



OXFORD  
ECONOMICS  
AUSTRALIA

**UPDATED LABOUR  
PRICE ESCALATION  
FORECAST 2025/26 TO  
2029/30**

**PREPARED BY OXFORD ECONOMICS  
AUSTRALIA FOR JEMENA GAS NETWORKS  
(NSW)**

**DECEMBER 2024**

## Oxford Economics Australia

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## December 2024

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# 1. EXECUTIVE SUMMARY

Oxford Economics Australia (OEA) was engaged by Jemena Gas Networks (JGN) to prepare forecasts of a discrete set of labour escalation price indices, relevant to the gas distribution industry from 2025/26 to 2029/30 (FY26 to FY30). We understand these forecasts will be used by the JGN to develop their operating and capital expenditure forecasts for their upcoming Access Arrangement. These forecasts, in turn, will be included in their revised regulatory submission to the Australian Energy Regulator (AER) for JGN's NSW Gas Distribution Regulatory proposal 2025-2030, due January 2025. The forecasts in this report were finalised in early December 2024 and incorporate the latest data and macro-economic forecasts as at early December 2024.

For **gas network related labour**, Oxford Economics Australia forecasts that total wage costs for the New South Wales Electricity, Gas, Water and Waste Services (EGWWS or 'Utilities') sector — expressed in Wage Price Index (WPI) terms — will average 3.6% per annum over the five-year period from FY26 to FY30 inclusive, 0.1% below the Australian EGWWS WPI average of 3.7% over the same period. In real (inflation-adjusted) terms, the EGWWS WPI is forecast to average 1.0% p.a. over the five years to FY30 (see Table 1.1 below).

Note that the wage price index measure does not include the Superannuation Guarantee charge (SGC). As the SGC is in effect a labour 'on-cost', in terms of escalating wage costs over the forecast period, **the full annual 0.5% for the SGC therefore needs to be added to the forecast increases in the WPI** for FY25 and FY26.

Over the forecast period, the Australian and NSW EGWWS WPI growth is expected to push above and remain higher than the All Industries WPI average, with the national All Industries WPI forecast to average 3.4% over the five years to FY30. This means that the Australian EGWWS WPI is expected to be 0.3% higher than the All Industries average, which is slightly lower than the 0.4% historical difference of the decade to FY21.

Utilities wages are forecast to increase by more than the national average over the forecast period because of the following factors:

- the electricity, gas and water sector is a largely capital intensive industry whose employees have higher skill, productivity and commensurately higher wage levels than most other sectors
- strong union presence in the utilities sector will ensure outcomes for collective agreements, which cover 62% of the workforce, remain above the wage increases for the national 'all industry' average. In addition, with the higher proportion of employees on EBAs, compared to the national average (35%), and EBAs wage rises normally higher than individual agreements, this means higher overall wage rises in the EGWWS sector.
- increases in individual agreements (or non-EBA wages) are expected to remain elevated as the labour market remains tight, with the unemployment rate now around 4.1% and expected to remain around 4.1-4.4% over the next two years, before again tightening over the FY28 to FY30 period as the unemployment rate again falls below 4%.
- demand for skilled labour will remain high and strengthen with the high levels of utilities investment from FY23 to FY30 (and beyond), which are well above the levels of the past two decades. Oxford Economics Australia is forecasting utilities-related engineering construction to be 24% higher in FY30 compared to FY24 levels, which were 57% higher than FY21 levels.
- the overall national average tends to be dragged down by the lower wage and lower skilled sectors such as the Retail Trade, Wholesale Trade, Accommodation, Cafés and Restaurants,

and, in some periods, also Manufacturing and Construction. These sectors tend to be highly cyclical, with weaker employment suffered during downturns impacting on wages growth in particular, such as occurred in the wake of the COVID-19 impacts. The EGWWS sector is not impacted in the same way due to its obligation to provide essential services and thus retain skilled labour.

Although OEA's economic growth (GDP) forecasts are for further weak growth over FY25 and FY26, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate only drifting up slowly from 4.1% now to 4.4% by mid-2025, where it will remain until late 2026. Job ads are still very high – well above pre-Covid levels, suggesting further jobs growth, although slowing from here. Furthermore, we expect that the rise in the unemployment rate will be kept in check by falls in the participation rate from current record levels, as employment growth slows. Skill shortages, which have already emerged, are expected to remain acute in many parts of the economy, although there has been recent evidence of shortages of unskilled labour beginning to ease. The tight labour market will see wage pressures remain elevated.

Wages have been slower to pick up compared to the inflation rate, due to lags in the transmission of wage increases, particularly in the enterprise bargaining segment, where the duration of agreements runs for 2-3 years. The All industries WPI peaked at 4.1% in 2023/24 (up from 3.5% in 2022/23) and is forecast to ease over the next four years as the economy cools, CPI inflation decelerates, and the unemployment rate rises to around 4.4%. The strengthening in economic and employment growth from 2027/28 will then see All Industries WPI growth pick up sharply to 3.4% and 3.6% over 2028/29 and 2029/30.

We expect to see the continuation of critical skilled labour shortages and competition for scarce labour - particularly from the mining and construction sectors - which will push up wage demands in the utilities sector. Mining investment has picked up and is forecast to see steady increases over the next 6 years to the end of the decade. Meanwhile, there is similar strong growth coming through in the Construction sector, with solid increases over the outlook period across all segments of the overall construction sector. With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 6 years, following the substantial 21% recorded over FY24 – levels in FY24 were 57% above FY21 levels. Another large increase of 16.5% is expected in FY25, before growth subsequently slows and averages 1.3% over the 5 years to FY30.

Employers are already reporting an increasing shortage of technicians and trade workers, and employees with STEM skills. These are essential workers in the utilities sector. A key problem is that the TAFE (technical and further education) systems across the country have simply not been training enough workers. OEA research shows this is compounded by new graduates in the trades stream, in particular, not increasing fast enough to replace retiring workers, with new graduate numbers in some trades actually falling. Despite government announcements that they are moving to address the TAFE system, it is unlikely that these issues will be addressed within the next 5 years. Accordingly, we expect skilled labour shortages to persist in the EGWWS, construction and mining sectors, and possibly parts of the manufacturing sector.

With strong competition for similarly skilled labour from the mining and construction industries, firms in the utilities sector will need to raise wages to attract and retain workers. In other words, the mobility of workers between the EGWWS, mining and construction industries means that demand for workers in those industries will influence employment, the unemployment rate and hence spare capacity in the EGWWS labour market. Businesses will find they must 'meet the market' on remuneration in order to attract and retain staff and we expect wages under both individual arrangements and collective agreements to show further strong increases over the 2024/25 to 2025/26 period.

The EGWWS WPI rebounded strongly over FY23 and FY24 to match the national average in those years. We are forecasting the national EGWWS WPI to rise further in FY25 to 4.6%, before subsequently easing. EBAs in the sector have climbed over the past 18 months, with approved agreements averaging 4.4% in annual wage growth terms. We expect the next rounds of EBAs negotiated in the sector to remain elevated around current levels. The latest data from the September 2024 quarter shows that the EGWWS WPI pushed up to 5.1%, the highest annual increase since 2005/06. This current high rate of growth suggests that workers in the sector who receive their wage increases via individual arrangements are also obtaining very high wage outcomes. From FY25, we expect the EGWWS WPI to again outpace the All Industries WPI over the forecast period. Driving this will be continued high EBAs negotiated in an environment of relatively high inflation and a tight labour market, particularly for the types of skilled labour that dominate in the EGWWS sector.

**Table 1.1 Summary – Labour Cost Escalation Forecasts: NSW & Australia**  
(per cent change, year average, year ended June)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	5 yr Avg (f)
							Forecasts	Next Regulatory Period					
<b>NOMINAL PRICE CHANGES</b>													
<u>1. Gas Network-Related Labour</u>													
EGWWS WPI - New South Wales (a)	2.6	2.5	1.6	1.8	3.0	3.1	3.7	3.8	3.5	3.4	3.6	3.8	3.6
EGWWS WPI - Australia (b)	2.8	2.7	1.8	1.5	3.5	4.1	4.6	3.9	3.6	3.5	3.7	3.8	3.7
<u>2. Contractor Labour Cost Escalation</u>													
Construction WPI - New South Wales (c)	2.0	1.5	2.1	2.8	3.7	3.9	3.6	3.6	3.3	3.3	3.6	3.8	3.5
Construction WPI - Australia (b)	1.9	1.5	1.3	2.6	3.7	4.1	3.7	3.6	3.4	3.4	3.7	3.9	3.6
<u>3. All Industries Wages</u>													
All Industries WPI - New South Wales	2.3	2.1	1.5	2.4	3.4	4.1	3.6	3.4	3.2	3.1	3.4	3.6	3.3
All Industries WPI - Australia (d)	2.3	2.1	1.5	2.4	3.5	4.1	3.6	3.5	3.2	3.1	3.4	3.6	3.4
Consumer Price Index (headline) (e)	1.6	1.3	1.6	4.4	7.0	4.2	2.7	3.4	2.5	2.5	2.5	2.5	2.7
<b>REAL PRICE CHANGES (g)</b>													
<u>1. Gas Network-Related Labour</u>													
EGWWS WPI - New South Wales (a)	0.9	1.2	0.0	-2.7	-4.0	-1.1	1.0	0.4	1.0	0.9	1.1	1.3	1.0
EGWWS WPI - Australia (b)	1.1	1.3	0.2	-2.9	-3.5	-0.1	1.9	0.5	1.1	1.0	1.2	1.3	1.0
<u>2. Contractor Labour Cost Escalation</u>													
Construction WPI - New South Wales (c)	0.3	0.2	0.5	-1.7	-3.3	-0.3	0.9	0.2	0.7	0.8	1.1	1.3	0.8
Construction WPI - Australia (b)	0.2	0.2	-0.3	-1.8	-3.3	-0.2	1.0	0.3	0.8	0.9	1.2	1.4	0.9
<u>3. All Industries Wages</u>													
All Industries WPI - New South Wales	0.7	0.7	-0.1	-2.1	-3.7	-0.1	0.9	0.0	0.6	0.6	0.9	1.1	0.7
All Industries WPI - Australia (d)	0.7	0.8	-0.1	-2.1	-3.6	-0.1	0.9	0.1	0.7	0.6	0.9	1.1	0.7

Sources: Oxford Economics Australia, ABS

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for New South Wales.  
 (b) Australian sector wage forecasts provided for comparison.  
 (c) Construction Sector Wage Price Index (WPI) for New South Wales.  
 (d) Australian All Industries WPI provided for comparison.  
 (e) Inflation forecasts are RBA forecasts for the next 2-3 years from latest 'Statement of Monetary Policy'. Beyond that, inflation forecasts are based on a glide-path to the mid-point of RBA inflation target (2.5%) by year 5. The overall forecasts are then calculated as a geometric mean of the 'official' RBA inflation forecasts over the next 5 years or to the end of the regulatory period, with years 3,4 and 5 CPI equal to the calculated 5-year geometric mean. This methodology is the position adopted by the AER in its Final position paper "Regulatory treatment of inflation" of December 2020.  
 (f) Average Annual Growth Rate for 2025/26 to 2029/30 inclusive, ie for next regulatory period.  
 (g) Real price changes are calculated by deducting the inflation rate from nominal price changes.

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy JGN **external labour cost escalation** by wages growth (as measured by the WPI) in the NSW construction sector. 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 year. Hence, our wage forecasts are based on Oxford Economics Australia 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.

Our forecast is for the Australian and NSW Construction WPI to average 3.6% and 3.5% over the five years from FY26 to FY30 inclusive (JGN regulatory period) – or 0.9% and 0.8% per annum on average in real (inflation adjusted) terms (see Table 1.1).

The Australian Construction WPI growth recovered over FY22 to 2.6% (in year average terms) from 1.3% in FY21 and further to 3.7% in FY23 and then 4.1% in FY24. Construction wages growth is forecast to ease but remain elevated in FY25 and FY26 as construction activity increases and activity levels remain well above the previous highs of FY18 and FY13 (see figure 5.5), underpinning higher wages due to strong labour demand. Very high EBAs in the sector over the past 18 months (and more expected in the near-term) will also underpin high construction wages. Construction wages growth then eases over FY27 as growth in construction activity slows, but then picks up again from FY29 as activity re-accelerates from FY28. Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher electricity and mining investment and a plethora of publicly funded transport infrastructure projects (particularly in the eastern states of the nation).

**NSW Construction WPI** growth has slipped below the national average over the past year, largely due to slower growth in construction activity compared to the national average. We are forecasting NSW's construction WPI growth to continue to mostly track below the national average out to FY30, due to weaker increases in NSW construction activity.

## 2. INTRODUCTION, DATA & LAYOUT

Oxford Economics Australia was engaged by Jemena Gas Networks (JGN) to prepare forecasts of a discrete set of labour escalation price indices, relevant to the gas distribution industry from 2025/26 to 2029/30 (FY26 to FY30). We understand these forecasts will be used by the JGN to develop their operating and capital expenditure forecasts for their upcoming Access Arrangement. These forecasts, in turn, will be included in their revised regulatory submission to the Australian Energy Regulator (AER) for JGN's NSW Gas Distribution Regulatory proposal 2025-2030, due January 2025. Forecasts for wage cost escalation will be used by JGN to develop their operating and capital expenditure forecasts. The forecasts in this report were finalised in early December 2024.

The Australian Bureau of Statistics 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. The data used in the projections is the latest available as at early December 2025, including the September quarter 2024 releases of the Consumer Price Index (CPI), Wage Price Index (WPI) and National Accounts, plus the Reserve Bank of Australia (RBA) forecasts for the CPI and WPI contained in the RBA November 2024 'Statement of Monetary Policy'. Other inflation and interest rate data were sourced from the Reserve Bank of Australia.

Forecasts of the economic variables in this report were mostly sourced from Oxford Economics Australia reports, including the *Australian Macro Service, Long Term Forecasts: 2024 – 2038*, *Engineering Construction in Australia 2024-2036* and *Building in Australia 2024-2037*, along with other unpublished forecasts and from Oxford Economics Australia internal research and modelling.

The previous Summary section presents an overview of the outlook for the labour input costs including numerical forecasts which are presented in the summary table.

Section 3 provides a macroeconomic and construction outlook for Australia and NSW. This section also has forecasts of key economic variables plus a discussion of the drivers and logic underpinning the projections, to provide context for the labour market outlook.

Section 4 discusses Oxford Economics Australia's national wage and CPI projections and discusses the use of the Reserve Bank of Australia forecasts of the CPI for the deflation of nominal wages. Forecasts of the All Industries WPI are also provided in chapter 3. Not that most of the references to historical data and forecasts of wages in Sections 4 and 5 are in nominal terms unless specifically stated that the data/forecasts are in real (inflation-adjusted) terms.

Section 5 provides the forecasts and rationale of the wage projections for the Electricity, Gas, Water and Waste Services (EGWSS) and Construction sectors for Australia and NSW, as measured by the WPI.

Appendices include an explanation of different wage measures and wage models.



## 3. MACROECONOMIC OUTLOOK

### 3.1 AUSTRALIA MACROECONOMIC FORECASTS

#### **Australian economy has slowed sharply, but recession not expected in the near-term**

Real Gross Domestic Product (GDP) recovered well from the COVID-related slump in 2020, posting growth of 2.1% and 4.2% over FY21 and FY22 respectively, with Gross National Expenditure (GNE - domestic demand plus change in stocks) experiencing faster growth of 3.6% and 5.9% respectively in those years. Solid growth of 4.4% for GNE continued in FY23, with GDP growth slightly lower at 3.4%, due to another negative contribution from net exports.

Growth in the Australian economy slowed sharply over FY24, with GDP growth coming in at just 1.4% and GNE at 1.9%. This marked the slowest year of annual growth in GDP in over 30 years (excluding the COVID-related slump in FY20). Driving this sluggish figure was weak private consumption, as the high interest rate environment cut disposable incomes and the significant stock of savings built up over the pandemic period faded. Despite the economic headwinds brought about by tight monetary policy, a recession was avoided owing to strong population over FY23 and FY24, with public sector spending also contributing. In the September quarter 2024, quarterly growth was 0.3%, with growth through-the-year just 0.8%.

Policy settings have probably reached their peak impact on consumption, while slowing inflation over FY25 will help support real incomes. But growth in spending will be modest over the remainder of 2024. The savings rate has now fallen to its pre-pandemic level, meaning the scope for households to fund consumption growth by saving less is very limited. The tight labour market and rising wage growth will support incomes. Elevated interest rates and price inflation will keep spending growth weak in the near term. The July 2024 tax cuts are providing some support to incomes and consumer spending over the second half of 2024. However, it appears that households largely saved the tax cuts in the September quarter, with household consumption expenditure unchanged from the weak June quarter and the household savings ratio increasing.

The investment outlook is patchy. Private sector business investment weakened in September quarter, falling back -0.2%, to be up only 1.5% over the year after three weak quarters. Non-dwelling construction strengthened for a third consecutive year and is expected to continue given strong investment in mining and electricity infrastructure construction. A pipeline of publicly funded transport and health projects will also support growth in the near term, although some commitments have been wound back. Dwelling construction declined -1.4% in FY24, but has increased for three successive quarters now, rising 1.2% in the September quarter – but is set to remain weak over FY25 and FY26 as builders finish the large backlog of work to be done and falling commencements over FY24 flow on to less work done.

While we expect overall investment to remain positive at 2-3%, the higher cost environment provides downside risk as the viability of some future projects is questioned. Nevertheless, mining investment has picked up over the past three years. With prices for a number of commodities expected to remain at healthy levels over the medium term and strong demand for renewable energy related minerals, we expect further investments to get underway and mining investment to continue to rise and remain strong well into the middle of the decade. Overall, new business investment increased 7.9% and 5.9% in FY23 in FY24 respectively, but it is forecast to increase only 1% in FY25. Growth in business investment is then expected to bounce back to 4.3% in FY26, driven by private engineering construction, before growth eases over FY27 and FY28.

Fiscal policy is now moving from supportive to tightening, with government consumption expenditure set to slow from around 4% currently to 1.9% in FY26. Nevertheless, public infrastructure spending is set to remain strong over the short-to-medium term as there is a large pipeline of transport and other projects to complete, which were brought forward as part of the COVID-19 response. With a significant size of the public transport pipeline yet to be completed, total public construction is set to continue to ramp up over the coming two years to peak in FY26 at just under \$80bn (5.0% above FY24 levels). As the pipeline of transport projects ease from FY27, public investment is set to fall, declining by 6.1%. The strength in business and public investment will not only drive near term demand but will increase the economy's productive capacity over the long run.

**Figure 3.1 Australia – Basic Economic Indicators**



The labour market continues to track strongly. Employment grew by a solid 2.8% in FY24, following an exceptional 4.5% in FY23. Faster population growth has facilitated strong jobs growth whilst the participation rate remains at record highs. Labour demand has recently started to soften, with the unemployment rate pushing up to 4.1% over the past three months. However, job vacancies are still at high levels, suggesting healthy growth in employment in the near term. This strength is the best insurance the economy has against a drastic collapse in growth. But it is adding to inflationary pressures in the economy. While the labour market continues to track in such a strong position, there will continue to be upward pressure on wage growth, which picked up over FY24 and remain elevated in FY25.

After rate hikes at 10 consecutive meetings, the RBA finally paused its hiking cycle in April 2023, but then added another 0.25% increase in May, June and November, the latter due to a higher-than-expected CPI outcome in the September 2023 quarter. The official cash rate has since sat at 4.35%, with the latest September 2024 quarter CPI data tracking as expected. Despite easing inflation, domestic cost pressure remains broad and the labour market tight. As such, we don't expect the first rate cut until the June quarter 2025.

## Global Economic Outlook – solid near-term growth but increased uncertainty for medium term

Global conflicts and the outcome of the recent US election have added to global uncertainty. While global inflation has continued to ease back as supply chain concerns subside, the near-term outlook remains plagued with uncertainty. The news that Donald Trump will be the next US president and the Republicans will gain control of Congress potentially has huge ramifications for the global economy. While we've made some relatively small top-level adjustments to our global GDP and main macro forecasts, these shifts significantly underplay the implications at a sectoral level and for financial markets. Meanwhile heightened tensions in the Middle East have increased downside risk to our global growth forecast but have not prompted us to lower our forecasts further.

Despite the uncertainty, global GDP is forecast to undergo solid growth over the near term. Spurred by GDP growth in the US and fiscal stimulus in China, the global economy is anticipated to expand by an estimated 2.7% in 2024 and a further 2.8% in 2025. Recent productivity improvements alongside personal and business tax cuts in the US will underpin growth in the global economy – US GDP is anticipated to rise by 2.8% in 2024 and 2.6% in 2025. Additionally, GDP growth for China has received a boost from broad policy coordination between monetary and fiscal policy. For China, GDP growth is expected by 4.8% in 2024 and 4.4% in 2025.

Global CPI is expected to continue to fall back as headline rates in major economies fall toward target ranges. From its peak in 2022 at 8.1% global inflation has slowed eased back, growing by 6.1% in 2023 and an estimated 4.5% in 2024. The easing of price growth has been slowed recently by the persistence of service inflation which has lagged the declines experienced in goods. over 2025 with global CPI expected to grow by 3.5%. Prices are expected to continue to wind back over 2025 to 3.5% and then to 3.1% in 2026. With GDP growth set to be solid but unspectacular over the coming quarters and inflation set to slow, we continue to expect central banks to cut rates to make policy less restrictive. Most major economies have already commenced their cycle of monetary easing, including the US, UK, Canada, and New Zealand. In the absence of a major downside shock, we expect central banks to react cautiously in a bid to claw back some lost credibility amid lingering concerns about the strength of service sector inflation and still tight labour markets.

The impact of Trump's likely policies is limited over 2025 and 2026 due to the time taken for policies to take effect. The direct impact on global growth is likely limited in the near term, but masks major implication for trade and the composition for growth, and for financial markets. These effects may grow over time as the full scope of the President-elect's intentions become clear. The other key implication of the election for the global outlook is higher interest rates. The Federal Reserve may be slower to return policy to neutral, reflecting looser fiscal policy, with spillovers to emerging market central banks. Still, we doubt the path for policy rates in other advanced economies will significantly change because of the US election outcome.

The most obvious adverse channel is the imposition by the US of targeted tariffs on specific economies. The expected effective tariff rate will climb by about 2 percentage points to 5%, reflecting the imposition of tariffs on certain sectors in China and to a lesser extent the European Union, Mexico, Canada and China. The impact on overall export volumes may be tempered by trade diversification and higher US demand thanks to much looser US fiscal policy. The timing of any tariff rises is also important – it could take around 11 months to complete the legislation required to raise tariffs, implying that the adverse effects of tariff hikes may not be felt until 2026.

Currently, our forecasts assume that Trump opts for targeted rather than blanket tariffs, which limits the macro-level spillovers. Overall, we expect the impact of US tariffs will drag down total exports from China and the other targeted economies over the medium term. However, the impact will be concentrated in specific sectors, pointing to significant consequences for affected industries such as autos and steel. Notably, while the impact on bilateral trade with the US in the affected sectors may

be large, the impact on their overall exports may be far more muted. Greater diversification and reorientation of trade flows could eventually offset some of the impacts of trading less with the US, though the extent to which this is achieved will depend on the country-level breadth of US tariffs.

In the shorter-term, however, world trade is likely to receive a boost from Trump's victory due to the fact that the positive effects on trade from stronger US demand will be more front-loaded than the adverse impacts from tariffs on bilateral trade flows. The near-term bump could be larger still if orders surge next year because firms are looking to beat the tariff hikes. Beyond that, the election may accelerate the longer-term trend toward regionalisation of trade and a greater focus on protectionism and industrial policy around the world. The large structural shifts are not easily discernible in terms of their impacts on GDP in a given year, but nonetheless could be quite significant over the long run.

For Australia, the largest impact of the proposed US tariffs will come from reduced demand from China. That is, a slowdown in GDP from China as a result of reduced trade with the US may have flow on effects to demand for Australian exports. This is likely to place key commodities including iron ore, coal and alumina at greater risk of a reduction in trade volumes. However, as mentioned above, it may take some time for the full impact of the tariffs to take effect, isolating the risk to the Australian export market to FY26 and FY27. But it is important to emphasise that we see these impacts as being small in magnitude; we expect the Australian economy will be just 0.1% smaller in 2029 because of the change in the US administration.

High US interest rates, the current strong US economy and the strength of the near term US economic outlook has resulted in a relatively high US dollar over the past three years, with a further strengthening evident over recent months. This has seen the Australian dollar weaken from US\$0.67 in the September quarter 2024 to below US\$0.65 recently. However, with the US Fed expected to continue cutting rates – while the Reserve Bank of Australia cuts rates at a slower pace – we expect some appreciation of the A\$ against the US\$ over the next year. The A\$ is expected to rise to US\$0.69 in FY26 from an expected average of US\$0.67 in FY25. Conversely, the A\$ is expected to again weaken against the US\$ in FY27, as the RBA is expected to cut rates aggressively from late 2026, which will lessen the attractiveness of Australian interest rates to overseas investors. Thereafter we expect the A\$ to appreciate gradually over the latter years of the decade to the long term average of US\$0.75.

Whilst the immediate outlook is optimistic, the weight of decreased trade and easing fiscal stimulus in China will drive down global economic growth over the medium to long term. Notably, while tax cuts and other policy stimulus will boost US and, in turn, global growth in FY25 and into FY26, there will be limited spillovers to the Australian economy. More meaningful impacts are expected to emerge in FY27 and FY28, when the US fiscal policy boost will wane, and the dampening impacts of higher tariffs and lower net migration into the US take over. We expect US GDP will slow from an average pace of 2.7% in 2025-2027, to 1.9% in 2028 and 2029. This will materially slow global GDP growth and pose a headwind to Australian exports. However, the slowdown in US growth and imposition of tariffs will have an outsized impact on the Chinese economy due to weaker US import demand for Chinese goods. This channel will in turn weigh on Australian growth.

Over the long term, we expect global growth will gradually slow over the long term as resident population growth eases. Australia's trading partner growth (weighted by exports) is forecast to grow at a faster pace over the next 5-20 years (between 0.5 to 1% higher than the global average), due to the high weights of China, East Asia and India (all of which are expected to outpace the average pace of global growth) in Australia's export mix.

#### **Domestic demand and GDP will remain weak in FY25 and FY26, before improving from FY27**

Australian domestic demand is forecast to slow from 2.4% in FY24 to 1.9% in FY25 and rise to 2.1% in FY26 and 2.5% in FY27. Net exports are expected to provide a positive contribution over the next

two years, as tourism and education boost exports, with GDP growth forecast to lift from 1.4% in FY24 and (a still weak) 1.7% in FY25, to 2.5% in FY26 and 2.9% in FY27. Meanwhile, population growth is projected to ease from 2.5% in FY24 and 2.3% in FY24 to 1.3% in FY25 and further to 1.2% in FY26 and FY27, which will act to restrain growth. Employment growth is also forecast to slow from 2.8% in FY24 to 2.6% in FY25 and then to around 1% in each of FY26 and FY27. This will see the unemployment rate rise to around 4.4% by mid-2025, where it will remain until early 2027. We anticipate a decline in the participation rate will restrain the upward drift in the unemployment rate, although under-employment will rise. However, the softening in labour market demand will see wage pressures slowly subside, aiding the easing in price inflation.

Housing investment is expected to remain flat in FY25 and FY26 as the current backlog of work is finished and high interest rates impact new dwelling construction. On the other hand, we expect further moderate growth in business investment as deferred investment is undertaken, although some sectors, such as hotel construction and other tourism-related investment, will take longer to recover. Private sector engineering construction will remain buoyant due to higher levels of electricity and telecommunications infrastructure and higher levels of mining investment, particularly oil and gas. Meanwhile, public investment is expected to peak in FY26, as a large pipeline of transport infrastructure and social and institutional buildings projects come through.

Net exports detracted from GDP growth over FY24, for the fourth successive year. This is expected to continue over FY25, but we then expect exports to outpace imports over FY26 and FY27 and make a positive contribution to growth. Trade volumes will be a mixed bag. We expect mining export volumes to pick up over the next 2-3 years as new capacity comes onstream. Rural exports will remain strong over FY25, with bumper seasons in the eastern states boosting grain, other crops and dairy exports. Meat exports will strengthen too. Manufacturing exports will pick up over FY25 and FY26 as overseas conditions improve and the low Australian dollar boosts competitiveness. Overall merchandise export volumes will continue to display moderate growth over FY25 and FY26. Meanwhile, growth in merchandise import volumes will slow over FY25 and remain weak in FY26, in line with weak domestic demand. Services exports – including inbound tourism and education - remains positive, but growth will slow from here. The weak Australian dollar will boost inbound tourism and constrain outbound tourism.

Interest rate cuts are expected from early-mid 2025 and particularly over FY26 and into FY27 in response to the weakening in the economy and because we expect inflation to be comfortably back in the RBA target range of 2%-3%. The large rate cuts will precipitate a very strong rebound in dwelling construction – by mid-decade there will be a very large undersupply of housing, with pent-up demand waiting to be unleashed. The current undersupply is being exacerbated by high immigration and under-building. As consumers and businesses re-adjust to the 'normalcy' of higher interest rates – although at much lower levels than the 2000s and 2010s – investment and consumer spending will return to long term trend (or potential) rates of growth over the second half of the 2020s with an initial rebound in GDP growth over FY26-FY27 and strengthening to 3.4% in FY28, before subsequently easing back.

Over the longer term, potential growth will slow primarily due to a smaller contribution from labour force growth compared to recent history. Net overseas migration will fall back to a more normal level, and the contribution from natural increase (births minus deaths) will also moderate. The relatively large cohort of Australians aged 65+ moving into retirement will also place downward pressure on the labour force participation rate, although this will continue to be somewhat alleviated by relatively high net immigration.

### 3.2 OUTLOOK FOR THE NEW SOUTH WALES ECONOMY

In New South Wales, State Final Demand (SFD) growth rebounded strongly from the FY20 COVID-19 slump, with SFD recording growth of 4.4%, 3.8% and 4.6% in FY21, FY22 and FY23 respectively. Meanwhile, growth in Gross State Product (GSP) growth was slower in each of the same years – 2.35, 2.55 and 4.2% respectively. FY24 saw a marked slowing in growth to 1.5% for SFD and 1.2% for GSP, as the post-covid bounce ended and the substantial increases in interest rates over the past two years impacted household spending and housing investment.

Household consumption expenditure increased only 0.3% in FY24 - larger average mortgage sizes meant higher interest rates may have a stronger impact on consumption through the cash flow channel in NSW - but household only spending picks up to 0.6% in FY25, with the boost from tax cuts from July 2024 still being offset by high interest rates. Government consumption expenditure is also expected to show modest growth of 2.2% in FY25 and 1.8% in FY26 compared to 3.3% in in FY24 – well down on the national average for GCE in those years. Public investment has provided a healthy contribution to growth over the past three years and is expected to further – albeit slower - growth over the next 2 years, before declining from FY27. Driving this will be a large program of public transport projects, backed by state and federal government stimulus in road and rail infrastructure, as well as increasing levels of private investment in renewable energy generation assets and associated transmission network development.

Dwelling building activity (including renovations) declined -3% in FY24 and is forecast to decline a further -7% in FY25 and -4% in FY26. Business investment increased a healthy 4.4% in FY24, (following the 9.4% in FY23) and is expected to show further moderate increases of 4.7% in FY25 and around 3% in FY26, underpinned by higher engineering construction and equipment investment, offsetting declines in non-dwelling building. Business investment growth slows in FY27, but then picks over FY28 to FY30 due to the recovery in private non-dwelling building and stronger equipment spending.

**Table 3.1 New South Wales – Key Economic Indicators, Financial Years**

Year Ended June							Forecast						
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
<b>New South Wales</b>													
Total Construction Activity(*)	2.1	-7.8	-1.6	-2.8	10.1	4.3	-1.5	-0.4	-0.5	2.3	2.9	0.6	
State Final Demand	2.0	-2.1	4.4	3.8	4.6	1.5	1.2	1.5	2.0	3.2	3.3	2.2	
Gross State Product (GSP)	<b>2.6</b>	<b>-0.6</b>	<b>2.3</b>	<b>2.5</b>	<b>4.2</b>	<b>1.2</b>	<b>1.3</b>	<b>1.9</b>	<b>2.4</b>	<b>3.0</b>	<b>2.5</b>	<b>1.8</b>	
Employment Growth (Year Avg)	3.0	-0.3	0.1	1.0	6.0	2.2	1.7	0.6	0.7	1.5	2.0	1.3	
<b>Australia</b>													
Total Construction Activity(*)	-8.9	-3.8	-0.5	1.7	6.3	5.7	2.8	2.4	1.2	3.1	4.5	1.8	
Australian Domestic Demand	1.6	-0.8	2.9	5.5	4.3	2.4	1.9	2.1	2.5	3.5	3.7	2.6	
Gross Domestic Product (GDP)	2.2	-0.1	2.1	4.2	3.4	1.4	1.7	2.5	2.9	3.4	3.2	2.4	
Employment Growth (Year Avg)	2.4	0.3	0.4	3.4	4.5	2.8	2.6	0.9	1.0	1.8	2.3	1.8	

Source: Oxford Economics Australia and ABS

\* Total construction work done in constant prices as per the ABS Building Activity and Engineering Construction Activity  
Total construction is the sum of new dwelling building (includes alterations and additions activity greater than \$10,000), new non-building activity and new engineering construction.

Net exports detracted from growth in FY24 but are expected to contribute to growth over FY25-FY27. Healthy grain crops over FY21 to FY24 and large increases in other crops will drive higher rural exports. Mining exports, including the dominant coal exports, are also expected to increase over FY24 and FY25. Inbound tourism and education credits will add to export strength. Meanwhile, net interstate trade in goods and services will contribute to GSP growth over the outlook period as other states grow faster than NSW. Overall, SFD eases to 1.2% in FY25, with GSP forecast to be 1.3%.

SFD growth is projected to remain subdued over FY26 at an expected 1.5%, due to the high interest rates over 2023-25 impacting housing investment and consumer demand, with NSW suffering relative to the national average due to a higher household debt burden. Nevertheless, falling interest rates over FY26 will provide some delayed boosts to household consumption expenditure, but only a modest lift (+1.7%) because we expect slower employment growth to impact incomes and spending. Declines in public investment over FY27 and FY28 are also expected to contribute to weaker SFD and GSP growth, with public investment declining after a number of very large transport and other infrastructure projects wind down and are completed. SFD is forecasts to pick up to 2% in FY27, driven by a recovery in household spending and housing investment in the wake of interest rate declines. Meanwhile, net international exports are expected to contribute to output or GSP growth mainly due to subdued imports, with GSP forecast to increase 2.2% and 1.8% in FY26 and FY27 respectively.

A solid pickup in growth is then expected to ensue from FY28, as consumer spending and housing recover and strengthen as interest rates are eased through FY26 and FY27, with business investment expected to pick-up from FY28. Meanwhile, trade-exposed industries will be supported by a low Australian dollar, expected to remain in a range of US\$0.65 to US\$0.74 over the next 7 years. However, falling coal export volumes from FY27 will detract from overall export growth and total state output, with these declines gathering pace in the latter years of the decade. New South Wales will continue derive benefits from solid economic growth in other states, given its tendency to run a positive balance on interstate trade in goods and services.

The state's overall growth will continue to be hampered by slower population growth than the national average, with the state's population forecast ease from around 2.1% in FY23 to 1.9% in FY24 and then to 0.8% in FY25 and 0.7% in FY26 and FY27, before averaging 0.9% p.a. over the following 3 years to June 2030 – 0.4% to 0.5% lower than the national average. This will affect household consumption and housing demand.

Over the five years to FY30, SFD and GSP are forecast to average 2.4% and 2.3% p.a. respectively. Employment growth is expected to track below the national average over each of the next 6 years. However, the state's unemployment rate is still expected to remain below the national average, as it has been for the past decade (and over the past year). This will help maintain confidence and underpin household spending.

## 4. WAGES AND INFLATION OUTLOOK

### 4.1 CPI OUTLOOK

#### **Price inflation to ease back to RBA target over the next 2 years as supply pressures ease**

Consumer price inflation was subdued for the five years to the March quarter 2020, with annual (through-the-year or y/y) headline CPI inflation ranging between 1.0% and 2.2%; averaging 1.7%. Meanwhile, underlying (or core) inflation fell below the Reserve Bank's target 2-3% band in March 2016 and stayed there. Despite considerable volatility in prices due to COVID-19, the CPI remained under 2% over FY20 and FY21. However, over 2021 and 2022 a series of factors resulted in CPI inflation climbing, with headline CPI peaking at 7.8% and core inflation peaking at 6.4% in the December quarter 2022. These factors included severe supply chain shortages and delays, the zero-Covid policy pursued by China, the outbreak of war in Ukraine (and associated sanctions), floods in eastern Australia leading to substantial rises in some food prices; and the decline in the Australian dollar over 2022 and into 2023, further pushing up imported prices. Added to this was evidence of rising demand inflation via widening profit margins, as local businesses took advantage of stronger economic conditions.

Another important component of procyclical inflation since mid-2021 was the cost of constructing a new dwelling (which constitutes 8.5% of the CPI 'basket'). Cost inflation in the construction sector has been escalating since late 2020, due to both the surge in construction work generated by the HomeBuilder subsidy, and materials and labour shortages caused by this additional demand and exacerbated by supply bottlenecks and workplace restrictions. The house purchase component increased 20.7% y/y over the year to September 2022, before easing over the past two years to 4.8% y/y in the September quarter 2024. Construction cost inflation will slow further in the coming quarters, but over the next few years it will still remain high relative to its pre-covid history.

Overall, headline CPI inflation averaged 7% in FY23 and 4.2% in FY24. In July 2024, the government enacted a number of measures, including temporary electricity bill relief and rental subsidies, plus a sharp fall in fuel prices. This resulted in a low September quarter CPI outcome of just 0.2% in the quarter, pushing the annual (through-the-year or y/y) growth from 3.8% in the June quarter to 2.8% in the September quarter.

With most of the above supply-side pressures to ease further and oil and other commodity prices to weaken over FY25, we expect their absence will help subdue headline inflation materially over the coming year. Demand-driven inflation has also appeared to have weakened, largely due to higher interest rates. Nevertheless, the tight labour market - with the unemployment rate currently around 4.1% and expected to stay around 4.1-4.4% for the next year - will continue to contribute to wage pressures. This will see CPI inflation slowly decline over the next two years.

However, some structural factors will add to inflation over the short-to-medium term, such as household energy costs, rising higher rental and elevated food inflation. Rents constitute around 6% of the CPI, electricity and gas 2.9%, while food accounts for over 10% of CPI basket (or over 17% if you include meals out and takeaway food). Rental price growth rose to 4% (y/y) in the December quarter 2022 and lifted to 7.6% in the September quarter 2023 and has only slowly subsided to 6.7% in the September quarter 2024. Given the extreme tightness in rental markets currently, the CPI measure of rents is expected to remain quite high over the next 2-3 years as existing rental contracts roll over to new, much higher rents and new supply fails to keep with strong housing demand. Another factor driving inflation over the next 1-2 years will be further sharp increases in electricity and gas prices. It is worth noting that both rent and energy price rises in the September quarter were



constrained by temporary government subsidies, which will then see headline CPI inflation jump in the September quarter 2025, when these temporary measures finish.

Food inflation had averaged around 2.8% p.a. over the 25 years to 2014 but were very weak over the five years to FY19 (averaging only 1.1% p.a.), which was a key factor which muted prices over those years. This was due to intense competition between the major supermarkets and falling or weak global agricultural prices. The supermarkets cannot keep cutting prices (and either their own margins or suppliers' margins), while world agricultural prices will remain elevated over the medium term, now the previous global oversupply has dissipated. So while food inflation has fallen back from the 10% rises of 2022 to 3.4% y/y in the latest quarter, food prices are unlikely to track back to the sub-2% of the 2015-2019 period.

Underlying and headline CPI inflation are expected to remain somewhat elevated over FY25 to FY26 as the supply and demand pressures slowly abate, the labour market remains tight, and wage growth remains relatively high. Although global inflationary pressures will ease further over the next year, they will remain elevated, contributing to higher manufacturing costs and prices over the near term. The sharp decline in the exchange rate from around US\$0.72 in the first half of 2022 to US\$0.65 recently will also add to inflationary pressures in the near term. Conversely, we expect the A\$ to appreciate toward US69-70 cents over the next 1-2 years, which will provide some offsetting pressures over FY26.

Overall, OEA forecasts headline CPI inflation to be 2.7% in FY25 and 3.5% in FY26. The softer growth in the economy over FY24 to FY27 will see price and wage pressures weaken, with the CPI to ease back to around 2.7% in FY27, before picking up from FY29 and averaging 2.7% over the latter years of the 2020s (see figure 4.1). Our forecasts, on average, are similar to the February RBA forecasts over FY25 to FY26 (see section 4.1.1 below).

### **CPI inflation projected to average close to 2.5% over the medium-to-long term**

Headline CPI inflation is expected to sit close to (or just above) the mid-point of the RBA's 2-3% target band in the long run based on the following:

- Tradeables inflation, which currently constitutes around one-third of the CPI basket, is forecast to increase by an average of around 1.5% to 2% per annum contributing around 0.6% to annual inflation. Limited movements in the A\$, steady (but subdued) increases in global manufacturing costs and some commodity price increases underpin this projection.
- Non-tradeables inflation comprises the remaining two-thirds of the basket, but this proportion is increasing due to the move toward services and higher price inflation (than tradeables). It is assumed to increase by around 2.5-3.3% per annum, contributing just over 2% to headline inflation. This is weaker than the 3.7% average achieved from 2001 to 2015 when relatively high wage inflation, lower than average productivity growth to 2009 and also large rises in utilities prices pushed non-tradeables inflation to well outside of the RBA's 2 to 3% target range. We expect higher wages growth in the longer term and lower long-term productivity will also contribute to the maintenance of relatively high non-tradeables inflation.

#### **4.1.1 RBA CPI Forecasts are Used to Calculate Real Wages**

To calculate real wage and other cost increases, we deflate nominal price growth by deducting expected inflation. For the inflation forecast, we use the methodology preferred by the Australian Energy Regulator (AER). This methodology involves using the official near-term CPI forecasts from the Reserve Bank of Australia (RBA) and a longer-term average based on the 2.5% mid-point of the RBA's inflation target band (i.e. 2 to 3%).

The RBA's November 2024 'Statement on Monetary Policy' forecast the headline CPI rate to be 2.6% (y/y) in the December quarter 2024 and 2.5% in the June quarter 2025 - giving a year average of 2.7% for FY25. With the energy and rental subsidies finishing in mid-2025, the RBA forecasts headline inflation jumps to back up to 3.7% for the December quarter 2025, before easing to 3.1% in the June quarter 2026 – giving a year average CPI rate of 3.4% for FY26. The RBA's CPI forecast for December 2026 is 2.5% and assuming 2.5% in the June quarter 2027, then the year average CPI for FY27 of 2.5%. Beyond the RBA's forecast from the SoMP, we assume the CPI averages 2.5% over the medium-to-long term.

## 4.2 NATIONAL & NSW ALL INDUSTRIES WAGES

The key determinants of nominal wages growth are consumer price inflation, productivity, the relative tightness of the labour market (i.e. the demand for labour compared to the supply of labour), and compositional (structural) changes in the labour market following the end of the mining investment boom around 2013. The low wage growth of the 2014-21 period was both a product of and key contributor of low underlying inflation. Low wages helped keep business costs down and thus mute upward price pressures, while a significant section of pay deals are set in line with CPI inflation – especially for employees on awards. The unemployment rate and underemployment rate are key indicators of the amount of slack in the labour market. The unemployment rate was just above 5% over the two years to the March quarter 2020, before the COVID impacts. Historically this rate was seen as close to the NAIRU, (the Non-Accelerating Inflationary Rate of Unemployment or the 'natural rate of unemployment'), but our latest research suggests that the natural rate has lowered in recent years, possibly to around 4%<sup>1</sup>.

### **Wage growth has peaked, but will remain elevated as labour market remains tight**

Following the covid-inspired slump in wages in FY20 and FY21, wages growth picked up over FY22, with the All Industries wage price index (WPI) increasing to 2.4% in FY22 (from 1.5% in FY21). A further acceleration in wages growth occurred over FY23 and FY24 – to 3.5% and 4.1% respectively. The pace of growth in FY24 was the fastest rate of growth since the mining boom years of the late 2010s (see chart 4.1 and table 5.1). Wages growth appears to have now peaked and we expect wages growth to gradually ease back over FY25 to FY27, before stabilising and then re-accelerating over FY29 to FY30.

A key element adding to wage pressures over FY22 to FY24 was the rapid tightening in the national labour market. Employment growth has been very strong over the past three years, with the unemployment rate averaging 3.6% in FY23 and 3.9% in FY24 and labour force participation rates at record levels. A key to the outcomes over FY22 was little growth in the pool of available labour. The cessation of international migration to Australia from March 2020 saw population growth plummet to just 0.2% in the year to June 2021, while the working age population (above 15 years old) increased by only 50,000 (+0.2%) over 2020/21 and 206,000 in 2021/22, compared to over 330,000 persons in FY19 and in the year to March 2020. Growth in the labour force has been facilitated by a marked increase in the labour force participation rate to record levels, with the return of immigration adding to employment growth. However, immigration and the growth in the working population will slow markedly from here, as the government acts to stem the high numbers of arrivals. Furthermore, there is now little scope to raise the participation rate further and, with the underemployment rate near historical lows and job vacancies still well above pre-COVID levels, wage pressures will remain elevated in the near-term.

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<sup>1</sup> A 4% NAIRU is within the RBA's the lower bound estimate as of 2019. See the RBA's Assistant Governor Luci Ellis' 2019 speech "Watching the Invisibles".

Figure 4.1 Australia: Wages and Prices

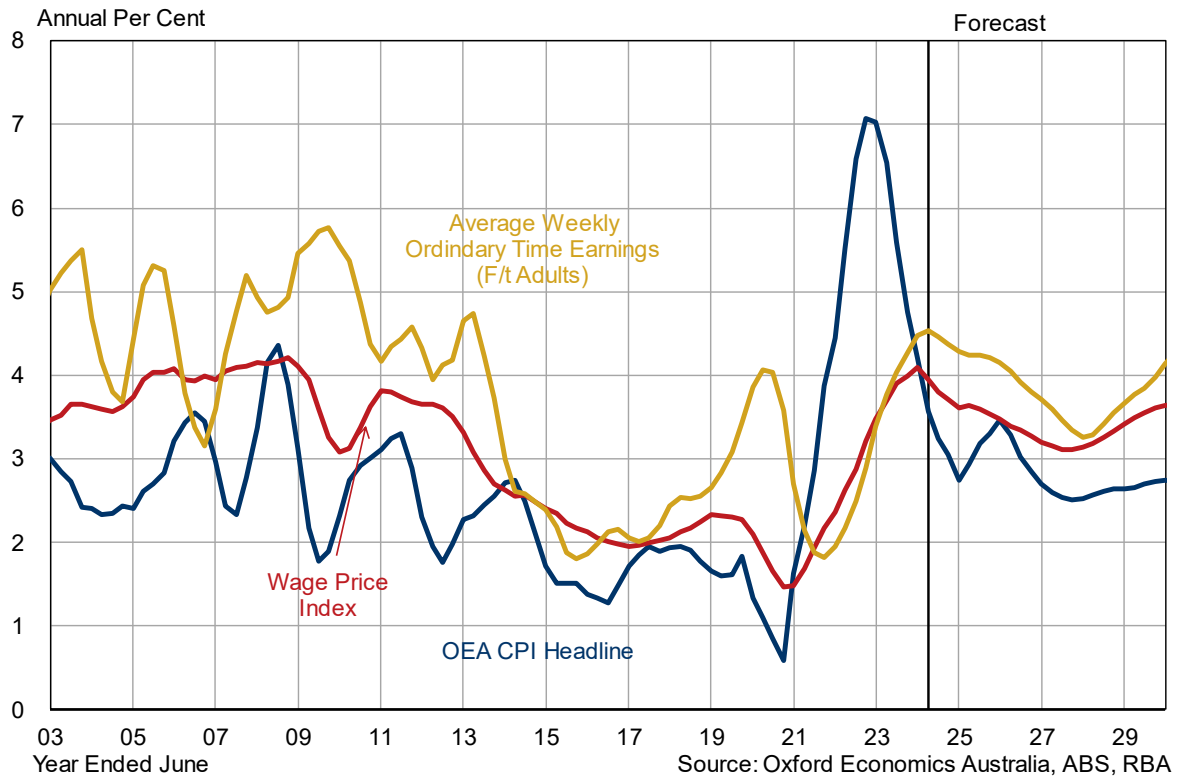
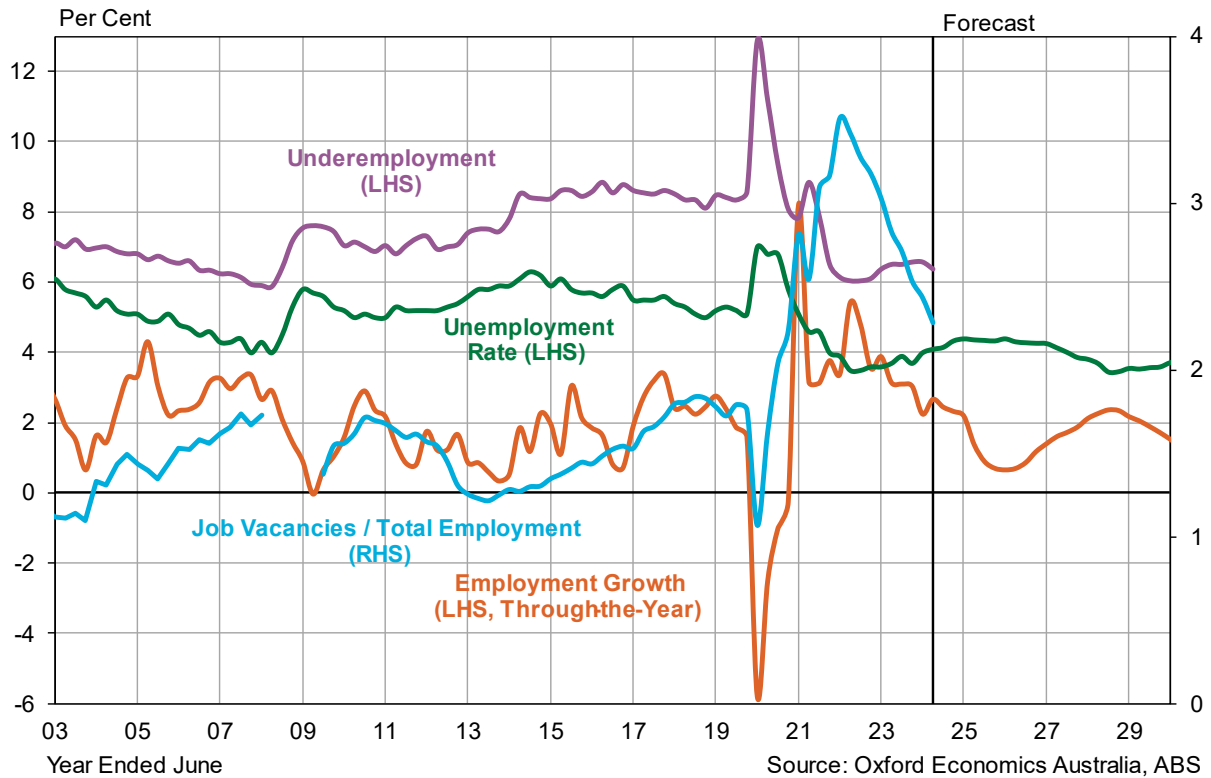


Figure 4.2 Australia: Employment and Unemployment



Although OEA's economic growth (GDP) forecasts are for further weak growth over over FY25 and FY26, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate only drifting up slowly from 4.1% now to 4.4% by mid-2025 where it will remain until late 2026. Job ads are still very high – well above pre-Covid levels, suggesting further jobs growth, although slowing from here. Furthermore, we expect that the rise in the unemployment rate will be kept in check by falls in the participation rate from current record levels, as employment growth slows. This is likely to occur amongst those currently in the workforce with a 'loose attachment' to the workforce, such as older workers who stayed in the workforce due to strong labour demand. As demand eases, a significant proportion of workers are likely to drop out of the workforce (and hence the labour force statistics) and possibly retire.

Skill shortages, which have already emerged, are expected to remain acute in many parts of the economy, although there has been recent evidence of shortages of unskilled labour beginning to ease. The tight labour market will see wage pressures remain elevated. Wages have been slower to pick up compared to the inflation rate, due to lags in the transmission of wage increases, particularly in the enterprise bargaining segment, where the duration of agreements runs for 2-3 years.

In the short-term, our wage forecasting methodology involves an analysis of the expected future wage movements in the three main methods of setting pay – for those reliant on awards (13% of the full-time workforce), collective agreements (35% of the workforce) and those who have their pay set by individual arrangements (52%). In terms of those workers on awards who have their pay determined by the Fair Work Commission (FWC) in the annual National Minimum Wage (NMW) case, the increase given in June 2022 and June 2023 for the 2022/23 and 2023/24 financial years were much higher than previous years. In June 2022 the FWC awarded a 5.2% increase to workers on the minimum wage, with workers on award rates receiving a 4.6% increase. A key element of this decision was the very high CPI inflation rate of 5.1% in the March quarter 2022 (which was then the latest available quarter). The June 2023 NMW decision (for the 2023/24 financial year) was even higher, driven by CPI inflation of 7% in the March quarter 2023. The Commission awarded an 8.6% in the minimum wage and an increase of 5.75% for workers on awards. These increases underpinned a lift in overall wages growth in FY23 and FY24.

In June 2024, the FWC awarded a 3.75% increase for the 2024/25 financial year. Although only 13% of full-time workers (a much higher proportion for part-time workers) rely on the annual increase in the minimum and award wage as their primary wage-payment mechanism, a significant proportion of workers are also indirectly influenced by the NMW increase, as it usually flows onto industry awards, with the Fair Work Commission estimating its decisions will affect more than 2.7 million workers (around 20% of the workforce). Accordingly, these FWC decisions will also influence the strength of wage increases given to those who receive their wages via 'individual arrangements' pay setting arrangements, as a significant proportion of wage increases given under individual arrangements are based on awards. Recent inflation outcomes, inflationary expectations and the tightness of the labour market are also key influences in the setting of wage increases under individual arrangements.

It is important to note that wage growth usually lags changes in the labour market, inflation and economic conditions, because of the inherent lags in wage setting mechanisms. Although wage increases related to the NMW and relevant awards are set each July, many of the enterprise agreements – covering 35% of the full-time workforce – run for an average of 2-3 years. These agreements averaged 2.6% over the five years to December 2021, having been set in an environment of low inflation and a much less tight labour market. However, as these previous (low wage increases) agreements expire, we expect the next round of agreements to be materially higher, due to previous and current high CPI inflation and because of widespread skilled labour shortages (with the unemployment rate expected to be below 4.4%). The latest DEWR (Department of Employment and Workplace Relations) data shows that agreements recently approved have lifted from 2.6% (average annualised wage increases – AAWI) in the September 2022 quarter to 4.4% in the December 2023

quarter, easing to 4.0% for the June quarter 2024. We expect similar high agreements to be negotiated over coming quarters. Of the other 52% of workers on individual agreements, those of who are on awards will receive an annual pay increase via the FWC increase, while others may receive an annual salary increase, but there are a significant proportion on fixed contracts running over a few years. The bottom line is that the next round of wage rises negotiated by workers will be continue to be relatively high.

Forecasts for All industries wages are detailed in Table 5.1 and the Summary table in the Executive Summary. The Australian All industries WPI is forecast to increase to remain elevated at 3.6% in FY25, before easing over the subsequent 3 years as the economy cools and the unemployment rate rises toward 4.5%. Stronger wage growth is then expected over FY29 and FY30 as stronger economic and employment growth returns from 2028, and the unemployment rate falls back below 4%. Overall, using RBA CPI forecasts, real (inflation-adjusted) WPI growth for the Australian All Industries WPI is forecast to rise 0.9% in FY25 as WPI growth finally outpaces high CPI inflation – after higher CPI inflation delivered real wage declines over FY21 to FY24. In FY26, the jump back in the CPI (as the temporary energy and rental subsidies expire) will undermine real WPI growth to just 0.1%. Thereafter, there will be positive growth in real wages from FY27 to FY30. Over the five-year period from FY26 to FY30, the real rate of increase is forecast to average 0.7% p.a., which will be above the 0.6% average of the decade to FY20 inclusive.

The **New South Wales All Industries WPI** are expected to largely track over the national All Industries WPI over the forecast period, with minor year-by-year differences related to the relative strength of the respective state economic growth and labour markets. A slightly lower unemployment rate in NSW, compared to the national average, will continue to sustain the overall tightness of the labour market in NSW and add pressure to overall wages.

## 5. INDUSTRY WAGES - UTILITIES & CONSTRUCTION: AUSTRALIA & NSW

### 5.1 CHOICE OF THE WAGE PRICE INDEX AS THE MEASURE OF LABOUR COSTS

The WPI for the EGWWS (Electricity, Gas, Water & Waste Services or ‘Utilities’) sector in NSW is used as a proxy for all of JGN gas network related labour costs. Network labour costs includes all internal labour (i.e. all head office staff including professional and admin employees plus field employees) as well as any external labour hired to provide field services such as ‘asset management’ services. Businesses providing these field services are usually classified to the utilities sector. Hence, including their labour costs as part of JGN opex and capex ‘network’ labour and escalating it with the WPI for the state utilities sector will be consistent with the AER’s framework.

OEA chose to use the Wage Price Index (WPI) as the key measure of growth in JGN internal labour costs for the forecasts of Electricity, Gas, Water and Waste Services. The key motivations for this are:

(a) Greater data availability: the EGWWS WPI is available at the national level and for the key states (NSW, Victoria and Queensland), both on quarterly and annual basis. Average Weekly Earnings (AWE) and Average Weekly Ordinary Time (AWOTE) are not available by industry by state, and at the national level are only published every 6 months; and

(b) The Australian Energy Regulator (AER) prefers the WPI as it has less volatility than AWOTE and is a better measure of underlying trends.

In terms of overall wage costs, **the full 0.5% for the SG increases each year should be added to the forecast WPI increases in each of the FY25 and FY26 years** for internal wages and also external wages, to arrive at the total percentage increase in labour costs. This applies to FY25 and FY26. This is in line with advice from Deloitte Access Economics (DAE) to the AER in their Superannuation Guarantee paper, that “...taking into account the uncertainty regarding how individual NSPs will respond to changes in the minimum superannuation guarantee, it is recommended that the full 0.5 percentage point annual increase to the superannuation guarantee be added to forecast WPI growth” (page 5 of DAE impact of *Changes to the Superannuation Guarantee on Forecast Labour Price Growth*, July 2020).

### 5.2 NATIONAL & NEW SOUTH WALES EGWWS WPI FORECASTS

**Utilities wage growth is forecast to continue to outpace the national ‘all industries’ average over the forecast period.**

The national (Australia-wide) EGWWS WPI growth has consistently been above the national (All Industries) average since the index’s inception in 1997 and averaged 0.6% higher over the past two decades (see Table 5.1 and Fig 5.1). Over the two decades to 2020/21, the average growth in the real (inflation-adjusted) WPI was 1.2%. Since the collapse in wages growth following the end of the mining boom, the EGWWS WPI has continued to outpace the All Industries average, increasing by an average of 2.5% over the past decade from 2013/14 to 2022/23 inclusive, 0.2% higher than the 2.3% national average.

Over the 5-year period from FY26 to FY30 inclusive the Australian EGWWS WPI is forecast to average 3.7%, which will be 0.3% above the All Industries average. In real terms, the Australian EGWWS WPI is forecast to average 1.0% p.a. over the five years to FY30, similar to the 0.9%

averaged over decade to FY21. In terms of the historical difference vis-à-vis the All Industries WPI average, the difference is slightly below the 0.4% difference of the decade to FY21.

**Table 5.1 Total Australia (All Industries) and Electricity, Gas, Water and Waste Services Average Weekly Ordinary Time Earnings and Wage Price Index (Year Average Growth)**

Year Ended June	Average Weekly Ordinary Time Earnings <sup>(1)</sup>						Wage Price Index <sup>(2)</sup>					
	All Industries			Electricity, Gas, Water and Waste Services			All Industries			Electricity, Gas, Water and Waste Services		
	Nominal \$/week	%CH	Real AWOTE %CH (4)	Nominal \$/week	%CH	Real AWOTE %CH (4)	Nominal Index	%CH	Real WPI %CH (4)	Nominal Index	%CH	Real WPI %CH (4)
2005	973	4.4	2.0	1,091	3.2	0.8	85.3	3.7	1.3	83.3	4.3	1.8
2006	1 018	4.6	1.4	1,111	1.9	-1.3	88.7	4.1	0.9	87.6	5.2	2.0
2007	1 054	3.6	0.6	1,152	3.7	0.7	92.2	3.9	1.0	91.8	4.8	1.8
2008	1 106	4.9	1.6	1,183	2.7	-0.7	96.1	4.1	0.8	95.7	4.2	0.8
2009	1 166	5.5	2.3	1,255	6.1	3.0	100.0	4.1	1.0	100.0	4.5	1.4
2010	1 231	5.6	3.2	1,351	7.6	5.3	103.1	3.1	0.8	104.4	4.3	2.0
2011	1 283	4.2	1.0	1,474	9.1	6.0	107.0	3.8	0.7	108.7	4.2	1.1
2012	1 338	4.3	2.0	1,510	2.5	0.1	110.9	3.6	1.3	112.5	3.5	1.2
2013	1 400	4.6	2.4	1,602	6.1	3.9	114.6	3.3	1.0	117.3	4.2	1.9
2014	1 442	3.0	0.3	1,635	2.0	-0.7	117.6	2.6	-0.1	121.1	3.2	0.4
2015	1 477	2.4	0.7	1,646	0.7	-1.0	120.4	2.4	0.7	124.5	2.8	1.1
2016	1 504	1.9	0.5	1,704	3.5	2.2	123.0	2.1	0.7	127.5	2.4	1.0
2017	1 535	2.0	0.3	1,777	4.3	2.6	125.4	2.0	0.2	130.3	2.2	0.5
2018	1 572	2.4	0.5	1,818	2.3	0.4	127.9	2.1	0.1	132.9	2.0	0.0
2019	1 614	2.7	1.0	1,842	1.3	-0.3	130.9	2.3	0.7	136.6	2.8	1.1
2020	1 676	3.9	2.5	1,896	2.9	1.6	133.7	2.1	0.8	140.2	2.7	1.3
2021	1 721	2.7	1.1	1,927	1.6	0.0	135.6	1.5	-0.1	142.7	1.8	0.2
2022	1 755	1.9	-2.5	1,979	2.7	-1.7	138.8	2.4	-2.1	144.9	1.5	-2.9
2023	1 814	3.4	-3.6	2,109	6.6	-0.5	143.7	3.5	-3.6	150.1	3.5	-3.5
2024	1 895	4.5	0.3	2,217	5.1	0.9	149.5	4.1	-0.1	156.3	4.1	-0.1
Forecasts												
2025	1 977	4.3	1.6	2,329	5.1	2.4	154.9	3.6	0.9	163.4	4.6	1.9
2026	2 059	4.1	0.8	2 433	4.5	1.1	160.3	3.5	0.1	169.7	3.9	0.5
2027	2 135	3.7	1.2	2 528	3.9	1.4	165.4	3.2	0.7	175.8	3.6	1.1
2028	2 205	3.3	0.8	2 617	3.5	1.0	170.6	3.1	0.6	181.9	3.5	1.0
2029	2 286	3.7	1.2	2 717	3.8	1.3	176.4	3.4	0.9	188.5	3.7	1.2
2030	2 381	4.2	1.7	2 834	4.3	1.8	182.8	3.6	1.1	195.8	3.8	1.3
Compound Annual Growth Rates (3)												
2001-2010	4.8		2.0	4.4		1.5	3.7		0.9	4.4		1.6
2010-2020	3.1		1.1	3.4		1.4	2.6		0.6	3.0		1.0
2024-2030	3.9		1.2	4.2		1.5	3.4		0.7	3.8		1.1
2025-2030	3.8		1.1	4.0		1.3	3.4		0.7	3.7		1.0

Source: Oxford Economics Australia, ABS

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

(2) Wage Price Index, excluding overtime and bonuses

(3) CAGR (Compound Annual Growth Rates) for 2025-2030 is the average annual growth for 2025/26 to 2029/30 inclusive i.e. next Revenue Determination period.

(4) Annual real increases based on annual CPI for each year, not the geometric CPI average for the Revenue Determination period

Oxford Economics Australia regards the WPI to be a measure of the *underlying* wages growth in the utilities sector for total Australia. In terms of total wage costs — expressed in Average Weekly Ordinary Time Earnings (AWOTE) — Oxford Economics Australia expects EGWWS AWOTE to average 4.0% per annum over the five years to FY30, 0.2% higher than the EGWWS WPI. Our AWOTE forecasts are higher due to compositional effects. Apprentices, trainees and numbers of new staff have increased markedly over recent years, across the electricity, gas and water sector generally. Given slower growth in employment numbers over the next decade, it is likely that there will

be overall upskilling of the existing workforce, which will see a commensurate movement by much of the workforce into higher grades (i.e. on higher pay), resulting in higher earnings per employee.

**Wages growth in the EGWWS sector is invariably higher than the total Australian national (All Industries) average.**

During the COVID-19 crisis, the EGWWS sector fared much better than just about all other sectors, along with the Education, Health & Social Assistance and Finance and Insurance sectors, in terms of wage increases over FY20 and FY21. However, in FY22, annual growth in the EGWWS WPI (1.5%) slipped below the All Industries average (2.4%) for only the second time in the past two decades. However, this proved to be a short-lived aberration, with the EGWWS WPI rebounding strongly over FY23 to match the national average of 3.5%. In FY24, the EGWWS WPI again matched the All Industries WPI. From FY25, we again expect the EGWWS WPI to outpace the All Industries WPI over the forecast period. Driving this will be much higher EBAs negotiated in an environment of very high inflation and a tight labour market, particularly for the types of skilled labour that dominate in the sector.

To a large extent, higher relative wages growth has been underpinned by strong capital works program in the utilities sector over the past two decades (and particularly up to 2013 - resulting in robust employment growth over the same period), strong competition from the mining and construction workers for similarly skilled labour and the powerful influence of unions in the utilities sector. This is set to continue over the next decade.

In addition, the electricity, gas and water sector is a largely capital intensive industry whose employees have higher skill, productivity and commensurately higher wage levels than most other sectors. Further, the overall national average tends to be dragged down by the lower wage and lower skilled sectors such as the Retail Trade, Wholesale Trade, Accommodation, Cafés and Restaurants, and, in some periods, also Manufacturing and Construction. These sectors tend to be highly cyclical, with weaker employment suffered during downturns (such as the recent COVID-19 inspired downturn) impacting on wages growth in those sectors. The EGWWS sector is not impacted in the same way due to its obligation to provide essential services and the need to retain skilled labour.

**Strong Union presence in the utilities industry and higher collective agreements outcomes pushes utilities wages above the All Industries average.**

Trade unions are typically able to negotiate higher-than-average wage outcomes for their members through collective bargaining, resulting in stronger wage growth than the all-industry average. Across the EGWWS sector, there are a number of 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).

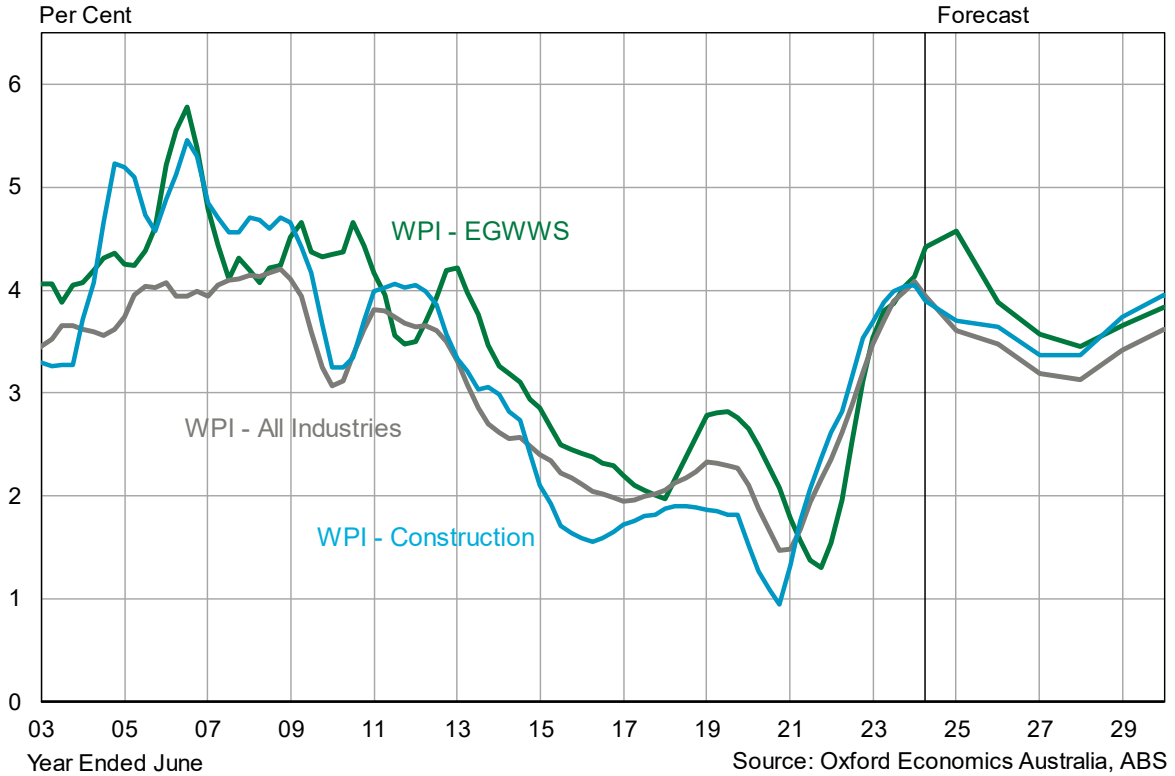
As at May 2023, 61.6% of full-time non-managerial employees in the EGWWS industry have their wages set by collective agreements, considerably higher than the national average of 35%. Over the 10 years to 2016, previous BIS Shrapnel research found that a higher proportion of workers on collective agreements was associated with higher wage growth, with a correlation coefficient of +0.6 (see Figure 5.2). As we expect that the EGWWS industry will continue to have higher levels of unionisation than the national average, and that we expect unions in the EGWWS industry will continue to be able to negotiate for higher wages for a substantial proportion of EGWWS employees, resulting in EGWWS wages growing faster than the national average.

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 level of total utilities wages (in A\$ terms) will generally be higher than the All

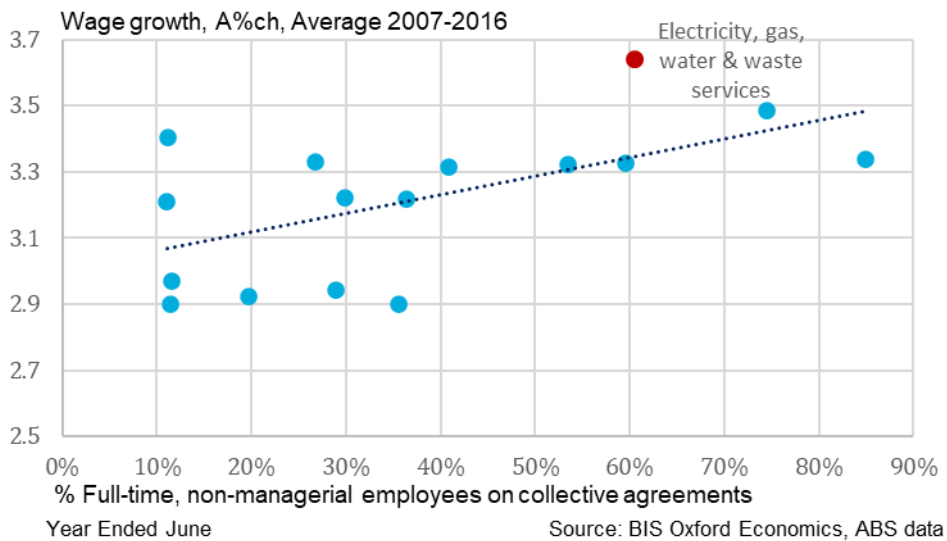


Industries average. Over the outlook period, we expect collective agreements in the EGWWS sector to achieve average increases of 3.8%.

**Figure 5.1 Wage Price Index - Australia All Industries, Electricity, Gas, Water & Waste Services, and Construction**



**Figure 5.2 Average wage growth and unionisation rates by industry, 2007-2016**

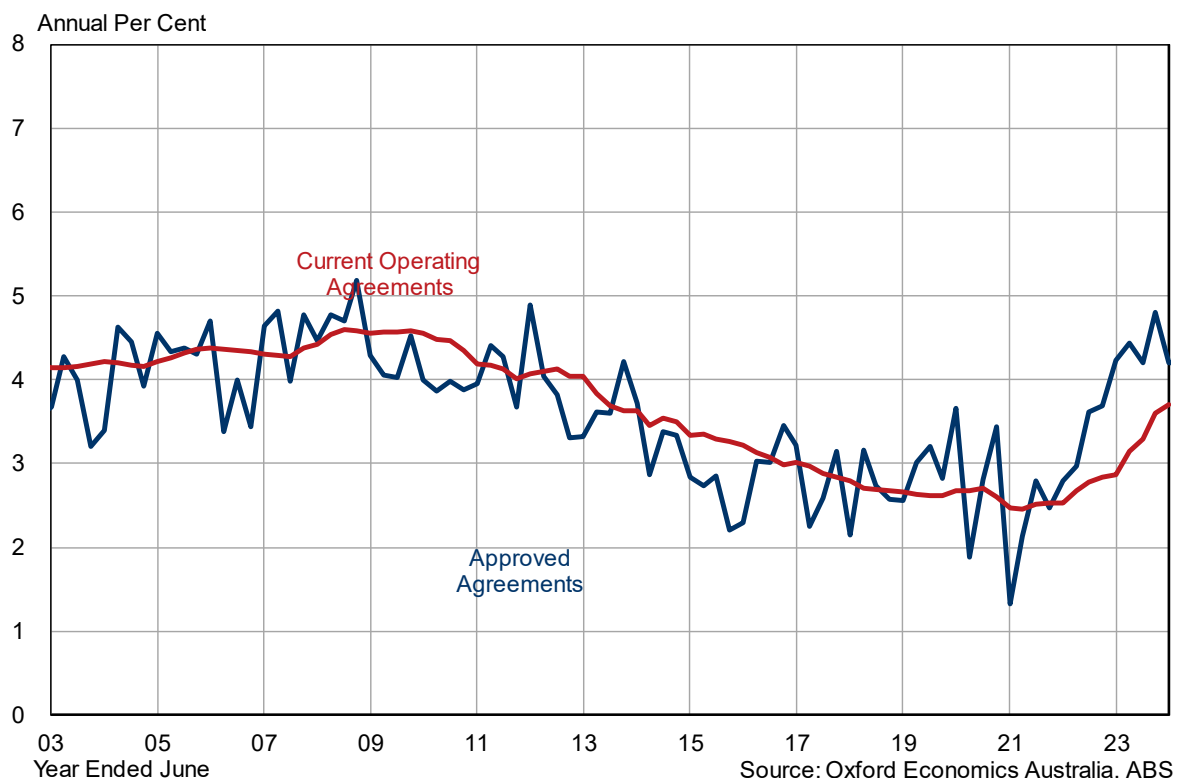


Oxford Economics Australia analysis shows collective agreements in the EGWWS sector were on average around 1.5% higher than CPI inflation over the 15 years to FY2014 (excluding the effects of GST introduction in 2000/01). In the six years to FY20, collective agreements were on average 1.4%

above the CPI. Given the strength of unions in the sector and a still strong demand for skilled labour, collective agreements are forecast to remain around 1.1% above the 'official' CPI over FY25-30, although this is lower than previous periods.

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, Oxford Economics Australia bases its near-term forecasts of Enterprise Bargaining Agreement (EBA) wages on the strength of recent agreements, which have been formalised or lodged (i.e., an agreement has been reached or approved) over recent quarters.

**Figure 5.3 Federal Agreements – Australia: Electricity, Gas, Water & Waste Services**



EBA outcomes were relatively weak over FY21 and remained subdued in FY22 (averaging 2.5%), compared to the 5 years to FY20, when EBAs averaged around 2.9%. However, EBAs have picked up appreciably over the past two years, with the March 2024 data recording 4.8% and the latest June data showing that approved EBAs were 4.2% (AAWI terms), with an average of 4.4% for FY24 (see figure 5.3 below). We expect the next rounds of EBAs negotiated in the sector to remain elevated around current levels, due to several factors:

- Workers who have had fixed EBAs from 2-3 years ago and are negotiating new rounds of EBAs are still 'catching up' on high inflation, and will be seeking high increases to compensate for past and current cost-of-living increases. CPI inflation averaged 7% in FY23 and 4.2% in FY24, with forecasts of 2.7% in FY25 and 3.5% in FY26,
- the demand for skilled labour remains strong, and

- the recent high enterprise agreement outcomes in the construction sector (average of 4.7% in FY24) will influence negotiations in the EGWWS sector, as some skills can be transferable.

As chart 5.3 shows, the annualised average growth in *current* operating agreements is yet to catch up to the *approved* agreements. With new rounds of negotiated (approved) EBAs likely to average around 4.2% in FY25, there is expected to be a marked increase in current operating agreements as the old agreements from 2-3 years ago with lower AAWIs are replaced by the new, higher wage agreements. This means that wages from the collective agreements channel will remain around 4% over the next two years, before easing.

**Wage increases under Individual agreements and EBAs have strengthened due to tight supply and strong demand for skilled labour from the Mining and Construction sectors.**

The latest data from the September 2024 quarter shows that the EGWWS WPI pushed up to 5.1%, the highest annual increase since 2005/06. This current high rate of growth suggests that workers in the sector who receive their wage increases via individual arrangements are also obtaining very high wage outcomes. Increases in individual agreements (or non-EBA wages) 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 (which influences bonuses and incentives, etc.), current business conditions and the short-term economic outlook. Demand for labour (and hence wages) in the utilities sector are also significantly influenced by investment in the sector, particularly engineering construction, which has been the key driver of employment growth in the sector over the past two decades. Figures 5.7, 5.8 and 5.9 illustrate this relationship, and shows employment has a much stronger relationship with utilities engineering construction rather than utilities output.

The overall labour market is expected remain very tight over the next 1-2 years, with the unemployment rate to remain around 4.1-4.5%, despite a slowing in employment growth from 4.4% in FY23 to 2.8% in FY24 and 2.6% in FY25, before easing. We expect population and labour force growth to largely match employment growth, with small declines in the participation rate keeping the unemployment rate low, as workers with a 'loose attachment' to the workforce drop out as labour demand eases (some to fully retire). Hence, we expect to see the continuation of critical skilled labour shortages and competition for scarce labour - particularly from the mining and construction sectors - which will sustain high wage demands in the utilities sector. Mining investment is now picking up and is forecast to see steady increases over the next 6 years to the end of the decade (see figure 5.4). Meanwhile, there is similar strong growth coming through in in the Construction sector, with solid increases over the outlook period across all segments of the overall construction sector - residential building, non-residential building and civil engineering & infrastructure construction (see figure 5.5).

With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 6 years, following the substantial 21% recorded over FY24 – levels in FY24 were 57% above FY21 levels. Another large increase of 16.5% is expected in FY25, before growth subsequently slows and averages 1.3% over the 5 years to FY30 (see figure 5.7).

Employers are already reporting an increasing shortage of technicians and trade workers, and employees with STEM skills. These are essential workers in the utilities sector. A key problem is that the TAFE (technical and further education) systems across the country have simply not been training enough workers. OEA research shows this is compounded by new graduates in the trades stream, in particular, not increasing fast enough to replace retiring workers, with new graduate numbers in some trades actually falling (see figure 5.6). Despite government announcements that they are moving to address the TAFE system, it is unlikely that these issues will be addressed within the next 5 years. Accordingly, we expect skilled labour shortages to persist in the EGWWS, construction and mining sectors, and possibly parts of the manufacturing sector.

Figure 5.4 Australia – Mining Investment

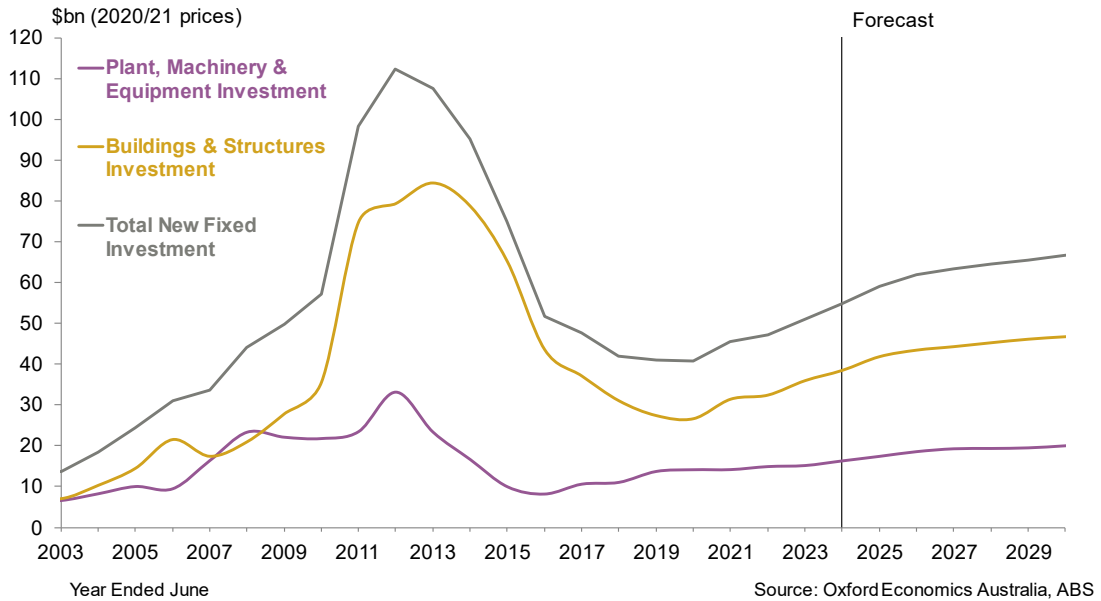
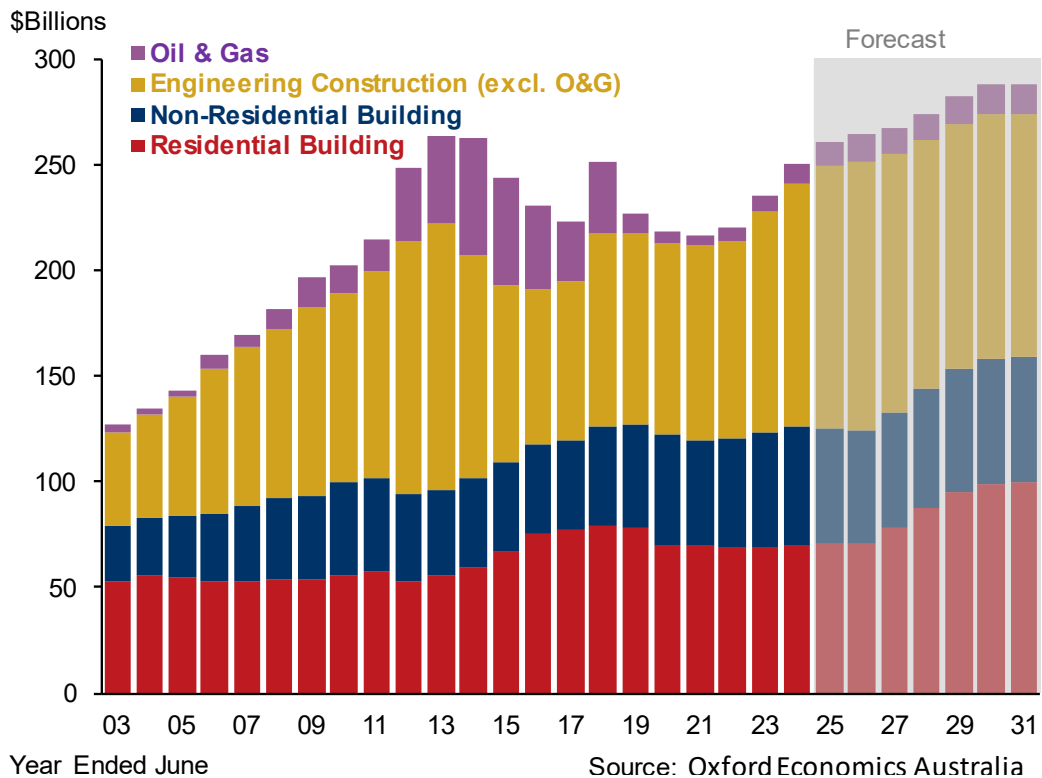


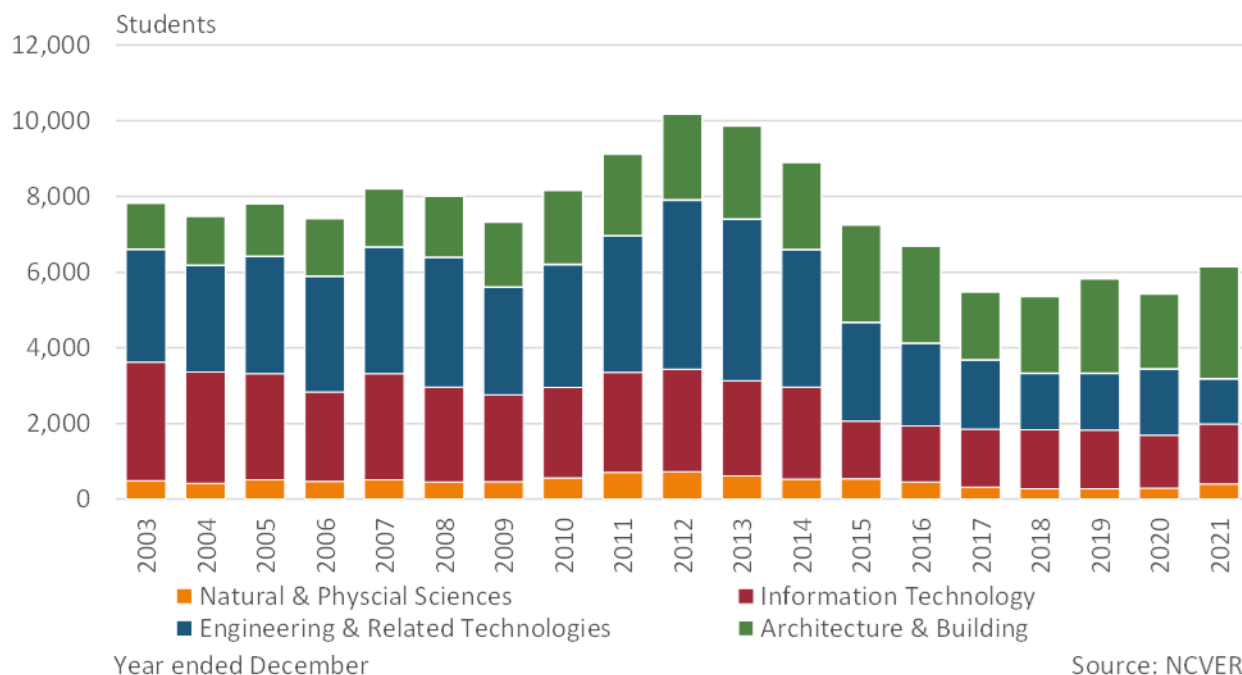
Figure 5.5 Australia – Construction Activity (real work done)



With strong competition for similarly skilled labour from the mining and construction industries, firms in the utilities sector will need to raise wages to attract and retain workers. In other words, the mobility of

workers between the EGWWS, mining and construction industries means that demand for workers in those industries will influence employment, the unemployment rate and hence spare capacity in the EGWWS labour market. Businesses will find they must 'meet the market' on remuneration in order to attract and retain staff and we expect wages under both individual arrangements and collective agreements to show further strong increases over the 2024/25 to 2025/26 period.

**Figure 5.6 Australia, number of completions, VET, 2003-2021**



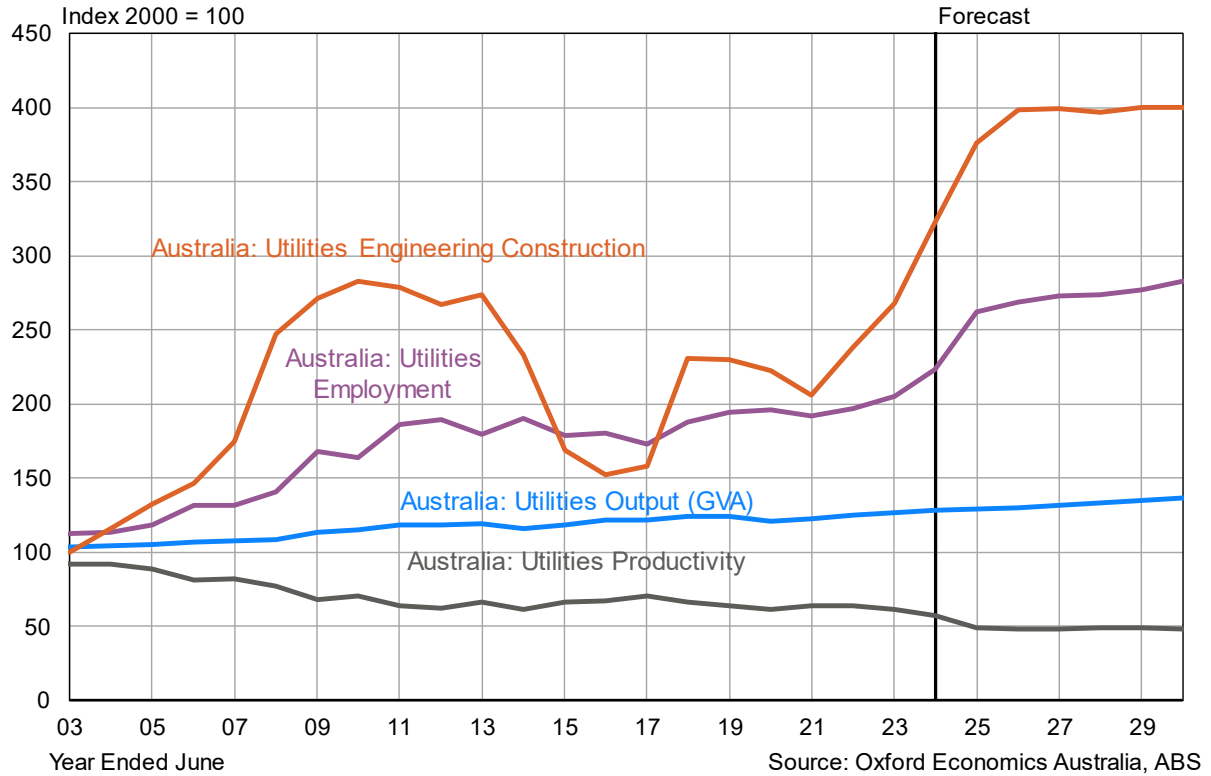
**EGWWS sector has high levels of productivity, compared to the national average, which underpins higher wages.**

The EGWWS sector has one of the highest levels of sectoral productivity – as measured by real Gross Value Added (GVA) per employed person – among the 18 industry sectors, with only Mining and Finance & Insurance Services having higher productivity. Utilities’ productivity is more than double the national average according to ABS data for Australia and well above the average for NSW (see figure 5.8). High productivity levels and commensurate skill levels are the key reasons why wage levels are much higher in the utilities sector than most other industries (in terms of average weekly earnings measures – see table 5.1).

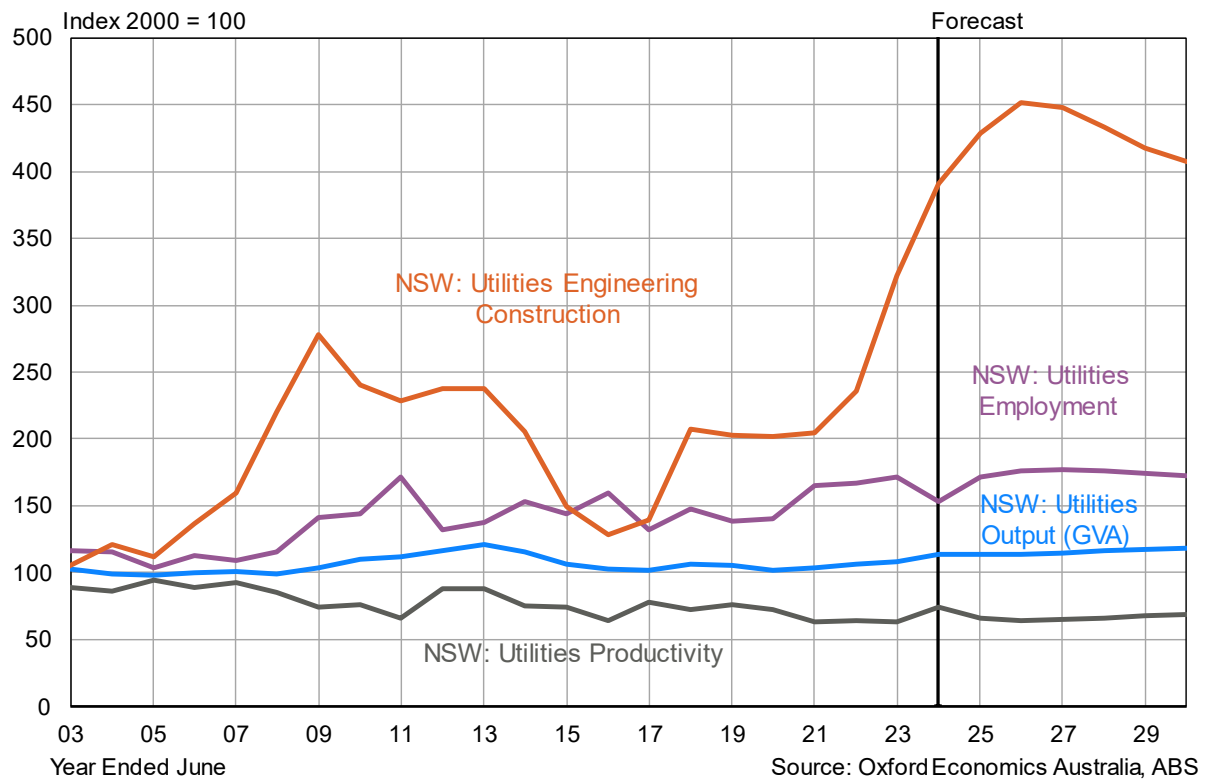
However, over the past two decades, the growth in productivity in the sector has **not** been a driver of higher wages growth in the utilities sector. Productivity suffered a steep decline over 2001 to 2014 due to a combination of strong employment growth (mainly due to rising investment, as previously discussed) and weak growth in GVA, in Australia and across all states (see figures 5.6, 5.7 and 5.8). Meanwhile, utilities wages growth was relatively strong over this same period. In effect, there is no clear relationship between wages growth and the traditional productivity measures (i.e. GVA/employment) in the utilities sector. Low productivity is set to continue in part because GVA (output) growth is expected to remain low, with low output a function of low demand caused both by high prices and energy-saving (and water-saving) measures. However, employment levels are expected to remain relatively stable – and actually increase - due to the need to maintain a skilled workforce to ensure reliability (particularly given more natural disasters due to Climate Change) and

also to undertake capital works to cater for population and economic growth and for capital replacement or enhancement.

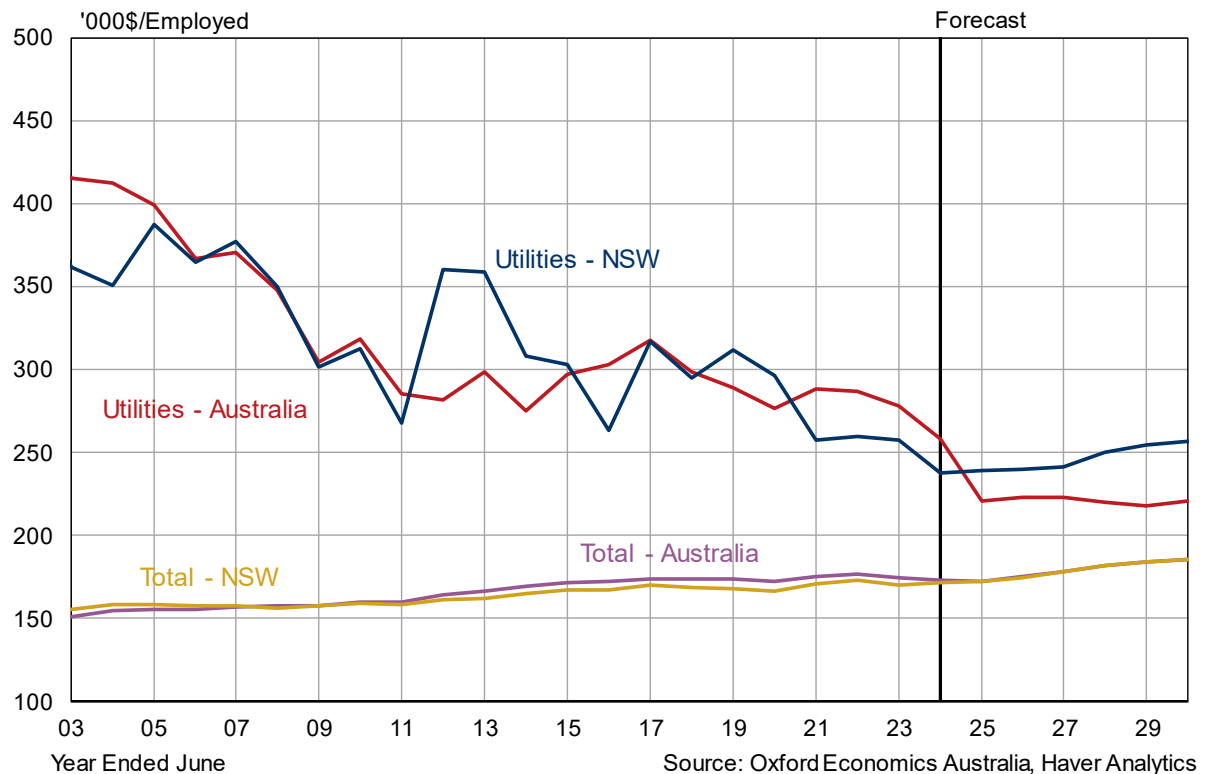
**Figure 5.7 Australia – Utilities Employment, Output, Investment & Productivity**



**Figure 5.8 New South Wales – Utilities Employment, Output, Investment & Productivity**



**Figure 5.9 Utilities Productivity in Australia and New South Wales**



### 5.2.1 Outlook for Utilities Wages Growth in NSW

Wages in the NSW utilities sector are expected to move in line with the national utilities sector average over the upcoming regulatory period (see Table 1.1), but will average around 0.1% lower. In the near-term, the NSW EGWWS WPI is expected to be somewhat lower than the national EGWWS WPI in FY25, largely due to very strong outcomes in Queensland pushing up the national EGWWS WPI average. Slightly lower EBAs in NSW than the national EBA average recently are also expected to see NSW utilities wages track below the national WPI outcomes over FY24 and FY25.

Subsequently, sustained high levels of utilities engineering construction in NSW (see figure 5.8) will see NSW utilities WPI growth keep pace with the national EGWWS average over the forecast period.

### 5.3 CONSTRUCTION WAGES

Given that service providers' outsourced labour is mostly supplied by firms in the construction industry, we proxy JGN external labour cost escalation by wages growth (as measured by the WPI) in the NSW construction sector. 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 year. Hence, our wage forecasts are based on Oxford Economics Australia 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.

Our forecast is for the Australian Construction WPI to average 3.6% over the five years from FY26 to FY30 inclusive (JGN regulatory period) – or 0.9% per annum on average in real (inflation adjusted) terms. NSW Construction wages are forecast to average 3.5%, or 0.8% in real terms (see Table 1.1).

While this is a marked improvement on the past five years, it is still well down on the 4.3% annual national average (nominal terms) of the decade to 2011/12.

The Australian Construction WPI growth recovered over FY22 to 2.6% (in year average terms) from 1.3% in FY21 and further to 3.7% in FY23 and then 4.1% in FY24. Construction wages growth is forecast to ease but remain elevated in FY25 and FY26 as construction activity increases and activity levels remain well above the previous highs of FY18 and FY13 (see figure 5.5), underpinning higher wages due to strong labour demand. Very high EBAs in the sector over the past 18 months (and more expected in the near-term) will also underpin high construction wages. Construction wages growth then eases over FY27 as growth in construction activity slows, but then picks up again from FY29 as activity re-accelerates from FY28. Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher electricity and mining investment and a plethora of publicly funded transport infrastructure projects (particularly in the eastern states of the nation).

**NSW Construction WPI** growth has slipped below the national average over the past year, largely due to slower growth in construction activity compared to the national average. We are forecasting NSW's construction WPI growth to continue to mostly track below the national average out to FY30, due to weaker increases in NSW construction activity (see table 3.1).



# APPENDIX 1: A NOTE ON DIFFERENT WAGE MEASURES & WAGE MODELS

Several different measures of wages growth are referred to in this report, each differing slightly both in terms of their construction and appropriateness for measuring different aspects of labour costs. The following provides a brief summary of the main measures, what they are used for and why.

The main wage measures are:

- Average Weekly Ordinary Time Earnings (AWOTE) — earnings gained from working the standard number of hours per week. It includes agreed base rates of pay, over-award payments, penalty rates and other allowances, commissions and retainers; bonuses and incentive payments (including profit share schemes), leave pay and salary payments made to directors. AWOTE excludes overtime payments, termination payments and other payments not related to the reference period. The AWOTE measures used in this report refer to full-time adult AWOTE and are sourced from the Australian Bureau of Statistics (ABS) catalogue number 6302.0, with Oxford Economics Australia forecasts.
- Average Weekly Earnings (AWE) — represents average total gross earnings (before tax) of all employees (including full-time and part-time workers). They include weekly ordinary time earnings plus over-time payments.
- The Wage Price Index (WPI) — a CPI-style measure of changes in wage and salary costs based on a weighted combination of a surveyed 'basket' of jobs. The WPI used in this report excludes bonuses. The WPI also excludes the effect of changes in the quality or quantity of work performed and most importantly, the compositional effects of shifts within the labour market, such as shifts between sectors and within firms. The WPI figures quoted in this report are sourced from ABS catalogue number 6345.0, with Oxford Economics Australia forecasts.

Each measure provides a slightly different gauge of labour costs. However, the main distinction between average earnings measures and the wage price index relate to the influence of compositional shifts in employment. The compositional effects include changes in the distribution of occupations within the same industry and across industries, and the distribution of employment between industries. For example, a large fall in the number of lower paid employees, or in employment in an industry with lower average wages, will increase average weekly earnings (all else being equal). While this is a true reflection of the average cost of labour to businesses, it is not necessarily the best measure of ongoing wage inflation (i.e. trends in wage-setting behaviour in the labour market). Another compositional problem with using the 'all persons' AWOTE is variations in the proportion of male and female employees (particularly as average female AWOTE is lower than average male AWOTE). However, in practice, the data shows only minor differences in the AWOTE growth rates between male and females (or males and all persons) — between -0.2 and +0.2 per cent — since the 1980s or basically since the equal pay legislation was enacted through the 1970s.

The wage price index was specifically designed to get around these compositional problems. It uses a weighted average of wage inflation across a range of closely specified jobs. As it measures the

collective variations in wage rates made to the current occupants of the same set of specified jobs, the WPI reflects pure price changes, and does not measure variations in quality or quantity of work performed. However, like the CPI (Consumer Price Index), the weights are fixed in a base year, so that the further away from that base and the more the composition of the labour market changes over time, the more 'out of date' the measure becomes.

Importantly, the WPI does not reflect changes in the skill levels of employees within industries or for the overall workforce and will therefore understate (or overstate) wage inflation if the overall skill levels increase (or decrease). The wage price index is also likely to understate true wage inflationary pressures as it does not capture situations where promotions are given in order to achieve a higher salary for a given individual, often to retain them in a tight labour market. Average weekly earnings would be boosted by employers promoting employees (with an associated wage increase) but promoting employees to a higher occupation category would not necessarily show up in the wage price index. However, the employer's total wages bill (and unit labour costs) would be higher.

### **Oxford Economics Australia Wage Growth Model**

Oxford Economics Australia' model of wage determination in the short-to-medium term is based on the analysis of expected future wage movements in the three main methods of setting pay, as each discrete pay setting method has its own influences and drivers. The main pay setting categories and their key determinants are:

- Employees under awards have their pay determined by Fair Work Australia in the annual National Wage case. When determining pay increases, Fair Work Australia aim to maintain the standard of living of those employed on awards by providing a safety net of fair minimum wages. Hence, they focus on the overall performance of the domestic economy, taking into account productivity, business competitiveness, inflation and employment growth. This means that increases in the Federal Minimum Wage are usually based on recent CPI growth along with Fair Work Australia's view on short term future conditions for the Australian economy. From 1 July 2022, the minimum wage was increased by 5.2%. This followed rises of 2.5%, 1.3%, 3.5% and 3.5% respectively in previous years. At the All Industries level, 13% of all non-managerial full-time employees (data excludes those in agriculture, forestry and fishing) have their pay rises determined by this method, but only 1.5% of Electricity, Gas, Water & Waste Services' (EGWWS) employees.
- For employees under collective agreements (representing 35% of all employees; 61.5% of EGWWS), their pay is determined through enterprise bargaining, and wage increases are influenced through a combination of recent CPI, inflationary expectations, profitability levels of relevant enterprises, business conditions, and the short-term economic outlook. Workers' unions can also play a significant part in negotiations, especially unions with a good position in industrial relations through strong membership. With the average duration of these agreements currently two to three years, Oxford Economics Australia use the most recent agreements formalised in recent quarters as a basis for our near-term forecasts. Beyond that, collective agreements are based on our expectations of economic conditions.
- The remaining 52% of employees (or 34.5% of EGWWS employees) have their pay set by individual arrangements, whether it be individual contracts or some other form of salary agreement, which may include incentive-based schemes. Similar to the minimum wage and collective agreements, inflation and inflationary expectations have a strong influence on agreements, as well as the strength of the labour market. Individual arrangements are skewed towards more skilled workers, so the balance between demand and supply in skilled labour can be an important influence.

Note that wage increases under 'individual arrangements' are calculated by deduction. Data from DEEWR (Department of Education, Employment and Workforce Relations) 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).

The 'bottom-up' approach to wage forecasting is complemented by a more formalised 'top-down' macroeconomic modelling framework – to ensure an overall macroeconomic consistency with output, employment, productivity and price variables. The wage price index is a function of the following explanatory variables:

- CPI
- unemployment rate
- labour productivity (GDP/employment)
- lagged wage (WPI) growth (to capture 'sticky' nature of wage determination in the short term).

The top-down macroeconomic modelling methodology becomes more relevant beyond the next 2-3 years.



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