Attachment 8.3

BIS Oxford Economics Advice on Input Cost Escalation Forecasts

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Australian Gas Networks

OXFORD ECONOMICS AUSTRALIA

INPUT COST ESCALATION: FORECASTS TO 2030/31

PREPARED BY OXFORD ECONOMICS AUSTRALIA FOR AUSTRALIAN GAS NETWORKS (SOUTH AUSTRALIA)

MAY 2025

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May 2025

This report can be made public and published on the Australian Energy Regulator's website as part of Australian Gas Networks' Revised Regulatory Proposal.

The modelling and results presented here are based on information provided by third parties, upon which Oxford Economics Australia has relied in producing its report and forecasts in good faith. Any subsequent revision or update of those data will affect the assessments and projections shown.

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EXECUTIVE SUMMARY

Oxford Economics Australia (OEA) was engaged by Australian Gas Networks (AGN) to provide price forecasts of labour relevant to South Australia's gas distribution industry for the period 2026/27 (FY27) to 2030/31 (FY31). Forecasts for wage cost escalation will be used by AGN to develop their operating and capital expenditure forecasts. These forecasts, in turn, will be included in AGN's Access Arrangement submission to the Australian Energy Regulator (AER) - with the regulatory period covering the five-year period from 2026/27 to 2030/31 (FY27 to FY31) inclusive.

Note that most of the references to historical data and forecasts of wages are in nominal terms unless specifically stated that the data/forecasts are in real (inflation-adjusted) terms. The forecasts in this report were finalised in Mid-May 2025 and incorporate the latest data and macro-economic forecasts as at Mid-May 2025.

Labour Cost Escalation

For **gas network related labour**, Oxford Economics Australia forecasts that total wage costs for South Australia's Electricity, Gas, Water and Waste Services (EGWWS or 'Utilities') sector — expressed in Wage Price Index (WPI) terms — will average 3.7% per annum over the five-year period from FY27 to FY31 inclusive, in line with the Australian EGWWS WPI average of 3.7% over the same period. In real (inflation-adjusted) terms, the South Australia (SA) EGWWS WPI is forecast to average 1.1% p.a. over the five years to FY31 (see Table 1.1 below).

Over the forecast period, the Australian and SA EGWWS WPI growth is expected to remain higher than the All Industries WPI average, with the national All Industries WPI forecast to average 3.5% over the five years to FY31. This means that the Australian EGWWS WPI is expected to be over 0.2% 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 4-4.4% 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 FY25 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 see very strong increases over the next two years, before plateauing, to be 22% higher in FY31 compared to FY24 levels, which in turn 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.

Table 1.1 EGWWS, Construction and All Industries Wage Price Index

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	5 yr Avg (f)
	Actuals					Forecasts		Next Regulatory Period					
NOMINAL PRICE CHANGES													
1. Gas Network-Related Labour													
EGWWS WPI - South Australia (a)	**2.6**	**1.7**	**1.4**	**3.7**	**4.5**	**5.9**	**4.6**	**3.6**	**3.5**	**3.6**	**3.8**	**3.8**	**3.7**
EGWWS WPI - Australia (b)	2.7	1.8	1.5	3.5	4.1	4.6	3.9	3.7	3.5	3.7	3.9	3.8	3.7
2. Contractor Labour Cost Escalation													
Construction WPI - South Australia (c)	**1.4**	**1.4**	**2.0**	**2.3**	**2.4**	**3.4**	**3.4**	**3.3**	**3.3**	**3.5**	**3.8**	**3.5**	**3.5**
Construction WPI - Australia (b)	1.5	1.3	2.6	3.7	4.1	3.5	3.5	3.5	3.5	3.8	4.0	3.7	3.7
3. All Industries Wages													
All Industries WPI - South Australia	2.3	1.6	2.1	3.5	3.9	3.3	3.3	3.2	3.2	3.4	3.6	3.5	**3.4**
All Industries WPI - Australia (d)	2.1	1.5	2.4	3.5	4.1	3.4	3.4	3.3	3.3	3.5	3.7	3.6	3.5
Consumer Price Index (headline) (e)	1.3	1.6	4.4	7.0	4.2	2.4	3.0	2.8	2.5	2.5	2.5	2.5	2.6
REAL PRICE CHANGES (g)													
1. Gas Network-Related Labour													
EGWWS WPI - South Australia (a)	**1.2**	**0.1**	**-3.0**	**-3.3**	**0.3**	**3.4**	**1.6**	**0.9**	**0.9**	**1.1**	**1.3**	**1.3**	**1.1**
EGWWS WPI - Australia (b)	1.3	0.2	-2.9	-3.5	-0.1	2.2	1.0	0.9	1.0	1.2	1.4	1.3	1.2
2. Contractor Labour Cost Escalation													
Construction WPI - South Australia (c)	**0.0**	**-0.3**	**-2.5**	**-4.8**	**-1.8**	**1.0**	**0.4**	**0.6**	**0.8**	**1.0**	**1.3**	**1.0**	**0.9**
Construction WPI - Australia (b)	0.2	-0.3	-1.8	-3.3	-0.2	1.0	0.6	0.7	1.0	1.3	1.5	1.2	1.1
3. All Industries Wages													
All Industries WPI - South Australia	0.9	0.0	-2.4	-3.5	-0.3	0.9	0.4	0.5	0.7	0.9	1.1	1.0	**0.9**
All Industries WPI - Australia (d)	0.8	-0.1	-2.1	-3.6	-0.1	0.9	0.4	0.5	0.8	1.0	1.2	1.1	0.9

Sources: Oxford Economics Australia, ABS

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for South Australia.
(b) Australian sector wage forecasts provided for comparison.
(c) Construction Sector WPI for South Australia.
(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 the mid-point of RBA inflation target (2.5%).
(f) Average Annual Growth Rate for 2026/27 to 2030/31 inclusive, ie for next regulatory period.
(g) Real price changes are calculated by deducting the inflation rate from nominal price changes.

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% now to 4.3% by late-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.

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.

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. 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. We expect the EGWWS WPI to rise further and peak in FY25 at 4.6%, before easing to 3.9% in FY26. Driving this will be much higher EBAs negotiated in an environment of high inflation and a very tight labour market, particularly for the types of skilled labour that dominate in the EGWWS sector.

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy AGNs **external labour cost escalation** by wages growth (as measured by the WPI) in the South Australia 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 SA Construction WPI to average 3.7% and 3.5%, respectively, over the five years from FY27 to FY31 inclusive (AGNs regulatory period) – or 1.1% and 0.9% per annum on average in real (inflation adjusted) terms (see Table 1.1).

The Australian Construction WPI has seen three years of strengthening growth, rising from 1.3% in FY21 to 4.1% in FY24. FY24 recorded the strongest year of growth since FY12. Construction wage growth is forecast to maintain it elevated level over the next two years as construction activity increases and activity levels surpasses the previous highs of FY18 and FY13. With 3 quarters of data available, wage growth is expected to come in at 3.5% over FY25. Underpinning higher wage growth will be worsening of the currently acute skills shortage as labour demand strengthens. Construction wages growth will then ease somewhat over FY26 to FY28 as growth in activity softens, but will then pick up again from FY29 as activity ramps up. Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher utilities and mining investment and a plethora of publicly funded transport infrastructure projects (particularly in the eastern states of the nation).

Materials Input Cost Escalation

Prices for construction material inputs lifted to historically high levels over FY22 and FY23 as international supply disruptions (COVID and the conflict in Ukraine) resulted in surging commodity prices. Notably, surges in the price for iron, coal and oil drove the substantial rises in the cost of key construction inputs such as fuel, steel, and bitumen. The most recent financial year (FY24) marked the start of normalising price growth for the construction industry, with international set commodity prices having either stabilised or declined. However, the prices for domestically produced materials (e.g. concrete and processed steel products) have placed a floor under cooling growth. Domestically influenced prices were impacted by the lagged impact of higher energy costs and wages at a time of strong demand from the construction sector. Furthermore, exacerbating rising material costs has been three consecutive years of a depreciating Australian Dollar (A$), which has dropped from US$0.75 in FY21 to around US$0.63 in the March 2025 quarter. This depreciation equates to a 20% rise in US$ denominated imported prices over this period. The Australian Dollar is forecast to average US$0.65 in FY26, before a sustained appreciation over FY27 to FY29 towards 0.69 US$. The appreciating AU$ will contribute to softening material costs over the medium term.

Local and overseas steel prices spiked in FY22 due to the large increases in iron ore prices in FY21 followed by coking coal prices in FY22. Local steel prices increased further in FY23 as strong demand from construction enabled producers to pass along the previous years' higher commodity prices. Falling iron ore and coal prices have since translated to falling steel prices, with this trend expected to continue over FY25 and FY26. Historically, iron ore prices have been highly correlated with the Chinese residential construction market. Looking forward, the Chinese real estate sector will likely remain under pressure with risks tilted to the downside, and steel production is likely to be subdued in the longer term as China aims to meet its carbon emissions targets. Nevertheless, we expect a modest uptick in steel prices from FY26 as the commodity price stabilise and local construction activity picks up.

Brent oil prices have fallen back slightly from their US$91/brl high in FY22 (after surging nearly 70%) to US$85 in FY24 (-7%). Any notable price corrections have been limited by both OPEC+ production cuts in the first half of FY24 and continuing conflict in the Middle East. There remains substantial uncertainty regarding geopolitical tensions in the Middle East, which is expected to prop up prices more than otherwise expected. Nevertheless, benchmark Brent oil prices are forecast to continue easing as markets adjust, with a -20% decline forecast over the next two years (to FY26). Modest price growth is then expected to return over the next revenue determination period (FY27 to FY31) as economies expand (quicker than the falling demand from electrification) at a time when the depletion of cheaper oil reserves will contribute to constrained supplies. Prices for oil derived construction materials (e.g. Bitumen) are forecast to track trends in oil prices.

Concrete prices, which are heavily influenced by domestic market dynamics, rose notably over the past two years due to rising demand pressures and higher manufacturing costs (energy and labour costs). FY25 is expected to see another year of strong price increases as heightened demand from South Australia's construction sector persists. Price growth is then expected to soften over FY26 and FY27 as a moderate residential downturn pursues, before a surge in residential construction over the back half of the decade results in renewed cost escalation.

Table 1.2 Commodity and Materials Price Forecasts

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	5 yr Avg (b)
	Actuals					Forecasts		Next Regulatory Period					
NOMINAL PRICE CHANGES													
Australian Steel Pipe & Tube PPI - A$/t (e)	-2.2	0.7	42.0	5.9	-10.7	-3.0	2.3	0.0	1.7	2.9	2.7	2.6	2.0
Hot Rolled Coil Steel - A$/t, China (d)	-5.0	20.9	18.6	-22.0	-4.6	-7.5	11.3	-1.5	3.4	3.9	1.4	1.2	1.7
Bitumen - A$/t, South Australia (f)	-1.7	-2.5	9.6	28.7	-6.4	5.3	-6.5	-1.0	2.8	3.2	3.4	3.2	2.3
Concrete, Cement & Sand PPI - South Australia (g)	-1.0	-0.5	1.0	4.4	5.8	6.0	1.2	2.2	2.7	3.3	3.1	2.2	2.7
Gas & Fuel Engineering Construction IPD (h)	1.5	-0.7	13.6	6.1	-0.1	2.0	1.8	2.7	3.2	3.8	3.4	2.9	3.2
Exchange rate, US$/AU$ (i)	*0.72*	*0.67*	*0.75*	*0.73*	*0.67*	*0.66*	*0.65*	*0.65*	*0.68*	*0.69*	*0.69*	*0.69*	*0.68*
Consumer Price Index (headline) (a)	1.3	1.6	4.4	7.0	4.2	2.4	3.0	2.8	2.5	2.5	2.5	2.5	2.6
REAL PRICE CHANGES (c)													
Australian Steel Pipe & Tube PPI - A$/t (e)	-3.5	-0.9	37.5	-1.1	-14.9	-5.5	-0.7	-2.7	-0.9	0.4	0.2	0.1	-0.6
Hot Rolled Coil Steel - A$/t, China (d)	-6.4	19.3	14.2	-29.0	-8.8	-9.9	8.3	-4.2	0.9	1.4	-1.1	-1.3	-0.9
Bitumen - A$/t, South Australia (f)	-3.0	-4.2	5.2	21.7	-10.6	2.9	-9.5	-3.8	0.3	0.7	0.9	0.7	-0.2
Concrete, Cement & Sand PPI - South Australia (g)	-2.3	-2.1	-3.5	-2.6	1.6	3.6	-1.8	-0.6	0.2	0.8	0.6	-0.3	0.1
Gas & Fuel Engineering Construction IPD (h)	0.1	-2.4	9.1	-0.9	-4.3	-0.5	-1.2	0.0	0.6	1.3	0.9	0.4	0.6

Sources: Oxford Economics Australia, ABS, RBA, Consensus Forecasts

(a) Inflation forecasts are RBA forecasts for the next 2-3 years from latest 'Statement of Monetary Policy'. Beyond that, inflation forecasts are based on the mid-point of RBA inflation target (2.5%).
(b) Average Annual Growth Rate for 2026/27 to 2030/31 inclusive, ie for next regulatory period.
(c) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(d) Hot Rolled Steel and Crude oil price forecasts are sourced from the latest available Consensus Economics 'Energy & Metal Consensus Forecasts' (EMCF) publication. US$ prices adjusted by using exchange rate above.
(e) Steel Pipe & Tube producer price index (PPI), modelled using latest EMCF price forecasts for iron ore and coking coal, converted to A$ (using above exchange rate); plus manufacturing wages, transport costs
(f) South Australian bitumen prices based on latest EMCF Brent oil prices; and Oxford Economics Australia (OEA) modelling of bitumen import prices, freight & transport costs, and other relevant variables.
(g) Producer price index (PPI) for concrete, cement and sand: Adelaide. Forecasts based on Oxford Economics Australia OEA modelling and construction and other macroeconomic forecasts.
(h) Gas and Fuel Construction Price Index forecasts from OEA modelling of input prices, and construction and other macroeconomic forecasts
(i) Exchange rate forecasts sourced from latest available Consensus Economics 'Asia Pacific Consensus Forecasts' (APCF), which has forecasts covering the next 2 years, after which exchange rate is held steady.

In terms of overall cost escalation in the construction of gas infrastructure, costs jumped 20% over the two years to FY23 (as recorded by the Gas and Fuel IPD), following the movements in material input prices. FY24 has since recorded a -0.1% decline in overall construction costs, driven by the declines in steel and energy/ fuel costs. Construction cost growth is forecast to remain at modest level over the next three years (averaging 2.2% annually to FY27) as material input costs either stabilise or decline. Elevated labour cost escalation with prevent any declines in overall construction costs. Beyond FY27, rising domestic construction activity, notably residential and utilities construction, is expected to put strain on domestic material and labour supplies. As a result, gas related construction costs are forecast to average 3.2% annual growth over the next revenue determination period (FY27 to FY31).

1. INTRODUCTION

Oxford Economics Australia was engaged was engaged by Australian Gas Networks (AGN) to provide price forecasts of labour that are relevant to South Australia's gas transmission and distribution industry for the period 2024/25 to 2030/31 (FY25 to FY31). Forecasts for wage will be used by AGN to develop their capital and operating and capital expenditure forecasts. The forecasts in this report were finalised in Mid-May 2025.

The Australian Bureau of Statistics is the primary data source for the consumer price index, wages, employment, real gross value added and investment data, and for a range of other economic variables. The data used in the projections is the latest available as at mid-May 2025 and includes the March quarter 2025 Consumer Price Index (CPI), Producer price Index (PPI) and Wage Price Index (WPI). National Accounts data releases are the December quarter 2024 releases, while the latest RBA May 2025 'Statement of Monetary Policy' is from May 2025. 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: 2025 – 2039*, *Engineering Construction in Australia 2025-2039* and *Building in Australia 2024-2038,* 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 2 provides a macroeconomic and construction outlook for Australia and South Australia. 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 3 discusses Oxford Economics Australia' 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 3 and 4 are in nominal terms unless specifically stated that the data/forecasts are in real (inflation-adjusted) terms.

Sections 4 provides the forecasts and rationale of the wage projections for the Electricity, Gas, Water and Waste Services (EGWSS) and Construction for Australia and South Australia as measured by the WPI.

Sections 5 provides forecasts of commodity prices and the materials indices.

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

2. MACROECONOMIC AND CONSTRUCTION OUTLOOK

2.1 AUSTRALIAN MACROECONOMIC OUTLOOK

Australian economy has started to pick up, but Trump's tariffs mean a bumpy short-term.

Australia's economy had a strong recovery after the COVID-19 related slump in 2020, with real Gross National Expenditure (GNE – domestic demand plus the change in stocks) and Gross Domestic Product (GDP) growing by an average of 4.7% and 3.3% per year respectively over the three years to FY23. However, growth slowed sharply in FY24, with GDP rising just 1.4% - the weakest pace in over 30 years outside the pandemic slump - and GNE increasing 1.8%, as high interest rates hit private consumption and pandemic-era savings dwindled. A recession was avoided thanks to strong population growth and sustained public sector spending.

Growth picked up to 0.6% quarter-on-quarter in Q4 (December 2024 quarter), resulting in annual growth of 1.3% over calendar 2024. All major expenditure components contributed steadily, with momentum broadening across both public and private sectors after a year of reliance on public spending. Encouragingly, private activity showed signs of turning, with per capita household consumption rising and business investment posting a strong quarter.

Fiscal support measures are helping households at present. The July 2024 tax cuts and cost-of-living subsidies have left consumers with more money to spend on discretionary items. Moreover, public demand is keeping the labour market in a tight position, which continues to buoy the labour market and household incomes. We expect the degree of support from government spending will wane through 2025, notwithstanding increased spending promises from the federal election campaign or because of a sharp deterioration in the economic outlook due to Trump's tariffs and the escalating trade war.

Household spending to improve. Household consumption rose 0.4% quarter-on-quarter in Q4, boosted by strong discretionary spending and Black Friday sales, despite utilities rebates weighing on growth (with rebates recognised as public expenditure). While cost-of-living support is providing a temporary lift, high interest rates and inflation will keep spending weak near term. However, the July 2024 tax cuts, a tight labour market, wage growth, and easing inflation will support real incomes. With households saving much of the tax cuts, balance sheets remain strong. Consumption growth is expected to lift from 1% in FY24 and 0.8% in FY25 to 2% in FY26 and 2.6% in FY27.

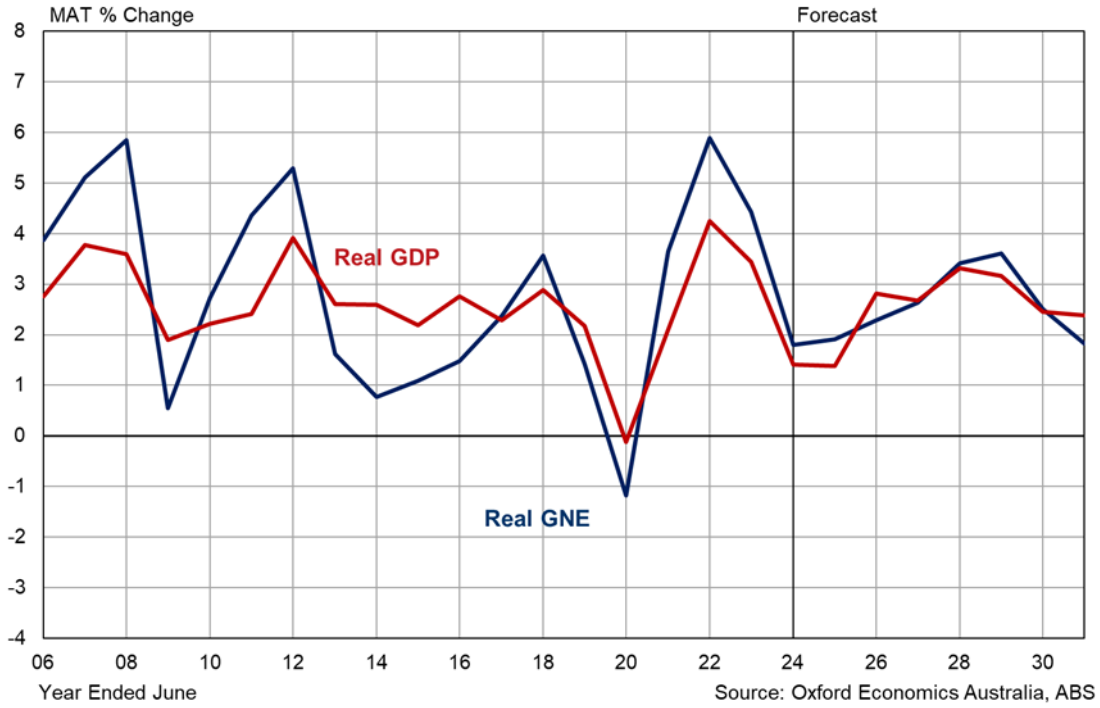
The near-term investment outlook is modest. Investment contributed steadily to Q4 growth, with publicly funded transport projects remaining a key driver, though activity in this segment has likely peaked. A large pipeline of infrastructure projects, accelerated during the COVID-19 response, will keep public construction strong, with spending expected to peak in FY26 before easing from FY27. Private sector investment in mining and electricity (including renewables) supported Q4 growth. Private sector engineering construction is expected to stay buoyant, driven by electricity, telecommunications, and mining (particularly oil and gas). Non-residential building activity will be

underpinned by data centres, accommodation, warehouses, and healthcare projects. However, capacity constraints and lingering cost inflation will continue to weigh on the pipeline of new work.

Mining investment has risen steadily over the past three years and is set to remain strong despite some softness in commodity prices—which may fall further if the fallout from Trump's tariff war worsens—supported by sustained demand for critical minerals. New business investment grew by 7.4% in FY23 and 6% in FY24 but is forecast to moderate to 2–5% growth over FY25 and FY26, led by private engineering construction and ongoing investment in equipment, technology, and intangibles. Business investment growth is expected to ease through FY27 but strengthen again by FY30, helping to expand the economy's long-term productive capacity.

Dwelling investment, however, remains a weak spot. It fell in Q4 due to capacity constraints, with declines across both new builds and alterations. Dwelling investment is expected to stay flat through FY25 and FY26 before rebounding strongly from FY27.

Figure 2.1 Australia – Basic Economic Indicators



Labour market healthy, inflation easing and more rate cuts coming. The labour market remains healthy, with employment growing 2.7% in FY24 after a strong 4.5% gain in FY23, supported by fast population growth and a record-high participation rate. Although the unemployment rate has edged up to around 4.1%, high job vacancies point to continued solid employment growth near term. However, as population growth eases and labour demand softens, employment growth is forecast to slow, pushing unemployment slightly higher to around 4.3% by late-2025 and through to early 2027. This gradual cooling will help ease wage pressures, contributing to the broader moderation in inflation.

Inflation is already easing sharply. Headline CPI fell from 7% in FY23 to 4.2% in FY24, helped by temporary government relief measures, falling fuel prices, and weaker demand. Inflation is expected to drop further to 2.5% in FY25 and remain relatively contained through FY28 before gradually picking up again.

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 official cash rate then remained at 4.35% for five quarters. In response to the faster-than-expected decline in underlying inflation, the RBA cut rates in February and May 2025 to 3.85%. More rate cuts are likely over 2025, with the timing (and number of cuts) dependent on a further easing in inflationary pressures and the RBA perceptions of the likely economic impacts from the trade war.

'Liberation Day' tariff hikes are a headwind but won't derail the Australian Economy. The new US 'Liberation Day' tariffs, announced by President Trump in April, pose a headwind but are unlikely to derail Australia's economy. Australia will face a 10% tariff despite minimal barriers to US imports, and efforts to win exemptions appear unlikely. However, direct exposure is limited - less than 4% of Australian goods exports go to the US - with meat and pharmaceuticals most affected (though many pharmaceutical exports are temporarily exempt). Australia's competitiveness has improved relative to economies facing higher tariffs but will weaken against US domestic producers. Impacts on nominal indicators like terms of trade and equity prices are expected to be more significant than on export volumes or jobs. Key exports like beef and aluminium are likely to be minimally affected (as US beef production is at multi-year lows and only 5% of aluminium exports are destined for the US market), while steel could see a larger hit given the US market accounts for a third of Australia's steel exports.

The greater risk lies in the broader global fallout: we estimate that global GDP could be 1.3% lower by late 2027 compared to our previous forecasts (developed prior to 'Liberation Day'), with downside risks elevated due to sudden and disruptive tariff implementation. A major slowdown in China remains the biggest indirect threat to Australia. Domestically, the Albanese government has ruled out retaliatory tariffs, leaving inflation risks relatively unchanged for now, though ongoing uncertainty may push the RBA toward earlier interest rate cuts.

Meanwhile, Australia's trade balance will stay weak in the near term. Net exports detracted from growth for the fourth consecutive year in FY24 and are expected to do so again in FY25. However, a turnaround is likely by FY26–27 as exports outpace imports. Resources exports have been flat due to production issues but should recover as new capacity comes online. Rural exports are strong, thanks to bumper crops, while manufacturing exports will benefit modestly from a weaker Australian dollar, despite soft global demand. Merchandise imports will remain subdued, while services exports, particularly tourism and education, will grow more slowly, helped by the low dollar boosting inbound tourism.

Increased uncertainty for the global economic outlook as trade war looms. The global economic outlook has weakened, with growth forecast to ease from 2.8% in 2024 to 2.3% in 2025 and 2026. Uncertainty is rising sharply due to the volatile US tariff policy under President Trump. Frequent tariff announcements and reversals are heightening global instability, dampening investment, and raising the risk of a US recession. The US economy faces four major shocks—rising uncertainty, real income declines, supply chain disruptions, and falling stock markets impacting financial wealth—with

spillovers causing a broader global demand shock. Despite these risks, the US is still forecast to avoid a deep recession, with US GDP growth slowing sharply from 2.8% in 2024 to 1.3% in 2025 before picking up to 1.7% in 2026 and then subsequently rebounding modestly over 2027 and 2028.

Higher tariffs may prolong inflation, delay interest rate cuts, and trigger stagflation risks. Falling equity markets could also drag down US consumer spending. Globally, US tariffs will hurt Chinese and targeted economies' exports, but diversification may limit the overall damage. Longer term, the shift toward regionalisation and protectionism will reshape global trade patterns.

China's growth is projected to slow from 5% in 2024 to 4.1% in 2025 and 3.9% in 2026 and 2027, with modest direct hits to exports, cushioned somewhat by diversification efforts since 2018. The Eurozone will gradually strengthen, helped by faster rate cuts and a small lift from defence spending, though the gains will be modest. Most major economies are easing monetary policy cautiously as inflation declines, but service sector inflation and tight labour markets remain concerns.

For Australia, the main impact of US tariffs will come indirectly via weaker Chinese demand, posing some risk to key commodity exports like iron ore and coal, although the effects are currently expected to be relatively minor. The Australian dollar has weakened, falling below US$0.63 over January-April 2025, and is likely to stay subdued as the RBA cuts rates alongside or faster than the US Fed. Over the longer term, global growth will gradually slow as population growth eases, but Australia's major trading partners—China, East Asia, and India—will continue to grow faster than the global average, supporting Australia's export outlook.

Australian recession unlikely near-term, with modest growth expected over next 2 years, strengthening from FY28

Australia is unlikely to enter a recession in the near term, with modest growth expected over the next two years before strengthening from FY28. Domestic demand is forecast to slow from 2.4% in FY24 to 2% in FY25, then lift to 2.2% in FY26 and 2.6% in FY27. GDP growth is expected to hold at 1.4% in FY25 before improving to 2.8% in FY26 and 2.7% in FY27, supported by a positive contribution from net exports as tourism rebounds and resources exports recover.

Several factors reduce the risk of recession: Australia faces lower US tariffs than competitors, strong population growth, the government has fiscal capacity for stimulus, and the RBA has room to aggressively cut rates. A weaker Australian dollar would also enhance competitiveness, boosting tradeable sectors and international tourism. Meanwhile, strong construction activity, driven by infrastructure projects, mining investment, and a severe housing undersupply, will provide further support.

Interest rate cuts are expected through 2025 and FY26, helping inflation return to the RBA's 2–3% target range. Lower rates will trigger a strong rebound in dwelling construction, addressing pent-up housing demand. As consumers and businesses adjust to a new normal of higher, but manageable, interest rates, investment and consumption are expected to return to trend growth. GDP growth is forecast to strengthen to 3.3% by FY28 before easing slightly thereafter. However, the forecast strengthening of the economy and the tightening of the labour market late this decade is expected to see the RBA and government tighten policy settings, which will see growth slow over FY30 and FY31.

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.

2.2 SOUTH AUSTRALIA MACROECONOMIC OUTLOOK

Compared to other states, South Australia's economy was relatively insulated from the impact of the pandemic. After contracting by -1% in FY20, State Final Demand (SFD) surged over FY21 and FY22, before easing back to 2.6% in FY23. SFD growth continued to slow over FY24, growing just 1.7% as tight monetary policy impacted household demand - which rose just 0.8% - and building investment, which was down -2.8%. Gross State Product (GSP) has mirrored the pattern of SFD growth over recent years, with GSP growth slowing from 5.4% in FY22 to 3.6% in FY23 and an anaemic 1.2% in FY24.

Economic growth in the South Australian economy is expected to remain soft over FY25, with SFD forecast to rise 1.6% and GSP remaining at a weak 1.1%. Contributing to the soft growth outlook will be household spending (+0.5%), curtailed by elevated interest rates, and another decline in business investment. Partially offsetting private sector weakness will be a pick-up in housing investment and further solid growth in public expenditure, with the public sector remaining a significant direct and indirect contributor to growth. Several defence programs based in Adelaide, including military vehicles and the Space Agency, will support growth in the medium term. A sharp decline in merchandise exports will also drag down GSP growth in FY25. SFD and GSP are forecast to recover to 3.3% and 2.5% respectively in FY26, driven by a large lift public investment (particularly transport infrastructure), further growth in dwelling building, a bounce-back in business investment – led by utilities, mining and harbour projects - and positive net international exports.

Fig 2.2 South Australia – Key Economic Indicators

						Forecast						
Year Ended June	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
South Australia												
Total Construction Activity(*)	-4.8	5.0	12.6	-0.4	2.3	1.4	14.0	1.6	0.1	-0.3	-1.0	0.1
State Final Demand	-1.5	5.2	6.2	2.6	1.7	1.6	3.3	2.4	2.7	2.6	1.9	1.5
Gross State Product (GSP)	**-0.8**	**4.8**	**5.4**	**3.6**	**1.2**	**1.1**	**2.5**	**2.1**	**2.7**	**2.7**	**2.1**	**1.6**
Employment Growth (Year Avg)	0.0	1.2	4.2	3.4	1.7	1.3	1.2	0.8	1.3	1.8	1.4	0.6
Australia												
Total Construction Activity(*)	-3.8	-0.5	1.7	6.3	5.7	3.2	2.2	2.9	1.9	3.2	1.5	0.1
Australian Domestic Demand	-0.8	2.9	5.5	4.3	2.4	2.0	2.2	2.6	3.3	3.5	2.6	1.9
Gross Domestic Product (GDP)	-0.1	2.1	4.2	3.4	1.4	1.6	2.4	2.8	3.5	3.2	2.4	2.5
Employment Growth (Year Avg)	0.3	0.4	3.3	4.5	2.7	2.4	1.4	1.0	1.8	2.3	1.8	1.1

Source: Oxford Economics Australia, 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.

The South Australian labour market has remained resilient, with the unemployment rate averaging 3.8% over FY24 and around 4% in FY25. However, employment growth slumped to just 1.7% and 1.3%

over FY24 and FY25, compared to an average of 3.8% over the previous 2 years. The decline in employment growth has been matched by a relatively sharp fall in the participation rate, which has come off from a peak of 65% in mid-2023 to 63% currently. The decline in participation has helped keep the market relatively tight.

Although we expect employment growth to remain sluggish over FY25 to FY27, the state unemployment rate is expected to remain below the 4.3% mark over the forecast period – indicative of a tight labour market, which will add to wage pressures in the state. Moderate growth in employment in the medium term and higher wages are expected to support household spending, with falling interest rates over the next year supporting consumer demand.

The South Australian construction sector is a key contributor to private and public investment and overall state economic growth. The South Australian construction market is dominated by engineering construction work, which has consistently represented 50% to 60% of total work done within the state. Total construction work done rose 2.3% in FY24 and an expected 1.4% in FY25, before lifting 14% in FY26, with civil infrastructure investment driving growth. Growth in infrastructure investment is then expected to soften over FY27, after which an acute undersupply of housing and lower interest rates will drive rising investment into residential construction.

Growth in economic activity is forecast to ease back over FY27, before strengthening again over FY28 and FY29 due to solid increases in household spending, residential and business investment, partially offset by small declines in public investment. Overall, SFD and GSP are forecast to average 2.3% and 2.1% over the seven years from FY25 to FY31 inclusive (compared to an average of 2.8% for both SFD and GSP over the past 5 years to FY24 inclusive).

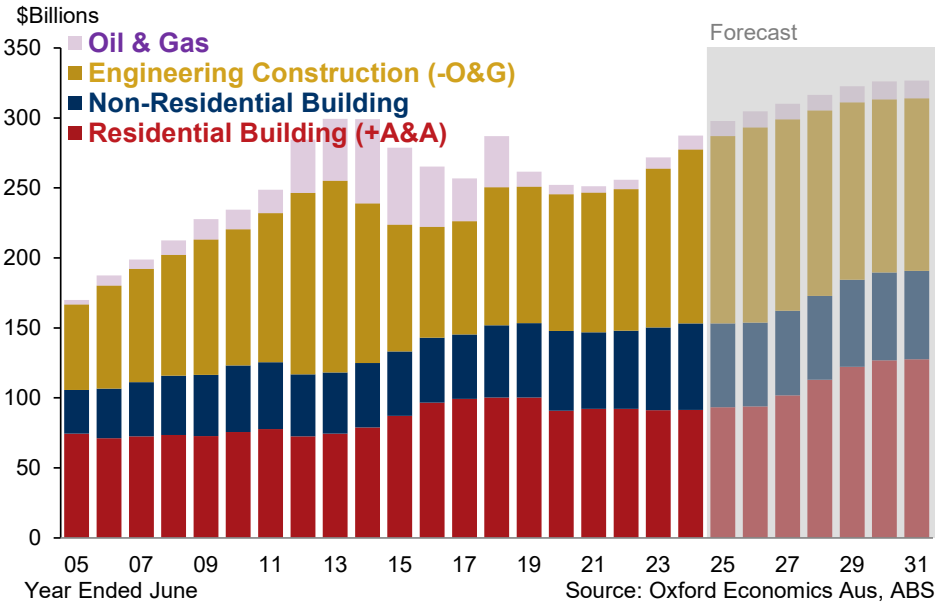
Over the long run, we expect South Australia's economy to underperform against the rest of the economy. This primarily reflects the state's demographic outlook, with population growth projected to average 0.8% p.a., -0.4% slower than the national average over FY25 to FY31.

2.3 AUSTRALIA CONSTRUCTION OUTLOOK

Beginning in 2018-19, total construction activity, measured in work done terms, saw three years of consecutive declines, which were exacerbated by the outbreak of COVID-19. Nationally, residential building work done is yet to recover from the decline – but a strengthening pipeline of non-residential building and transport and utilities infrastructure drove construction to $287bn in FY24. Excluding oil and gas work done, which typically does not impact local construction capacity to the same extent as other sectors, construction work done reached $277bn in FY24 (+5.2% annual growth). This represents peak levels of construction activity, passing the previous peak (excluding oil and gas) of FY13.

Building construction activity (residential and non-residential buildings, plus alterations and additions - 'A&A') has seen soft growth over the past three years as high building costs and capacity constraints plagued the sector. Further hindrance in the form of high borrowing costs is expected to result in stagnant growth inactivity over FY25 (0.1%) and FY26 (0.3%). Pent up dwelling demand and easing borrowing costs are then expected to stimulate a surge in construction, namely from residential, with total building activity forecast to lift a cumulative 24% over the four years from FY26 to FY31 – rising from around $154bn to a record $191bn.

Figure 2.3 Construction Outlook - Australia



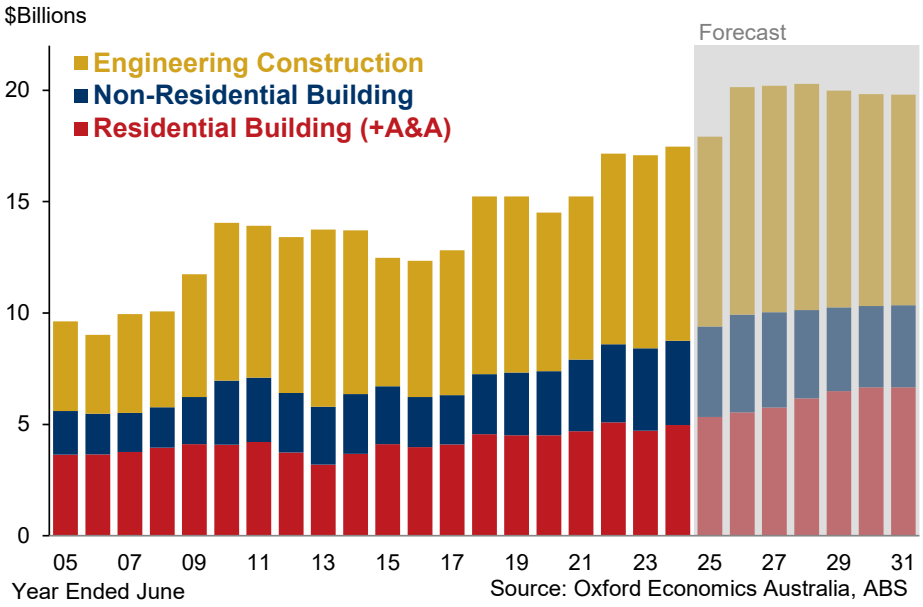
Engineering construction activity climbed to $134bn in FY24 and will continue to rise to a peak of $151bn in FY26, on the back of publicly funded transport infrastructure and renewed mining investment. Overall activity will then ease to $136bn by FY31. Although transport infrastructure investment has contributed much to recent growth in activity – we anticipate that this will shift towards the utilities sector, with utilities work done having more than doubled since FY16 to $41bn, with further growth to a peak of $50bn in FY26, with this level more or less maintained out to FY31.

2.4 SOUTH AUSTRALIA CONSTRUCTION OUTLOOK

The South Australian construction sector has seen several years of sustained growth, having averaged 5.5% annual growth since FY20. Both engineering and building construction contributed to these gains, though engineering construction has played the dominant role. Construction work done come in at $17bn in FY24, with an increase in dwelling activity to account for an estimated 1.4% rise in FY25. A step up in engineering construction is forecast for FY26, driving a 14% rise in total construction levels. The remained of the forecast period will see a notable uplift in building construction countering an easing in engineering activity.

For the residential building sectors, the resilience of demand over FY24 and easing interest rates in the near future will set the scene for the return of sustained growth over the FY26 to FY31 period, with annual growth forecast to average 4%. Non-residential building construction activity is set to peak at a record $4.4bn in FY26, before a moderate downturn out to FY31. A step up in mining and heavy industry investment, and transport related activity will drive a 20% jump in engineering construction in FY26. Engineering construction activity is then expected to ease back over the remained of the forecast period but stay at high levels. Transport and utility construction activity will see further moderate gains. The end of the 2020's will see activity ramp up with the next round of transport, utilities and mining projects, leading to sustained high levels of engineering construction activity.

Figure 2.4 Construction Outlook – South Australia



3. WAGES AND INFLATION OUTLOOK

3.1 CONSUMER PRICE INDEX OUTLOOK

Price inflation eases back to RBA target 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 (trimmed mean) peaking at 6.8% 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 had 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 and then to 1.4% in the March 2025 quarter.

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 and December quarter CPI outcomes of just 0.2% in each quarter, pushing the annual (through-the-year or y/y) growth from 3.8% in the June 2024 quarter to 2.4% in the December quarter. The March 2025 quarter outcome of 0.9% q/q saw the headline rate remain at 2.4%, but more importantly, saw the core inflation rate fall to 2.9% - the first time the core rate has been back in the RBA target band since December 2021.

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% and expected to stay around 4.1-4.4% for the next year - will continue to contribute to wage pressures, although overall wages growth has now peaked. Meanwhile, the sharp decline in the exchange rate from around US$0.72 in the first half of 2022 to US$0.63 in the March quarter 2025 will also add to inflationary pressures in the near term. Conversely, we expect the A$ to appreciate toward US72 cents over the medium-term, which will provide some offsetting pressures.

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 5.5% in the March quarter 2025. 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 above-average increases in electricity and gas prices. It is worth noting that both rent and energy price rises in the September and December quarters were constrained by temporary government subsidies, which will then see headline CPI inflation jump in the September quarter 2025 and March quarter 2026, 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 3.2% y/y in the latest quarter, food prices are unlikely to track back to the sub-2% of the 2015-2019 period.

Overall, OEA forecasts the national headline CPI inflation to be 2.4% in FY25 and 3.1% 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 2.8% in FY27 and 2.5% in FY28, before picking up from FY29 and averaging 2.8% over the latter years of the 2020s, before easing back over FY31 and FY32 as the economy slows. Our forecasts, on average, are similar to the February 2025 RBA forecasts over FY25 to FY28 (see section 4.1.1 below).

CPI inflation projected to average close to 2.7% over the medium-to-long term

Headline CPI inflation is expected to sit at - 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% per annum, contributing around 2.1% to headline inflation. This annual growth 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.

3.1.1 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 forecasts, 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 May 2025 'Statement on Monetary Policy' forecast the headline CPI rate to be 2.1% (y/y) in the June quarter 2025, giving a year average of 2.4% for FY25. With some government subsidies expected to finish in mid-2025 and late 2025, the RBA forecast the headline inflation jumps to back up to 3.3% in the December quarter 2025, before easing to 3.1% in the June quarter 2026 – giving a year average CPI rate of 3.0% for FY26. The RBA's CPI forecast for December 2026 is 2.9% and 2.6% for the June quarter 2027, then the year average CPI for FY27 of 2.8%. Beyond the RBA's forecast from the SoMP, we assume the CPI averages 2.5% over the medium-to-long term.

3.2 NATIONAL 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%[1].

Wage growth 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.

[1] 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".

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. Growth in the labour force over recent years has been facilitated by a marked increase in the labour force participation rate to record levels, with the return of high 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 participation rate to record levels. However, there is now little scope to raise the participation rate further and, with the underemployment rate at historical lows and job vacancies well above pre-COVID levels, wage pressures will remain elevated.

Gradual declines in the participation rate and continued skills shortages will play a role in sustaining a low unemployment rate over the near to long term

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% now to 4.3% by late-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.

Current trends in the various wage setting environments support elevated wage growth

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 for the 2022/23 financial year was much higher than previous years – with the FWC awarding a 5.2% increase to workers on the minimum wage, although workers on award rates only received a 4.6% increase (minimum $40/week increase for award rates below $870/week). A key

Figure 3.1 Australia: Wages and Prices

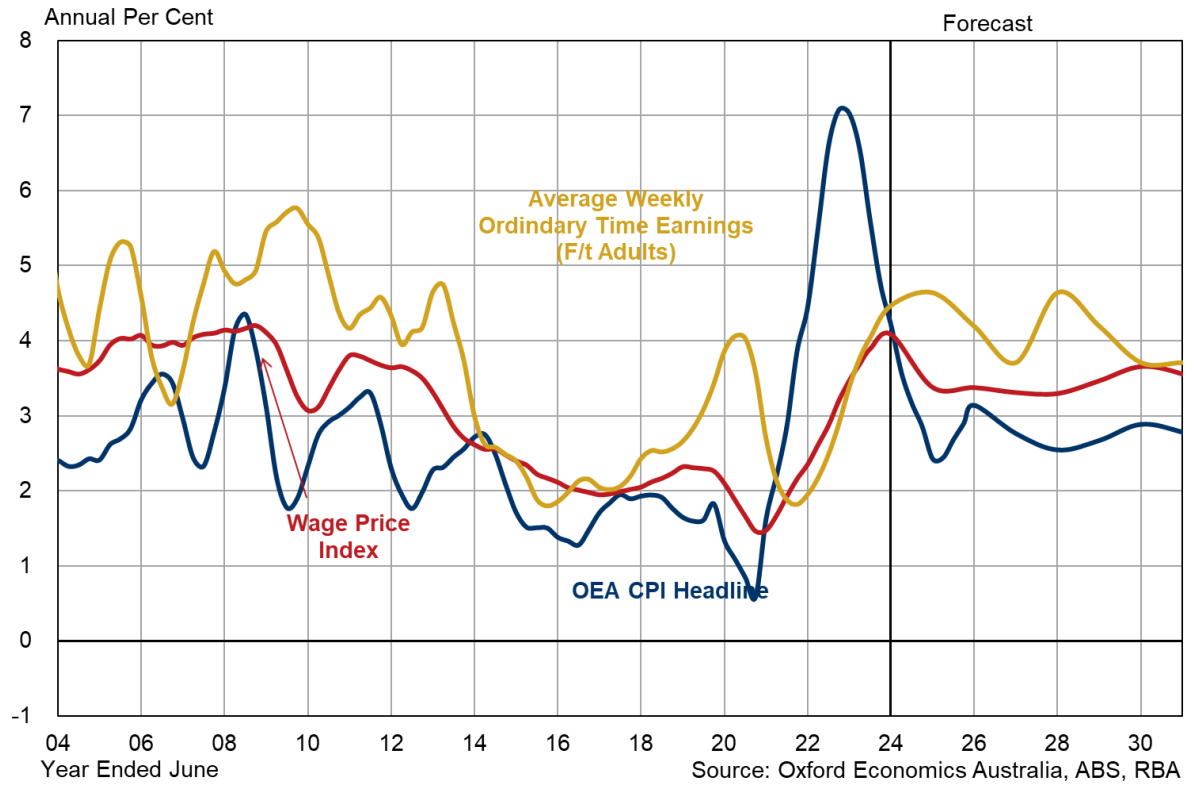
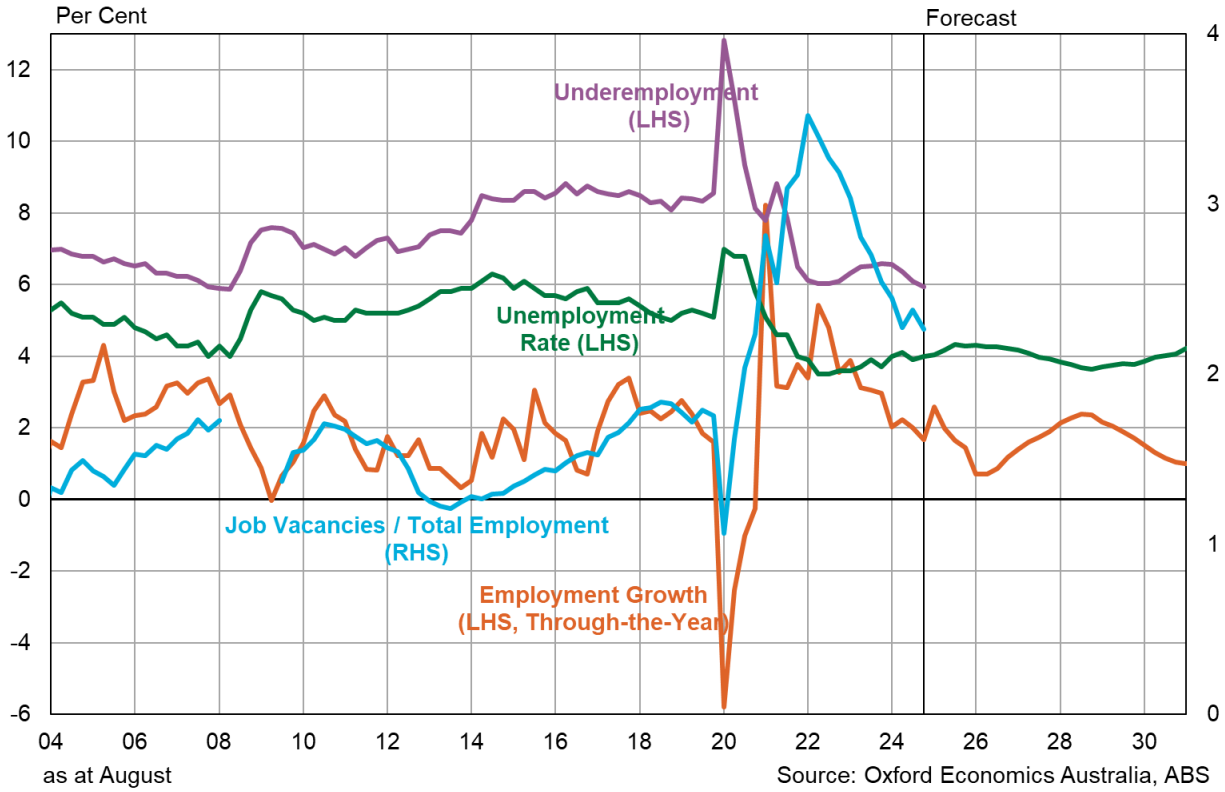


Figure 3.2 Australia: Employment and Unemployment

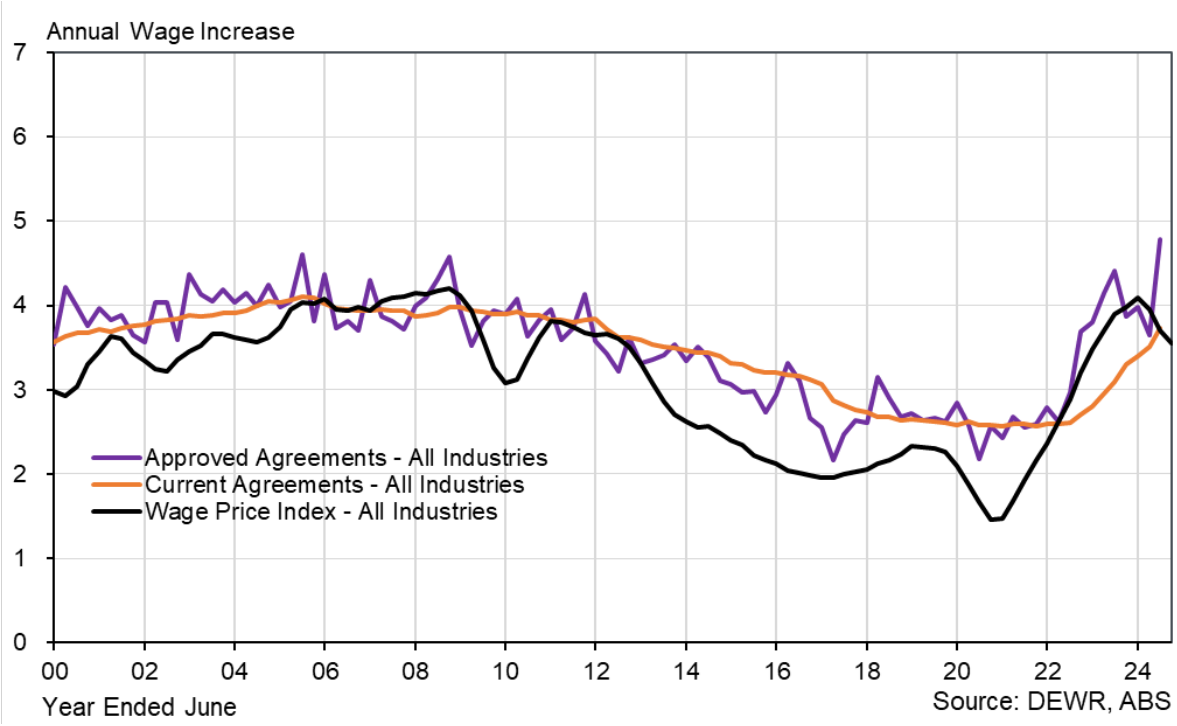


element of this decision was the very high CPI inflation rate of 5.1% in the March quarter 2022 (which was then the latest available quarter). The June 2023 NMW decision (for the 2023/24 financial year) was even higher, driven by CPI inflation of 7% in the March quarter 2023. The Commission awarded an 8.6% in the minimum wage and an increase of 5.75% for workers on awards. This underpinned the lift in wages growth in FY24.

The most recent 2024 NMW decision, for the 2024/25 financial year, will see the minimum wage increase by 3.75%, another strong result given CPI will be trending below 3.0%. It is likely that the minimum and award increases provided by the FWC will remain high again in FY26 given elevated CPI inflation and particularly given the support for higher wages from the current Federal Labor government (which the previous government did not support).

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.

Figure 3.3 EBAs – Approved vs Current Agreements – All industries, Australia



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, the next round of agreements have been materially higher, due to ongoing high CPI inflation and because of widespread skilled labour shortages (with the unemployment rate expected to be below 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 a very high 4.8% in the December 2024 quarter (latest available data), with an average of 4% over the past two years (September 2023 – December 2024) – see figure 3.3. We expect continued 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 recent and current rounds of wage rises negotiated by workers will continue to be higher than recent years.

Forecasts for All industries wages are detailed in Table 4.1 and the Summary table in the Executive Summary. The Australian All Industries WPI rose 4.1% in FY24 and is forecast to remain at an elevated 3.4% over the next two years. As the economy cools and the unemployment rate rises, All Industry wages are expected to soften over FY27 and FY28. However, from FY29 the WPI is expected to re-accelerate as the economy strengthens, the unemployment rate declines, the labour market tightens (particularly for skilled labour) and CPI inflation begins to pick up. The All Industries WPI is forecast to rise and peak at 3.7% in FY30, before easing as the economy slows. Although easing over the next 4 years, All Industries wage growth will still sit well above the 2.2% averaged over the back half of the 2010's. This will be due to the fact that labour market conditions will be tighter and inflation higher compared to this pre-covid period. Over the five-year period from FY27 to FY31, the real rate of increase is forecast to average 0.9% p.a., which will be above the 0.6% average of the decade to FY20 inclusive.

The **South Australia All Industries WPI** is expected to largely track slightly below 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.

4. INDUSTRY WAGE FORECASTS – UTILITIES & CONSTRUCTION: AUSTRALIA & SOUTH AUSTRALIA

4.1 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 South Australia is used as a proxy for all of AGN's 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 AGN's opex 'network' labour and escalating it with the WPI for the state utilities sector will be consistent with the AER's framework. That being said, some of AGN's internal staff may be involved in project delivery such as replacement and/or augmentation capital projects. Their labour cost can be included in the capex calculations. OEA chose to use the Wage Price Index (WPI) as the key measure of growth in South Australian 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.

Note that in terms of overall wage costs **for FY25 and FY26 only, the full 0.5% for the Superannuation Guarantee increases each year should be added to the forecast WPI increases** each year for internal wages and also external wages, to arrive at the total percentage increase in labour costs. 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).

4.2 NATIONAL & SOUTH AUSTRALIAN 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 4.1 and Fig 4.1). 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 2.6% over the past decade from FY15 to FY24 inclusive, 0.2% higher than the 2.4% national average. The Australian EGWWS WPI rose 4.1% in FY24, or -0.1% in real terms.

We forecast the Australian EGWWS WPI to grow at a rate of 4.6% in FY25 and 3.9% in FY26, representing a real increase of 2.2% in FY25 and 1.0% in FY26. The WPI is then forecast to grow at an average annual rate of 3.7% over the five years between FY27 to FY31, over 0.2 percentage points above the same average for the All Industries WPI.

Table 4.1 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 ([1])						Wage Price Index ([2])					
	All Industries			Electricity, Gas, Water and Waste Services			All Industries			Electricity, Gas, Water and Waste Services		
	Nominal $/week	%CH	Real AWOTE %CH	Nominal $/week	%CH	Real AWOTE %CH	Nominal Index	%CH	Real WPI %CH	Nominal Index	%CH	Real WPI %CH
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	1 981	4.5	2.1	2,352	6.1	3.7	154.6	3.4	1.0	163.4	4.6	2.1
2026	2 062	4.1	1.1	2 458	4.5	1.5	159.9	3.4	0.4	169.7	3.9	0.9
2027	2 139	3.7	0.9	2 554	3.9	1.1	165.2	3.3	0.5	176.0	3.7	0.9
2028	2 208	3.3	0.7	2 644	3.5	1.0	170.6	3.3	0.7	182.1	3.5	1.0
2029	2 289	3.7	1.2	2 746	3.9	1.4	176.5	3.5	1.0	188.8	3.7	1.2
2030	2 384	4.1	1.6	2 866	4.4	1.9	183.0	3.7	1.2	196.2	3.9	1.4
2031	2 491	4.5	2.0	2 990	4.3	1.8	189.5	3.6	1.1	203.7	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
2024-2031	4.0		1.4	4.4		1.8	3.4		0.8	3.9		1.3
2027-2031	3.8		1.3	4.0		1.4	3.5		0.9	3.7		1.2

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, exludes over time and bonuses

(3) CAGR (Compound Annual Growth Rates) for 2027-2031 is the average annual growth for 2026/27 to 2030/31 inclusive i.e. next Revenue Determination period.

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 matched the All Industries WPI, largely because of some large one-off 'catch-ups' in wages for some low paid sectors such aged-care and childcare. 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 very 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 a 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 (also see Figures 4.5, 4.6 and 4.7).

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 thus greater 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 4.2). As we expect that the EGWWS industry will continue to have higher levels of unionisation than the national average, we expect that 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.

Figure 4.1 Wage Price Index - Australia All Industries and Electricity, Gas, Water & Waste Services

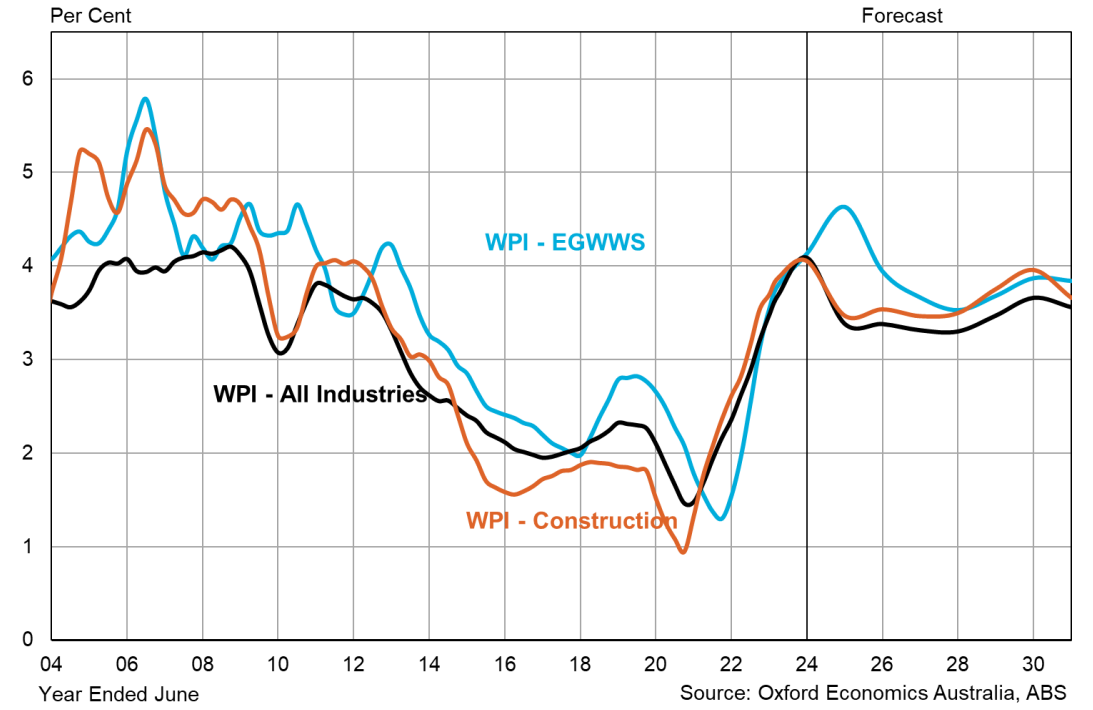
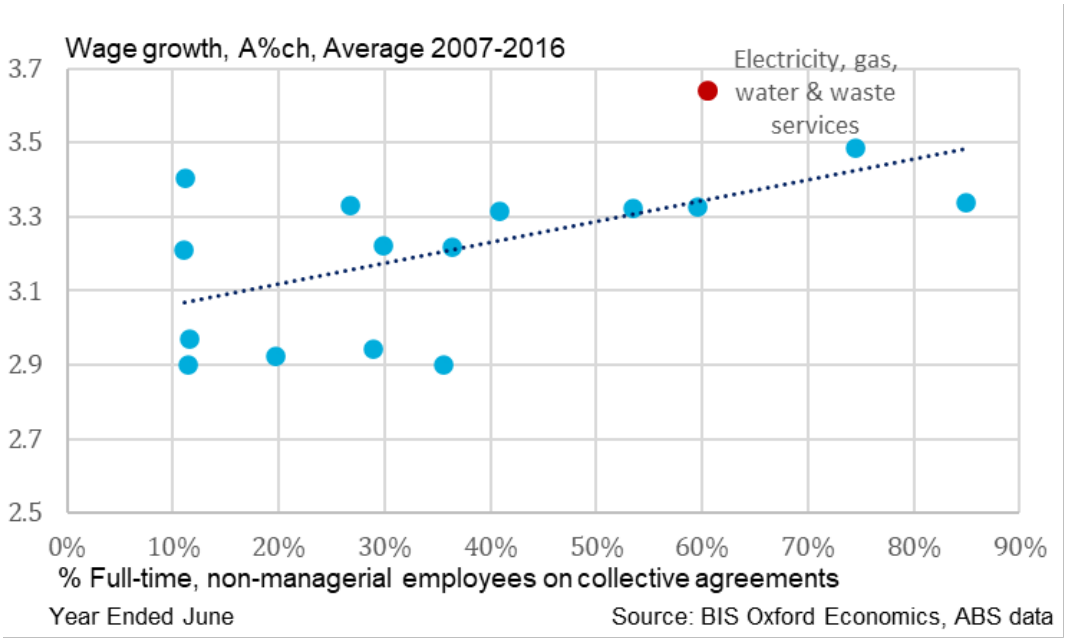


Figure 4.2 Average wage growth and unionisation rates by industry, 2007-2016

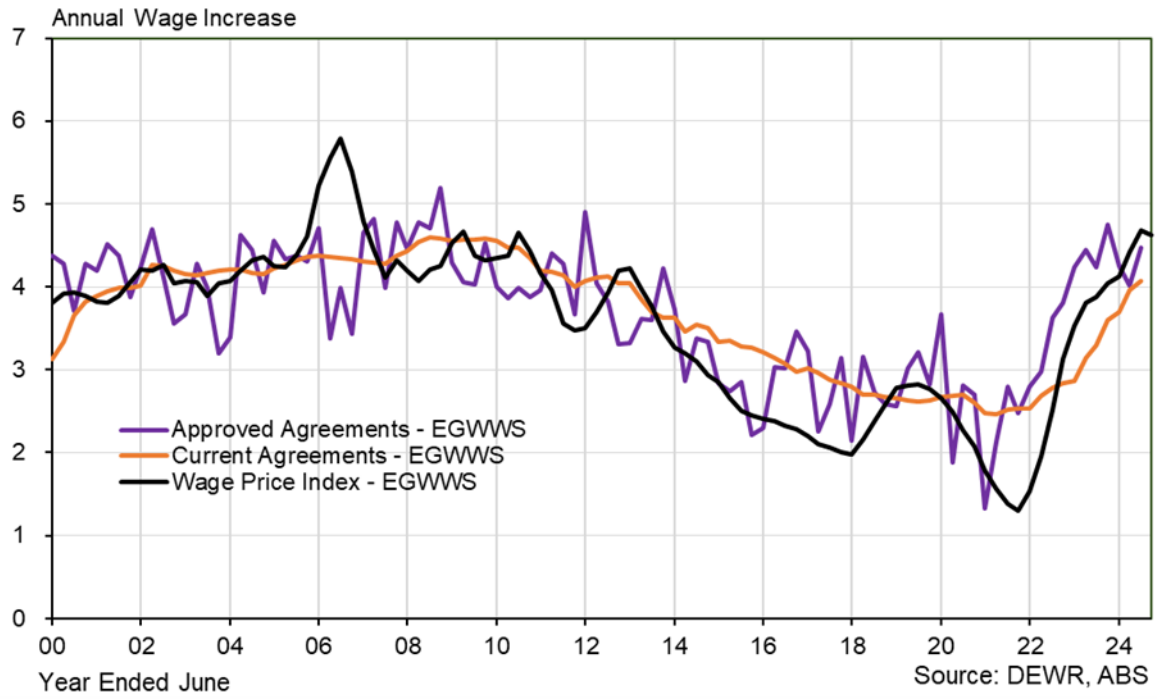


Collective bargaining dominates the pay setting arrangements in the utilities sector, while the relative absence of workers relying on (often) low-increase awards (set in the National Wage Case) means the overall average level of total utilities wages (in A$ terms) will generally be higher than the All Industries average. Over the outlook period, we expect collective agreements in the EGWWS sector to achieve average increases of 3.9%.

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 FY14 (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 1.3% above the 'official' CPI over FY25-31, 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 4.3 EBAs – Approved vs Current Agreements – Electricity, Gas, Water & Waste Services Sector, Australia



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 approved EBAs averaging 4.4% (AAWI terms) in calendar 2024 – an outcome not seen in over 15 years. We expect the next rounds of EBAs negotiated in the sector to remain elevated around current levels of 4-4.5%, due to several factors:

- CPI inflation will remain relatively high (averaging 4.2% in FY24, 2.4% in FY25, 3.1% in FY26, 2.8% in FY27),
- There is still an element of catch-up from the low EBA outcomes of 2022 and 2023, which were swamped by very high inflation, which then delivered real wage losses
- the demand for skilled labour remains strong, and
- the recent very high enterprise agreement outcomes in the construction sector will influence negotiations in the EGWWS sector, as some skills can be transferable.

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

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 4.5 and 4.6 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 tight over the next 2 years, with the unemployment rate to remain around 4%, despite a slowing in employment growth from 4.5% in FY23 and 2.7% in FY24 to 2.4% in FY25 and 1.4% in FY26. 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 push up 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 4.4). Meanwhile, there is similar strong growth coming through in in the Construction sector, with solid increases across all segments of the overall construction sector (residential building, non-residential building and civil engineering & infrastructure construction) over FY23 to FY25, leading to strong labour demand in that sector, particularly over FY23 and FY24 when activity surpassed the 2018 levels – excluding oil and gas, where a significant proportion of the 'work done' measure is large imported components assembled on-site (see figure 2.3).

With regard to utilities investment, Oxford Economics Australia is forecasting further strong increases over the next 2 years, with utilities-related engineering construction projected to be over 22% higher in FY31 compared to FY24 levels, following the 57% increase over the past three years (see charts 4.6 and 4.7). However, given the need for much greater amounts of transmission and distribution investment, let alone renewables generation, these projections could be considered conservative –

there is a significant upside risk to the quantum of electricity-related investment required and therefore to the levels of skilled labour required.

Figure 4.4 Australia – Mining Investment

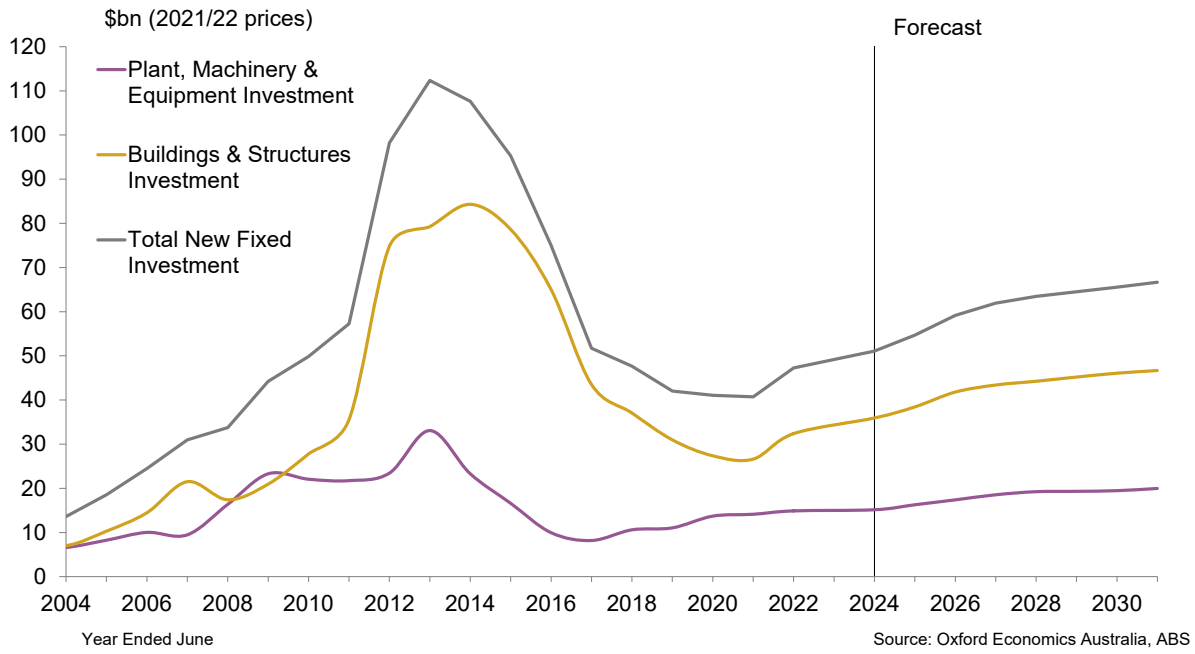
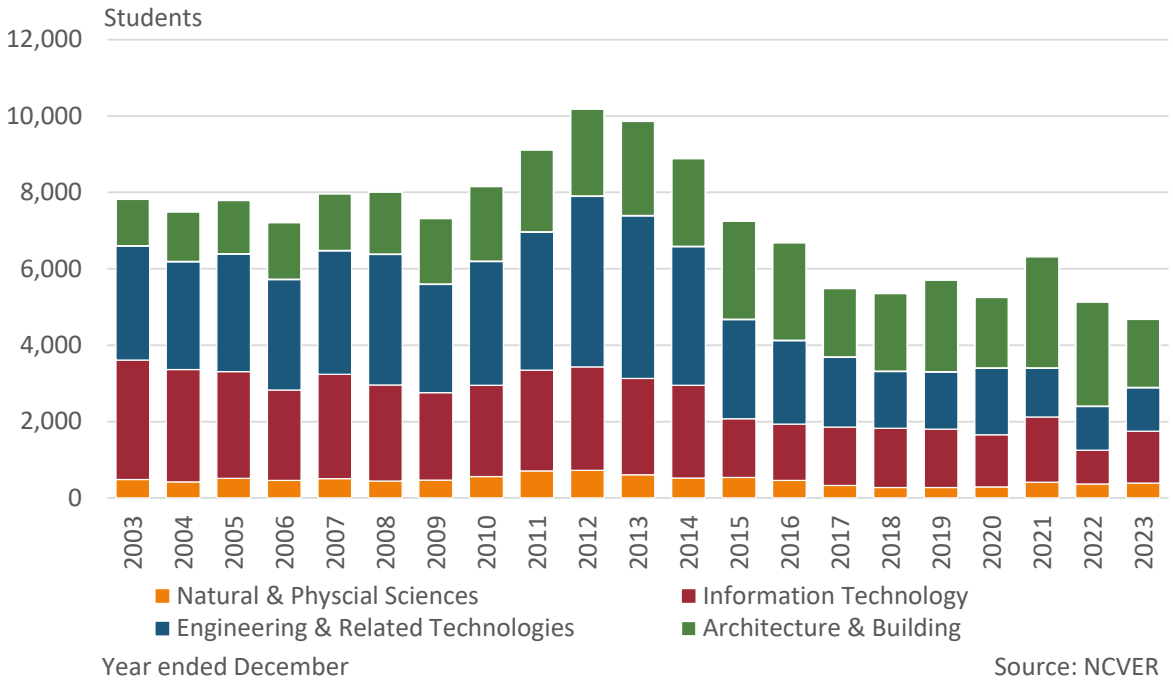


Figure 4.5 Australia, number of completions, diploma or higher, VET, 2003-2023



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 4.5). 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. Ultimately, this means that the skill shortages will persist for the next few years.

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 next two years.

EGWWS sector has relatively high levels of productivity, 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, Finance & Insurance Services and Information, Media & Telecommunications having higher productivity. Utilities' productivity is more than 50% higher than the national average according to ABS data for Australia and well above the average for South Australia (see Figure 4.8). 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 4.1).

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 4.6 and 4.7). 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 4.6 Australia – Utilities Employment, Output, Investment & Productivity

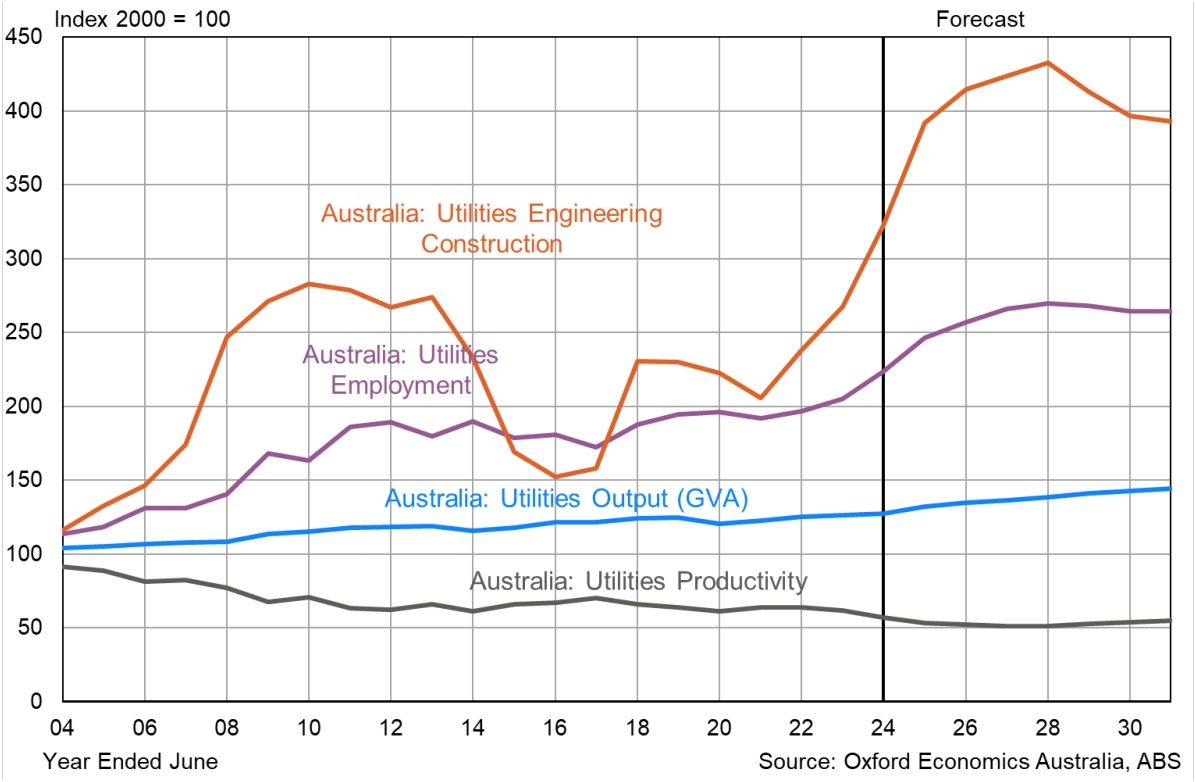


Figure 4.7 South Australia – Utilities Employment, Output, Investment & Productivity

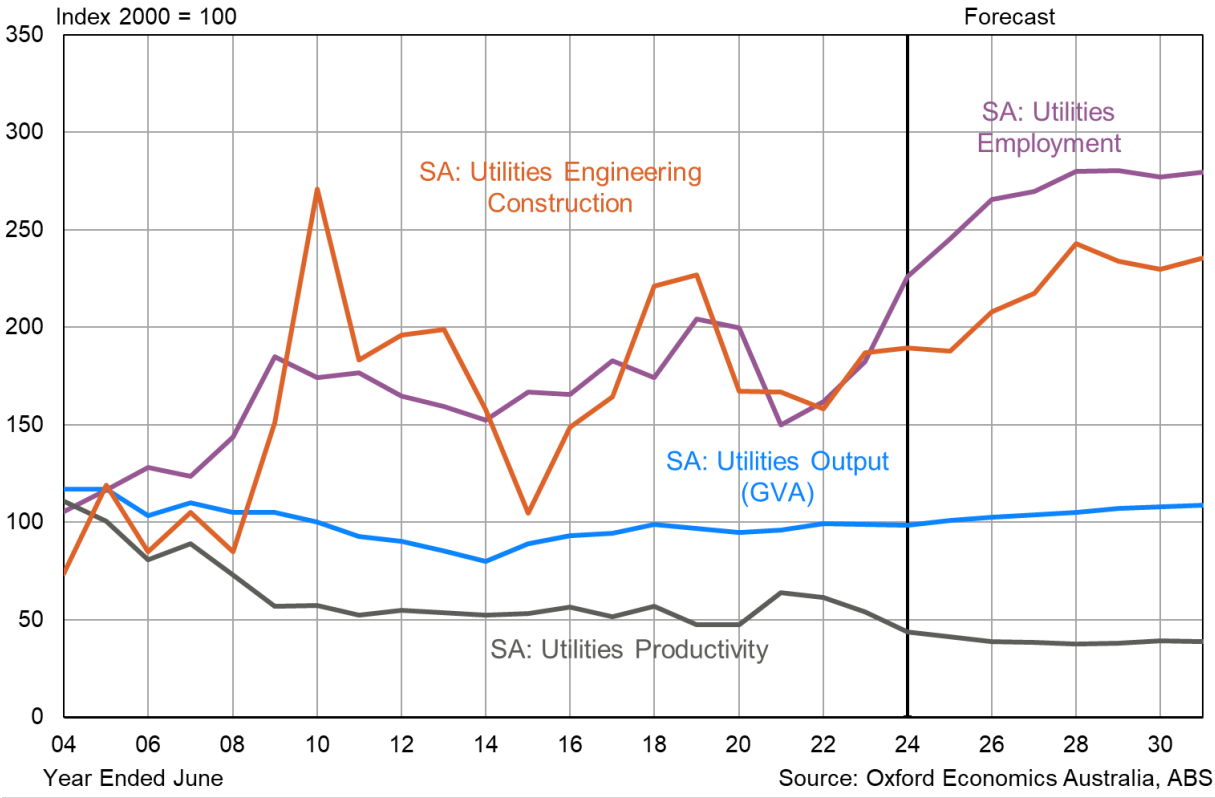
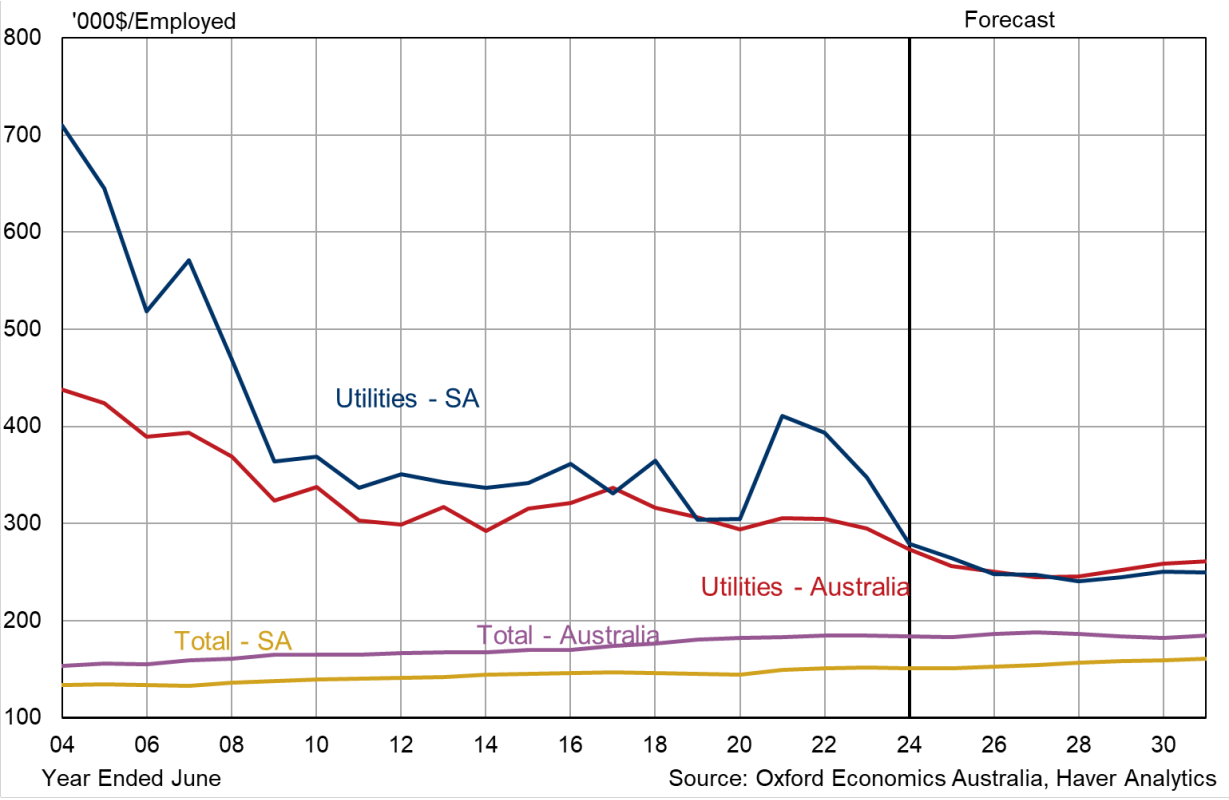


Figure 4.8 Utilities Productivity in Australia and South Australia



4.2.1 Outlook for Utilities Wages Growth in South Australia

Wages in the SA utilities sector are expected to move in line with the national utilities sector average over the upcoming regulatory period (see Table 1.1). In the near-term, however, the SA EGWWS WPI is expected to continue to outpace the national EGWWS WPI in FY25 (5.9% compared to 4.6% nationally), due mainly to the 7% EBA outcome in the March 2024 quarter, which impacted 70% of the SA EGWWS workforce covered by an EBA. SA EGWWS wages are then expected to fall back in line with the national average by FY27 as the March 2024 EBA cohort moves onto a new (lower) EBA. We expect this new EBA will be lower given that the 7% awarded in March 2024 likely reflected, in part, a 'catch-up' compensation for two previous years of real wage declines (over FY22 and FY23).

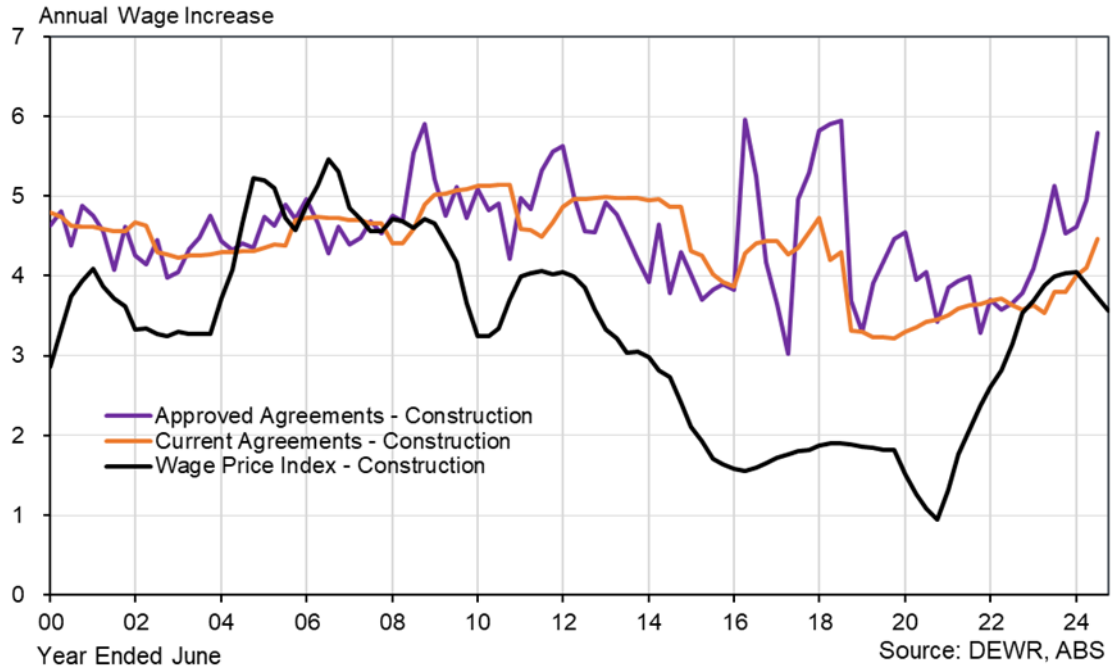
4.3 NATIONAL & SOUTH AUSTRALIA CONSTRUCTION WPI FORECASTS

Given that service providers' outsourced labour is mostly supplied by firms in the construction industry, we proxy AGNs external labour cost escalation by wages growth (as measured by the WPI) in the SA 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 3.7% over the five years from FY27 to FY31 inclusive (AGNs regulatory period) – or 1.1% per annum on average in real (inflation adjusted) terms. South Australian Construction wages are forecast to average 3.5%, or 0.9% 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 FY12.

The Australian Construction WPI growth recovered over FY22 to 2.6%, followed by 3.7% in FY23 and 4.1% in FY24 (in year average terms). This compares to the meagre 1.6% annual average over FY16 to FY21. Construction wages are estimated to remain elevated in FY25 (3.5%) as construction activity increases and serious skills shortages worsen, underpinning higher wages due to strong labour demand. It is important to note that in FY23 and FY24, overall construction activity levels surpassed the previous highs of FY13 and FY18 (see figure 2.3). Given the falling VET completions and increasing retirements, this means that there is likely a serious undersupply of skilled labour to cater for increasing construction levels. Construction wages growth stabilises at around 3.5% over FY26 to FY28 as activity cools somewhat, but then picks up again from FY29 as activity again steps up a notch. Very high EBAs in the construction sector recently will contribute to elevated WPI outcomes over the next couple of years (see figure 4.9). Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher utilities and mining investment and sustained high (but easing) levels of publicly funded transport infrastructure activity (particularly in the eastern states of the nation).

Figure 4.9 EBAs – Approved vs Current Agreements – Construction Sector, Australia



South Australian construction wage growth has diverged from the national trend over the past three years, and only averaged just 2.4% growth over FY23 and FY24. This compares to 3.9% nationally for construction, and 3.8% for the SA All Industries WPI. We suspect this anomalous outcome in the SA

Construction WPI reflects data quality issues and does not accurate reflect SA construction wage growth over the past two years, given that construction sector EBAs averaged 3% and 3.5% respectively in FY23 and FY24. However, recent Quarterly WPI data has shown a marked acceleration in construction WPI growth in South Australia, and for FY25 we expect the state's construction WPI to be 3.4%, just below the national average of 3.5%

In terms of forecasting, we have the SA construction WPI converging toward the national average over the forecast period, albeit remaining below that average reflecting the relatively softer labour market and construction outlook compared the national picture. South Australian construction wage growth is forecast to lag behind the national average by -0.2% annually over the FY27 to FY31 period. Overall, the WPI averages 3.5% annual growth over the FY27 to FY31 period, or 0.9% annually in real terms.

5. COMMODITY PRICE AND MATERIAL COST ESCALATOR FORECASTS

5.1 FORECAST METHODOLOGY

Regulators, such as the AER, have shown a preference for accepting a range of forecasts from different forecasters, and then taking an average. For the global price forecasts of Brent oil and hot rolled coil, we source the average price forecasts from the Consensus Economics report, *Energy and Metals Consensus Forecasts* (E&MCF), which is published every month. The Consensus E&MCF provides a wide range of different forecasters for a number of global energy and metals commodities, with prices in US$ terms. Quarterly forecasts are provided for two financial years, followed by calendar year forecasts for the next three years. Long-term forecasts are provided by a five-year average.

Table 5.1 Commodity and Materials Price Forecasts

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	5 yr Avg (b)
	Actuals					Forecasts		Next Regulatory Period					
Material Indicators													
Australian Steel Pipe & Tube PPI (e)	103.5	104.2	147.9	156.6	139.8	135.6	138.7	138.8	141.1	145.3	149.2	153.1	145.5
A%CH	-2.2	0.7	42.0	5.9	-10.7	-3.0	2.3	0.0	1.7	2.9	2.7	2.6	2.0
Hot Rolled Coil Steel - US$/t, China (d)	440	593	683	494	459	419	470	482	508	528	535	542	519
A%CH	-10.9	34.6	15.2	-27.6	-7.1	-8.7	12.2	2.6	5.3	3.9	1.4	1.2	2.9
Hot Rolled Coil Steel - A$/t, China (d)	656	793	941	734	700	648	721	710	735	763	774	784	753
A%CH	-5.0	20.9	18.6	-22.0	-4.6	-7.5	11.3	-1.5	3.4	3.9	1.4	1.2	1.7
Crude Oil (Brent) - US$/brl (d)	51.6	54.2	91.2	86.7	84.8	74.3	68.0	69.8	72.6	74.4	76.5	78.1	74
A%CH	-24.9	4.9	68.4	-4.9	-2.3	-12.3	-8.5	2.6	4.1	2.4	2.8	2.1	2.8
Crude Oil (Brent) - A$/brl (d)	76.9	72.5	125.7	128.8	129.2	114.9	104.3	102.7	105.0	107.5	110.6	112.9	108
A%CH	-19.9	-5.8	73.4	2.5	0.4	-11.1	-9.2	-1.5	2.2	2.4	2.8	2.1	1.6
Bitumen - A$/t, South Australia (f)	1344	1310	1436	1848	1731	1823	1705	1688	1736	1791	1852	1911	1796
A%CH	-1.7	-2.5	9.6	28.7	-6.4	5.3	-6.5	-1.0	2.8	3.2	3.4	3.2	2.3
Concrete, Cement & Sand PPI - South Australia (g)	105.6	105.1	106.1	110.7	117.1	124.1	125.6	128.3	131.9	136.2	140.3	143.5	136.0
A%CH	-1.0	-0.5	1.0	4.4	5.8	6.0	1.2	2.2	2.7	3.3	3.1	2.2	2.7
Gas & Fuel Engineering Construction IPD (h)	187.3	185.9	211.2	224.0	223.7	228.2	232.2	238.6	246.2	255.5	264.2	271.9	255.3
A%CH	1.5	-0.7	13.6	6.1	-0.1	2.0	1.8	2.7	3.2	3.8	3.4	2.9	3.2
Exchange rate, US$/AU$ (period avg) (i)	*0.67*	*0.75*	*0.73*	*0.67*	*0.66*	*0.647*	*0.652*	*0.679*	*0.692*	*0.692*	*0.692*	*0.692*	*0.689*
A%CH (inverted)	6.2	-11.3	2.9	7.2	2.6	1.3	-0.8	-4.1	-1.8	0.0	0.0	0.0	-1.2
Consumer Price Index (headline) (a)	1.3	1.6	4.4	7.0	4.2	2.4	3.0	2.8	2.5	2.5	2.5	2.5	2.6
REAL PRICE CHANGES (c)													
Australian Steel Pipe & Tube PPI (e)	-3.5	-0.9	37.5	-1.1	-14.9	-5.5	-0.7	-2.7	-0.9	0.4	0.2	0.1	-0.6
Hot Rolled Coil Steel - A$/t, China (d)	-6.4	19.3	14.2	-29.0	-8.8	-9.9	8.3	-4.2	0.9	1.4	-1.1	-1.3	-0.9
Bitumen - A$/t, South Australia (f)	-3.0	-4.2	5.2	21.7	-10.6	2.9	-9.5	-3.8	0.3	0.7	0.9	0.7	-0.2
Concrete, Cement & Sand PPI - South Australia (g)	-2.3	-2.1	-3.5	-2.6	1.6	3.6	-1.8	-0.6	0.2	0.8	0.6	-0.3	0.1
Gas & Fuel Engineering Construction IPD (h)	0.1	-2.4	9.1	-0.9	-4.3	-0.5	-1.2	0.0	0.6	1.3	0.9	0.4	0.6

Sources: Oxford Economics Australia, ABS, RBA, Consensus Forecasts

(a) Inflation forecasts are RBA forecasts for the next 2-3 years from latest 'Statement of Monetary Policy'. Beyond that, inflation forecasts are based on the mid-point of RBA inflation target (2.5%).
(b) Average Annual Growth Rate for 2026/27 to 2030/31 inclusive, ie for next regulatory period.
(c) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(d) Hot Rolled Steel and Crude oil price forecasts are sourced from the latest available Consensus Economics 'Energy & Metal Consensus Forecasts' (EMCF) publication. US$ prices adjusted by using exchange rate above.
(e) Steel Pipe & Tube producer price index (PPI), modelled using latest EMCF price forecasts for iron ore and coking coal, converted to A$ (using above exchange rate); plus manufacturing wages, transport costs
(f) South Australian bitumen prices based on latest EMCF Brent oil prices; and Oxford Economics Australia (OEA) modelling of bitumen import prices, freight & transport costs, and other relevant variables.
(g) Producer price index (PPI) for concrete, cement and sand: Adelaide. Forecasts based on Oxford Economics Australia OEA modelling and construction and other macroeconomic forecasts.
(h) Gas and Fuel Construction Price Index forecasts from OEA modelling of input prices, and construction and other macroeconomic forecasts
(i) Exchange rate forecasts sourced from latest available Consensus Economics 'Asia Pacific Consensus Forecasts' (APCF), which has forecasts covering the next 2 years, after which exchange rate is held steady.

The latest available consensus forecast publication is April 2025, where 26 separate forecasters supplied price forecasts out to 2026 – the average of all the forecasters is used here. The amount of survey participants providing forecasts gradually declines to 9 for the long term 2028-2032 forecasts.

The US$ denominated forecasts were converted into A$ terms using consensus forecasts of exchange rates. Exchange rate forecasts are available for the next two years from the Consensus Economics *Asia Pacific Consensus Forecasts* (APCF) publication. The US$/A$ exchange rate is then held constant at the last APCF forecast point over the longer term. Overall, the exchange rate is predicted by the large range of forecasters supplying forecasts to the Consensus Economics survey. The Australian dollar is heavily influenced by movements in Australia's basket of commodity prices and interest rate relativities between Australian and overseas interest rates (particularly US interest rates), and the strength of the US$ in the global economy. The A$ averaged US$0.66 in FY24 and is expected to average a lower US$0.65 in FY25. The Consensus Economics APCF forecasts then project the A$ to average US$0.65 in FY26 before appreciating over the following two years to reach US$0.69 in FY28.

With respect to the material cost forecasts, our forecasting methodology is based on error correction statistical regression models. The underlying price drivers in these models are identified statistically (examining historical relationships between inputs and outputs) and from our experience in researching and forecasting material price movements. Key quantitative and qualitative data that underpin the forecasts include economic conditions, the outlook for demand (i.e., construction activity) and supply considerations (e.g., commodity prices, wage costs).

5.2 STEEL PRICES

Steel prices are largely driven by movements in the main input costs of iron ore and coking coal, which are determined on international commodity markets, while there are also local influences such as manufacturing wages, energy costs and the strength of construction, which is the main market for steel. Other global factors may also have an influence, such as the degree of over- or under-supply or demand influences in global steel production. In terms of the latter, substantial increase in Chinese steel production capacity over the 1990s and 2000s tended to constrain steel prices, compared to movements in the commodity inputs. However, over recent years, China has been closing old, inefficient, and high-polluting capacity, and this and other reductions in global oversupply has helped improve steel prices and margins. Steel prices now tend to be more influenced by movements in their input prices.

5.2.1 Iron ore and coking coal prices

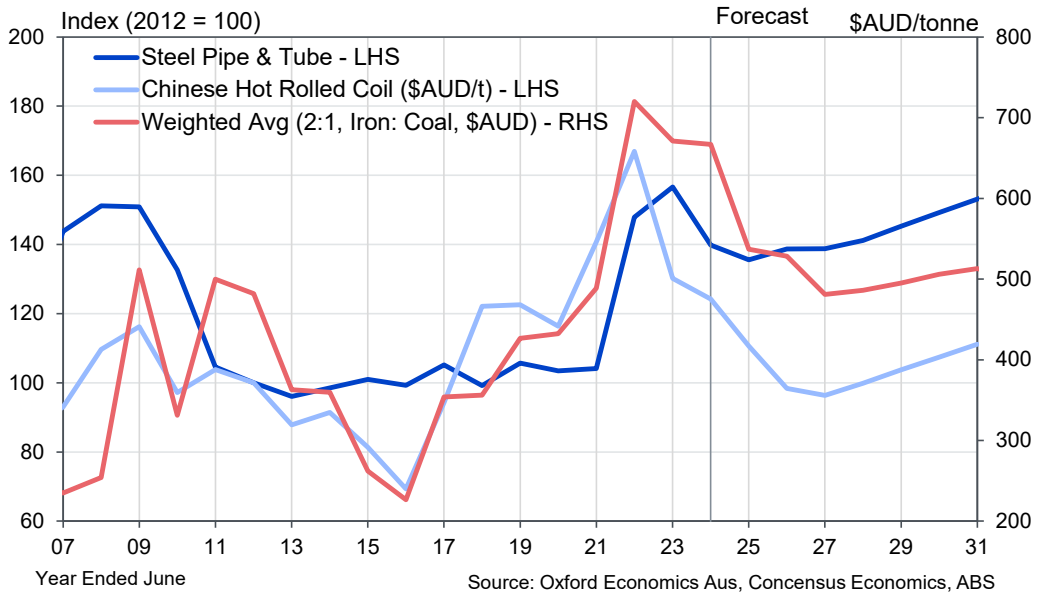
Iron ore and coking coal prices have been high since the initial dam collapse in Brazil reduced global supply in early 2019, followed by COVID's impact on global supply chains and the conflict in Ukraine constraining iron and coal supplies, plus local weather events, which saw prices peak over 2021 and 2022. Prices have now come back sharply over the past three years, as global supplies normalised.

Historically, iron ore prices have been highly correlated with the Chinese residential construction market, driven by the demand for steel in high density dwelling construction activity. Looking forward, the Chinese real estate sector will likely remain under pressure with risks tilted to the downside, and steel production is likely to be subdued in the longer term as China aims to meet its carbon emissions targets. Iron ore supplies are anticipated to continue increasing over the forecast period as new mines

in Australia and Brazil raise production and as China increases refining capacity. Additionally, the giant Simandou mine in Guinea will start production soon and will account for some 5% of global supply when fully operational in 2027, keeping the market well supplied and weighing on prices over the next 2-3 years. Nevertheless, with an expected steady increase in demand, prices are expected to see moderately upward pressure towards the end of the decade.

Coking coal prices surged to historic highs in the second half of FY22 due to the energy crisis brought about by the war in Ukraine and local weather events constraining Australian exports, with prices jumping 200% hit over US$300/tonne. Prices have since ease back considerably (~US$200/tonne), although they are still sitting well above pre-COVID levels. Prices are expected to continue to ease over the next 2-3 years, although to a lesser degree than iron ore prices.

Figure 5.1 Steel Prices Drivers – Australia



5.2.2 Hot Rolled Steel

Hot rolled steel prices are less sensitive to domestic demand pressures relative to more processed steel products (e.g. steel pipes) since a significant proportion of hot rolled steel is imported, typically from China. Furthermore, with China being the primary exporter of hot rolled coil to the Australian market, prices over FY21 were impacted by China's COVID-19 zero policy (and subsequent steel output and shipping constraints), with prices jumping 35% in FY21 (in US$ terms). FY22 saw a further 15% increase in hot rolled coil steel prices as the price of primary inputs, iron ore and coking coal, shot up. As Chinese steel output began recovering in the second half of 2022, hot rolled steel prices in US$ terms saw a correction of some -28%. Commodity price declines have since contributed to a further -7% decline in FY24, with a further -9% decline in FY25 expected by the contributors to the Consensus Economics E&MCF. HRC prices are then expected to begin to rise from FY26, with US$ HRC prices forecast to rise by an average of 2.9% p.a. over FY27 to FY31. The rise in A$ terms will be somewhat muted by the expected A$ appreciation, with an annual average of 1.7% projected over the five years to FY31.

5.2.3 Steel Pipe and Tubes

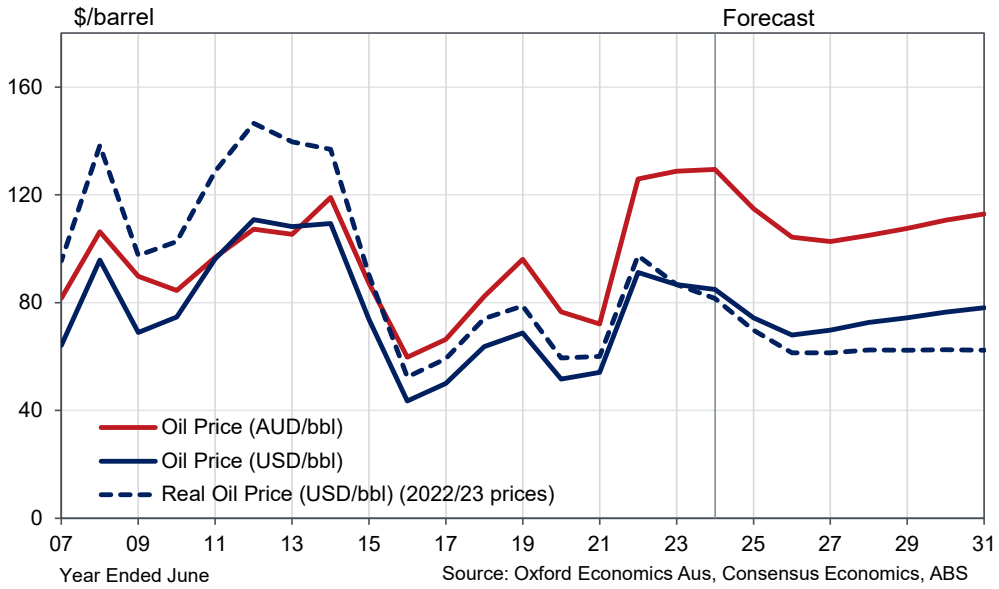
Both local demand pressures and commodity prices influence steel pipe prices. On the demand side, pressures stemming from construction activity (primarily utilities) is a key driver. The 'steel pipe & tube manufacturing PPI' underwent a dramatic increase in price over FY22 (+42%) in line with the price rises in iron ore and coking coal. Steel pipe prices continued the price growth over FY23, still reflecting some of the input prices from FY22, while increasing domestic cost pressures of energy costs and wages also limited any immediate price correction. However, the continued easing of iron ore and coal over FY24 saw the PPI decline by -10.7%.

While wages growth will limit declines in steel pipe manufacturing over the near term, declines in iron ore and coking coal will drive down the price of steel pipes. Stable demand from a subdued building sector is expected to contribute to an estimated -3% decline in prices in FY25. From FY27, as demand recovers, upward price pressure on steel pipes is expected to return. Steel pipe prices are forecast to average 2.0% annual average growth over the five years to FY31, with FY29 seeing the peak in inflationary pressure (+2.9%) as growth in demand from the construction sector is at its greatest.

5.3 BRENT OIL PRICES

Brent oil prices jumped in FY22 to US$91/barrel (increasing in A$ terms by 73% to A$126/brl), as the rebound in global demand post covid was exacerbated by a supply shock due to the Russian invasion of Ukraine and subsequent trade restrictions and supply disruptions. Global oil supplies improved over 2023, but with global demand remaining resilient despite prospects for recession, oil prices remained elevated, correcting downward by only -4.8% to average US$87/brl over FY23. Following the initial surge in Brent prices in FY22, prices, while easing slightly, have remained at elevated levels. Brent Oil declined a further -2.3% in FY24, with any notable correction in oil prices being negated by both OPEC+ production cuts in the first half of FY24 and continuing conflicts in the Middle East.

Figure 5.2 Brent Oil Prices



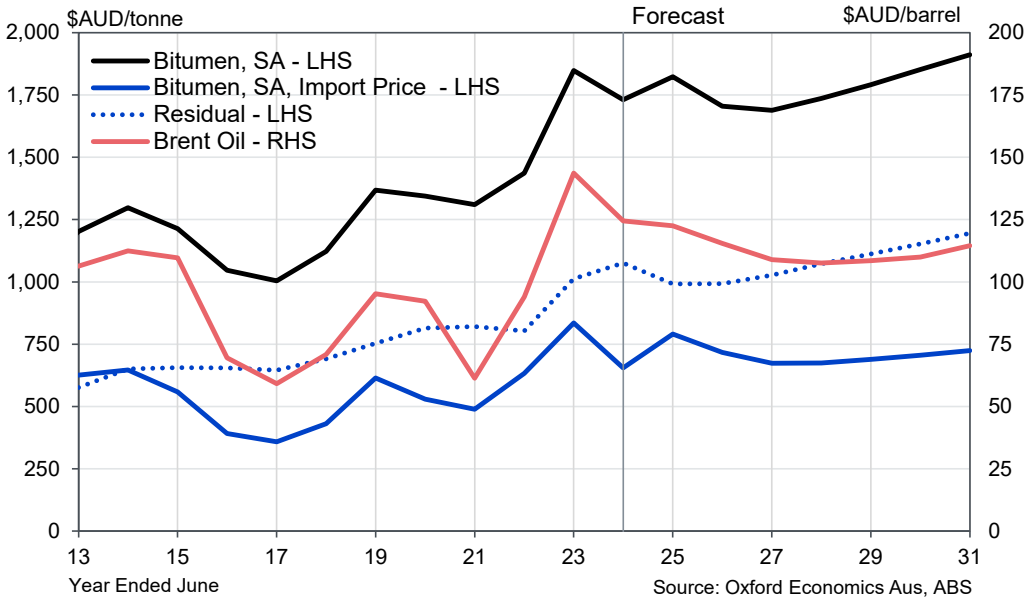
Consensus oil prices projections have a -12.3% decline in FY25, and a further -8.5% in FY26 to bottom out at US$68/brl. Over the next regulatory period, the consensus oil price is forecast experience growth of 2.8% annually, on average (to average US$74/brl). It is expected that demand and supply will trend in opposite directions over the second half of the 2020s, with demand continuing to rise as economies expand (despite intensifying electrification), and supply being constrained due to the expectation of inadequate investment over the coming years. Furthermore, the depletion of cheaper and easier to access oil (especially in the US) will add to constrained supply. An expected appreciation in the A$ will help soften domestic oil prices over the near term, with annual average declines of -7% forecast over FY25 to FY27. Domestic oil prices are forecast to average AU$108/brl over the regulatory period, with 1.6% annual average growth predicted.

5.4 BITUMEN PRICES

Domestic bitumen prices are driven by two components: the underlying cost of raw imported bitumen and costs/margins associated with the supply and transportation of the bitumen. The imported bitumen price (see Import Price in Figure 5.3) accounts for approximately 40% of the cost of retail bitumen prices and is driven by the underlying global price of oil, albeit with around a 1-2 quarter lag. Freight costs vary between jurisdictions, with those furthest from the export ports in SE Asia (e.g. South Australia) recording higher freight costs compared to closer states or territories (e.g. Western Australia).

With the surge in oil prices over FY22, SA bitumen prices jumped a cumulative 41% over FY22 and FY23. Adding to this upward price pressure was heightened shipping costs due to higher oil prices and unique factors associated with the pandemic. With oil prices and supply chains normalising over FY24, bitumen prices eased back moderately (-6.4%). With easing oil prices expected over the next two years, bitumen prices are forecast to respond by softening around -4% annually, on average, over FY26 and FY27.

Figure 5.3 Bitumen Price Drivers – South Australian

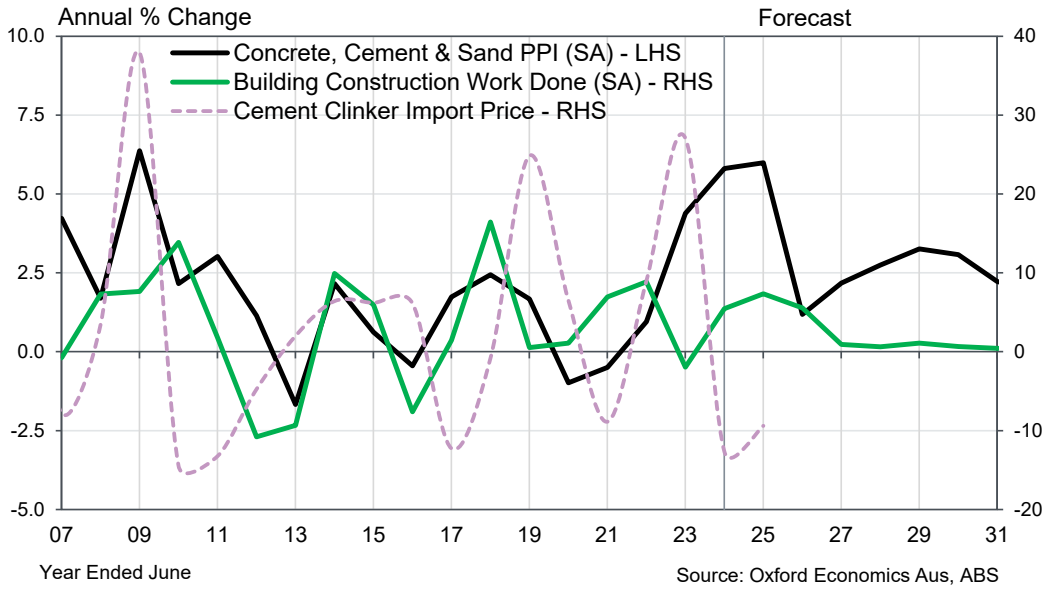


Despite oil prices forecast to rise modestly over the longer term, we do not expect this to necessarily translate to weak growth in bitumen costs. Transportation and supplier costs are forecast to continue their steady upwards trend over the forecast period, and with these components making up ever-increasing share of the overall bitumen price (~40% in 2014 to ~55% in 2024, nationally), their majority share of the overall cost will put a floor under retail bitumen prices. Overall, SA bitumen prices are forecast to record 2.3% annual average growth over the five years to FY31.

5.5 CONCRETE PRICES

We proxy the escalation of pre-mixed concrete in South Australia with the Adelaide 'Concrete, Cement and Sand' PPI. The Concrete, Cement & Sand PPI is heavily driven by the overall level of construction activity in the economy, both from building construction, and engineering construction.

Figure 5.6 Concrete Price Drivers – South Australia



With demand in the South Australian building construction sector rising 18% over the two years to FY22, in addition to higher manufacturing costs (driven primarily by higher energy prices and import prices for clinker), concrete prices were hit by both demand and supply pressures which resulted in a cumulative 10% rise in prices over FY23 and FY24. Strong demand over FY25 is expected to see a continuing pass through of higher manufacturing costs to consumers, with a further 6% rise in prices. The strengthening outlook for building construction over the back half of the decade is expected to translate to moderate upward price pressure on concrete prices, with prices growth forecast to average 2.7% annually over the five years to FY31.

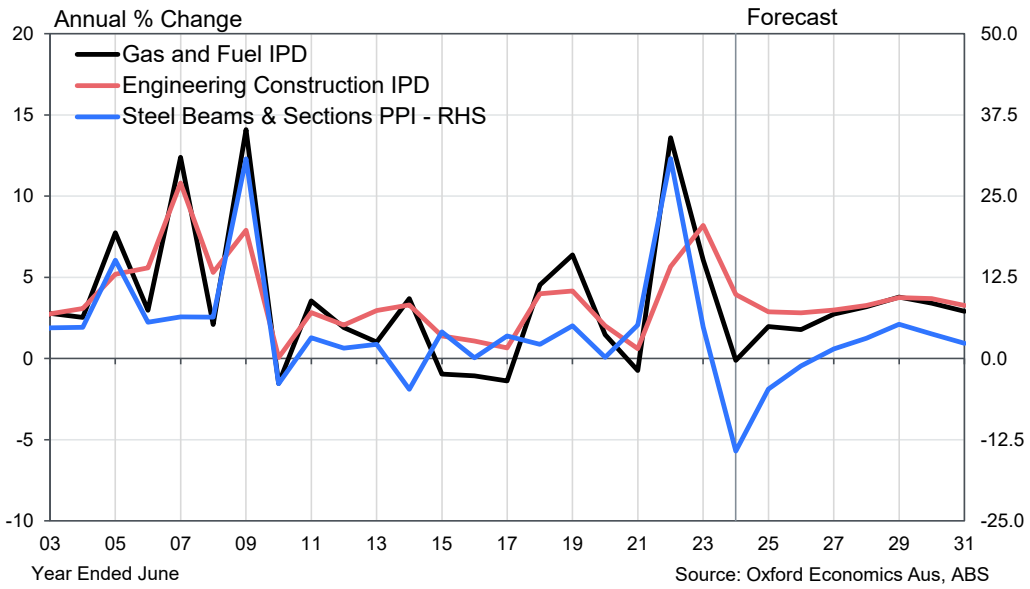
5.6 GAS AND FUEL ENGINEERING CONSTRUCTION COSTS

The gas and fuel engineering construction implicit price deflator (IPD) measures cost growth relevant to the gas pipeline engineering construction sector. It is a combined index of materials and labour, with key cost components for the Gas & Fuel IPD are wages, steel, concrete, plant and equipment, and

fuel. Compared to other engineering build types, the Gas & Fuel IPD is more sensitive to fluctuations in steel and energy/ fuel prices.

Overall, gas and fuel engineering construction cost growth is expected to ease over the near term following a 20% surge over the two years to FY23. Driving the easing in price growth, in addition to the -0.1% decline over FY24, will be falling steel and oil prices, with construction cost growth forecast to average around 1.9% annually over FY25 to FY27. Beyond this point, domestic demand pressures for steel and construction labour will see gas and fuel infrastructure construction costs rise moderately. Overall, construction costs are forecast to average 3.2% annually over the next regulatory period (FY27 to FY31).

Figure 5.7 Australia Gas & Fuel IPD and Construction Cost Drivers



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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