish business conditions and spare capacity, a generalised pickup in non-mining business investment will be slow to come through. We've been sweating on the recovery of non-mining business investment. But the latest Capex figures, while mixed, show that we have longer to wait. Manufacturing investment, as expected, will continue to contract. Unfortunately, the dollar just isn't low enough to help. Not yet anyway. We're still losing industry as a result decisions made a year ago when the dollar was higher. Holden and Electrolux are two examples. Many of these industry losses are permanent. But some activities will come back. For example, the loss of food processing operations doesn't make medium term sense. We think they'll return.

Meanwhile, expectations for investment in 'other' selected (mainly services) industries in 2015/16 are 10 per cent lower than the corresponding estimate in 2014/15. But it's a mixed bag. Expectations for:

- Finance, Media and Telecommunications, and the Utilities are strong.
- Wholesale trade, Transport, Rental and Real Estate are steady
- Retail Trade looks like it's peaking after strong growth in the last three years due to the rollout of Masters & Bunnings stores plus Convenience centres. Any declines will be tempered by the inflow of funds into retail and the ongoing logic of competitive refurbishment.
- Expectations for other services sectors including Construction and Professional Services suggest sharp falls in investment.

Overall, non-mining business investment will be weak. It doesn't make sense for businesses to invest until capacity utilisation is tighter, and demand and profitability strengthen. When

demand finally picks up, emerging capacity constraints will be another driver of business investment by non-mining sectors. However, that will take time. That said, firms will eventually shift their focus from cost-cutting to servicing growth in demand, including catching up computer software and hardware investment deferred in the difficult post-GFC operating environment.

Meanwhile, new public investment has been falling for some time. We think it will turn around this year although the risk is on the downside. The main challenge, as always, is financing new infrastructure projects. Some projects will be financed by asset sales or leases, particularly in New South Wales and Victoria. Future PPPs will most likely require that the public sector takes more of the initial risk. Private investors in infrastructure, notably super and pension funds, are risk averse. Governments will have to act as developers, to Build, Own, Operate, then Transfer to the private sector to finance the next round of projects.

Overall, this is not a business-as-usual economy. We are on a threshold of structural change, switching from a mining-investment driven economy back towards balanced growth. The quicker the dollar falls to below US 70 cents, the faster we transition to a balanced economy.

Growth in the interim is supported by an upswing in dwellings building, a pick up in private consumption expenditure and growth in resources exports.

We expect the economy to remain weak for another year before strengthening non-mining business investment (underwritten by a lower dollar and tightening capacity) pushes the economy closer to its potential. But it will be a 'soft cycle' as the potential growth rate of 3¼ per cent is unlikely to be realised on average. The next round of infrastructure and mining projects, plus another cycle in dwellings building (we will still have a deficiency of housing stock at the end of the current cycle), will underpin stronger growth towards the end of the decade.

## 2.2 Economic outlook: the detail

The next year will be characterised by:

- falling mining investment, offset by strong housing and resources exports,
- continued tight business conditions - cutting costs and deferring investment,
- tight government expenditure,
- further rises in unemployment,
- subdued wage pressures and further labour productivity increases, offsetting the inflationary impact of falls in the dollar, and
- a sustained period of low interest rates until growth picks up.

We expect the economy to build momentum from late 2016 with growth forecast to be slightly above trend in 2016/17. Growth could ease in 2017/18 as interest rates rise and dwellings building runs out of puff, but quickly return to trend reflecting balanced growth in the final two years of the decade.

The difficult period is now – waiting for the dollar to fall below US 70 cents and for structural change to deliver stronger non-mining business investment and broadly based growth.

### 2.2.1 External demand

***World Economic Outlook, Commodity Prices and the Australian Dollar***

Prospects for **global economy** are improving, although the story is markedly different across regions. There are positive signs for growth in the US. Euro Zone economies remain in the

doldrums while Japan's economy is expected to gradually pick up. And, China's economy is slowing. Geopolitical tensions in Russia and the Middle East have led to trade restrictions and volatility in energy prices. The unbalanced growth profile reflects the various policy settings and stimulus measures (including unconventional monetary policy) being implemented with differing levels of success.

Overall, the world economy experienced another sluggish year of 3.3 percent growth during 2014, weighed down by problems in Japan and ongoing concerns in Europe. Global growth is expected to gain momentum over the next few years. However, expectations around the pace of this expansion have been pared back following concerns about a moderating Chinese economy, Japanese growth stalling and the continued lack of confidence in Europe as adjustment takes its toll. On the positive side, the oil price decline provides a boost to the outlook through lower production costs for businesses and higher disposable incomes for households, particularly in emerging market economies as they are mostly net importers of oil.

The **United States** economy ended 2014 strongly following a patchy start to the year. Employment growth was exceptionally strong, taking the unemployment rate down to 5.6 percent by December (from 6.7 per cent the previous year). The growth in employment has helped fuel a surge in private consumption expenditure which has joined business investment as an area of strength, while public expenditure has ceased to be a drag on growth. The current momentum is expected to carry over into the next few years with the Federal Reserve likely to take a cautious approach and avoid tightening monetary settings in an aggressive manner. Growth is expected to be broadly based with stronger consumer spending supported by a healthy labour market and lower oil prices. Meanwhile, housing activity is gathering momentum, and business investment is improving as input prices remain subdued and corporate profits rise.

On some measures, **China** is now regarded as the world's largest economy. The economy is rebalancing, shifting away from a heavy construction focus (residential and infrastructure) to a more consumption driven approach. Growth slowed to 7.4 percent during 2014, with a weaker property market impacting fixed capital investment, while exports were hampered by the continued poor performance of the European economies. The deceleration in Chinese growth is expected to continue. The Government has introduced stimulus measures including lower taxes for small businesses, further boosts to fiscal and infrastructure spending and cuts to the benchmark lending rates. While these measures are designed to prop-up the momentum in domestic activity, going forward we will likely have to get used to seeing Chinese growth in the 6-7 per cent range later this decade. This is still significant growth given China is a much bigger economy now after experiencing double digit growth for most of last decade.

The **Eurozone** economies are struggling from a lack of competitiveness. This is due to the imbalance in cost structures exacerbated by a fixed exchange rate system which is impeding the necessary adjustments. Within the Euro area, Germany is undervalued while the other countries are overvalued. Hence, the lack of growth and high unemployment across the Euro zone, while conditions in Germany are more favourable. Debt is of concern. However it is not the central issue holding back growth. It is the cost imbalances. The current deflationary pressures are a natural consequence of the current imbalances as countries attempt to reset their cost bases against a low inflation German economy, to a lower level. Quantitative easing can help boost demand. But the key concerns are supply side issues. Unfortunately these issues cannot be solved quickly and will ultimately result in years of weakness before activity turns around. We expect growth to average a modest 1.6 per cent per annum over the next five years.

Over the past year, the **Japanese** government and central bank introduced some strong stimulus measures to boost growth prospects and eliminate the persistent threat of deflation. Unfortunately, the government also shot itself in the foot when it introduced a significant

increase in the sales tax in April 2014 which triggered a sharp contraction in domestic consumption. Although the economy shrank through the middle of the year, prospects have improved as the stimulus measures have gained traction. Employment growth has picked up and the unemployment rate has dropped to 3.4 per cent, the lowest level since the late 1990s. Demographics will continue to plague the Japanese economy as a declining workforce population limits overall growth potential. Attempts to increase female participation will help but the economy will continue to be held back by a lack of capacity and will ultimately limit the level of overall growth to under 2 per cent annually over the next five years.

***Commodity Prices, So Much for the 'Super Cycle'***

The long lead times between executing investment decisions and when the new production reaches the market means that commodity prices will always contain a natural element of volatility as commodity markets swing from periods of under-supply to over-supply. For Australia's key bulk commodity exports, the supply/demand balance saw prices peak during 2011 (in US dollar terms) before sliding back over the subsequent years towards levels that appeared to be sustainable over the long-term.

Australia's key commodity exports have suffered a further large drop in prices over the past year. Amid a backdrop of slowing consumption growth in China along with ongoing weakness in the major European and Japanese markets, major international suppliers of iron ore, thermal coal and metallurgical coal have significantly increased production. Much of this new supply has been due to the massive program of resource investment which were commissioned or committed to during the commodity price boom.

Major global producers have also ramped up output in order to lower overall unit costs. This has flooded commodity markets with an excess of supply and now producers are scrambling to further reduce their costs of production. A consolation for domestic producers has been the decline in the Australian dollar, which has softened the impact of the commodity price falls as revenues have not fallen as fast in Australian dollar terms.

Even so, the price weakness for commodities is expected to continue in the short term. We expect only a moderate recovery in the prices of oil, coal and iron ore over the next few years. A key element of the price recovery will be international producers reacting to weak prices and oversupply by closing uneconomic mines and/or cutting back production. The second driver will be strengthening demand for commodities as global economic growth gradually picks up.

The plunge in oil prices late last year and early this year was caused by a substantial increase in oil production by producers outside OPEC – namely the US, Canada and Brazil. Despite plunging prices, OPEC committed to retaining current production levels. That maintained the oversupply and acted to supress prices over the short-term. Meanwhile, consumption growth had been modest, leading to large increases in inventories. It appeared the traditional lower cost producers were trying to regain market share and force out the newer US shale oil producers (who have higher costs of production) and deter future US investment in new shale oil capacity. The strategy was somewhat successful. Oil prices rebounded 13 per cent in the June 2015 quarter. We are likely to see further volatility in prices going forward, although the trend is expected to point upwards.

The decline in coking and thermal coal prices is reflective of a recent oversupply and weaker import demand growth from major global consumers. With the significant decline in prices, producers will be increasingly reliant on the lower Australian dollar to mitigate some of the losses incurred at current prices. The outlook for thermal and coking coal prices is for a moderate recovery over the next couple of years as the global economy gradually strengthens and the availability of new sources of supply are restricted.

***Exchange Rates***

The fall in commodity prices and good news on the United States economy has driven the dollar lower in recent months. At the time of writing, the Australian dollar depreciated nearly 20 per cent against the US dollar since August last year. Similarly, the Australian dollar has also declined against the currencies of our major trading partners, which measured on a trade weighted basis, depreciated 13 per cent.

While there may still be an element of volatility, we forecast commodity prices to bottom in mid-2015 and will start to achieve moderate gains through the second half of 2015. The forecast rise in commodity prices should stabilise the Australian dollar around US 75 cents over 2015/16 and 2016/17. That said, factors such as the Reserve Bank cutting the cash rate and a more buoyant US economy may see the exchange rate drift lower than our forecast. Eventually, we expect the dollar will attain around US 70 cents during 2018/19.

***Strong external demand will underwrite Australia's GDP growth***

The outlook for Australia's **exports**, in particular resources exports, is largely dependent on the prospects of the Chinese economy as China alone accounts for a nearly a third of Australia's merchandise exports.

As mentioned, China's economic growth, although slowing, is expected to remain solid, supported by near-term targeted stimulus measures and ongoing medium-term economic reforms aimed at reorienting growth towards domestic consumption and away from investment and exports. Overall, we expect economic growth in China to remain between 6½ and 7 per cent over the next five years.

The level of infrastructure in China however remains well below that in developed countries. This suggests that infrastructure investment — encompassing municipal infrastructure, utilities, transportation and social infrastructure such as schools and hospitals — is likely to remain strong well into the next decade and possibly beyond. As infrastructure investment is intensive in its use of steel which, in turn, requires iron ore and coking coal as inputs, the prospects of Australia's bulk commodity exports remain bright. A consumption driven Chinese economy is also good news for Australia as it will drive the demand for thermal coal higher.

Meanwhile, the expected improvement in world economic growth rates over the next two years coupled with the lower exchange rate, will facilitate a recovery in export volumes of non-commodity manufactures. Even though the Australian dollar has fallen 28 per cent since April 2013, improvements in manufacturing exports will still depend on future world economic conditions. We expect manufacturing year average export growth rates to reach 3.2 per cent in 2014/15, picking up even further over the next two years. This recovery will gain more speed over the medium term as world economies return to trend growth rates, and the dollar falls toward (and below) US 70 cents.

Service exports which is dominated by travel services (ie tourism and education exports) has picked up strongly and is expected to gather momentum over the next three to five years due to a lower dollar. Overall, we forecast services exports to grow by 5.8 per cent per annum over the next five years compared to -0.2 per cent over the previous five years.

**In summary**, total goods and services export volumes are forecast to average a solid 5.4 per cent annual growth over the next five years, supported by improving world economic conditions and a further depreciation of the Australian dollar. Leading the charge is very strong growth in energy, mineral and metals exports volumes, currently accounting nearly 60 per cent of the value of exports of goods and services.

**Import** volume growth slowed dramatically from over 12 per cent in 2011/12 to -0.9 per cent in 2012/13 and -1.3 per cent in 2013/14. Falls were recorded across most categories with only consumer goods maintaining growth. Much of the contraction can be directly attributable to the

easing of mining and heavy industry construction, but the fall in the Australian dollar and weaker domestic demand were also contributing factors.

The fall in the dollar will help the competitiveness of local producers against importers, including domestic tourism. Still, the dollar really needs to fall to below US 70 cents before many local producers can really be competitive. Added to this is the lack of local production capacity in discretionary consumer goods and capital goods — often because that production has moved overseas — so there is effectively little prospect of replacing these imports.

The upshot is that net exports is expected to contribute 0.8 percentage points to real GDP growth over the next four years.

Australia's **current account deficit** (CAD) is expected to improve this year. The impact of falls in commodity export prices will largely be offset by a lower deficit in net income & transfers due to declines in repatriated profits from mostly foreign owned mining companies. Overall, strong trade balance surpluses in the second half of the decade will cause the CAD to fall. As a percentage of real GDP, CAD is forecast to average-1.4 per cent per annum compared to -3.2 per cent over the past five years.

### 2.2.2 Domestic demand

***Consumer expenditure to outpace growth in incomes over the next five years***

Household consumption expenditure growth slowed sharply in the immediate aftermath of the global financial crisis as people cut spending and sharply increased savings. That came after the spending binge of the previous decade when the banks turned mortgages into lines of credit allowing households to borrow against the value of their home to boost current expenditure. And they did, sharply reducing savings ratios. Increased concern about high household debt was brought to a head by the GFC and concerns about job security. The decline in household consumption expenditure growth was more marked than the decline in real household disposable income with the household saving rate rising to its highest level since the 1980s.

Over the past three years, households have stayed cautious, keeping savings high and only slightly loosening the purse strings, resulting in growth in consumption expenditure marginally outpacing growth in household disposable income.

We expect that to continue over the next few years. Households have built up a considerable savings buffer after several years of high savings ratios. In addition, improved financial security including wealth effects via rising house prices and record low interest rates will see households save less of their income. Consequently, we expect HFCE (household final consumption expenditure) to pick up and outstrip the growth in household disposable income – as it has done over the past three years. With the Australian dollar now lower, the ongoing growth in household consumption expenditure is expected to translate into increased retail turnover and activity in Australia over the next few years.

We expect the Reserve Bank to keep rates low while the economy stays weak, only beginning to increase interest rates from late calendar year 2016 and through 2017. This would dampen consumer spending in 2017/18 before it picks up strongly towards the end of the decade. Overall, household consumption expenditure is forecast to average growth of 3 per cent per annum over the five years to 2019/20.

Over the longer term, population growth is expected to be the primary driver of household expenditure. As such, slowing population growth will see household consumption expenditure growth moderate slightly over the following decade, averaging 2.8 per cent per annum between 2020 and 2030. Although the economy is expected to remain healthy through this period, we do

not expect a return to the debt-driven increases in consumption that occurred through the late 1990's and early 2000's when growth rates often approached and exceeded 5 per cent.

### *Offsetting cycles will keep investment subdued*

**Private investment** will be characterised by offsetting cycles. The mining and heavy industry construction boom which underwrote the strength in Australia's GDP growth last decade peaked in 2013/14 and will now detract from growth. We initially estimated that **mining and heavy industry construction** would decline by 41 per cent over the next four years. We now believe the decline will be closer to 60 per cent as some projects included in our initial modelling will struggle to get off the ground given lower commodity prices.

It is important to note that total resources construction will still be above long-rung average levels. Projects already under construction and their outstanding activity (ie work yet-to-be-done), will place a floor under the level of work, ensuring investment remains at healthy levels with activity supported by roads.

On the bright side, the long-awaited recovery in **dwellings investment** is now entrenched. This upswing was delayed due to weak housing market sentiment and excessive caution by investors. However, with the expectation of low interest rates for an extended period, and a growing deficiency of stock, a solid increase in dwellings building is now well under way and will build momentum from here. We are comfortable that we have another 18 months of strong residential building along with improved alterations and additions activity before the current dwelling investment cycle runs out of puff. But this recovery will not be uniform between regions, with sizeable stock deficiencies set to drive the markets in parts of Queensland and New South Wales, in particular.

**Table 2.1: Australia – Key Economic Indicators, Financial Years**

| Year Ended June | Actuals | | | | | Forecasts | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015e | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| **Private Investment** | | | | | | | | | | | | |
| – Dwellings | 3.8 | -2.9 | -3.8 | 5.3 | 8.5 | 5.8 | -0.9 | -6.2 | -2.1 | 3.6 | 1.7 | -1.8 |
| – New Non-Dwelling Construction (+) | 18.5 | 35.7 | 10.7 | -2.9 | -12.4 | -13.5 | -7.6 | -10.0 | 4.6 | 13.6 | 7.9 | 0.5 |
| – New Non-Dwelling Building (+) | 9.0 | 4.2 | 11.2 | 5.1 | 4.6 | 2.7 | 3.2 | -6.2 | -3.9 | 6.7 | 7.3 | 3.2 |
| – New Engineering Construction (+) | 25.1 | 54.8 | 10.6 | -6.0 | -19.9 | -22.9 | -15.9 | -13.7 | 13.3 | 19.7 | 8.3 | -1.6 |
| **Total New Private Investment (+)** | **5.8** | **15.1** | **3.2** | **-2.3** | **-2.5** | **-3.9** | **-0.3** | **-4.0** | **3.2** | **9.5** | **6.9** | **2.4** |
| **New Public Investment (+)** | **-3.0** | **-3.6** | **-4.1** | **-1.5** | **-8.7** | **4.4** | **7.9** | **9.0** | **5.4** | **1.4** | **0.9** | **1.7** |
| **Gross National Expenditure (GNE)** | **4.2** | **5.0** | **1.4** | **0.7** | **1.0** | **1.3** | **2.8** | **1.6** | **3.2** | **4.4** | **3.7** | **2.8** |
| **GDP** | **2.3** | **3.7** | **2.5** | **2.5** | **2.4** | **2.5** | **3.4** | **2.7** | **3.4** | **3.6** | **3.2** | **3.1** |
| **Inflation and Wages** | | | | | | | | | | | | |
| Headline CPI (Yr Avg)- RBA/Treasury forecasts (*) | 3.1 | 2.3 | 2.3 | 2.7 | 1.8 | 2.4 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Underlying CPI (Yr Avg)(**) | 2.6 | 2.4 | 2.4 | 2.6 | 2.4 | 2.7 | 2.8 | 2.8 | 2.5 | 2.7 | 3.0 | 3.1 |
| Wage Price Index (Jun on Jun)(***) | 3.8 | 3.7 | 2.9 | 2.6 | 2.4 | 2.9 | 3.5 | 3.6 | 3.4 | 3.6 | 3.9 | 4.0 |
| Wage Price Index (Yr Avg)(***) | 3.8 | 3.6 | 3.3 | 2.6 | 2.4 | 2.7 | 3.3 | 3.7 | 3.4 | 3.6 | 3.9 | 4.0 |
| Average Weekly Earnings (Yr Avg) | 4.2 | 4.3 | 4.6 | 3.0 | 3.1 | 3.8 | 4.4 | 4.9 | 4.4 | 4.7 | 5.1 | 5.2 |
| **Employment** | | | | | | | | | | | | |
| – Employment Growth (Yr Avg) | 2.4 | 1.2 | 1.2 | 0.7 | 1.4 | 1.7 | 1.7 | 1.4 | 1.1 | 2.1 | 2.4 | 1.6 |
| – Employment Growth (May on May) (%) | 2.2 | 1.7 | 0.9 | 0.7 | 2.2 | 1.3 | 1.9 | 0.9 | 1.6 | 2.1 | 2.3 | 1.2 |
| – Unemployment Rate (May) (%) | 5.0 | 5.2 | 5.6 | 5.8 | 5.8 | 6.1 | 5.8 | 6.0 | 5.6 | 5.1 | 4.5 | 4.7 |
| **Labour Productivity Growth** | | | | | | | | | | | | |
| – Total | -0.1 | 2.5 | 1.3 | 1.8 | 1.0 | 0.8 | 1.6 | 1.3 | 2.3 | 1.5 | 0.8 | 1.4 |
| – Non-farm | -0.1 | 2.6 | 1.3 | 1.7 | 1.1 | 0.9 | 1.6 | 1.4 | 2.3 | 1.5 | 0.8 | 1.4 |
| **Exchange Rates** | | | | | | | | | | | | |
| – US$ per A$ (Yr Avg) | 0.99 | 1.03 | 1.03 | 0.92 | 0.84 | 0.75 | 0.75 | 0.73 | 0.69 | 0.75 | 0.81 | 0.79 |

Source: BIS Shrapnel, ABS and RBA

+Expenditure on new assets (or construction work done). Excludes sales (or purchases) of second hand assets.
*Headline CPI forecasts based on Reserve Bank of Australia's forecasts to June 2017 and then Commonwealth medium term projections.
** Based on RBA measure of Trimmed mean and Weighted median inflation
*** Based on Ordinary Time Hourly Rates of Pay
e:estimate

**Private non-dwelling building** is also likely to experience solid growth over the next two years. But that will be offset by falling government building in particular hospital projects. A healthy pipeline of projects in the offices, retail accommodation, warehouses, aged care and entertainment and recreation segments will push overall building higher this year and next. However, completion of these projects and absence of new ones will cause activity to decline from 2016/17. Nonetheless, the longer term outlook is positive, as improving demand across non-mining industries will see capacity constraints emerge and prompt the next round of investment in commercial and industrial buildings later this decade.

The maturing of the mining investment boom will detract from private **plant and equipment investment** in the near-term. Broadly based growth in equipment investment will return when capacity constraints emerge as demand picks up. That we think is at least another year away.

Total investment in intellectual property products (IPP) rose by 1.7 per cent in the March quarter with increases recorded all categories of IPP. Mineral and petroleum exploration surprisingly recorded a second successive quarter of growth – due to a lift in offshore oil and gas exploration offsetting declines elsewhere, particularly in iron ore and coal – but we expect this rebound to be short-lived. Exploration in real terms is already down 27 per cent from its December 2012 peak, and we expect further falls in overall exploration over the next year, before rising from the trough over 2016/17.

R&D and computer software investment is expected to gradually strengthen over the next few years reflecting catch-up of necessary investment after a period of deferrals by many businesses. In addition, emerging capacity constraints when demand finally picks up will boost investment as firms begin to shift their focus from cost-cutting to servicing growth in demand. Overall, investment in IPP is expected to record a small increase this year before picking up pace over subsequent years.

The completion of the last of the post GFC stimulus in particular health projects and belt tightening to control budget deficits and debt will be a drag on **public investment** in the short-term. However, we expect a recovery in the second half of the decade. This will be underwritten by the next round of infrastructure projects as state governments embrace the process of ‘asset recycling’ where mature assets are sold or leased to finance new ones.

State Government finances in Queensland and Western Australia in particular will be boosted by increased royalties as the large mining projects come on stream, but the other states will remain dependent on the Commonwealth Government, and may not fare so well.

### 2.2.3 Labour demand and supply

Employment growth has generally been subdued since mid 2011 reflecting a weakening in employers’ demand for labour due to a prevailing orthodoxy of cost cutting including labour costs. More recently, the maturing of the mining investment boom — and the transition to less labour-intensive production phase — have weighed on the demand for labour in mining and mining-related sectors such as employment services firms, engineering & technical services firms and vehicle and equipment leasing providers.

We expect employment growth to remain weak over the next 18 months as many trade-exposed businesses continue to focus on cost-cutting to deal with problems of competitiveness associated with the still too ‘high’ Australian dollar. Other businesses’ demand for labour will also be weak due to slower growth in demand, revenue and profits. In addition, miners are cutting costs including labour to preserve profitability in the face of lower commodity prices. With the labour force expected to continue to outpace employment growth (albeit marginally), the unemployment rate is forecast to rise and peak at 6.3 per cent by mid-2016.

However, employment growth should pick up from the late 2016. This will see the unemployment rate drop to 6 per cent (s.a) in mid-2017, before again rising (as the economy slows) to a peak of 6.1 per cent (s.a.) in the second half of 2018.

Overall, we expect employment growth to average 1.6 per cent per annum over the next five years slightly stronger than the labour force growth. In the medium-to-longer term, continued solid employment growth should see the unemployment rate cycle between 4.5 and 5.5 per cent, with any further decrease in the unemployment rate moderated by increases in migration and/or higher interest rates. An unemployment rate much below 5 per cent — which is thought to be the non-accelerating inflation rate of unemployment (NAIRU) — would cause a rise in wage inflation, as employers bid up wages for scarce skilled labour in a tightening labour market.

The labour supply will be critical for medium-term economic growth potential, given relatively low unemployment rates (ie there is not a large pool of spare labour currently available). We expect the labour force to grow at slightly below total population growth over the next 15 years as the 65 years and over category grows strongly. This is in contrast to previous decades where the baby boomers, immigration and increased participation rate provided a significant boost to the working age population.

## 2.3 Main risks to outlook

There is a risk that commodity prices don't rebound and we have a bigger collapse in mining investment. Our assumption is for a large decline in resources investment. A drastic deterioration in the prospects of mining projects could trigger a bigger fall in mining investment and a recession in Australia. However, we see this as a low probability (tail) event as the Federal Government has scope to loosen fiscal policy to support growth in Australia if needed.

There is a risk that the dollar will fall further or more quickly than currently anticipated. But this would be a positive outcome for many Australian industries, including the perpetually weak manufacturing sector, as well as other trade-exposed industries such as agriculture, tourism and education.

There is a risk that our forecast recovery in non-mining business investment will take longer to come through, which means that the economy will stay softer for longer. If the recovery does not come through, we expect the Reserve Bank to keep interest rates at historically low levels even longer than our current forecast to support economic recovery.

Longer term, the main risk to Australia's growth prospects relate to the fundamental drivers of growth – lower population growth and a failure for labour productivity growth to maintain its long-term average. However, we expect Australia's relatively high level of income to continue to attract migrants. Furthermore, as the positive benefits of the terms of trade and increased labour supply of the past decade or two start to wane, we expect both governments and businesses to make a more concerted effort to invest in productivity – much as it occurred during the 1980s and 1990s.

## 2.4 Medium term issues

The Australian economy is subject to strong internally generated cyclical swings. In addition, Australia's market economy orientation and non-interventionist policy means that the economy has to adjust to short-term external forces beyond our control with little regard to the longer term consequences. The commodities demand and price boom with the associated rise in the Australian dollar driving structural change is a case in point. The financial engineering boom followed by the GFC-induced correction was another.

A decade ago, the Australian economy was just recovering from the overinvestment of the 1980s debt-driven investment boom and the subsequent financial crisis and recession. It took a long

time to absorb the excess capacity created during the boom. But capacity constraints eventually drove a recovery in business investment early last decade, spreading through to balanced growth in the economy by mid-decade.

The minerals boom, and the consequent minerals investment boom, left everything else in abeyance. Since that time, underwritten by the strong rise in the Australian dollar, we have built up our capability to service much higher levels of minerals investment at the expense of trade-exposed activity, focused in regions servicing those major projects. The boost to activity from strong mining investment, albeit now declining, has been the primary driver of growth in the economy and masked the weakness of other sectors. That was aided by the boost from the Government's GFC (global financial crisis) stimulus package and lower interest rates.

We went through a process of structural change, shifting labour and operational resources towards mining investment and away from non-mining, and particularly non-mining trade-exposed export and import-competing, industries. This has resulted in a corresponding shift between regions. Those regions servicing mining investment, and the capital cities where much of that took place, prospered largely at the expense of non-mining-related activities and regions.

Many workers involved in those projects work on a 'fly-in fly-out' rotation, boosting associated residential, hospitality, retail and transportation services. The cities servicing those projects have boosted their capacity to undertake design, construction, project management, legal, financial, accounting and other services, requiring increased facilities such as office space to house that activity and flowing on to stimulate the broader economy.

The main transmission mechanism for the shift of resources towards minerals investment was the rise in the Australian dollar. The resultant reduction in international competitiveness underwrote the process of structural change mentioned above, with the hollowing out of trade-exposed industries 'making room for the minerals boom'. Consequently, the continued loss of industry, regular announcements of job losses and shifting of activities offshore. These businesses are under enormous competitive pressure. Typically, in what has become an increasingly global economy, the decision whether to remain operating in Australia is made when the next major investment or retooling decision has to be made. Hence, the protracted adjustment period.

That structural change process is ongoing as the impact of the 'still too high' Australian dollar continues to work its way through the system. We think the Australian dollar needs to be below US 70 cents for Australian trade-exposed industries to be competitive.

Nor has the weakness only been felt in the non-mining trade-exposed sectors. Much of the rest of the economy, sheltered from the impact of the high dollar, is still suffering from the consequences of the GFC. Weak confidence, revenue and profits continue to impact on business psychology. Further, cost-cutting and cash preservation is deferring and delaying investment. The weakness of non-mining business investment, coupled with long lead times between investment and capacity coming on stream, is setting up Australian industry for a period of tight capacity later this decade, leading to a surge in investment. But not yet. There is still sufficient capacity to cater for another 18 months to two years of growth, with weak confidence delaying the next round of investment. Hence the current weakness of the non-mining economy.

The 'new normal' of weak demand and profits driving cost-cutting 'productivity initiatives' is a child of the long period of weakness of non-mining-related industries since the GFC. This psychology is self-fulfilling, perpetuating the weakness of confidence, demand and profits. But it also contains the seeds of the next upswing. Eventually, inadequate investment will lead to capacity constraints, underwriting the next phase of investment. Indeed, investment delayed will

require a catch-up to increase capacity to levels required to service demand, later adopting new labour-saving technologies to improve efficiency and allow companies to service market shifts. As the cycle moves into the investment phase, the psychology of business will shift from survival to growth mode.

***Rolling investment cycles will continue to dominate as drivers of Australia's economic growth***

The extraordinary stimulus to GDP from minerals investment growth is over. That contribution will turn negative from now on as minerals investment recedes from peak levels. Even so, minerals investment remains extraordinarily high, at a level adding substantially to our capacity to produce and export. That is both a strength and a weakness, the risk being that a substantial decline will have a major negative impact on demand and activity. Meanwhile, growth in resources production and exports is sustaining GDP growth, but with a lesser effect on employment.

And now a phase of residential investment is well entrenched, with activity strengthening for another two years.

After that, the main driver of growth will be non-mining business investment. We do not think it will pick up pace for another year or two. However, once it picks up momentum, it will constitute a long and strong upswing. Some sectors, notably commercial property, look like peaking in some cities around the end of this decade, though others will turn down earlier. The delay to the commencement of this investment is setting the preconditions for a strong cyclical upswing.

We are a long way from stable, balanced growth. It looks as though the continuation of strong cycles in investment will continue to drive cyclical shifts in the economy.

## 2.5 The Queensland economy: past growth, current conditions and short-to-medium term outlook

The **Queensland** economy was a major beneficiary of the mining boom. But that masked major differences between sectors with Queensland's other trade-exposed industries, particularly tourism and agriculture, paying the price of the rise in the dollar associated with the mining boom. That will now reverse, initially as Queensland absorbs the shock of the fall in mining investment and then as the lower dollar boosts trade-exposed industries.

Growth has weakened markedly since mid 2012, with GSP growth decelerating to 2.3 per cent in 2013/14 (after averaging 4.2 per cent per annum over the previous 11 years) and to 1.5 per cent in 2014/15. SFD (state final demand which is the sum of expenditures by households, business and the state government) has effectively stalled since mid-2012 and we estimate it declined by 2.5 per cent last financial year. Consequently, employment growth has been weak, averaging 0.9 per cent growth per annum over the past three years.

The Queensland economy will continue to experience a tough time for at least another year as it absorbs the shock of falling mining investment. SFD is forecast to fall a further 0.9 per cent in 2015/16 as private engineering construction more than halves and public sector investment decreases again. Although we expect public engineering construction (and overall public investment) to begin a recovery from 2016/17, private sector engineering construction will decline further in 2016/17.

We are forecasting pipelines, mining and heavy industry engineering construction to fall almost 80 per cent over the 3 years to 2016/17 or from $30.3 billion to under $6.5 billion —back to 2009 levels. This fall will be largely driven by a massive decline in gas-related construction as the three colossal LNG projects at Gladstone, including gasfields and connecting pipelines, are completed and come on stream. Coal-related engineering construction has already declined 30

per cent from its peak of $9.2 billion in 2011/12 to $6.5 billion in 2013/14 and will more than halve to around $2.4 billion by 2016/17.

However, the Queensland economy will not suffer all of the negative effects from the decline in mining investment. There has been a large imported component (sourced from overseas) in the investment classified to mining and heavy industry engineering construction—with a high proportion of mining equipment also imported. The overseas engineering construction component often consists of large pieces of fabricated structures imported and bolted together on site, particularly for the huge LNG projects currently near or at completion. So although the local economy didn't receive all the benefits of the resources construction boom during the upswing, conversely it will not suffer the whole negative magnitude of the downturn.

Further, the sharp depreciation of the Australian dollar will boost prospects for Queensland's tradeables sectors such as tourism, agriculture, education services and manufacturing. The currency depreciation is also helping some mines/smelters remain viable and in production.

As the shift from the mining investment phase to the production phase progresses, mining output will make more and more significant contributions to economic growth via exports. However, the export multiplier for GSP (ie the positive spending effects that spill over to the rest of the economy) is much smaller than the multiplier effect of domestic construction. So although the economic benefits stemming from mining production will continue to flow through to the rest of the economy, these will be on a smaller scale.

The operational (production) phase of mining is much less labour-intensive than the construction (investment) phase, so we expect employment growth will continue to be undermined by layoffs from the mining industry as projects under construction reach completion, without similarly-sized projects coming through to take their place. In addition to this, it has been estimated that about a quarter of the Brisbane office market was used by firms directly and indirectly servicing the mining boom. The decline in investment has therefore led to a substantial adjustment in office employment and occupancy, and eventually will impact on office construction.

The recovery in public sector investment has been delayed by the vote not to proceed with the sale of public assets. The proceeds from the asset sales were to be used to retire government debt and finance the next round of projects. The election spending promises by the new Labor government were far more modest than the LNP, so the expected rebound in public infrastructure and recurrent spending will be slower. Government finances are in a relatively poor shape, public sector debt has blown out and the Queensland government has lost its AAA credit rating.

The fall in coal and minerals prices over the past three years has also weakened coal and mineral royalties revenues flowing to the government, but these royalties should increase over the medium term as higher global coal and minerals prices (in US$ terms) combined with a lower A$ helps A$ prices and revenues, and as LNG and coal production volumes increase on the back of the enormous level of investment over recent years. State government finances should also improve as the residential property market and stamp duties recover, and as employment picks up. So as state government finances gradually improve, we eventually expect government spending to recover, but that is still a year away. So after falling by almost a collective 30 per cent over the six years from the 2009/10 peak to the 2015/16 trough, public investment is expected to rebound in 2016/17 and grow over the medium term.

In line with this outlook, public non-residential building activity is estimated to have declined further in 2014/15 and is forecast to fall further over the next two years, on average, before recovering. Conversely private non-residential building picked up strongly in 2013/14, boosted

by retail and warehouse building and the $1.2 billion first stage of the (mainly privately funded) Sunshine Coast University Hospital. Further growth is expected in private non-residential building, driven by hotels and factories (with these two categories boosted by the lower dollar), warehouses and entertainment buildings. Office building work done will also hold up in the near term, but as the current round of office projects are completed, it will worsen the emerging oversupply and office construction is forecast to decline sharply in 2016/17. That said, we expect a strong, albeit a relatively short cycle of office construction, primarily in Brisbane late this decade.

The recovery in dwellings building is well entrenched and is expected to maintain its momentum through 2015/16. The residential upswing under way can be partly attributed to the mining boom, which stimulated strong population growth from both interstate and overseas, driving a mounting stock deficiency. Given the size of this gap between supply and demand, we expect to see dwelling investment trend upwards until the early-2020s, aside from a dip in 2017, largely due to higher interest rates.

The upswing in dwelling and private non-residential investment, combined with the recovery in public investment and in the state's tradeables sectors, will lead to a mild recovery in employment and household spending through 2015/16, strengthening from 2016/17. From late this decade, we also expect the next round of resources projects (albeit a much smaller round than the recent past) to proceed, and this, along with an expected broader base of economic activities, should see a return to stronger growth in the early 2020s. There will also be a need to build more dwellings and social and economic infrastructure, given we expect Queensland will still have the fastest population growth of the states, and much of the existing infrastructure will be showing signs of emerging bottlenecks.

There is reason for optimism in the medium-term. Fundamentally, Queensland has a diversified economy, with key industries including agriculture, tourism and education. Prior to the mining boom, and the structural shift towards mining and mining-related activity, the state experienced an extended period of strong growth. As the economy adjusts to significantly lower levels of mining investment and a depreciating Australian dollar, the question will be, how quickly will the state's trade-exposed industries be able to recover and take up the slack?

**Table 2.2: Queensland – Key Economic Indicators, Financial Years**

| | Actuals | | | | | Forecasts | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year Ended June | 2011 | 2012 | 2013 | 2014 | 2015e | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
| **Queensland** | | | | | | | | | | | | |
| Total Construction Activity[(a)] | 9.3 | 20.8 | 6.5 | 4.9 | -22.3 | -24.3 | -1.3 | 0.9 | 2.9 | 13.7 | 8.3 | 0.2 |
| State Final Demand | 4.3 | 8.5 | 1.5 | 0.3 | -2.5 | -0.9 | 3.4 | 2.6 | 3.5 | 5.8 | 4.7 | 3.2 |
| Gross State Product (GSP) | **1.0** | **4.8** | **3.0** | **2.3** | **1.6** | **2.8** | **4.3** | **3.2** | **3.8** | **4.3** | **4.4** | **3.2** |
| Employment Growth | 1.6 | 1.4 | 0.6 | 1.2 | 1.1 | 0.9 | 2.1 | 1.7 | 1.1 | 2.5 | 3.2 | 2.3 |
| **Australia** | | | | | | | | | | | | |
| Total Construction Activity[(a)] | 7.1 | 14.0 | 3.7 | -0.1 | -7.1 | -6.5 | -4.2 | -5.0 | 2.7 | 6.7 | 3.0 | -0.9 |
| Australian Domestic Demand | 3.7 | 5.2 | 1.6 | 1.0 | 0.8 | 1.3 | 2.8 | 1.7 | 3.0 | 4.4 | 3.8 | 2.9 |
| Gross Domestic Product (GDP) | 2.3 | 3.7 | 2.5 | 2.5 | 2.4 | 2.5 | 3.4 | 2.7 | 3.4 | 3.6 | 3.2 | 3.1 |
| Employment Growth | 2.4 | 1.2 | 1.2 | 0.7 | 1.4 | 1.7 | 1.7 | 1.4 | 1.1 | 2.1 | 2.4 | 1.6 |

Source: BIS Shrapnel and ABS

(a) Total Construction work done (constant prices), equals sum of new dwellings, building, alterations and additions activity over $10 000, non-residential building and engineering construction by private and public sectors.

e:estimate

# 3. INFLATION AND WAGES

## 3.1 Outlook for Australian inflation

Broad based inflationary pressures remain subdued reflecting weak demand inflationary pressures. The Reserve Bank's measure of underlying inflation eased slightly in the March quarter (rising by 0.6 per cent compared to 0.7 per cent in the previous quarter). Annual underlying inflation was 2.4 per cent in the March quarter, near the middle of the Reserve Bank's 2 to 3 per cent target range for CPI inflation. Meanwhile, annual headline rate at 1.3 per cent is the lowest level recorded since June 2012.

Looking ahead, we believe tradeables inflation will lift slightly due to the recent depreciation of the Australian dollar. The Australian dollar has depreciated nearly 15 per cent since September 2014 quarter resulting in a cumulative 7.1 per cent rise in import prices of consumer goods over the previous two quarters. However, consumer durables inflation (including motor vehicles and parts, clothing & footwear, furniture & furnishings, household electrical items and toys, books and leisure goods) actually fell over the past two quarters, partly as a result of reduction in the margins along the supply chain (ie of wholesalers and retailers) and discounting. That said, the quantum of discounting in the March 2015 quarter was less than previous years suggesting some pass-though of higher import prices on final prices of retail goods. We think this process is likely to continue over the next few quarters resulting in part reversal of the deflation in consumer durables prices recorded over the past three quarters.

Some of higher tradeables inflation will be offset by weaker non-tradeables inflation due to soft wages growth. The latter reflects spare capacity in the labour market as a result of weak domestic demand. Accordingly, much lower wage increases have been awarded to 50 per cent of workers who have their pay set by 'individual arrangements'. We estimate that wage increases for employees in this segment eased from 3.5 per cent in September 2012 quarter to 1.7 per cent in the March 2015 quarter. In year-average terms, wages growth as measured by WPI now stands at 2.5 per cent, the lowest level since the late 1990s when the ABS first published the data. Year average growth in 2014/15 is expected to be only 2.4 per cent for the WPI (wage price index) and 3.1 per cent for AWOTE (average weekly ordinary time earnings) with only a modest recovery forecast for 2015/16. This will put downward pressure on non-tradeables or domestic services inflation.

Overall, our view is that inflation will be weak reflecting spare capacity in the economy. We expect inflation to generally remain contained over the next 6 months (with prices rises fluctuating between 0.5 to 0.8 per cent per quarter) due predominantly to weak growth in unit labour costs (ie price of labour such as wage price index inflation adjusted for productivity). However, higher import prices from the recent fall in the dollar will put upward pressure on tradeables goods and services. Nonetheless, we expect that underlying inflation will rise over calendar year 2016 and reach 2.8 per cent by the end of the year. As the economic recovery gathers momentum through 2016, we believe retailers will rebuild margins and pass on some of the higher import costs of tradeable goods, to consumers. Reduction in spare labour capacity will also add to inflation from late 2016 via rising wages.

In year-average terms, BIS Shrapnel is forecasting CPI inflation to ease to 1.8 per cent in 2014/15 before gradually rising to 2.5 per cent and 2.8 per cent over 2015/16 and 2016/17 respectively. We expect CPI inflation to remain within the Reserve Bank's 2 to 3 per cent target range (albeit in the upper half) towards the end of the decade. Inflation containment will remain a policy challenge in the medium-term.

### 3.1.1 Reserve Bank of Australia CPI forecasts

The Reserve Bank and the Federal Treasury provide the 'official' view of CPI forecasts. The RBA's May 2015 'Statement on Monetary Policy' projects the headline CPI rate at 1½ per cent in the June quarter 2015, before rising to 2½ per cent in the December 2015 quarter. According to the RBA, headline CPI inflation is then expected to be in the 2 to 3 per cent range through to June quarter 2017 (RBA current forecasts only extend to June 2017).

The Federal Treasury in their Budget 2015/16 projected CPI inflation at 1¾ per cent in 2014/15 and 2½ per cent in 2015/16. For the budget forward estimate period (ie 2016/17 and 2017/18), the Federal Treasury forecast CPI inflation at 2.5 per cent.

**Table 3.1: Wages and Prices – Australia**
**(Year Average Growth)**

| Year Ended June | Average Weekly Ordinary Time Earnings[1] $/week | %CH | Wage Price Index All Industries 2012=100 | %CH | CPI Headline Inflation (BIS Shrapnel forecasts) 2012=100 | %CH | Official Headline CPI [2] 2012=100 | %CH |
|---|---|---|---|---|---|---|---|---|
| 2000 | 765.4 | | 64.7 | | 69.4 | | 69.4 | |
| 2001 | 804.2 | 5.1 | 66.9 | 3.5 | 73.6 | 6.0 | 73.6 | 6.0 |
| 2002 | 847.4 | 5.4 | 69.1 | 3.3 | 75.7 | 2.9 | 75.7 | 2.9 |
| 2003 | 890.0 | 5.0 | 71.5 | 3.5 | 78.0 | 3.0 | 78.0 | 3.0 |
| 2004 | 931.6 | 4.7 | 74.1 | 3.6 | 79.9 | 2.4 | 79.9 | 2.4 |
| 2005 | 972.9 | 4.4 | 76.9 | 3.7 | 81.8 | 2.4 | 81.8 | 2.4 |
| 2006 | 1 017.5 | 4.6 | 80.0 | 4.1 | 84.4 | 3.2 | 84.4 | 3.2 |
| 2007 | 1 054.1 | 3.6 | 83.2 | 3.9 | 86.9 | 3.0 | 86.9 | 3.0 |
| 2008 | 1 106.1 | 4.9 | 86.6 | 4.1 | 89.8 | 3.4 | 89.8 | 3.4 |
| 2009 | 1 166.5 | 5.5 | 90.2 | 4.1 | 92.6 | 3.1 | 92.6 | 3.1 |
| 2010 | 1 231.3 | 5.6 | 92.9 | 3.1 | 94.8 | 2.3 | 94.8 | 2.3 |
| 2011 | 1 282.5 | 4.2 | 96.5 | 3.8 | 97.7 | 3.1 | 97.7 | 3.1 |
| 2012 | 1 338.1 | 4.3 | 100.0 | 3.6 | 100.0 | 2.3 | 100.0 | 2.3 |
| 2013 | 1 400.3 | 4.6 | 103.3 | 3.3 | 102.3 | 2.3 | 102.3 | 2.3 |
| 2014 | 1 442.2 | 3.0 | 106.0 | 2.6 | 105.1 | 2.7 | 105.1 | 2.7 |
| 2015e | 1 487.2 | 3.1 | 108.6 | 2.4 | 106.9 | 1.8 | 106.9 | 1.8 |
| Forecasts | | | | | | | | |
| 2016 | 1 543.3 | 3.8 | 111.5 | 2.7 | 109.6 | 2.5 | 109.5 | 2.4 |
| 2017 | 1 611.0 | 4.4 | 115.1 | 3.3 | 112.7 | 2.8 | 112.3 | 2.6 |
| 2018 | 1 690.7 | 4.9 | 119.4 | 3.7 | 115.8 | 2.8 | 115.1 | 2.5 |
| 2019 | 1 765.4 | 4.4 | 123.5 | 3.4 | 119.0 | 2.8 | 118.0 | 2.5 |
| 2020 | 1 847.7 | 4.7 | 128.0 | 3.6 | 122.3 | 2.8 | 120.9 | 2.5 |
| 2021 | 1 941.2 | 5.1 | 132.9 | 3.9 | 126.0 | 3.0 | 124.0 | 2.5 |
| 2022 | 2 041.8 | 5.2 | 138.2 | 4.0 | 129.9 | 3.1 | 127.1 | 2.5 |
| Compound Annual Growth Rates [3] | | | | | | | | |
| 2000-2010 | 4.9 | | 3.7 | | 3.2 | | 3.2 | |
| 2010-2015 | 3.8 | | 3.2 | | 2.4 | | 2.4 | |
| 2015-2022 | 4.6 | | 3.5 | | 2.8 | | 2.5 | |
| 2017-2022 | 4.9 | | 3.7 | | 2.9 | | 2.5 | |

Source: BIS Shrapnel, ABS

(1) Earnings per person for full-time adults. Data is year ended May (available only mid month of quarter).

(2) Headline CPI forecasts based on Reserve Bank of Australia forecasts to June 2017 quarter and then Commonwealth Treasury medium term projections.

(3) e.g. CAGR (Compound Annual Growth Rates) for 2017-2022 is CAGR for 2017/18 to 2021/22 inclusive (ie next regulatory period).

e:estimate

## 3.2 Outlook for Australian all industries wages

### 3.2.1 Brief description of BIS Shrapnel's wages model

The key determinants of nominal wages growth are consumer price inflation, productivity and the relative tightness of the labour market (ie the demand for labour compared to the supply of labour). Price inflation, in turn, is primarily determined by unit labour costs. Other factors which influence price inflation include the exchange rate, the stage of the business cycle and the level of competition in markets generally.

BIS Shrapnel's model of wage determination is based on the analysis of past and future (expected) wage movements in three discrete segments of the workforce, based on the three main methods of setting pay and working conditions (see table 3.2):

- Those dependent on awards rely on pay increases given in the annual National Wage case by Fair Work Australia (formerly by the Fair Pay Commission and Australian Industrial Relations Commission). Most of the wage increases in the National wage case over the past decade have been given as flat, fixed amount (ie dollar value) increases, rather than as a proportional increase although the last two increases were given as a percentage increase. At the all industries level, 8.1 per cent of all full-time employees (data excludes those in agriculture, forestry and fishing) have their pay rises determined by this method. In the electricity, gas, water & waste services sector, only 2.7 per cent of workers have their pay set by this method.

- Collective agreements negotiated under enterprise bargaining account for 41.9 per cent of all employees, but 67.7 per cent of electricity, gas, water and waste services employees' wage increases are determined by this method.

- The remaining 50 per cent of all industries employees have their pay set by individual arrangements, such as individual contracts or other salary arrangements (including incentive-based schemes), while the proportion for electricity, gas, water and waste services is currently estimated to be around 30 per cent.

The key influences on the different wage determination mechanisms of each discrete segment are described below:

- Fair Work Australia (the body responsible for setting minimum wages in Australia) is responsible for establishing and maintaining a safety net of fair minimum wages for employees' dependant on Awards. This requires maintenance of employees' cost of living. Hence, in setting minimum wages, Fair Work Australia takes into account the performance and competitiveness of the national economy, including productivity, business competitiveness and viability, inflation and employment growth.

  Accordingly, increases in the Federal Minimum Wage (on which a range of mostly lower paid awards are also based) granted by the Fair Work Australia each year are usually set in relation to recent increases in the CPI and with regard to the Fair Work Australia's view of both current and short-term economic conditions. Fair Work Australia granted a 2.5 per cent ($17.30) increase in minimum wages, effective July 2015. The $17.30 per week increase lifted the Federal Minimum Wage to $656.90 per week.

## Table 3.2: Wages Growth, All Industries, Australia (by Workforce Segmented by Pay Setting Method)

| | | | | | | | Forecast | | | | | | | Averages | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year Ended June | 2010 | 2011 | 2012 | 2013 | 2014 | 2015e | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2010-15 | 2015-22 |
| **Proportion of Workforce by Pay setting Method (a)** | | | | | | | | | | | | | | | |
| Awards Only | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% | 8.1% |
| Collective Agreements | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% | 41.9% |
| Individual Arrangements | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **AWOTE** | | | | | | | | | | | | | | | |
| Awards Only | 0.7 | 3.5 | 3.4 | 2.9 | 2.6 | 3.0 | 2.5 | 2.9 | 3.3 | 2.9 | 2.8 | 3.1 | 3.2 | 3.1 | 3.0 |
| Collective Agreements | 4.1 | 4.0 | 4.0 | 3.7 | 3.5 | 3.4 | 3.4 | 3.6 | 3.8 | 3.7 | 3.9 | 4.0 | 4.0 | 3.7 | 3.8 |
| Individual Arrangements (b) | 7.2 | 4.4 | 4.7 | 5.5 | 2.6 | 2.9 | 4.2 | 5.1 | 6.0 | 5.1 | 5.4 | 6.0 | 6.2 | 4.0 | 5.4 |
| **AWOTE (Persons)(c)** | **5.6** | **4.2** | **4.3** | **4.6** | **3.0** | **3.1** | **3.8** | **4.4** | **4.9** | **4.4** | **4.7** | **5.1** | **5.2** | 3.8 | 4.6 |
| **Wage Price Index** | | | | | | | | | | | | | | | |
| Awards Only | 0.7 | 3.5 | 3.4 | 2.9 | 2.6 | 3.0 | 2.5 | 2.9 | 3.3 | 2.9 | 2.8 | 3.1 | 3.2 | 3.1 | 3.0 |
| Collective Agreements | 4.1 | 4.0 | 4.0 | 3.7 | 3.5 | 3.4 | 3.4 | 3.6 | 3.8 | 3.7 | 3.9 | 4.0 | 4.0 | 3.7 | 3.8 |
| Individual Arrangements (b) | 2.6 | 3.7 | 3.4 | 3.0 | 1.9 | 1.5 | 2.2 | 3.1 | 3.8 | 3.3 | 3.4 | 3.9 | 4.1 | 2.7 | 3.4 |
| **Wage Price Index (Ord. Time)** | **3.1** | **3.8** | **3.6** | **3.3** | **2.6** | **2.4** | **2.8** | **3.3** | **3.7** | **3.4** | **3.6** | **3.9** | **4.0** | 3.2 | 3.5 |
| Compositional Effects + Bonuses,etc | 2.5 | 0.4 | 0.7 | 1.3 | 0.4 | 0.6 | 1.0 | 1.1 | 1.2 | 1.0 | 1.1 | 1.2 | 1.2 | 0.7 | 1.1 |

Source: BIS Shrapnel, ABS, Department of Employment

(a) Full-time Adult Persons

(b) Indiv Agreements picks up all the compositional effects and bonuses plus all the standard errors of WPI and AWOTE estimates by the ABS

(c) Full-time Adult Persons, excluding overtime

e:estimate

## Table 3.3: Methods of Setting Pay, Industry, May 2010 Proportion of Full-Time Adult Employees (per cent)

| Industry (ANZSIC 2006) | Award Only | Collective Agreements | Individual Arrangements | All Methods of Pay Setting |
|---|---|---|---|---|
| Mining | 1.8% | 42.1% | 56.1% | 100.0% |
| Manufacturing | 9.1% | 29.3% | 61.6% | 100.0% |
| **Electricity, Gas, Water & Waste Services** | **2.7%** | **67.7%** | **29.6%** | **100.0%** |
| Construction | 6.7% | 26.3% | 67.0% | 100.0% |
| Wholesale trade | 7.7% | 11.3% | 81.0% | 100.0% |
| Retail trade | 16.6% | 20.7% | 62.7% | 100.0% |
| Accommodation and Food Services | 31.7% | 23.0% | 45.3% | 100.0% |
| Transport, Postal and Warehousing | 3.9% | 55.9% | 40.2% | 100.0% |
| Information Media and Telecommunications | 3.6% | 29.0% | 67.4% | 100.0% |
| Finance and Insurance Services | 1.5% | 39.9% | 58.7% | 100.0% |
| Rental, Hiring and Real Estate Services | 13.1% | 10.4% | 76.5% | 100.0% |
| Professional, Scientific ans Technical Services | 2.2% | 11.5% | 86.3% | 100.0% |
| Administrative and Support Services | 15.9% | 30.1% | 54.1% | 100.0% |
| Public Administration and Safety | 1.2% | 92.5% | 6.3% | 100.0% |
| Education and Training | 2.9% | 88.9% | 8.1% | 100.0% |
| Health Care and Social Assistance | 12.3% | 66.6% | 21.1% | 100.0% |
| Arts and Recreation Services | 10.4% | 40.1% | 49.4% | 100.0% |
| Other Services | 15.7% | 11.0% | 73.3% | 100.0% |
| **All Industries 2010 Survey** | **8.1%** | **41.9%** | **50.0%** | **100.0%** |

Source: ABS

- Increases in collective agreements under enterprise bargaining are influenced by a combination of recent CPI increases, inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook, and by the industrial relations 'strength' of relevant unions. Because the average duration of agreements now runs for two-to-three years, BIS Shrapnel bases its near-term forecasts on the strength of recent agreements, which have been 'formalised' over recent quarters. Thereafter, collective agreements are based on BIS Shrapnel's macroeconomic forecasts.
- Increases in individual agreements are primarily influenced by the strength of the labour market (especially the demand-supply balance of skilled labour), inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook.

**Wages** growth slowed considerably over the past 18 months due to spare capacity in the labour market. This, in turn, reflects weak domestic demand and cost cutting by businesses. In year-average terms, wages growth as measured by WPI now stands at 2.5 per cent, the lowest level since the late 1990s when the ABS first published the data.

Year average growth in 2014/15 is expected to be only 2.4 per cent for the WPI and 3.1 per cent for AWOTE (average weekly ordinary time earnings).

A broadening in employment, profits and investment is expected from late 2016 as the next set of economic drivers, in particular non-mining business and public investment, slowly come through. Meanwhile, current low interest rates will also stimulate wider economic activity, lifting confidence and spending and encouraging businesses to switch out of cost-containment mode.

The increase in profits, rising price inflation through 2016 and 2017 will push up wages growth over 2016 and 2017. There is usually a lag of at least a year for wages to respond upward to a strengthening in employment and falls in unemployment (and conversely downward wage pressure responding to weaker economic conditions). Wages growth (in year average terms) is expected to rise further and peak at 3.7 per cent for WPI (4.9 per cent for AWOTE) in 2017/18 – which would be the strongest result in WPI terms in nearly a decade. While the RBA will not be too alarmed at wage inflation of around 3.7 per cent (which, with long term productivity of around 1.5 per cent puts unit labour costs around 2.2 per cent – below the mid-point of its target band), it will nevertheless raise rates from late 2016 and in the first half of 2017 to prevent any serious inflationary pressures emerging.

The higher interest rates are expected to cause a slowdown in economic and employment growth during 2018, and this will eventually feed through to wages growth, with wages growth in the individual arrangements segment slowing first. Wages growth is forecast to ease to 3.4 per cent in WPI terms in 2018/19, while AWOTE growth eases to 4.4 per cent at the same time. But with only a small rise expected in the average unemployment rate to 6.3 per cent in 2018 — because of slower labour force growth due to the deceleration in the 'working population' — ongoing tight labour market is expected to see wage pressures re-emerge again towards the end of the decade once the subsequent recovery resumes from the second half of 2019.

**Chart 3.1: Australia – Wages and Prices**

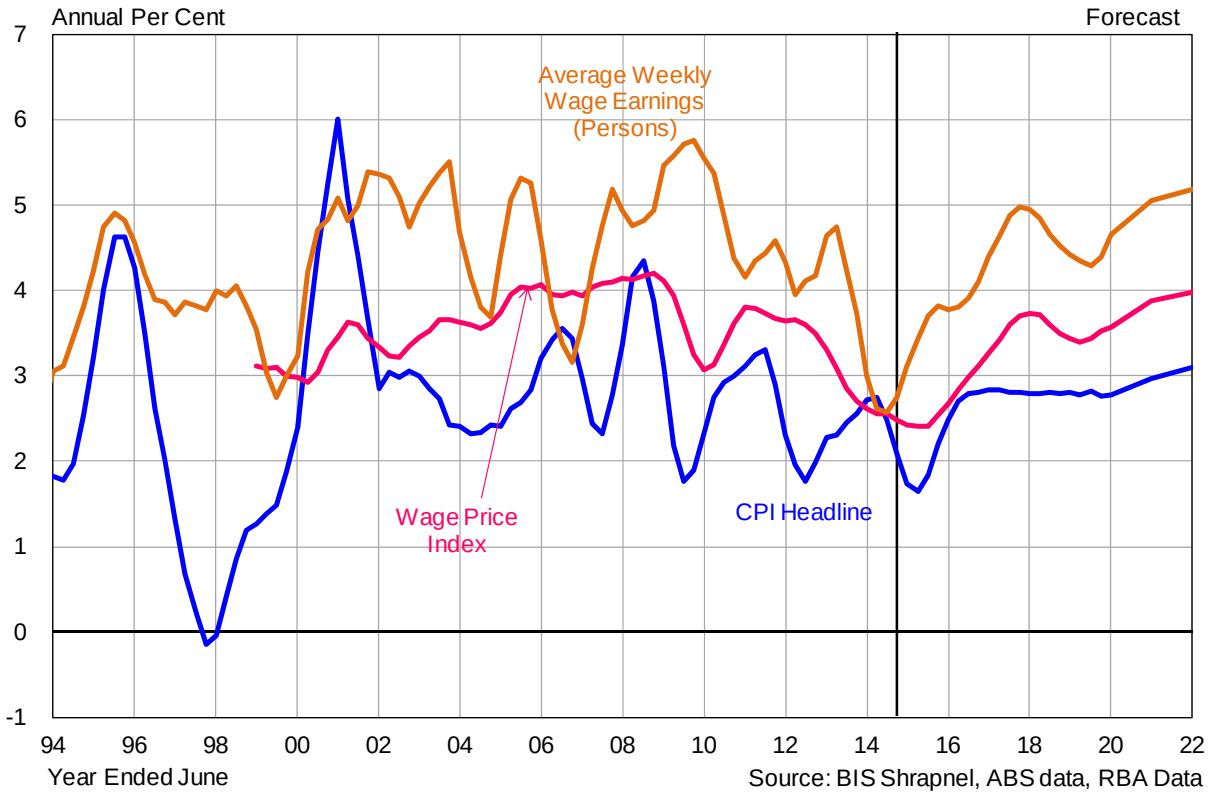
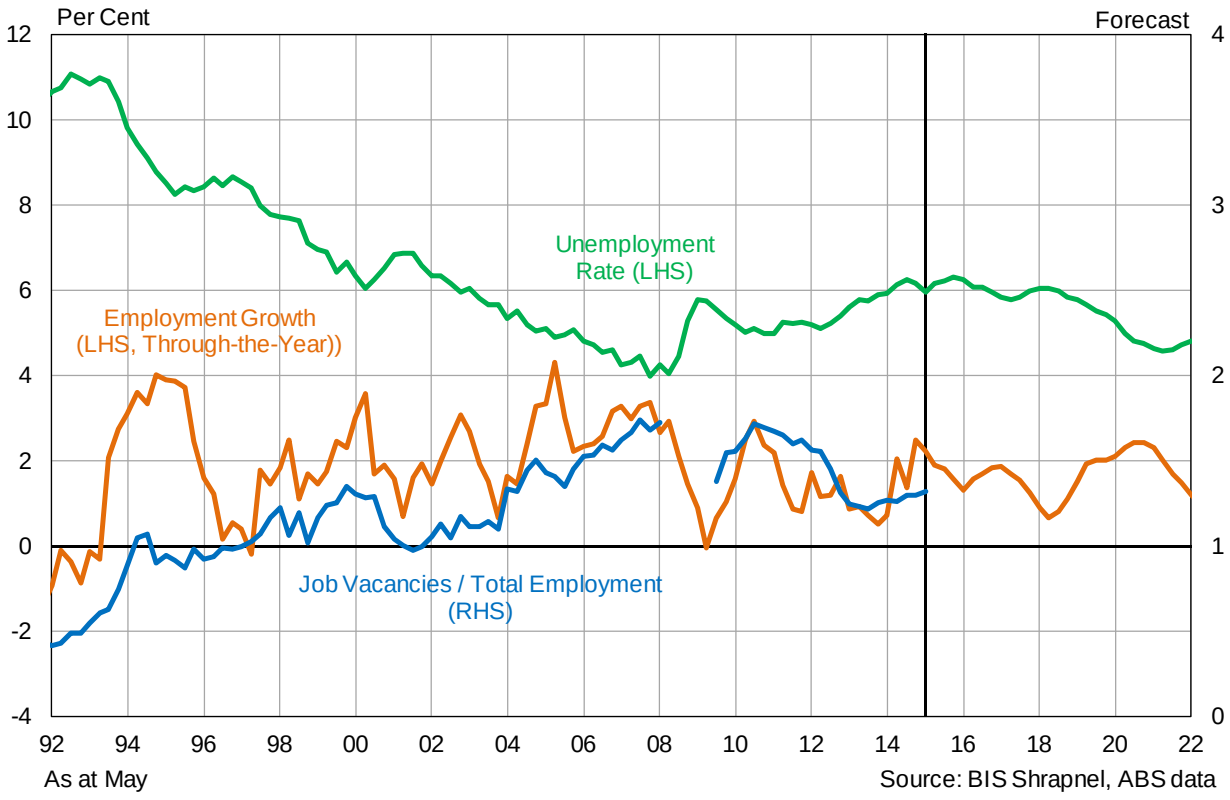



**Chart 3.2: Employment and Unemployment**



# 4. ELECTRICITY, GAS, WATER AND WASTE SERVICES WAGE PRICE INDEX INFLATION FORECASTS

In this section, we provide an outlook for EGWWS (electricity, gas, water and waste services) wages at the national level followed by a discussion and forecasts of wages growth in EGWWS industry in Queensland. The state wage forecasts can be used by Powerlink Queensland to escalate their opex labour costs including all transmission network-related over their next revenue reset period. Note that our wages model is described in section 3 and Appendix A.

**Utilities wages growth will ease for another year**

The mining investment boom reached its peak in 2013/14 and will decline for another three years. Similarly, utilities engineering construction reached its peak in 2012/13 and will also fall over the next three years. Accordingly, wages growth in the utilities sector (in WPI terms) will be relatively modest over 2015/16.

**However, strong union presence in the utilities sector will ensure utilities wage inflation remain above the all industry average**

The key elements of the utilities wage forecast are set out in table 4.4. It shows that collective bargaining dominates the pay setting arrangements in the utilities sector, while the relative absence of workers relying on (often) low-increase awards (set in the National Wage Case) means the overall average for total utilities wages will generally be higher than the all industries average. Over the past decade, the outcomes from collective agreements have been 0.4 per cent higher, on average, than the all industries average, at 4.4 per cent compared to 4 per cent. We expect this trend to continue over the outlook period, with collective agreements achieving average increases of 4 per cent for the utilities sector, compared to 3.8 per cent for all industries (see table 4.4 and 4.5).

Despite the relative weakness of the economy over 2008/09 and 2009/10, wages remained elevated in the utilities sector due to the comparative strength of demand for skilled labour, and particularly because of the strength of unions in what is an essential service sector. The industrial relations reality is that there are powerful utilities unions such as the Communications, Electrical and Plumbing Union (CEPU) and Australian Services Union (ASU), which have a history of achieving high wage outcomes for the sector. Other unions active in the sector include the Australian Workers Union (AWU), the National Union of Workers (NUW) and Professionals Australia (formerly known as Professional Engineers, Scientists and Managers Australia.

BIS Shrapnel analysis shows collective agreements in the EGWWS sector have been on average around 1.5 per cent higher than CPI inflation over the decade to 2010 (excluding the effects of GST introduction in 2000/01). In the five years to 2010 when the labour market was very tight, collective agreements were on average 1.7 per cent above the CPI. Given the strength of unions in the sector and a still strong demand for skilled labour over the next four years (and possibly beyond) than for most of the 2000s, collective agreements are forecast to remain around 1.2 per cent above the CPI in the forecast period.

As well as increases in CPI, increases in collective agreements under enterprise bargaining are also influenced by a combination of inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook, and, as mentioned, by the industrial relations ‘strength’ of relevant unions. Because the average duration of agreements runs for two-to-three years, BIS Shrapnel bases its near-term forecasts of Enterprise Bargaining Agreement (EBA) wages on the strength of recent agreements, which have been ‘formalised’ or ‘lodged’ (ie an agreement has been ‘reached’ or ‘approved’) over recent quarters.

## Table 4.1: Wage Price Index Growth by Industry Sector and by State

| Sector | % of Total Employment Nov 2014 | Wage Price Index[1] Annual Per Cent Change | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Jun'08 | Jun'09 | Jun'10 | Jun'11 | Jun'12 | Jun'13 | Jun '14 | Dec '14 | Mar '15 | Five-Year Average |
| Private | | 4.4 | 3.6 | 2.7 | 3.9 | 3.8 | 3.0 | 2.5 | 2.5 | 2.2 | 3.2 |
| Public | | 3.9 | 4.4 | 4.0 | 3.7 | 3.3 | 2.8 | 2.8 | 2.8 | 2.4 | 3.2 |
| Industry | | | | | | | | | | | |
| Mining | 2.0 | 6.7 | 4.2 | 3.8 | 4.1 | 5.2 | 3.5 | 2.5 | 2.4 | 2.4 | 3.6 |
| Manufacturing | 7.9 | 4.6 | 2.5 | 2.6 | 4.1 | 3.8 | 2.8 | 2.8 | 2.7 | 2.6 | 3.3 |
| Electricity, Gas, Water and Waste Services | 1.2 | 3.5 | 4.7 | 4.7 | 3.7 | 3.7 | 3.9 | 3.0 | 3.0 | 2.5 | 3.5 |
| Construction | 9.1 | 4.7 | 4.5 | 2.9 | 4.0 | 4.1 | 3.2 | 2.9 | 2.5 | 1.8 | 3.3 |
| Wholesale Trade | 3.3 | 4.6 | 3.3 | 1.7 | 4.8 | 4.8 | 3.4 | 2.0 | 2.5 | 2.2 | 3.4 |
| Retail Trade | 10.8 | 4.5 | 3.5 | 2.8 | 3.3 | 2.7 | 2.7 | 2.4 | 2.3 | 2.1 | 2.7 |
| Accommodation and Food Services | 7.0 | 2.3 | 3.4 | 2.0 | 3.0 | 3.3 | 2.6 | 2.2 | 2.6 | 2.5 | 2.8 |
| Transport, Postal and Warehousing | 5.2 | 3.9 | 4.4 | 3.2 | 4.0 | 3.8 | 2.9 | 2.4 | 2.4 | 2.4 | 3.0 |
| Information Media and Telecommunications | 1.9 | 3.9 | 3.0 | 2.0 | 3.2 | 3.5 | 2.9 | 2.4 | 2.5 | 2.4 | 2.9 |
| Finance and Insurance Services | 3.6 | 3.6 | 3.2 | 3.1 | 4.5 | 4.1 | 2.9 | 2.6 | 2.7 | 2.5 | 3.3 |
| Rental, Hiring and Real Estate services | 1.9 | 4.1 | 3.6 | 2.5 | 3.6 | 3.5 | 3.1 | 2.3 | 2.4 | 2.2 | 2.9 |
| Professional, Scientific and Technical Services | 8.1 | 5.1 | 5.1 | 2.9 | 4.0 | 4.6 | 2.9 | 2.0 | 1.9 | 1.7 | 3.2 |
| Administration and Support Services | 3.2 | 4.9 | 2.9 | 2.5 | 3.7 | 3.6 | 2.7 | 2.5 | 2.0 | 1.8 | 2.9 |
| Public Administration and Safety | 6.3 | 3.9 | 4.5 | 3.7 | 3.4 | 3.6 | 2.9 | 2.8 | 2.2 | 2.1 | 3.0 |
| Education | 7.8 | 4.0 | 4.5 | 3.9 | 3.8 | 3.6 | 2.5 | 3.2 | 3.4 | 2.8 | 3.2 |
| Health Care and Social Assistance | 11.9 | 3.6 | 3.9 | 4.0 | 3.6 | 2.6 | 3.3 | 2.9 | 2.8 | 2.6 | 3.0 |
| Arts and Recreation Services | 2.0 | 3.4 | 3.9 | 2.8 | 3.4 | 3.5 | 2.9 | 3.0 | 3.4 | 2.4 | 3.1 |
| Other Services | 4.0 | 3.3 | 3.3 | 2.3 | 3.6 | 3.8 | 3.0 | 2.3 | 2.2 | 2.3 | 3.0 |
| State/Territory | | | | | | | | | | | |
| New South Wales | 31.4 | 4.0 | 3.6 | 3.1 | 3.7 | 3.6 | 2.8 | 2.5 | 2.5 | 2.1 | 3.1 |
| Victoria | 25.0 | 4.2 | 3.4 | 2.7 | 4.1 | 3.5 | 3.0 | 2.7 | 2.8 | 2.6 | 3.2 |
| Queensland | 19.9 | 3.9 | 4.1 | 3.3 | 3.9 | 3.8 | 2.7 | 2.6 | 2.5 | 2.3 | 3.2 |
| South Australia | 6.9 | 4.6 | 3.7 | 2.9 | 3.3 | 3.4 | 3.3 | 3.1 | 2.6 | 2.5 | 3.3 |
| Western Australia | 11.8 | 5.6 | 4.6 | 3.4 | 3.8 | 4.8 | 3.5 | 2.4 | 2.3 | 2.1 | 3.5 |
| Tasmania | 2.1 | 3.6 | 4.2 | 3.6 | 3.5 | 3.2 | 2.9 | 2.3 | 2.6 | 2.4 | 3.0 |
| Northern Territory | 1.1 | 4.2 | 3.8 | 3.4 | 3.9 | 3.6 | 3.2 | 2.8 | 2.9 | 2.4 | 3.3 |
| Australian Capital Territory (ACT) | 1.8 | 4.0 | 4.1 | 3.0 | 3.5 | 3.9 | 2.9 | 2.3 | 1.7 | 1.7 | 3.0 |
| Total All[2] | 100 | 4.1 | 3.8 | 3.1 | 3.8 | 3.7 | 2.9 | 2.6 | 2.6 | 2.3 | 3.2 |

(1) Measures changes in the price of labour. Ordinary hourly rates of pay (excludes overtime and bonuses) Source: BIS Shrapnel, ABS data
(2) Excludes Agriculture, Forestry and Fishing sector

## Table 4.2: Australia
## AWOTE Growth by Industry Sector

| Industry Sector | % of Total Employment Nov '14 | Average Weekly Earnings[1] $ / Week Nov '14 | Annual Per Cent Change | | | | | | Five-Year Average |
|---|---|---|---|---|---|---|---|---|---|
| | | | Nov'09 | Nov'10 | Nov'11 | Nov'12 | Nov'13 | Nov'14 | |
| Mining | 2.0 | 2 495 | 7.8 | 6.8 | 5.2 | 8.0 | 4.6 | 1.0 | 5.1 |
| Manufacturing | 7.9 | 1 354 | 1.7 | 1.7 | 4.2 | 2.6 | 5.5 | 4.9 | 3.8 |
| Electricity, gas, water and waste services | 1.2 | 1 631 | 6.8 | 9.1 | 3.2 | 6.8 | 0.6 | 0.7 | 4.0 |
| Construction | 9.1 | 1 475 | 7.8 | 4.4 | 5.3 | 3.7 | 2.2 | 1.7 | 3.5 |
| Wholesale trade | 3.3 | 1 414 | 3.1 | 2.5 | 11.7 | 5.6 | -1.9 | 1.9 | 3.9 |
| Retail trade | 10.8 | 1 064 | 5.6 | 1.4 | 3.6 | 3.0 | 2.3 | 3.1 | 2.7 |
| Accommodation and food services | 7.0 | 1 037 | 5.7 | 3.4 | 3.5 | 3.7 | 5.6 | -1.1 | 3.0 |
| Transport, postal and warehousing | 5.2 | 1 452 | 4.1 | 10.3 | 4.9 | 6.3 | 1.5 | 4.4 | 5.4 |
| Information media and telecommunications | 1.9 | 1 671 | 6.3 | 4.2 | 2.2 | 5.7 | 2.5 | 0.0 | 2.9 |
| Finance and insurance | 3.6 | 1 726 | 2.4 | 8.8 | -0.1 | 6.1 | 0.4 | 4.6 | 3.9 |
| Rental hiring and real estate services | 1.9 | 1 283 | 4.4 | -2.6 | 0.9 | 7.5 | -1.7 | -0.3 | 0.7 |
| Professional, scientific and technical services | 8.1 | 1 795 | 4.7 | 5.8 | 2.8 | 3.3 | 5.9 | 3.7 | 4.3 |
| Administration and support services | 3.2 | 1 273 | 4.4 | 1.3 | -4.8 | 10.2 | 0.9 | -0.7 | 1.3 |
| Public administration and defence | 6.3 | 1 539 | 7.2 | 5.8 | 2.4 | 5.5 | 3.8 | 0.3 | 3.5 |
| Education and training | 7.8 | 1 566 | 5.7 | 5.2 | 4.2 | 4.8 | 3.1 | 3.0 | 4.1 |
| Health and social assistance | 11.9 | 1 400 | 7.7 | 2.2 | 4.6 | 3.0 | 4.7 | 2.3 | 3.4 |
| Arts and recreational services | 2.0 | 1 292 | 7.7 | 4.5 | 5.0 | 2.7 | 7.1 | -2.2 | 3.3 |
| Other services | 4.0 | 1 096 | 7.7 | 4.9 | 1.1 | 5.3 | -0.2 | -0.6 | 2.0 |
| Total All Industries[2] | 100 | 1 477 | 7.7 | 3.9 | 4.3 | 5.0 | 2.9 | 2.8 | 3.8 |

(1) Full Time Adult Ordinary Time earnings for persons Source: BIS Shrapnel, ABS data
(2) Excludes Agriculture, Forestry and Fishing sector

**Chart 4.1: Wage Price Index**
**Total Australia (All Industries) and Electricity, Gas, Water and Waste Services**

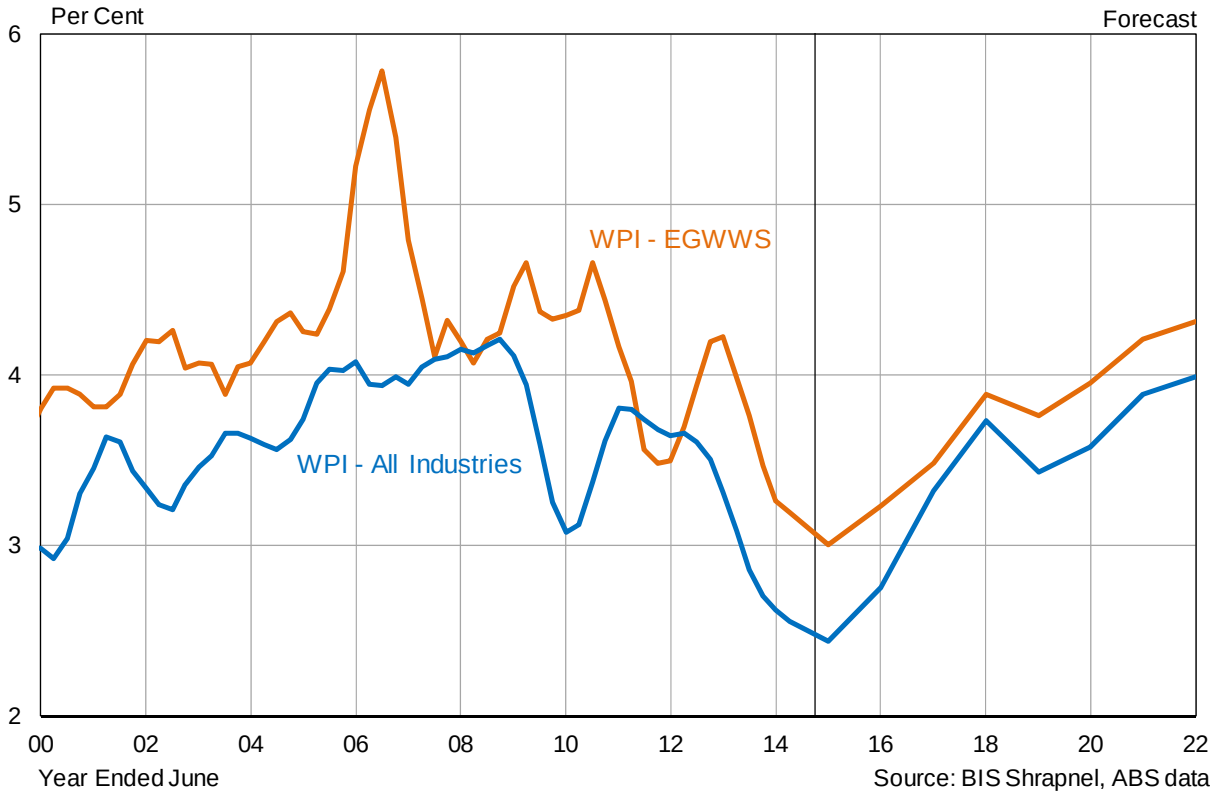



**Table 4.3: Federal Wage Agreements – Collective Agreements by Industry**
**(Average Annualised Wage Increase)**

| Selected Industry (ANZSIC 2006) | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | Average 2006-2014 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Electricity, Gas, Water and Waste Services** | **4.4** | **4.5** | **4.7** | **4.8** | **4.8** | **4.4** | **4.2** | **4.1** | **3.6** | **4.4** |
| Agriculture, Forestry and Fishing | 3.0 | 2.9 | 3.0 | 3.7 | 3.7 | 3.7 | 3.8 | 3.7 | 3.4 | 3.4 |
| Mining | 3.7 | 4.0 | 4.3 | 4.4 | 4.3 | 4.2 | 4.5 | 4.6 | 4.1 | 4.2 |
| Manufacturing | 4.2 | 4.3 | 4.2 | 4.1 | 3.9 | 3.9 | 3.9 | 3.8 | 3.5 | 4.0 |
| Construction | 4.9 | 4.9 | 4.6 | 5.3 | 5.4 | 4.8 | 5.1 | 5.3 | 4.9 | 5.0 |
| Wholesale Trade | 3.7 | 3.6 | 3.8 | 4.1 | 4.0 | 3.7 | 3.8 | 3.8 | 3.4 | 3.8 |
| Retail trade | 3.5 | 3.5 | 3.5 | 3.6 | 3.5 | 3.4 | 3.6 | 3.3 | 3.1 | 3.4 |
| Accommodation and Food Services | 3.3 | 3.4 | 3.2 | 3.6 | 3.9 | 3.9 | 3.8 | 3.7 | 3.0 | 3.5 |
| Transport , Postal and Warehousing | 3.7 | 3.9 | 4.0 | 4.2 | 4.2 | 4.0 | 3.9 | 3.9 | 3.6 | 3.9 |
| Information Media and Telecommunications | 3.6 | 3.2 | 3.3 | 3.8 | 3.8 | 3.4 | 3.4 | 3.5 | 3.3 | 3.5 |
| Financial and Insurance Services | 4.1 | 4.1 | 3.8 | 4.0 | 3.6 | 3.7 | 3.5 | 3.3 | 3.0 | 3.7 |
| Rental, Hiring and Real Estate Services | 3.8 | 4.8 | 4.5 | 3.5 | 3.7 | 3.9 | 4.7 | 4.4 | 4.2 | 4.2 |
| Professional, Scientific and Technical Services | 3.8 | 4.0 | 4.0 | 4.5 | 4.3 | 4.0 | 4.1 | 4.1 | 4.0 | 4.1 |
| Administrative and Support Services | 3.8 | 3.6 | 3.6 | 3.8 | 3.7 | 3.6 | 4.2 | 4.3 | 4.0 | 3.8 |
| Public Administration and Safety | 4.0 | 4.1 | 4.2 | 4.3 | 3.9 | 3.7 | 3.7 | 3.7 | 3.5 | 3.9 |
| Health Care and Social Assistance | 4.0 | 4.0 | 4.0 | 4.1 | 4.0 | 4.0 | 3.6 | 3.3 | 3.1 | 3.8 |
| Education and Training | 4.9 | 4.8 | 4.9 | 4.4 | 4.6 | 4.6 | 4.7 | 3.9 | 3.6 | 4.5 |
| Arts and Recreation Services | 3.5 | 3.8 | 4.0 | 4.1 | 3.5 | 3.5 | 3.4 | 3.3 | 3.2 | 3.6 |
| Other Services | 4.0 | 4.1 | 4.0 | 3.9 | 3.7 | 3.6 | 4.5 | 4.4 | 3.7 | 4.0 |
| ALL INDUSTRIES | 4.1 | 4.1 | 4.0 | 4.2 | 4.1 | 4.0 | 4.0 | 3.7 | 3.5 | 4.0 |

(1) Current agreements in June of each year.

Source: Department of Employment

## Table 4.4: Electricity, Gas, Water and Waste Services Forecasts – Australia

| | Year Average Percent Change | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Forecast | | | | | | | Averages | |
| Year Ended June | 2010 | 2011 | 2012 | 2013 | 2014 | 2015e | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2010-15 | 2015-22 |
| **Proportion of Workforce by Pay setting Method (a)** | | | | | | | | | | | | | | | |
| Awards Only | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% | 2.7% |
| Collective Agreements | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% | 67.7% |
| Individual Arrangements | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% | 29.6% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| **AWOTE** | | | | | | | | | | | | | | | |
| Awards Only | 0.7 | 3.2 | 3.4 | 2.9 | 2.6 | 3.0 | 2.5 | 2.9 | 3.3 | 2.9 | 2.8 | 2.8 | 3.0 | 3.0 | 2.9 |
| Collective Agreements | 4.6 | 4.2 | 4.1 | 3.9 | 3.6 | 3.5 | 3.6 | 3.6 | 3.9 | 3.9 | 4.1 | 4.3 | 4.4 | 3.9 | 4.0 |
| Individual Arrangements (b) | 14.5 | 19.0 | -0.4 | 10.2 | -0.7 | 1.1 | 4.0 | 5.0 | 5.7 | 5.9 | 6.1 | 6.1 | 6.2 | 5.8 | 5.6 |
| **AWOTE (Persons)(c)** | **7.6** | **9.1** | **2.5** | **6.1** | **2.0** | **2.6** | **3.7** | **4.1** | **4.5** | **4.6** | **4.8** | **4.9** | **5.0** | 4.5 | 4.5 |
| **Wage Price Index** | | | | | | | | | | | | | | | |
| Awards Only | 0.7 | 3.2 | 3.4 | 2.9 | 2.6 | 3.0 | 2.5 | 2.9 | 3.3 | 2.9 | 2.8 | 2.8 | 3.0 | 3.0 | 2.9 |
| Collective Agreements | 4.6 | 4.2 | 4.1 | 3.9 | 3.6 | 3.5 | 3.6 | 3.6 | 3.9 | 3.9 | 4.1 | 4.3 | 4.4 | 3.9 | 4.0 |
| Individual Arrangements (b) | 4.2 | 4.2 | 2.2 | 5.0 | 2.4 | 1.9 | 2.5 | 3.2 | 3.9 | 3.6 | 3.8 | 4.1 | 4.2 | 3.1 | 3.6 |
| **Wage Price Index (Ord. Time)** | **4.3** | **4.2** | **3.5** | **4.2** | **3.3** | **3.0** | **3.2** | **3.5** | **3.9** | **3.8** | **4.0** | **4.2** | **4.3** | 3.6 | 3.8 |
| Compositional Effects + Bonuses,etc | 3.2 | 4.9 | -1.0 | 1.9 | -1.2 | -0.4 | 0.5 | 0.6 | 0.6 | 0.8 | 0.8 | 0.7 | 0.7 | 0.8 | 0.7 |

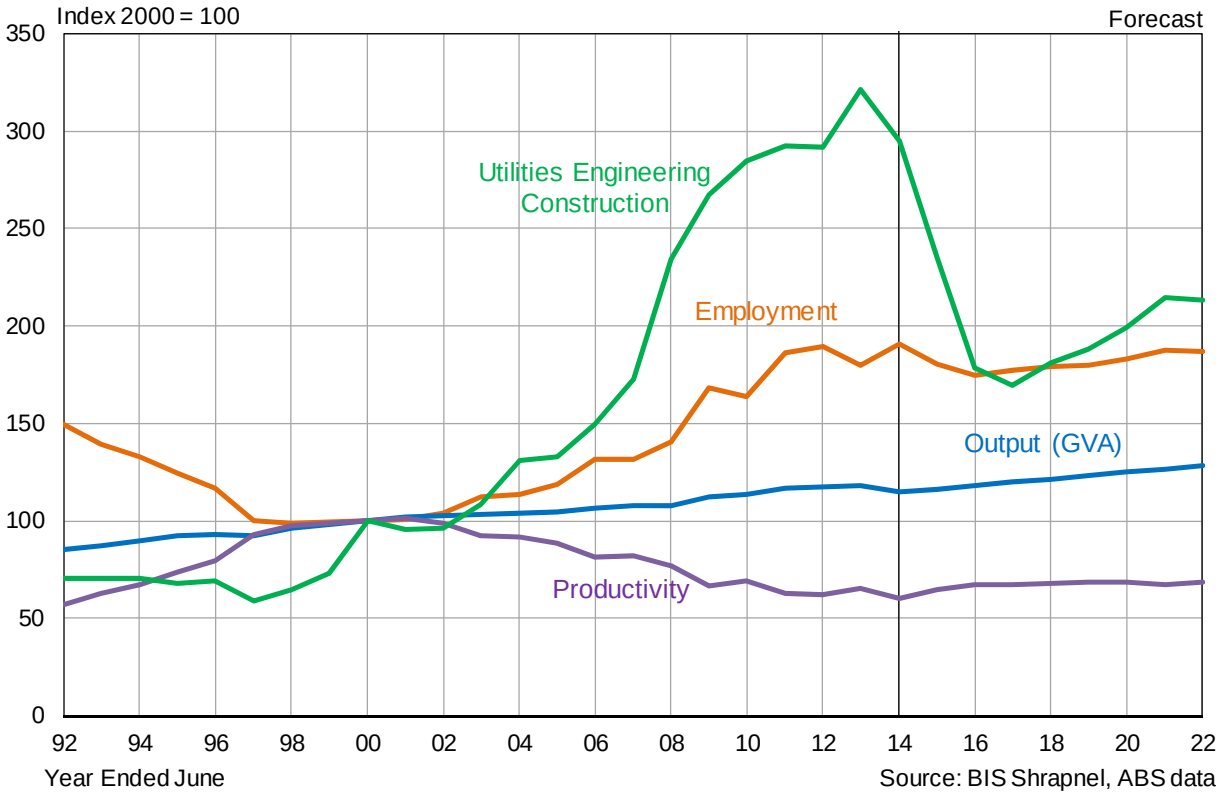
(a) Full-time Adult Persons. Source: BIS Shrapnel, ABS, Department of Employment

(b) Because of relatively small workforce (and therefore small sample size) in EGWWS, Indiv Agreements picks up all the standard errors of WPI and AWOTE estimates by ABS.

(c) Full-time Adult Persons, excluding overtime.

e:estimate

## Chart 4.2: Australia – Utilities Employment, Output and Investment



We expect EBA outcomes to be steady over the next two years but remain above inflation and the 'all industries' average given relatively high wage outcomes negotiated in agreements expiring over the next two years, still strong demand for skilled labour and particularly given the recent high enterprise agreement outcomes in the construction sector. This will influence negotiations in the EGWWS sector, as some skills can be transferable. A mild recovery in EBA outcomes will occur over subsequent years as the labour market begins to tighten, unemployment falls and business profitability improves. However, forecast growth in wage agreements of 3.8 per cent per annum remains below that experienced over much of the past decade.

**Demand for skilled labour also a key driver of utilities wages**

Employment growth in the utilities sector over the past ten years (2003/04 to 2013/14 inclusive) averaged 5.4 per cent per annum, the second fastest growth among the 18 main industry sectors behind the Mining sector (11 per cent per annum), with Health and Social Assistance employment growth third at 4.1 per cent per annum.

We believe investment in the sector, particularly engineering construction, has been the key driver of employment growth in the sector over the past decade (see chart 4.2). While utilities related engineering construction is expected to fall sharply for another year, it is still expected to trough at a level that will higher than the long-term historical average, before recovering towards the end of the decade. Consequently, the demand for skilled labour will remain strong.

Our view is that sustaining the capital expenditure and activity required to maintain the current aging electricity network efficient and operational is expected to attract investment particularly within the network refurbishment, extension and augmentation programs. Meanwhile, water and sewerage activity is expected to rise over the next few years on the back of asset renewal and augmentation programs and a handful of large public funded water projects such as the Goulburn-Murray Water Connections Project - Stage 2 in Victoria, the Hawkesbury-Nepean floodplain mitigation measures in New South Wales and agricultural irrigation projects in regional areas of Queensland, New South Wales and Western Australia. Other treatment plant upgrades, dam expansions, and pipelines will continue to keep the levels at historically high levels. Similar to investment levels derived from the mining boom in the years prior, the secondary impact of growth in other industries such as the residential market would also create a floor to investment in the water and sewerage subsectors.

As well as the pick-up in infrastructure work, this strong growth in utilities employment has also been associated with an ongoing reversal in the sharp losses in employment seen through the 1990s. Privatisation and rationalisation were the drivers of the job cuts in the 1990s, but in some cases the desire to be streamlined left only a 'skeleton' crew in-house for routine operations and emergency disruptions, while capital and maintenance works (both minor and major) tended to be contracted out. Capital expenditure in the utilities sector during the 1990s was also relatively low, and this may also have contributed to weaker employment.

The emergence of skilled labour shortages across many industry sectors over the 2000s encouraged utilities businesses to boost their in-house response capabilities, while increasing competition shifted the business focus towards customer service in order to enhance product differentiation with an accompanying increase in employment not directly related to the provision of electricity, gas, and water services. The entrance of new players in the sector (such as new businesses related to renewable energy provision, new private electricity and gas businesses, etc.) also exacerbated this situation as it increased demand for all occupations within this sector.

## Table 4.5: Average Weekly Ordinary Time Earnings and Wage Price Index Total Australia and Electricity, Gas, Water and Waste Services Sector (Year Average Growth)

| Year Ended June | Average Weekly Ordinary Time Earnings (1) | | | | Wage Price Index (2) 2011/12=100 | | | |
|---|---|---|---|---|---|---|---|---|
| | All Industries | | Electricity, Gas, Water and Waste Services | | All Industries | | Electricity, Gas, Water and Waste Services | |
| | $ | %CH | $ | %CH | Index | %CH | Index | %CH |
| 1989 | 487.3 | | 513.4 | | | | | |
| 1990 | 521.0 | 6.9 | 559.2 | 8.9 | | | | |
| 1991 | 555.4 | 6.6 | 585.2 | 4.7 | | | | |
| 1992 | 580.8 | 4.6 | 620.5 | 6.0 | | | | |
| 1993 | 591.0 | 1.8 | 638.3 | 2.9 | | | | |
| 1994 | 609.1 | 3.1 | 657.9 | 3.1 | | | | |
| 1995 | 634.9 | 4.2 | 668.6 | 1.6 | | | | |
| 1996 | 663.8 | 4.6 | 707.6 | 5.8 | | | | |
| 1997 | 688.5 | 3.7 | 748.6 | 5.8 | | | | |
| 1998 | 716.0 | 4.0 | 796.1 | 6.3 | 60.9 | | 56.7 | |
| 1999 | 741.4 | 3.5 | 827.1 | 3.9 | 62.8 | 3.1 | 58.4 | 3.0 |
| 2000 | 765.4 | 3.2 | 866.8 | 4.8 | 64.7 | 3.0 | 60.6 | 3.8 |
| 2001 | 804.2 | 5.1 | 918.5 | 6.0 | 66.9 | 3.5 | 62.9 | 3.8 |
| 2002 | 847.4 | 5.4 | 981.0 | 6.8 | 69.1 | 3.3 | 65.6 | 4.2 |
| 2003 | 890.0 | 5.0 | 1,001.3 | 2.1 | 71.5 | 3.5 | 68.2 | 4.1 |
| 2004 | 931.6 | 4.7 | 1,056.7 | 5.5 | 74.1 | 3.6 | 71.0 | 4.1 |
| 2005 | 972.9 | 4.4 | 1,090.6 | 3.2 | 76.9 | 3.7 | 74.0 | 4.3 |
| 2006 | 1 017.5 | 4.6 | 1,110.9 | 1.9 | 80.0 | 4.1 | 77.9 | 5.2 |
| 2007 | 1 054.1 | 3.6 | 1,151.9 | 3.7 | 83.2 | 3.9 | 81.6 | 4.8 |
| 2008 | 1 106.1 | 4.9 | 1,182.8 | 2.7 | 86.6 | 4.1 | 85.0 | 4.2 |
| 2009 | 1 166.5 | 5.5 | 1,255.5 | 6.1 | 90.2 | 4.1 | 88.9 | 4.5 |
| 2010 | 1 231.3 | 5.6 | 1,350.8 | 7.6 | 92.9 | 3.1 | 92.8 | 4.3 |
| 2011 | 1 282.5 | 4.2 | 1,473.9 | 9.1 | 96.5 | 3.8 | 96.6 | 4.2 |
| 2012 | 1 338.1 | 4.3 | 1,510.0 | 2.5 | 100.0 | 3.6 | 100.0 | 3.5 |
| 2013 | 1 400.3 | 4.6 | 1,602.5 | 6.1 | 103.3 | 3.3 | 104.2 | 4.2 |
| 2014 | 1 442.2 | 3.0 | 1,635.0 | 2.0 | 106.0 | 2.6 | 107.6 | 3.3 |
| 2015e | 1 487.2 | 3.1 | 1,677.8 | 2.6 | 108.6 | 2.4 | 110.9 | 3.0 |
| Forecasts | | | | | | | | |
| 2016 | 1 543.3 | 3.8 | 1,740.0 | 3.7 | 111.5 | 2.7 | 114.4 | 3.2 |
| 2017 | 1 611.0 | 4.4 | 1,811.2 | 4.1 | 115.1 | 3.3 | 118.4 | 3.5 |
| 2018 | 1 690.7 | 4.9 | 1,893.2 | 4.5 | 119.4 | 3.7 | 123.0 | 3.9 |
| 2019 | 1 765.4 | 4.4 | 1,979.9 | 4.6 | 123.5 | 3.4 | 127.6 | 3.8 |
| 2020 | 1 847.7 | 4.7 | 2,074.5 | 4.8 | 128.0 | 3.6 | 132.7 | 4.0 |
| 2021 | 1941.2 | 5.1 | 2,177.0 | 4.9 | 132.9 | 3.9 | 138.3 | 4.2 |
| 2022 | 2041.8 | 5.2 | 2,286.9 | 5.0 | 138.2 | 4.0 | 144.2 | 4.3 |
| Compound Annual Growth Rates (3) | | | | | | | | |
| 1990-2000 | 3.9 | | 4.5 | | | | | |
| 2000-2010 | 4.9 | | 4.5 | | 3.7 | | 4.3 | |
| 2010-2015 | 3.8 | | 4.4 | | 3.2 | | 3.6 | |
| 2015-2022 | 4.6 | | 4.5 | | 3.5 | | 3.8 | |
| 2017-2022 | 4.9 | | 4.8 | | 3.7 | | 4.0 | |

Source: BIS Shrapnel, ABS

(1) Earnings per person for full-time adults. Data is year ended May (available only mid month of quarter).

(2) Ordinary time hours excluding bonuses.

(3) e.g. CAGR (Compound Annual Growth Rates) for 2018-2022 is compound annual growth for 2017/18 to 2021/22 inclusive (ie the next regulatory period).

e:estimate

The strong growth in employment in the Utilities, Mining and Construction sectors, and the associated sustained strong demand for skilled labour, contributed to above average wages growth in all three sectors. At the same time, the overall labour market tightened considerably during the 2000s, with the unemployment rate falling from around 7 per cent in 2001 to 5 per cent by 2005, and to 4 per cent in early 2008. This saw skilled labour shortages worsen and employers in these sectors bid up wages.

The global financial crisis and the subsequent slowing in the economy over 2008/09 along with a slow transition from mining investment-led growth to broadly based growth reduced labour demand and wage pressures. Consequently, the unemployment rate rose reaching a peak of 6.3 per cent in January 2015.

However, with the economy expected to grow close to trend in about two years, employment growth will outpace population and labour force growth and the unemployment rate is expected to fall to 5.8 per cent by late 2017. Hence, we expect to again witness the re-emergence of skilled labour shortages and competition for scarce labour through 2017, particularly from the construction sector, which will push up wage demands in the utilities sector towards the end of the decade.

**Individual agreements will recover from their current weakness**

Increases in individual agreements or contracts (ie non-EBA wages) are primarily influenced by the strength of the labour market (especially the demand-supply balance of skilled labour), inflationary expectations, recent profitability of relevant enterprises (which influences bonuses and incentives, etc.), current business conditions and the short-term economic outlook.

Across all industries, wage growth from individual agreements is estimated to have risen by just 1.5 per cent in 2014/15, reflecting general weakness in the economy and the labour market. However, this is expected to gradually recover over the next five years. With the economy expected to grow close to potential in two years, we expect further growth in wages in the segment to come through, as employers bid up wages for skilled labour in scarce supply. Businesses will find they must ‘meet the market’ on remuneration in order to attract and retain staff and we expect wages under individual arrangements to continue to rise through the second half of the forecast period. Overall, BIS Shrapnel expects individual wage agreements for the EGWWS sector to grow by 3.6 per cent per annum, on average, over the seven years to 2021/22.

**. . . pushing aggregate WPI for the Utilities sector higher**

Together with the awards and collective agreements, BIS Shrapnel expects total wage costs for the Australian Electricity, Gas, Water and Waste Services (EGWWS or ‘Utilities) sector — expressed in wage price index (WPI) terms — will average of 4 per cent per annum (0.3 percentage points higher than the national ‘All Industries’ WPI average of 3.7 per cent per annum) over the seven years to 2021/22.

## 4.1 Outlook for utilities wages growth in Queensland

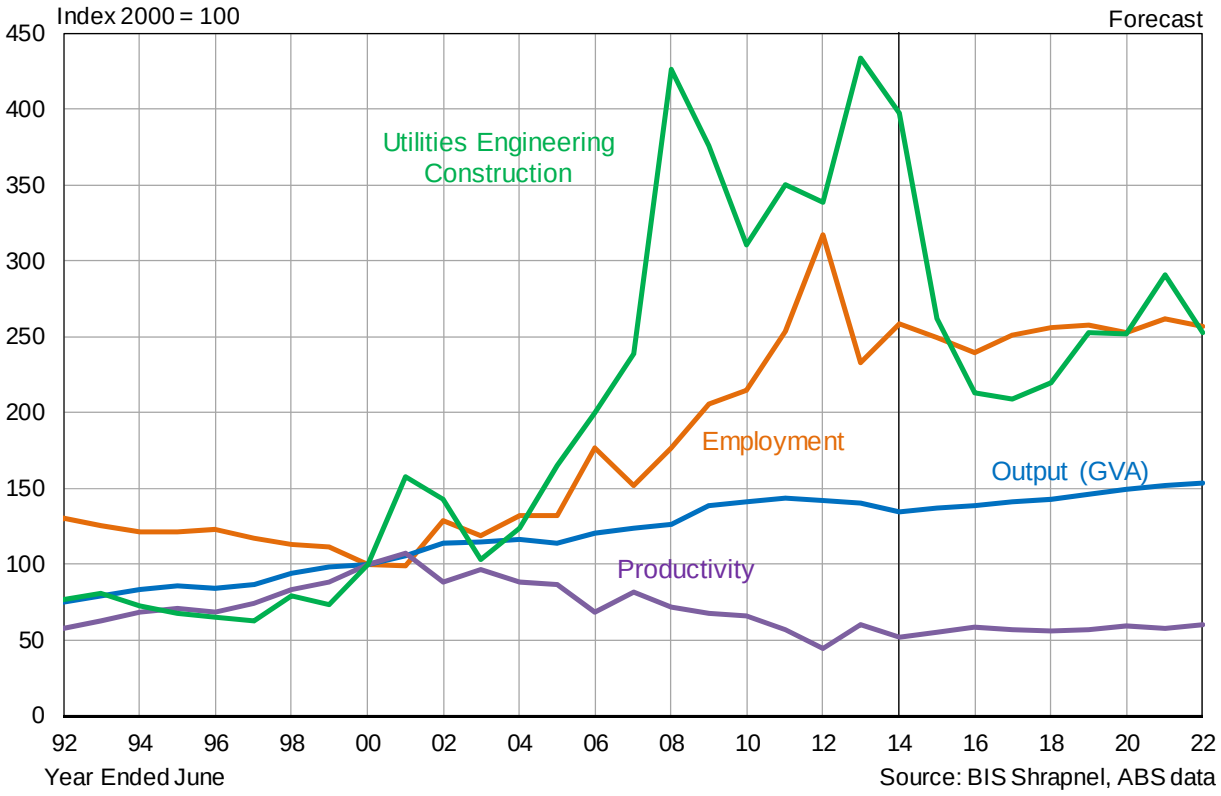
The ABS does not provide WPI data for the Utilities sector in Queensland, providing state utilities data only for NSW and Victoria. These two states collectively account for almost 54 per cent of total Australian utilities employment, with Queensland accounting for just over 22 per cent, then Western Australia and South Australia at 11.4 per cent and 7.4 per cent respectively. Forecasts of WPI for the EGWWS sector in Queensland therefore is based on national EGWWS WPI forecasts, as well as movements in the 'unknown residual' for the utilities wage price index.

We forecast utilities wage inflation in Queensland to dip below the national average over the next two years as employment growth in the sector eases due to contraction in the utilities construction.

We expect wages growth to pick up pace from 2017/18 due to increased demand for labour from the states' utilities sector as utilities-related engineering construction ramps up again. Chart 4.3 shows BIS Shrapnel's engineering construction forecasts for the utilities-related segments comprising electricity, (non-water) pipelines and water and wastewater construction. Queensland's utilities engineering construction is projected to fall for another two years (but remain at historically high levels), before increasing gradually from 2017/18.

We are forecasting electricity and gas pipelines work done to shift higher from 2017/18 driven by the construction of another key gas export pipeline and Galilee Basin transmission works. Ongoing development of the CSG fields to feed the LNG trains once they are built will require continual upstream investment in pipelines (and other infrastructure) over the long term.

**Chart 4.3: Queensland – Utilities Employment, Output and Investment**



In addition, we expect water and sewerage work done to start rising strongly from 2016/17 due to stronger pipeline work and the beginning of new projects that will provide flood mitigation benefits as well as additional water supplies for new coal and CSG fields. Taken together, work done is expected to reach a new cyclical peak of $1 billion by 2018/19, employing an additional 600 persons.

Chart 4.3 also shows that utilities investment is a key influence on employment growth in the utilities sector (even though some capital projects are outsourced to the construction sector). The combination of high levels of utility engineering construction and overall construction in the state means increased competition for 'similarly' skilled labour and wage pressures in the state's utilities sector over the three years to 2021/22.

Overall, Queensland's utilities WPI growth is forecast to average 4 per cent per annum over the five years from 2017/18 to 2021/22 inclusive (ie over Powerlink Queensland's next regulatory period, see table 4.6).

**Table 4.6: Electricity, Gas, Water and Waste Services – Queensland and Australia (Year Average Growth)**

| Year Ended June | WPI (1) 2011/12=100 | | | |
|---|---|---|---|---|
| | Queensland | | Australia | |
| | Index | A% CH | Index | A% CH |
| 2000 | | | 60.6 | |
| 2001 | | | 62.9 | 3.8 |
| 2002 | | | 65.6 | 4.2 |
| 2003 | | | 68.2 | 4.1 |
| 2004 | | | 71.0 | 4.1 |
| 2005 | | | 74.0 | 4.3 |
| 2006 | | | 77.9 | 5.2 |
| 2007 | | | 81.6 | 4.8 |
| 2008 | | | 85.0 | 4.2 |
| 2009 | 87.6 | | 88.9 | 4.5 |
| 2010 | 92.3 | 5.3 | 92.8 | 4.3 |
| 2011 | 96.4 | 4.5 | 96.6 | 4.2 |
| 2012 | 100.0 | 3.7 | 100.0 | 3.5 |
| 2013 | 104.3 | 4.3 | 104.2 | 4.2 |
| 2014 | 107.8 | 3.4 | 107.6 | 3.3 |
| 2015e | 111.1 | 3.0 | 110.9 | 3.0 |
| Forecasts | | | | |
| 2016 | 114.5 | 3.1 | 114.4 | 3.2 |
| 2017 | 118.3 | 3.3 | 118.4 | 3.5 |
| 2018 | 122.5 | 3.6 | 123.0 | 3.9 |
| 2019 | 127.1 | 3.8 | 127.6 | 3.8 |
| 2020 | 132.3 | 4.1 | 132.7 | 4.0 |
| 2021 | 138.0 | 4.3 | 138.3 | 4.2 |
| 2022 | 144.1 | 4.4 | 144.2 | 4.3 |
| Long Term Averages | | | | |
| 2000-2010 | | | 4.3 | |
| 2010-2015 | 3.8 | | 3.6 | |
| 2015-2022 | 3.8 | | 3.8 | |
| 2017-2022 | 4.0 | | 4.0 | |

Source: BIS Shrapnel, ABS

(1) Ordinary time hours excluding bonuses.

e:estimate

# 5. CONSTRUCTION SERVICES INDUSTRY WAGE FORECASTS

This section provides forecasts of Powerlink Queensland's contract or 'out-sourced' labour escalation. Given utility service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy Powerlink Queensland's contract labour cost escalation by wages growth (as measured by the WPI) in the state's construction industry.

Our research has shown that construction activity (ie work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one to two years. Hence, our wage forecasts are based on BIS Shrapnel's forecasts of construction activity by state (which includes residential and non-residential building, plus engineering construction) as well as predicted movements in the construction wages at the national level.

## 5.1 Construction sector wages growth in Queensland

Construction activity in Queensland is expected to decline sharply for another year driven by large fall in engineering construction before picking up later in the decade (see chart 5.1). Dwellings building is expected to continue on its upward curve for at least another year while non-dwelling building is largely expected to track sideways over the forecast period.

Queensland engineering construction totalled $165 billion over the last five years. Over 55 per cent of work done over this period was undertaken in the mining and heavy industry sector. The next largest sector is road construction which accounted for 16 per cent of activity and has been driven by record public sector investment, flood rebuild and toll road construction. The electricity sector accounted for 7.5 per cent of activity and takes the place of third largest sector which has benefited from record investment in transmission and distribution networks in recent years.

From 2014/15, engineering construction activity is expected to fall a collective 58.8 per cent over the next two years to 2015/16, settling at $17.5 billion. The substantial unwinding will primarily reflect the completion of the three massive LNG projects around Gladstone and associated water and pipeline infrastructure in the Surat Basin. In addition, coal and coal handling, the former backbone of the Queensland mining industry, will continue to weaken with coal prices falling to anaemic levels.

Meanwhile, sectors more closely associated with public sector investment continues to weaken with the State Government tightening the belt on spending to improve its budgetary position after record levels of capital expenditure over the past five to ten years. The recent change of government will likely further exacerbate this problem given the unwillingness to lease (sell) major public sector assets, such as ports, to fund new infrastructure projects. This has already been seen with the Cross River Rail project, which currently remains unfunded and unlikely to begin on the previous governments timeline given the $5 billion cost.

The next upswing in total engineering construction is forecast from 2018, driven by improved government finances and further mining and mining-related projects. However, the magnitude of the next upswing is unlikely to be as significant as that currently underway, with the next cyclical peak expected to be in the region of $22 billion and occurring towards the end of the decade – some $20 billion lower than the 2013/14 peak. Nonetheless, the overall level of work on an annual basis will be above long-term historical average.

Given our construction outlook, we expect Queensland construction industry WPI growth to average 3.9 per cent per annum over the five years from 2017/18 to 2021/22 inclusive (ie over Powerlink Queensland's next regulatory period).

**Chart 5.1: Total Construction – Queensland**
**Value of Work Done, Constant 2012/13 Prices**

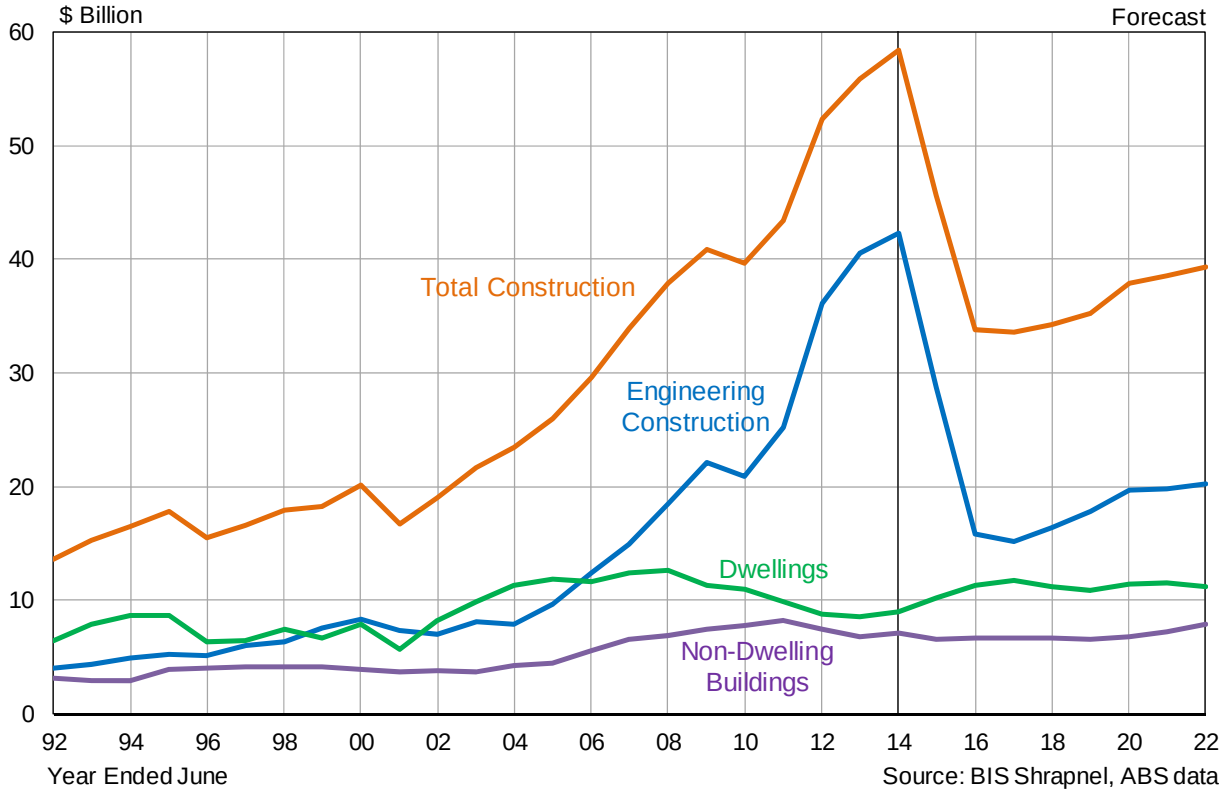


**Table 5.1: Construction Wages Growth – Queensland and Australia**
**Year Average Growth**

| Year Ended June | WPI (1) 2011/12=100 | | | |
|---|---|---|---|---|
| | Queensland | | Australia | |
| | Index | A% CH | Index | A% CH |
| 2000 | 61.0 | | 61.3 | |
| 2001 | 63.0 | 3.3 | 63.8 | 4.1 |
| 2002 | 65.0 | 3.2 | 65.9 | 3.3 |
| 2003 | 67.1 | 3.2 | 68.1 | 3.3 |
| 2004 | 70.5 | 5.0 | 70.6 | 3.7 |
| 2005 | 73.6 | 4.4 | 74.3 | 5.2 |
| 2006 | 76.9 | 4.5 | 77.9 | 4.9 |
| 2007 | 80.5 | 4.7 | 81.7 | 4.9 |
| 2008 | 84.2 | 4.5 | 85.5 | 4.7 |
| 2009 | 89.0 | 5.7 | 89.5 | 4.7 |
| 2010 | 91.5 | 2.9 | 92.4 | 3.3 |
| 2011 | 94.9 | 3.6 | 96.1 | 4.0 |
| 2012 | 100.0 | 5.4 | 100.0 | 4.1 |
| 2013 | 102.9 | 2.9 | 103.3 | 3.3 |
| 2014 | 106.0 | 3.0 | 106.4 | 3.0 |
| 2015e | 108.0 | 1.9 | 108.8 | 2.2 |
| Forecasts | | | | |
| 2016 | 110.4 | 2.2 | 111.9 | 2.9 |
| 2017 | 113.5 | 2.8 | 115.8 | 3.5 |
| 2018 | 117.1 | 3.2 | 120.0 | 3.6 |
| 2019 | 121.0 | 3.3 | 124.0 | 3.4 |
| 2020 | 125.8 | 4.0 | 128.8 | 3.9 |
| 2021 | 131.4 | 4.5 | 134.3 | 4.3 |
| 2022 | 137.3 | 4.5 | 140.1 | 4.3 |
| Long Term Averages | | | | |
| 2000-2010 | 4.1 | | 4.2 | |
| 2010-2015 | 3.4 | | 3.3 | |
| 2015-2022 | 3.5 | | 3.7 | |
| 2017-2022 | 3.9 | | 3.9 | |

Source: BIS Shrapnel, ABS

(1) Ordinary time hours excluding bonuses.

e:estimate

# APPENDIX A: BIS SHRAPNEL'S WAGE MODEL

BIS Shrapnel's wage model (for both AWOTE and WPI) is based on the analysis of past and future (expected) wage movements in three discrete segments of the workforce, based on the three main methods of setting pay and working conditions (see tables 3.2, 3.3 and 4.2):

- Those dependent on awards rely on pay increases given in the annual National Wage case by Fair Work Australia (formerly by the Fair Pay Commission and the Australian Industrial Relations Commission). Most of the wage increases in the National Wage case over the past decade have been given as flat, fixed amount (ie dollar value) increases, rather than as a proportional increase. At the all industries level, 8.1 per cent of all employees (data excludes those in agriculture, forestry and fishing) have their pay rises determined by this method. In the electricity, gas, water and waste services sector, only 2.7 per cent of workers have their pay set by this method.

- Collective agreements negotiated under enterprise bargaining account for 41.9 per cent of all employees, but 67.7 per cent of electricity, gas, water and waste services employees' wage increases are determined by this method.

- The remaining 50 per cent of all industries employees have their pay set by individual arrangements, such as individual contracts or other salary arrangements (including incentive-based schemes), while the proportion for electricity, gas, water and waste services is 30 per cent.

Future movements of forecasts of wage inflation are based on the key influences on the different wage determination mechanisms of each discrete segment ie:

- Increases in the Federal Minimum Wage (on which a range of mostly lower paid awards are also based) granted by Fair Work Australia (and by the Fair Pay Commission and the AIRC previously) each year are usually set in relation to recent increases in the CPI and with regard to the wage-setting body's view of both current and short-term future economic conditions. For instance, the $21.66 increase granted by the Fair Pay Commission in its decision in mid-2008 (effective October 2008) amounted to a 4.1 per cent increase for those on the Federal Minimum Wage of $522/week. This reflected the marked acceleration in the CPI in the first half of 2008 (to 4.2 per cent in the March quarter and to 4.5 per cent in the June quarter). It also reflected the strong economic conditions apparent around mid-2008 (the unemployment rate was just over 4 per cent). Conversely, the Fair Pay Commission gave no increase in its July 2009 decision, citing as its reasons, the deterioration of economic conditions and what we believe is a spurious link between minimum wage increases and higher unemployment.

- Increases in collective agreements under enterprise bargaining are influenced by a combination of recent CPI increases, inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook, and by the industrial relations 'strength' of relevant unions. Because the average duration of agreements now runs for two-to-three years, BIS Shrapnel bases its near-term forecasts on the strength of recent agreements, which have been 'formalised' over recent quarters. Thereafter, collective agreements are based on BIS Shrapnel's macroeconomic forecasts.

- Increases in individual agreements are primarily influenced by the strength of the labour market (especially the demand-supply balance of skilled labour), inflationary expectations, the recent profitability of relevant enterprises, current business conditions and the short-term economic outlook.

Note in tables 3.3 and 4.2, wage increases under 'individual arrangements' are calculated by deduction. Data from Department of Employment are used for wage increases under collective agreements.

The limitation of this methodology is that because individual arrangements are calculated as a residual, all of the compositional effects in terms of AWOTE (ie from more or less lower-paid workers being employed in the relevant year) plus all (or most) of the bonuses and incentives from those under award or collective agreements end up in the individual arrangements residual, which distorts the pay increases in this segment. However, the methodology works well for the WPI, particularly at the all industries level, although some compositional problems occur at the sectoral level, particularly for sectors with a relatively small employment base (such as electricity, gas, water and waste services).

## Some Deficiencies in Econometric Models of Wage Determination for the EGWWS Sector

We believe that BIS Shrapnel's institution-based or bottom-up wage model for the EGWWS sector better approximates the underlying (actual) data generating process than a straight application of an econometric model. As a result, we strongly believe our model of wage determination for the EGWWS or utilities sector is superior to methodology utilising purely econometric regression techniques, in particular linear regression models to forecast wages. This opinion is based on a number of factors, some of which are described below:

- The evolution of the wage determination system from the 1980s and particularly during the 1990s in the utilities sector means that econometric equations struggle with the changes in the relative importance of different factors influencing wages growth that have occurred over the past two-to-three decades. As such, we believe that an econometric equation would struggle to properly model the present complexity of the wage determination processes in this sector.
- BIS Shrapnel's model of wage determination does take account of the present complexity of the wage determination process, both at the national (all industries) level and at the industry sector level. Our methodology and explanation of the macroeconomic influences are, we believe, clear and transparent. We use small sector mathematical models to derive forecasts for discrete segments, rather than an over-riding, overall macroeconomic model.
- BIS Shrapnel believes the use of univariate or multi-equation time series econometric modelling is not the best method for forecasting wages growth in the utilities sector. This is because many regression equations include lagged dependent variables, and econometric models that include lagged dependant variables tend to miss turning points in the cycle, often producing results we know to be spurious. Indeed, the models performed no better (or worse) than a combination of a large range of 'mini' sectoral models overlaid with our expertise and knowledge of key influences.

## APPENDIX B: TERMS OF REFERENCE

The primary deliverable for this assignment is a clear and concise independent consultancy report for Powerlink that meets the above requirements, including an explanation of the approach adopted in developing the above information required and how this approach is consistent with contemporary practice.

The report will:

- Address the position adopted by the AER in recent draft/final decisions;
- Provide a forecast for WPI for EGWWS that can be included in Powerlink's Revenue Proposal for the 2017/18 – 2021/22 Regulatory Control Period;
- Provide WPI forecasts for the Construction services sector that can be included in Powerlink's Revenue Proposal for the 2017/18 – 2021/22 Regulatory Control Period;
- Describe the forecasting methodology used by the consultant;
- Highlight forecasts that will be derived from appropriately sourced independent data and forecasts; and
- Describe the consultant's relevant expertise in relation to the scope of works.

## APPENDIX C: STATEMENT OF COMPLIANCE WITH EXPERT WITNESS GUIDELINES

I have read the Guidelines for Expert Witnesses in Proceedings of the Federal Court of Australia and confirm that I have made all inquiries that I believe are desirable and appropriate and that no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Court.

# APPENDIX D: CURRICULUM VITAES OF KEY PERSONNEL

**Richard Robinson**
**Senior Economist and Associate Director - Economics**

Richard Robinson has been employed with BIS Shrapnel since 1986.

Richard is the company's principal economic forecaster, being largely responsible for the short term economic forecasts presented at BIS Shrapnel's half yearly conferences in March and September. He contributes forecasts and analysis to the regular subscription services, *Economic Outlook* and *Long Term Forecasts*.

Richard regularly analyses and forecasts resources investment and civil engineering construction activity, and production of manufactures, consumer goods and commodities. In this work, he has developed considerable industry expertise in the construction, manufacturing, agriculture, services, commodity and resources sectors of the Australian and state economies.

Richard has also been involved in a wide range of consultancy and private client projects including formulating end-use sector demand models for forecasting product demand, project evaluation studies, cost-benefit analysis, assessments of individual property markets and analysing the consistency of escalators in contracts. Some other projects have included analysing and forecasting freight tonnages; a study of the repair and maintenance market; the preparation of economic arguments for the National Wage Case for a private industry group; regular analysis and detailed short and long term forecasts of economic variables in a number of overseas countries; and contributing discussion papers to CEDA (Committee for Economic Development of Australia).

**Dr Kishti Sen**
**Senior Economist**

As a senior economist, Kishti contributes to the formulation of BIS Shrapnel’s economic forecasts, at the Australia, State, and industry level. In addition, he manages BIS Shrapnel’s subscriptions services including Economic Outlook and Long Term Forecasts report.

Kishti is the resident expert on labour cost escalation. He has worked on numerous cost escalation reports for clients in the utilities, mining and construction sectors. In addition, Kishti has prepared economic impact assessments reports, expert witness reports in wage negotiations and skills demand and supply analysis by industry and by occupation.

Kishti holds a PhD in Economics from the University of Sydney and Bachelors Degree in Economics and Mathematics from Massey University. Kishti has special interest in labour economics, cost escalation, benefit-cost assessments and econometric modelling.

**Jehanesan Konesan**
**Research Associate**

Jehanesan works across both the Infrastructure and Mining and the Economics units where he has contributed to a number of reports and private client studies including several cost escalation projects. He has a double degree in Actuarial Science and Economics from Macquarie University and an honours degree in Economics from the University of New South Wales.