BIS OXFORD ECONOMICS

LABOUR COST ESCALATION FORECASTS TO 2029/30

PREPARED BY BIS OXFORD ECONOMICS FOR SA POWER NETWORKS

FINAL REPORT – NOVEMBER 2023

BIS Oxford Economics

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November 2023

This report/document can be made public and published on the Australian Energy Regulator's website as part of **SA Power Networks**' Regulatory Proposal.

The modelling and results presented here are based on information provided by third parties, upon which BIS Oxford Economics 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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1. EXECUTIVE SUMMARY

Oxford Economics Australia (formerly BIS Oxford Economics) was engaged by SA Power Networks Pty Ltd (SAPN) to provide price forecasts of labour that are relevant to the South Australian electricity distribution industry for the period to 2029/30 (FY30). This period includes SAPN's next regulatory period, which is the five-year period from 2025/26 to 2029/30 (FY26 to FY30) inclusive. Forecasts of wage cost escalation will be used by SAPN to develop the real price changes over its upcoming regulatory period, which, in turn, will be used by the business to construct its operating and capital expenditure forecasts.

For **electricity network related labour**, Oxford Economics Australia (OEA) forecasts that total wage costs for the South Australian Electricity, Gas, Water and Waste Services (EGWWS or 'Utilities') sector — expressed in Wage Price Index (WPI) terms — will average 3.8% per annum over the seven-year period from FY24 to FY30 inclusive, the same as the Australian EGWWS WPI average over the same period. For the five-year regulatory period from FY26 to FY30, the average increase in the South Australian EGWWS WPI is forecast to be 3.6%. In real terms, the South Australian EGWWS WPI is forecast to average 1.1% p.a. over the five years to FY30 (see Table 1.1 below).

Note that these forecasts include the impact of the proposed increases to the Superannuation Guarantee (SG) over the years from FY23 to FY26. We estimate that the Australian and South Australian EGWWS WPI will be, on average, -0.04% lower in each of the relevant years, than if the SG increases did not proceed. This is based on the notion that a proportion of the costs associated with SG increases will be ultimately borne by employees, via lower wage growth than would be the case if there was no SG increase. The Reserve Bank of Australia (RBA) has quoted research from the Grattan Institute that found that employees tend to receive lower wages due to the imposition of a SG increase. In effect some of the employees' wage increase (which they would have received in the absence of the SG increase) is replaced with the extra superannuation contribution. This means that although the 'statutory' incidence of the higher superannuation contributions are borne by employers, over time a proportion of these higher SG costs are passed from employers to employees via lower wage growth (i.e. known as the 'economic incidence').

However, given the SGC is in effect a labour 'on-cost', in terms of escalating wage costs over the regulatory period, **the full annual 0.5% for the SGC therefore needs to be added to the forecast increases in the WPI** for each relevant year.

Over the regulatory forecast period from FY26 to FY30, Australian EGWWS WPI growth is expected to remain higher than the All Industries WPI average, with the Australian All Industries WPI forecast to average 3.4% over the five years to FY30. This means that the Australian EGWWS WPI is expected to be 0.3% higher than the All Industries average, which is lower than the 0.4% historical difference of the past decade. The forecast real growth in Australian EGWWS WPI would be 1.1% over the 5-year regulatory period to FY30, which is similar to the 1.0% p.a. averaged over the decade to 2020.

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 65% 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 (38%), 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 strengthen from the current weak pace as the labour market tightens, especially from FY23 with the unemployment rate now around 3.7% and expected to remain below 4% over the next 1½ to 2 years.
- demand for skilled labour will pick up and strengthen with the high levels of utilities investment from FY22 to FY30, which are well above the levels of the past two decades. OEA is forecasting electricity-related engineering construction to be 29% higher in FY30 compared to FY23 levels. This will also be a key driver of wages going forward.
- 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.

The economy is expected to remain resilient over the short-to-medium term and, although OEA's economic growth (GDP) forecasts are for modest weakening over FY24 and FY25, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate remaining around 3.7% to 4% over the next two years to FY25. The rise in the unemployment rate is also expected to be kept in check by falls in the participation rate, as some workers drop out of the labour force as employment growth slows (many of these will fully retire). Skill shortages, which have already emerged, are expected to remain acute in many parts of the economy, although there has been some recent evidence of shortages of unskilled labour beginning to ease. The tight labour market will see wage pressures remain elevated.

Wages have been slower to pick up compared to the inflation rate, due to lags in the transmission of wage increases, particularly in the enterprise bargaining segment, where the duration of agreements runs for 2-3 years. The All industries WPI is forecast to increase to a peak of 3.9% in 2023/24 (from 3.5% in 2022/23), before easing slowly over the subsequent four years as the economy cools and the unemployment rate rises back above 4%. The strengthening in economic and employment growth from 2027/28 will then see All Industries WPI growth pick up sharply to 3.5% and 3.6% over 2028/29 and 2029/30.

We expect to see the continuation of critical skilled labour shortages and competition for scarce labour - particularly from the mining and construction sectors - which will push up wage demands in the utilities sector. Mining investment is now picking up and is forecast to see significant increases to the end of the decade. Meanwhile, overall construction activity will remain elevated at close to current levels over the next four years (before again lifting from 2027/28), leading to strong labour demand in that sector, particularly over FY23 and FY24 when activity surpasses the 2018 levels. With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 6 years (and beyond), with electricity-related engineering construction projected to be 29% higher in FY30 compared to FY23 levels, following the 42% increase over the past two years. 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 upside to the levels of skilled labour required.

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. Added to this is that skilled immigration only fully returned in the first half of 2022, after being suspended since early 2020. Although now resumed, the backlog of skilled labour shortages will be slow to fill, meaning that the skill shortages will persist for at least the next 2 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 2023/24 to 2025/26 period. The EGWWS WPI rebounded strongly over FY23 to match the national average. From FY24, we expect the EGWWS WPI to again outpace the All Industries WPI over the forecast period. 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.

Table 1.1 Summary – Labour Cost Escalation Forecasts: South Australia & Australia

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

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	5 yr Avg (g)
	Actuals					Forecasts		Next Regulatory Period					
NOMINAL PRICE CHANGES													
1. Electricity Network-Related Labour													
EGWWS WPI - South Australia (a)	**2.5**	**2.6**	**1.7**	**1.4**	**3.7**	**4.2**	**4.1**	**3.8**	**3.5**	**3.4**	**3.6**	**3.8**	**3.6**
EGWWS WPI - Australia (b)	2.8	2.7	1.8	1.5	3.5	4.1	4.1	3.9	3.6	3.4	3.7	3.8	3.7
2. Contractor Labour Cost Escalation													
Construction WPI - South Australia (c)	**1.8**	**1.4**	**1.3**	**2.0**	**2.3**	**3.6**	**3.8**	**3.6**	**3.4**	**3.3**	**3.7**	**3.8**	**3.6**
Construction WPI - Australia (b)	1.9	1.5	1.3	2.6	3.7	4.2	4.0	3.8	3.5	3.4	3.7	3.9	3.7
3. All Industries Wages													
All Industries WPI - South Australia	**2.2**	**2.3**	**1.6**	**2.1**	**3.5**	**3.9**	**3.7**	**3.4**	**3.3**	**3.2**	**3.5**	**3.6**	**3.4**
All Industries WPI - Australia (d)	2.3	2.1	1.5	2.4	3.5	3.9	3.7	3.5	3.3	3.2	3.5	3.7	3.4
Consumer Price Index (headline) (e)	1.6	1.3	1.6	4.4	7.0	4.2	3.2	2.7	2.5	2.5	2.5	2.5	2.5
REAL PRICE CHANGES (g)													
1. Electricity Network-Related Labour													
EGWWS WPI - South Australia (a)	**0.9**	**1.2**	**0.1**	**-3.0**	**-3.3**	**0.0**	**0.9**	**1.1**	**1.0**	**0.9**	**1.1**	**1.3**	**1.1**
EGWWS WPI - Australia (b)	1.1	1.3	0.2	-2.9	-3.5	-0.1	0.9	1.2	1.1	0.9	1.2	1.3	1.1
2. Contractor Labour Cost Escalation													
Construction WPI - South Australia (c)	**0.1**	**0.0**	**-0.3**	**-2.5**	**-4.8**	**-0.6**	**0.6**	**0.9**	**0.9**	**0.8**	**1.2**	**1.3**	**1.0**
Construction WPI - Australia (b)	0.2	0.2	-0.3	-1.8	-3.3	0.0	0.8	1.1	1.0	0.9	1.2	1.4	1.1
3. All Industries Wages													
All Industries WPI - South Australia	**0.5**	**0.9**	**0.0**	**-2.4**	**-3.5**	**-0.3**	**0.5**	**0.7**	**0.8**	**0.7**	**1.0**	**1.1**	**0.9**
All Industries WPI - Australia (b)	0.7	0.8	-0.1	-2.1	-3.6	-0.3	0.5	0.8	0.8	0.7	1.0	1.2	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 2025/26 to 2029/30 inclusive, ie for next regulatory period.
(g) Real price changes are calculated by deducting the inflation rate from nominal price changes.

South Australian EGWWS WPI growth is estimated to have declined sharply over FY21 and FY22 to 1.7% and 1.4% respectively (in nominal terms), from an estimated 2.6% in FY20, due to the impact of the COVID-19 outbreak on wages. South Australian EGWWS WPI growth is estimated to have lifted to 3.7% in FY23 and is forecast to rise further to 4.2% in FY24. The state utilities wage growth is

expected to be close to the Australian utilities WPI over the next few years, with recent SA EGWWS negotiated outcomes having been higher than the national average. However, over most of the forecast period, relative weaker utilities construction and weaker labour markets in South Australia will tend to mute the increases in the individual arrangements sector, offsetting the strength of the EBAs. South Australian EGWWS WPI growth is forecast to average 3.6% per annum in nominal terms over the five years to FY30 – or 1.1% p.a. in real (inflation-adjusted) terms (see Table 1.1). This WPI forecast includes the SG Increase impacts of -0.04% in each of the years from FY23 to FY26.

A key element of the ongoing strength in the South Australian economy is the large amounts of defence-related expenditure in South Australia over the forecast period (and beyond), including the manufacture of naval ships, army vehicles and other structures. This will also increase the demand for skilled labour and see the defence manufacturing sector also compete with the utilities sector for similarly skilled workers, many of which will have transferable skills across the utilities, construction, mining and manufacturing sectors. With strong competition for similarly skilled labour from the mining, construction and defence manufacturing industries, firms in the utilities sector will need to raise wages to attract and retain workers. This is expected to be accompanied by increases in utilities-related construction in the state, mining-related investment and construction activity generally, particularly over FY24 to FY26. The overall strengthening in the labour market, and particularly in the Construction and Mining sectors – which are key competitors to the utilities sector in terms of 'similarly' skilled workers - is expected to result in utilities WPI growth accelerating over the 2024 to 2025 period, and subsequently remain elevated over the following five years to FY30.

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy SAPN's **external labour cost escalation** by wages growth (as measured by the WPI) in the South Australian construction industry. Our research has shown that construction activity (ie work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year. Hence, our wage forecasts are based on OEA 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 **South Australian Construction WPI** to average 3.6% p.a. over the five-year period to FY30, or 1% in real terms (see table 1.1). Note that these wage forecasts for the Construction WPI include the impacts of the SG increase. In the construction sector, we estimate the impacts will be -0.07% for each year of the SG increase.

Australian Construction WPI growth recovered over FY22 to 2.6% and further to 3.7% in FY23 (in year average terms) from 1.3% in FY21. Meanwhile, the South Australian Construction WPI increased from 1.3% to 2% in FY22 and 2.3% in FY23, lagging the improvement in the Australian WPI despite similar EBA outcomes and stronger growth in construction activity. Construction wages are forecast to keep improving from FY24 as construction activity increases. Australian construction wages are expected to show strong growth over FY23 to FY26, particularly as construction activity levels surpass the previous highs of FY18 and FY13 and serious skills shortages manifest. In South Australia, the levels of state construction activity surpassed the previous 2018 peak in FY22 and are forecast to again set a new peak in FY24. Total activity then falls back in FY25 and then slowly increases and surpasses the FY24 peak in FY27, rising to a new peak in FY29 and remain at high levels in FY30. The stronger outlook for SA construction activity is expected to result in SA construction wages growth effectively catch up to national construction wages growth later in the decade.

2. INTRODUCTION

Oxford Economics Australia (formerly BIS Oxford Economics) was engaged was engaged by SAPN to provide price forecasts of labour that are relevant to the South Australian electricity distribution industry for the period to 2029/30 (FY30). This period includes SAPN's next regulatory period, which is the five-year period from 2025/26 to 2029/30 (FY26 to FY30) inclusive. Forecasts of wage cost escalation will be used by SAPN to develop the real price changes over its upcoming regulatory period, which, in turn, will be used by the business to construct its operating and capital expenditure forecasts. The forecasts in this report were finalised in mid-to-late October 2023.

The Australian Bureau of Statistics is the primary data source for the consumer price index, wages, employment, real gross value added and investment (including engineering construction) data, and for a range of other economic variables. The data used in the projections is the latest available as at mid-October 2023 and includes the June quarter 2023 Consumer Price Index (CPI), Wage Price Index (WPI) and National Accounts data releases. 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 BIS Oxford Economics reports, including the *Australian Macro Service*, *Long Term Forecasts: 2022 – 2036, Engineering Construction in Australia 2022-2036* and *Building in Australia 2022-2036*, along with other unpublished forecasts and from BIS Oxford Economics internal research and modelling.

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

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

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

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

3. MACROECONOMIC OUTLOOK

3.1 AUSTRALIA MACROECONOMIC FORECASTS

Australian economy now slowing, but recession not expected in the near-term

Real Gross Domestic Product (GDP) has recovered well from the COVID-related slump in 2020, posting growth of 2.2%,3.7% and 3.4% over FY21, FY22 and FY23 respectively, with Gross National Expenditure (GNE: domestic demand plus change in stocks) experiencing faster growth of 3.7%, 5% and 3.6% respectively in those years.

GDP growth has slowed, falling back from 0.7% q/q in each of the September and December quarters 2022 to 0.4% q/q in each of the March and June quarters 2023, with through-the year (y/y) at 2.1% in the June quarter (Q2), compared to 2.6% y/y/ in the December quarter and 6% y/y in the September quarter 2022. In the June quarter 2023, activity was well supported by investment and net exports. An improvement in weather conditions and a drawdown of inventories boosted mining exports. Meanwhile, the recovery in the services balance gained pace in Q2 due to strong inward tourist and student flows. However, consumption growth remains meagre, with high inflation and the drag from higher interest rates weighing heavily on discretionary spending.

Household consumption increased by just 0.1% q/q in Q2. The divergent trends between discretionary and essential spending continued to widen, with the recent contraction in discretionary spending worsened in Q2 to a 0.5% q/q decline despite a pickup in vehicle sales. The savings rate has fallen below its pre-pandemic level, meaning the scope for households to fund consumption by saving less is becoming more limited. However, the tight labour market, rising wage growth, and strong population growth will all support spending over the next year.

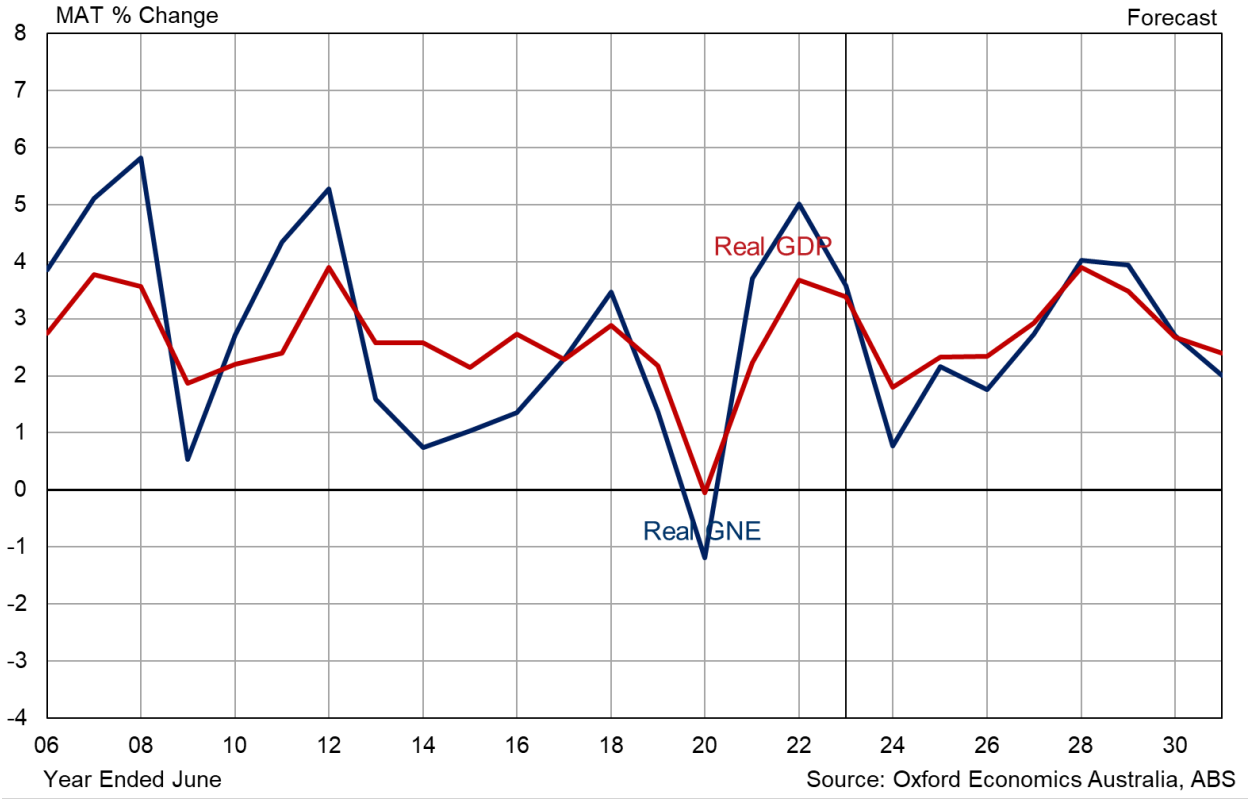
Private business investment activity was relatively strong over the first half of 2023, increasing by 4.6%. Some of this strong performance reflects the clearing of some supply bottlenecks. Machinery and equipment investment was particularly strong in Q2 due to businesses taking delivery of new vehicles. Moreover, the cessation of tax incentives for equipment spending has brought forward some activity and will make momentum over the second half of 2023 patchier. Mining investment picked up over FY21 and FY22, and into FY23. With prices for a number of commodities expected to remain at healthy levels over the medium term and strong demand for renewable energy related minerals, we expect further investments to get underway and mining investment to continue to rise and remain strong through most of this decade. Overall, new business investment increased 6% in each of FY22 and FY23, with around 4% growth expected in each of FY24 and FY25, before growth eases. The recovery in business investment will not only drive near term demand but will increase the economy's productive capacity in the long run.

Public investment is still being well supported by transport infrastructure and health projects, although some commitments have been wound back. Despite the considerable backlog of work still to be done, dwelling investment continues to falter, contracting by a further 0.2% q/q in Q2, although this was driven by another sharp fall in alterations and additions activity. There remains a substantial backlog of work to be done in new dwellings, but the realisation of these projects remains constrained by stretched capacity, compounded by a spate of recent insolvencies in the construction sector.

Import demand was broadly flat in the quarter, meaning the goods trade made a positive contribution to growth. Services exports continued to recover sharply from the pandemic, increasing by a remarkable 12.1% q/q in Q2. Growth was driven by tourist and student flows, with the number of international students in the country surpassing its pre-pandemic level. The outlook for services exports remains positive, but growth will slow from here.

We expect that some of the factors that supported growth in the first half of 2023 will prove to be temporary and that momentum will slow in the second half. Investment in machinery and equipment is likely to pull back, and the recovery in the services balance does not have as far to run. Nevertheless, population growth remains strong, which is supporting growth in household spending and will add to demand for housing and infrastructure going forward.

Fig 2.1 Australia – Basic Economic Indicators



The labour market continues to track strongly. Employment growth was an exceptional 4.3% in FY23, with the unemployment rate sitting in a narrow band between 3.4-3.7% and averaging 3.5%, while the participation rate is at record highs. Labour demand remains very strong – employment growth has been holding at 3% y/y over the past six months while job vacancies are still at high levels, suggesting further solid growth in employment in the near term (see chart 4.2). Faster population growth has facilitated strong jobs growth. This strength is the best insurance the economy has against a drastic collapse in growth. But it is adding to inflationary pressures in the economy. While the labour market continues to track in such a strong position, there will continue to be upward pressure on wage growth, and wages growth will pick up further in FY24.

One main negative influence on economic growth in the near-term is the progressive tightening of fiscal policy, which will see government consumption expenditure wound back. However, the tax cuts slated for July 2024 represent a reversal of this tightening stance and also represent an upside risk to inflation.

After rate hikes at 10 consecutive meetings, the RBA finally paused its hiking cycle in April, but then added another 0.25% increase in May and June, before pausing again over July to October. A higher than expected CPI outcome in the September 2023 quarter then saw the RBA add another 0.25% in November. The official cash rate now at 4.35%. Price growth has peaked, and while the resolution of

supply-side issues will relieve some of the inflation, it's the breadth and persistence of core inflation pressures that are causing most of the bank's concerns. The pickup in wage growth and emergence of strong demand pressures in rental markets pose upside risk to the inflation outlook. Inflation remains uncomfortably high, and the very tight position of both labour and rental markets means there is lots of scope for an upside surprise to core inflation. It's still possible there may be another rate hike in the near-term. There is also an elevated risk that the tax cuts of July 2024 may induce another one or two rate hikes, particularly if core inflation has not been markedly reduced by early 2024.

Global Economic Outlook

Our baseline forecast for global GDP growth is 2.5% in calendar 2023, 2.6% for FY23 and a weak 2% in FY24, following 3.1% in calendar 2022 (and 4.3% in FY22). Growth is then predicted to improve to 2.5% in FY25 and 3% in FY26. Although economic data continue to paint a relatively downbeat picture, it doesn't suggest that economies are entering a deeper slump. Growth will still remain weak through 2023, particularly in the US, Canada and most of Europe where growth will be between 0.5% and 1.5% over the next two years.

Offsetting the weakness of advanced economies will be strong Chinese GDP growth, forecast to increase by 5% in calendar 2023 (after 3% in 2022), 4.4% in FY23 and 4.7% in FY24, before easing back to around 4.5% over FY25 to FY29. However, recent problems in China's property sector and some weakness in data releases is of concern, although we think that China will take action to keep its economy growing in the near-term. The stronger outlook for China will also improve the outlook in the rest of Asia. Overall, we think that the balance of risks is now less tilted to the downside and believe that the risks of a substantial global economic slump have diminished over the past 8 months.

High and rising US interest rates and increased uncertainty has seen a broad-based appreciation of the US dollar since late 2021, which has pushed down the value of the Australian dollar to around US$0.68 since mid-2022, with another downshift recently to below US$0.65. Our outlook is for the AUD to remain weak over 2023 and 2024, before appreciating gradually to US$0.73 by mid-decade as US interest rates fall faster than Australian rates, with an average of US$0.73 projected over the second half of the decade.

Beyond the near-term weakness, we expect global growth will return to its trend pace of around 3% by FY26, and gradually slow over the long term as resident population growth eases. Australia's trading partner growth (weighted by exports) is forecast to grow at a faster pace over the next 5-20 years (between 0.5 to 1% higher), due to the high weights of China, East Asia and India (all of which are expected to outpace the average pace of global growth) in Australia's export mix.

Domestic demand and GDP to weaken sharply in FY24, improving in FY25

Australian domestic demand is forecast to slow from 3.4% in FY23 to 0.8% in FY24, with a partial rebound to 2.1% in FY25. Net exports are expected to provide a positive contribution over the next two years, as tourism and education boost exports, while imports weaken due to slowing domestic demand and a low A$. GDP growth is forecast to be 1.8% in FY24 and 2.3% in FY25.

Housing investment is expected to decline over FY24 and FY25 as the current backlog of work is finished and high interest rates impact new dwelling construction and alterations and additions activity. On the other hand, we expect further moderate growth in business investment in FY24 and FY25 as some deferred investment is undertaken, although some sectors, such as hotel construction and other tourism-related investment, will take longer to recover. Private sector engineering construction will remain buoyant due to higher levels of electricity and telecommunications infrastructure and higher levels of mining investment, particularly oil and gas. Meanwhile, public investment is expected to see moderate growth over the next two years to FY25, as a large pipeline of transport infrastructure and social and institutional buildings projects come through. Meanwhile,

government recurrent expenditure is expected to weaken sharply as governments attempt budget repair. With employment growth expected to slow as investment and government spending eases, household consumption expenditure growth will also slow sharply over FY24, with higher inflation and higher interest rates also weighing on spending. Tax cuts slated for July 2024 will boost spending in FY25, although there is still some uncertainty around these tax cuts.

Trade volumes will be a mixed bag. We expect mining export volumes to pick up over the next 2-3 year as new capacity comes onstream. Rural exports bounced back over calendar 2021 and will remain strong over FY23 and into FY24, with bumper seasons in the eastern states boosting grain, other crops and dairy exports. Meat exports will strengthen too. Manufacturing exports will remain constrained due to weak global growth but will pick up over FY25 and FY26 as overseas conditions improve. Overall merchandise export volumes will continue to display moderate growth over FY23 to FY26. Meanwhile, growth in import volumes will weaken sharply in FY24 before improving in FY25, in line with domestic demand. Net exports are expected to make a positive contribution to growth over FY24 and in FY25.

Large increase in both service credits and debits are expected over FY23 and FY24, before moderating in FY25. This will have different implications for the all-important tourism and education services trade and related industry sectors. Education exports were worth $37.6 billion in FY19 (before the COVID pandemic), or almost 39% of overall services exports (compared to only $461m for outbound education import 'debits'). Education exports have bounced back, helped by the earlier-than-expected return of Chinese students and partly because there is a large backlog of visas already for overseas students. We also expect inbound tourism 'exports' to recover well in the medium-term, aided by a low A$. Tourism exports (including 'business travel') were worth $25.3 bn in FY19 (26% of overall services exports), compared to $50.6 billion for outbound services 'imports' – which then accounted for almost 50% of overall services debits. We expect a slower ramp-up in outbound tourism (compared to inbound tourism), with tourism flows unlikely to recover back to their previous levels for another couple of years. The forecasts assume that the tourism and education credits (inbound) will recover back to pre-COVID levels by early-2024, while outbound tourism debits will not get back to the 2018 peaks until 2026.

Mild slowdown in mid-2020s, before economy moves to trend growth

Annual headline inflation jumped to 7.8% (y/y) in the December quarter 2022, while underlying inflation lifted to 6.4%, before the headline rate fell back to 7.0% in the March quarter 2023 and then 6% in the June quarter. Although we think the inflation peak has passed, the rise and broadening of in inflationary pressures has seen the RBA lift the cash rate by 4% since May 2022 to 4.1% in June 2023, with standard variable housing rates now around 8.5% and variable discounted rates at 7.1%. The RBA may raise rates again in the near-term, but we expect a pause in rises over FY24. However, large tax cuts expected in July 2024 are likely to see a further lift in rates over the second half of 2024, as the RBA attempts to curtail the extra demand pressures from the tax cuts, with elevated inflationary pressures still expected to be present with unemployment rate at or just below 4%. The persistence of high interest rates – with the extra lift in mid-late 2024 - will continue to impact consumer spending and housing and business investment over FY25 and into FY26. With government capital spending weakening at that time and recurrent spending still constrained, the end result will see annual domestic demand growth falling below 2% in FY26 and remaining somewhat subdued in FY27. GDP growth will also be soft.

Interest rate cuts are expected from early-mid 2025 and over FY26 and FY27 in response to the weakening in the economy and because we expect inflation to be back in the RBA target range of 2%-3%. The large rate cuts will precipitate a very strong rebound in dwelling construction – by mid-decade there will be a very large undersupply of housing, with pent-up demand waiting to be unleashed. The current undersupply is only being exacerbated by high immigration and under-

building. As consumers and businesses re-adjust to the 'normalcy' of higher interest rates – although at much lower levels than the 2000s and 2010s – investment and consumer spending will return to long term trend (or potential) rates of growth over the second half of the 2020s with an initial rebound in GDP growth to 2.9% in FY27 and then 3.9% in FY28, before subsequently easing back.

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

3.2 OUTLOOK FOR THE SOUTH AUSTRALIAN ECONOMY

Compared to other states, South Australia's economy was relatively insulated from the impact of the COVID pandemic. After contracting by -1% in FY20, State Final Demand (SFD) increased by a strong 5.3% in FY21 and 5.6% in FY22, before easing back to 2.8% in FY23. Meanwhile Gross State product (GSP) rose 4.7% in FY21 and 5.1% in FY22 - all well above the Australian equivalents of Australian domestic demand and GDP in those two years – before rising and estimated 3.3% in FY23 (close to Australian GDP growth). Strong investment was a key contributor to growth over FY21 and FY22, with dwelling, business and public investment all higher, but falls in dwelling and public investment contributed to slower growth in SFD in FY23.

SFD bounced back strongly in the recent June quarter, increasing by 1.3% q/q, after three weak quarters. Growth in the quarter was driven by government consumption expenditure, dwelling investment and strong growth in private equipment expenditure. Interestingly, these three areas of expenditure are all expected to weaken over the next year, so the June quarter can probably be viewed as a temporary blip.

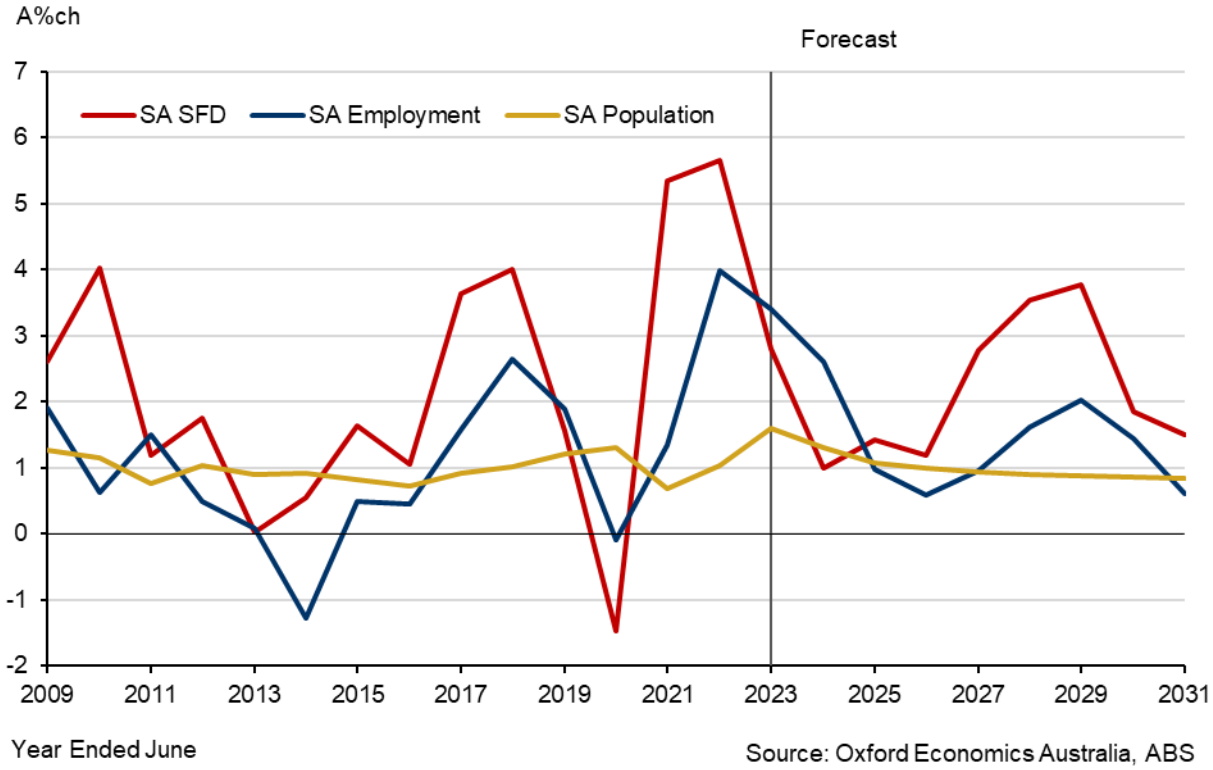
SFD and GSP growth are forecast to weaken sharply over FY24 – to around 1% – due to declines in dwelling investment and government consumption expenditure. As health spending was a focal point of the 2022 election, public demand may provide an upside surprise. Household spending growth will weaken sharply (but stay positive), while the growth in business investment will also slow, with private engineering construction the key contributor due to rising electricity infrastructure and mining-related construction. Public investment is expected to rise due to increase in roads and utilities investment.

The public sector remains a significant direct and indirect consumer. Several defence programs based in Adelaide, including military vehicles and the Space Agency, will support growth in the medium term. This will mitigate the softer outlook for the private sector. Nevertheless, the cancellation of the federal government's submarine contract with French contractor Naval Group has generated considerable uncertainty around defence work - future work is expected to be based in Adelaide, but the degree of domestic construction is still unknown.

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 surged 11% in FY22 to a historical peak of $14.4bn (constant 2020/21 prices). Activity levels are expected to see further small increases over FY23 and FY24 to a new peak of $14.7bn in FY24, before falling a cumulative -5% over FY25 and FY26, as engineering joins the declines in dwelling and non-residential building. Overall construction activity is then expected to show healthy increases over FY27 to FY29, driven mainly by strong growth in residential and non-residential building, with residential activity responding to a critical undersupply of housing and lower

interest rates. Modest increases in engineering construction activity are also expected to contribute, boosted by higher levels of transport, electricity and mining investment.

Fig 3.2 South Australia State Final Demand, Employment and Population Growth



The South Australian labour market continues to perform well. Employment growth has been robust since the beginning of the year, with the state adding 28,500 jobs in the 8 months to August and growth through-the-year at 4.1%. The unemployment rate has stayed at a historically low level, averaging 4.1% in FY23 and falling to around 3.6% over August to October 2023 – below the national average, which is a rare feat. The participation rate has increased steadily over the past year, reaching a record 64.8% in May, before easing back slightly over recent months.

We expect employment growth will moderate through FY24, before easing sharply over FY25 to FY26. However, the state unemployment rate is expected to remain mostly around (or under) 4% over the next year, and then average 4.1-4.4% in the following three years – 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, although higher interest rates will constrain consumer demand somewhat over the next 2 years.

SFD and GSP growth are forecast to pick up over FY25 and FY26, before strengthening from FY27 due to increases in residential, business and public investment, the latter as the next round of major projects get underway. Overall, both SFD and GSP growth are forecast to average 2.2% growth over the seven years to FY30 (compared to an average of 2.8% for SFD over the past 5 years to FY23 inclusive; and an average of 2.6% for the past 5 years to FY23 and 2.3% for the past three decades for GSP).

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 be -0.4% slower than the national average over FY24 to FY30.

Table 3.2 South Australia – Key Economic Indicators, Financial Years

								Forecast						
Year Ended June	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
South Australia														
Total Construction Activity(*)	3.8	19.5	0.0	-4.8	4.9	11.1	1.4	3.6	-4.2	-2.6	5.4	6.5	7.9	-1.2
State Final Demand	3.7	3.9	1.4	-1.7	4.0	5.3	2.4	2.4	2.2	1.0	1.5	3.1	3.6	2.3
Gross State Product (GSP**)	**1.9**	**2.2**	**1.1**	**-1.0**	**4.7**	**5.1**	**3.3**	**0.9**	**1.6**	**1.5**	**2.5**	**3.3**	**3.5**	**2.1**
Employment Growth (Year Avg)	1.6	2.6	1.9	-0.1	1.3	3.9	3.4	2.6	1.0	0.6	1.0	1.6	2.0	1.4
Australia														
Total Construction Activity(*)	-3.3	12.2	-9.1	-3.7	-0.7	2.0	6.0	1.9	-1.5	-0.6	2.8	8.0	7.5	2.5
Australian Domestic Demand	2.3	3.4	1.6	-0.8	3.0	5.0	3.6	0.8	2.1	1.9	2.8	4.0	3.9	2.7
Gross Domestic Product (GDP)	2.3	2.9	2.2	-0.1	2.2	3.7	3.4	1.8	2.3	2.3	2.9	3.9	3.5	2.7
Employment Growth (Year Avg)	1.5	3.0	2.3	0.5	0.5	3.3	4.0	2.1	1.8	1.3	0.9	1.8	2.3	1.8

Source: BIS Oxford Economics and ABS

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

** GSP is an estimate for FY23

4. WAGES AND INFLATION OUTLOOK

4.1 CPI OUTLOOK

Current strong inflationary pressures now easing, but will be slow to abate

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. The onset of COVID-19 in early 2020 then saw considerable volatility in the headline CPI measure over 2020 and 2021, due to volatility in oil prices, government responses to Covid, demand impacts and then supply chain impacts due to Covid – but the CPI remained under 2% over FY20 and FY21.

However, by late 2021/early 2022 it was apparent that inflationary pressures were increasing and broadening. Significantly, the September quarter 2021 saw core inflation – which excludes the extreme price movements, such as the 'usual' petrol price volatility – move back into the RBA's 2-3% target range for the first time since the December quarter 2015. Both core and headline inflation accelerated through 2022, with headline CPI peaking at 7.8% and core inflation peaking at 6.4% in the December quarter 2022, as a number of factors conspired to worsen local and global inflation. 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 on Russian oil and other commodity exports). Food prices also jumped in early 2022 because of the impact on wheat and other foods prices from the Ukraine war, while the floods in eastern Australia led to substantial rises in some food prices through 2022. The supply-chain disruption for imported goods were also exacerbated by the decline in the Australian dollar over 2022 and into 2023. 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 has been the cost of constructing a new dwelling (which constitutes 8.5% of the CPI 'basket'). Cost inflation in the construction sector has been escalating since late 2020, due to both the surge in construction work generated by the HomeBuilder subsidy, and materials and labour shortages caused by this additional demand and exacerbated by supply bottlenecks and workplace restrictions. The house purchase component increased 20.7% y/y over the year to September 2022, before easing over the past year to 5.2% y/y in the September quarter 2023. Construction cost inflation will slow further in the coming quarters, but over the next year it will still remain high relative to its pre-covid history.

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

With most of the above supply-side pressures to ease further and oil and other commodity prices to weaken over 2023/24, we expect their absence will help subdue headline inflation materially through 2023/24. However, demand-driven inflation will be slow to abate over the year, despite RBA attempts to 'cool' strong demand with higher interest rates. Moreover, the tightening labour market - with the unemployment rate currently around 3.7% and expected to stay under or near 4% for the next 1½ years - will contribute to wage pressures, which have so far contributed little to the above-average CPI inflation, apart from construction costs. Overall, headline CPI inflation averaged 4.4% in FY22 and 7% in FY23, (following 1.6% in FY21), with annual (through-the-year, or y/y) price growth easing back to 6.0% in June quarter and then 5.4% in the September quarter 2023 (latest data).

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 3.4%, 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 has lifted to 7.6% in the September quarter 2023. Given the extreme tightness in rental markets currently, the CPI measure of rents is expected to increase further over the next 2-3 years as existing rental contracts roll over to new, much higher rents and new supply fails to keep with strong housing demand. Another factor driving inflation over the next 1-2 years will be further sharp increases in electricity and gas prices, both of which increased by around 15% in the September quarter. It is worth noting that both rent and energy price rises in the latest quarter were constrained by temporary government subsidies.

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 below 5% y/y in the latest quarter, food prices are unlikely to track back to the sub-2% of the 2015-2019 period.

Underlying and headline CPI inflation are expected to remain somewhat elevated over FY24 to FY26 as the supply and demand pressures slowly abate and employment remain bouyant, and wage growth strengthens. Wages growth will accelerate as the unemployment rate is expected to remain mostly below 4% over FY23 to FY25. Although global inflationary pressures will ease over the next year, they will remain elevated, contributing to higher manufacturing costs and prices over the near term. The sharp decline in the exchange rate from around US$0.72 in the first half of 2022 to below US$0.65 recently will also add to inflationary pressures in the near term. Conversely, we expect the A$ to appreciate toward US73 cents over the next two years, which will provide some offsetting pressures between FY24 and FY26.

Overall, BISOE forecasts headline CPI inflation to be 4.3% in FY24, 3.2% in FY25 and 2.7% in FY26. The expected softening in the economy around mid-decade will see price and wage pressures weaken, with the CPI to ease back to around 2.4% over FY27, before picking up from FY28 and averaging to 2.6% over the latter years of the 2020s (see figure 4.1). Our forecasts, on average, are similar to the August RBA forecasts over FY23 to FY26 (see section 4.1.1 below).

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

Headline CPI inflation is expected to sit close to 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 1½ % to 2% per annum contributing over 0.5% 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% to headline inflation. This is weaker than the 3.7% average achieved from 2001 to 2015 when relatively high wage inflation, lower than average productivity growth to 2009 and also large rises in utilities prices pushed non-tradeables inflation to well outside of the RBA's 2 to 3% target range. We expect higher wages growth in the longer term and lower long-term productivity will also contribute to the maintenance of relatively high non-tradeables inflation.

4.1.1 RBA CPI Forecasts are Used to Calculate Real Wages

To calculate real wage and other cost increases, we deflate nominal price growth by deducting expected inflation. For the inflation forecast, we use the methodology preferred by the Australian Energy Regulator (AER). This methodology involves using the official near-term CPI forecasts from the Reserve Bank of Australia (RBA) and a longer-term average based on the 2.5% mid-point of the RBA's inflation target band (i.e. 2 to 3%). The AER then uses the geometric average of the five regulatory years as the deflator for each year. The RBA's August 2023 'Statement on Monetary Policy' forecast the headline CPI rate to be 4 ¼ % for the December quarter 2023 and then to 3 ½ % in the June quarter 2024 – giving a year average CPI rate of 4.2% for FY24. The RBA's CPI forecast for December 2024 is 3 ¼ %, and 3% by June 2025 - giving a year average CPI rate of 3.2% for FY25 – before easing to 2 ¾ % in December 2025. Beyond the RBA's forecast from the SoMP, we assume the CPI averages 2.5% over the medium-to-long term. The geometric average used for the five years from 2025/26 to 2029/30 is 2.54%. Since the initial forecasts were prepared for SAPN, the RBA has released updated CPI forecasts in its November SoMP. While their CPI forecasts over FY24 and FY25 were 0.25 to 0.4% higher, the December 2025 forecast (which was the same end-point as the August SoMP) was only 0.1% higher, which would raise the FY26 forecast by less than 0.1%. In terms of the CPI forecast for the regulatory period of FY26 to FY30, there is unlikely to be a material difference to the overall CPI average over that period.

4.2 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 now rebounding, and will lift further as labour market remains tighten

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 is now apparent in FY23 – with 3.5% expected - and we expect wages growth to strengthen over FY24 and FY25, before easing over FY26 to FY28.

A key element adding to wage pressures in FY22 and over FY23 has been the rapid tightening in the national labour market that is now apparent. Employment is now well above pre-COVID levels, with the unemployment rate at 3.5% 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 since March 2020 saw population growth plummet to just 0.2% in the year to June 2021, while the working age population (above 15 years old) increased by only 50,000 (+0.2%) over 2020/21 and 206,000 in 2021/22, compared to over 330,000 persons in FY19 and in the year to

[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".

Fig. 4.1 Australia: Wages and Prices

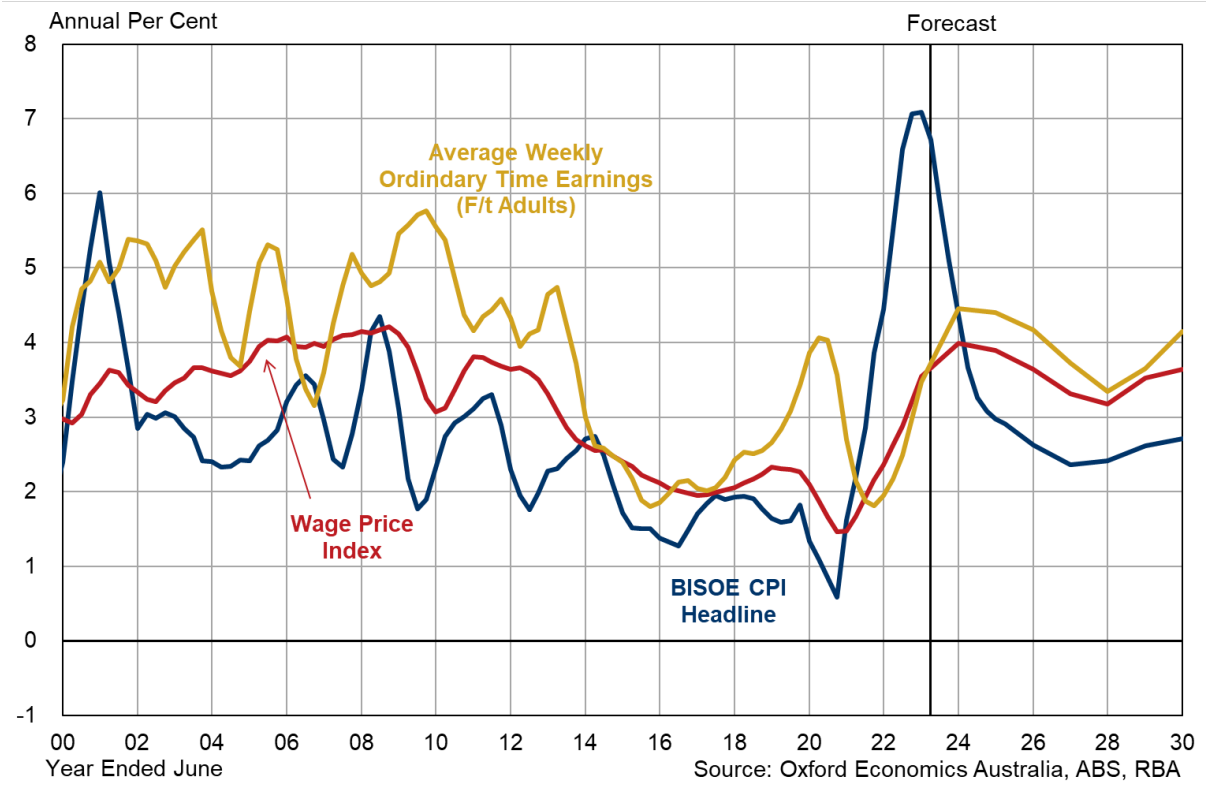
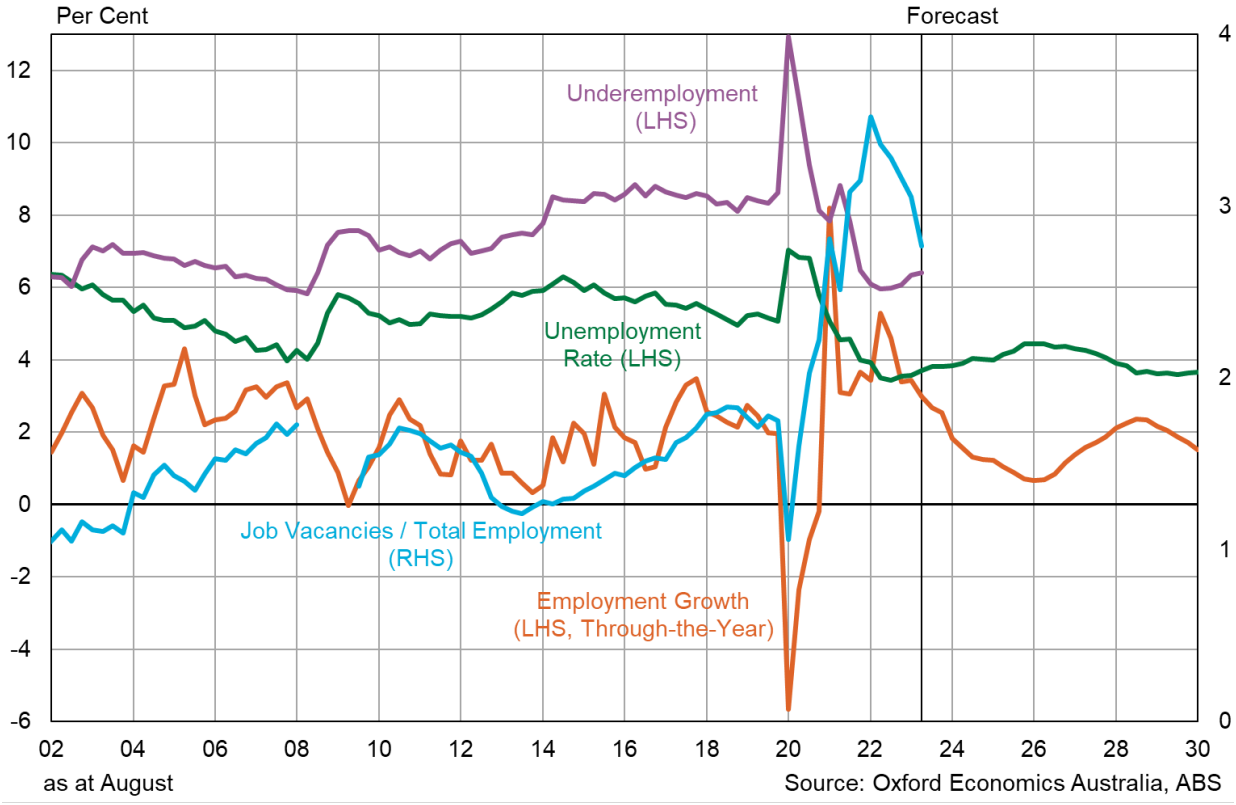


Fig. 4.2 Australia: Employment and Unemployment



March 2020. Growth in the labour force has been facilitated by a marked increase in the labour force 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.

The economy is expected to remain resilient over the short-to-medium term and, although OEA's economic growth (GDP) forecasts are for modest weakening over FY24 and FY25, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate remaining around 3.6% to 4% over the next two years to FY25. Note that we expect the unemployment rate to drift up at a slower rate than some other forecasters (such as the Reserve Bank), with a peak of around 4.5% reached during FY26. Job ads are still very high and have increased over the past two months, indicating that labour demand is still strong – reinforced by the creation of 133,000 jobs over the 3 months to October (pushing y/y growth to 3.0%). Furthermore, while our employment growth forecasts are only slightly stronger over the next two years, we expect that the rise in the unemployment rate will also 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 retire.

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

In the short-term, our wage forecasting methodology involves an analysis of the expected future wage movements in the three main methods of setting pay – for those reliant on awards (13% of the full-time workforce), collective agreements (38% of the workforce) and those who have their pay set by individual arrangements (48%). 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 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 will underpin a lift in wages growth in FY24. It is likely that the minimum and award increases provided by the FWC will remain high for the next 1-2 years, due to elevated CPI inflation and particularly given the support for higher wages from the new 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.

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 38% of the full-time workforce – run for an average of 2-3 years. These agreements averaged 2.6% over the five years to December 2021, having been set in an environment of low inflation and a much less tight labour market. However, as these previous (low wage increases) agreements expire, we expect the next round of agreements to be materially higher, due to 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 3.0% (average annualised wage increases – AAWI) in the December 2022 quarter to 3.7% and 3.8% in the March and June 2023 quarters. Of the other 49% of workers on individual agreements, those of who are on awards will receive an annual pay increase via the FWC increase, while others may receive an annual salary increase, but there are a significant proportion on fixed contracts running over a few years. The bottom line is that the next round of wage rises negotiated by workers will be much higher than recent years.

Forecasts for All industries wages are detailed in Table 5.1 and the Summary table in the Executive Summary. The Australian All industries WPI is forecast to increase to 3.9% in FY24 and remain elevated at 3.7% over FY25, before easing over the subsequent 3 years as the economy cools and the unemployment rate rises back toward 4%. Stronger wage growth is then expected over FY29 and FY30 as stronger economic and employment growth returns from 2028. Overall, using RBA CPI forecasts, real (inflation-adjusted) WPI growth for the Australian All Industries WPI is forecast to decline in FY23 and FY24 as high CPI inflation out-paces WPI growth (as occurred in FY22). Thereafter, with WPI growth remaining high and CPI inflation easing, there will be positive growth in real wages from FY25 to FY30. Over the five-year period from FY26 to FY30, 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 Australian All Industries WPI is expected to largely track over the national All Industries WPI over the forecast period, with minor year-by-year differences related to the relative strength of economic growth and labour markets. Over the five years to FY30 the South Australian All Industries WPI is forecast to average 3.4% in nominal terms and 0.9% in real terms – the same as the national average. Note that the impact of the SG Increases on the All Industries WPI is assumed to be -0.11% in each of the three years to 2025/26 inclusive.

5. INDUSTRY WAGE FORECASTS - UTILITIES & CONSTRUCTION: AUSTRALIA & SOUTH AUSTRALIA

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

The WPI for the EGWWS (Electricity, Gas, Water & Waste Services or 'Utilities') sector in South Australia is used as a proxy for all of SAPN's electricity 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 SAPN'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 SAPN'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 uses the Wage Price Index (WPI) as the key measure of growth in SAPN's internal labour costs for the forecasts of Electricity, Gas, Water and Waste Services. The key motivations for this are:

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

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

In terms of overall wage costs, **the full 0.5% for the SG increases each year should be added to the forecast WPI increases 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).

5.2 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 5.1 and Fig 5.1). Over the two decades to 2020/21, the average growth in the real (inflation-adjusted) WPI was 1.2%. Since the collapse in wages growth following the end of the mining boom, the EGWWS WPI has continued to outpace the All Industries average, increasing by an average of 2.5% over the past decade from 2013/14 to 2022/23 inclusive, 0.2% higher than the 2.3% national average.

Over the 5-year period from FY26 to FY30 inclusive (SAPN's next regulatory period) the Australian EGWWS WPI is forecast to average 3.7%, which will be 0.3% above the All Industries average. In real terms, the Australian EGWWS WPI is forecast to average 1.1% p.a. over the five years to FY30. Note that these forecasts include the impact of the SG increase, which is expected to see the EGWWS WPI be -0.04% lower over FY23 to FY26 than if the SG increase did not proceed. The overall real average of 1.1% is slightly above the 0.9% p.a. averaged over decade to FY21. In terms of the historical difference vis-à-vis the All Industries WPI average over the past decade, the difference is slightly below the 0.4% difference of the decade to FY21.

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

Year Ended June	Average Weekly Ordinary Time Earnings (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
Forecasts												
2024	1 891	4.2	0.0	2,221	5.3	1.1	149.3	3.9	-0.3	156.2	4.1	-0.1
2025	1 973	4.3	1.1	2,323	4.6	1.4	154.8	3.7	0.5	162.6	4.1	0.9
2026	2 054	4.1	1.4	2 423	4.3	1.6	160.3	3.5	0.8	168.9	3.9	1.2
2027	2 131	3.7	1.2	2 516	3.8	1.3	165.5	3.3	0.8	175.0	3.6	1.1
2028	2 201	3.3	0.8	2 606	3.6	1.1	170.8	3.2	0.7	181.0	3.4	0.9
2029	2 281	3.7	1.2	2 707	3.9	1.4	176.8	3.5	1.0	187.6	3.7	1.2
2030	2 376	4.2	1.7	2 817	4.1	1.6	183.2	3.7	1.2	194.8	3.8	1.3
Compound Annual Growth Rates (2)												
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
2023-2030	3.9		1.1	4.2		1.4	3.5		0.7	3.8		0.9
2025-2030	3.8		1.2	3.9		1.4	3.4		0.9	3.7		1.1

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

Oxford Economics Australia regards the WPI to be a measure of the *underlying* wages growth in the utilities sector for total Australia. In terms of total wage costs total wage costs — expressed in Average Weekly Ordinary Time Earnings (AWOTE) — OEA expects EGWWS AWOTE to average

3.9% per annum over the five years to FY30, 0.2% higher than the EGWWS WPI. Our AWOTE forecasts are higher due to compositional effects. Apprentices, trainees and numbers of new staff have increased markedly over recent years, across the electricity, gas and water sector generally. Given slower growth in employment numbers over the next decade, it is likely that there will be overall up skilling of the existing workforce, which will see a commensurate movement by much of the workforce into higher grades (i.e. on higher pay), resulting in higher earnings per employee.

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

During the COVID-19 crisis, the EGWWS sector fared much better than just about all other sectors, along with the Education, Health & Social Assistance and Finance and Insurance sectors, in terms of wage increases over 2019/20 and 2020/21. However, relatively low quarterly increases of 0.1% in each of the March and June quarters 2021 resulted in annual growth in the EGWWS WPI in 2021/22 slip below the All Industries average for only the second time in the past two decades. Overall, EGWWS WPI growth was 1.5% in 2021/22, around 0.9% lower than the All Industries average. 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%. From FY24, 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 high inflation and a very tight labour market, particularly for the types of skilled labour that dominate in the EGWWS sector.

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

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

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

Trade unions are typically able to negotiate higher-than-average wage outcomes for their members through collective bargaining, resulting in stronger wage growth than the all-industry average. Across the EGWWS sector, there are a number of utilities unions such as the Communications, Electrical and Plumbing Union (CEPU) and Australian Services Union (ASU), which have a history of achieving high wage outcomes for the sector. Other unions active in the sector include the Australian Workers Union (AWU).

As at May 2018, 64.6% of full-time non-managerial employees in the EGWWS industry have their wages set by collective agreements, considerably higher than the national average of 38.4%. Over the 10 years to 2016, previous BIS Shrapnel research found that a higher proportion of workers on collective agreements was associated with higher wage growth, with a correlation coefficient of +0.6 (see Figure 5.2). As we expect that the EGWWS industry will continue to have higher levels of unionisation than the national average, 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.

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 3.7%.

Figure 5.1 Wage Price Index - Australia All Industries, Electricity, Gas, Water & Waste Services, and Construction (includes SG increases impacts)

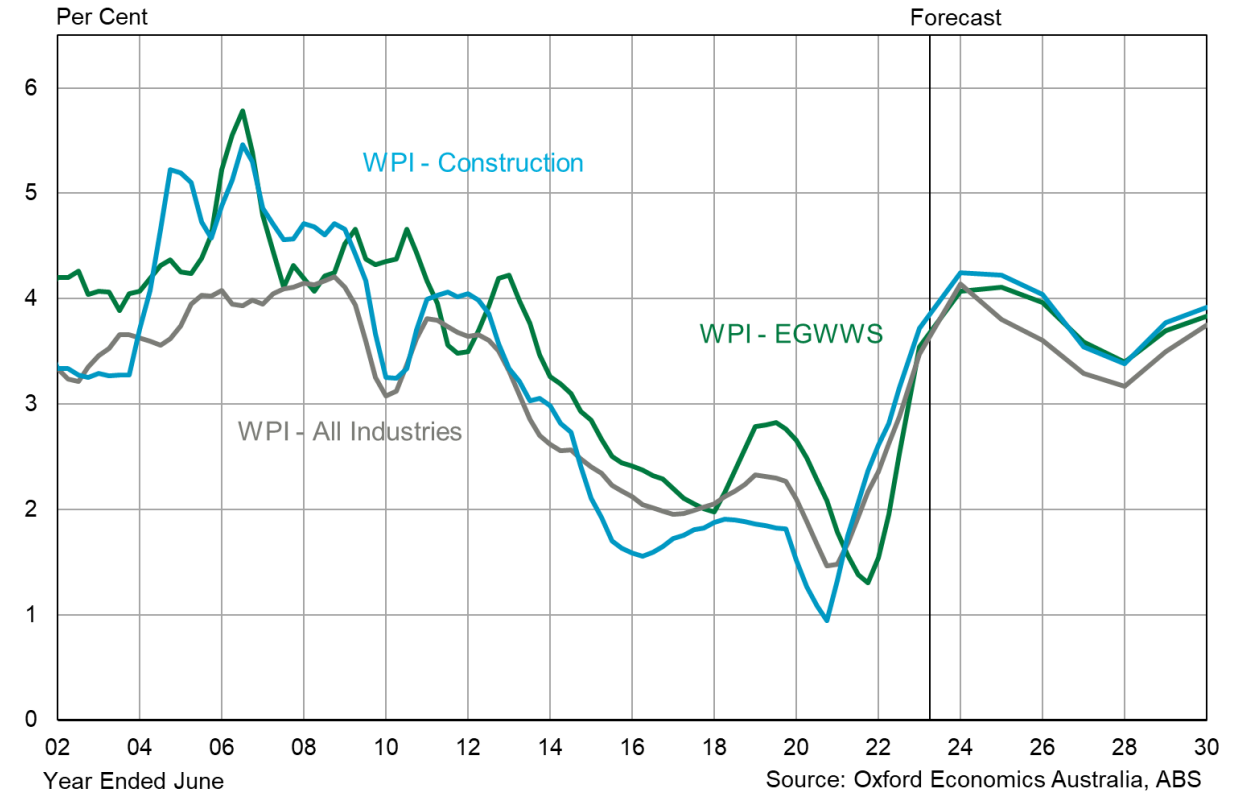
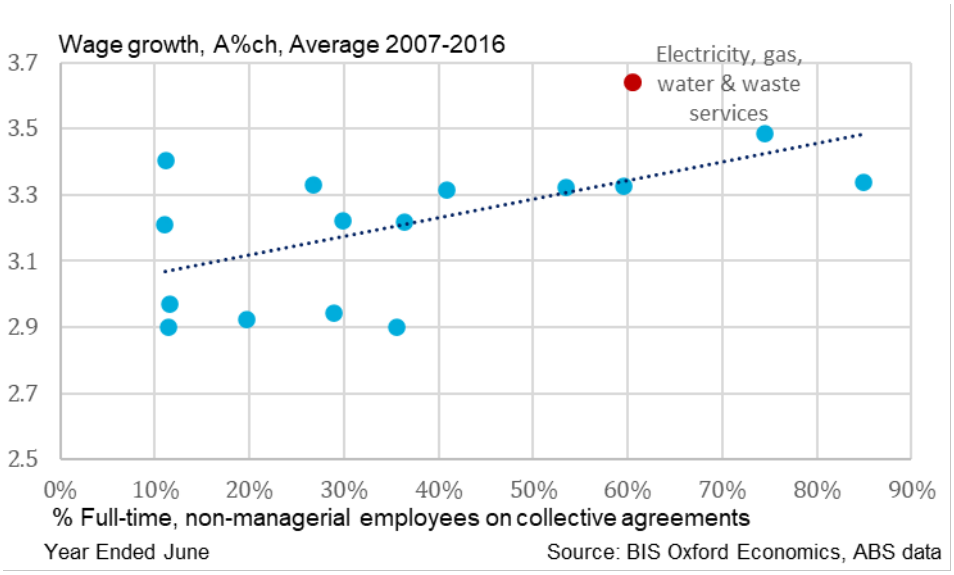


Figure 5.2 Average wage growth and unionisation rates by industry, 2007-2016



OEA analysis shows collective agreements in the EGWWS sector were on average around 1.5% higher than CPI inflation over the 15 years to FY2014 (excluding the effects of GST introduction in 2000/01). In the six years to FY20, collective agreements were on average 1.4% above the CPI. Given the strength of unions in the sector and a still strong demand for skilled labour, collective agreements are forecast to remain around 1.2% above the 'official' CPI over the FY26-30 regulatory period (this excludes SG increase impacts), 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, OEA 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.

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 four quarters, with the latest June 2023 data showing that approved EBAs have picked up to 4.2% (AAWI terms). We expect the next rounds of EBAs negotiated in the sector to remain elevated around current levels, due to several factors:

- CPI inflation will remain high (averaging 7% in FY23, 4.2% in FY24, 3.2% in FY25),
- the demand for skilled labour remains strong, and
- the recent 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 will strengthen from 2023 due to tight supply and stronger 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, has been the key driver of employment growth in the sector over the past two decades. Figures 5.6 and 5.7 illustrate this relationship, and shows employment has a much stronger relationship with utilities engineering construction rather than utilities output.

The overall labour market is expected remain very tight over the next 2 years, with the unemployment rate to remain between 3.6% to 4%, despite a slowing in employment growth from 4.3% in FY23 to 2.6% in FY24 and 1.3% in FY25. 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 7 years to the end of the decade (see figure 5.3). 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 surpasses 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 5.4).

Figure 5.3 Australia – Mining Investment

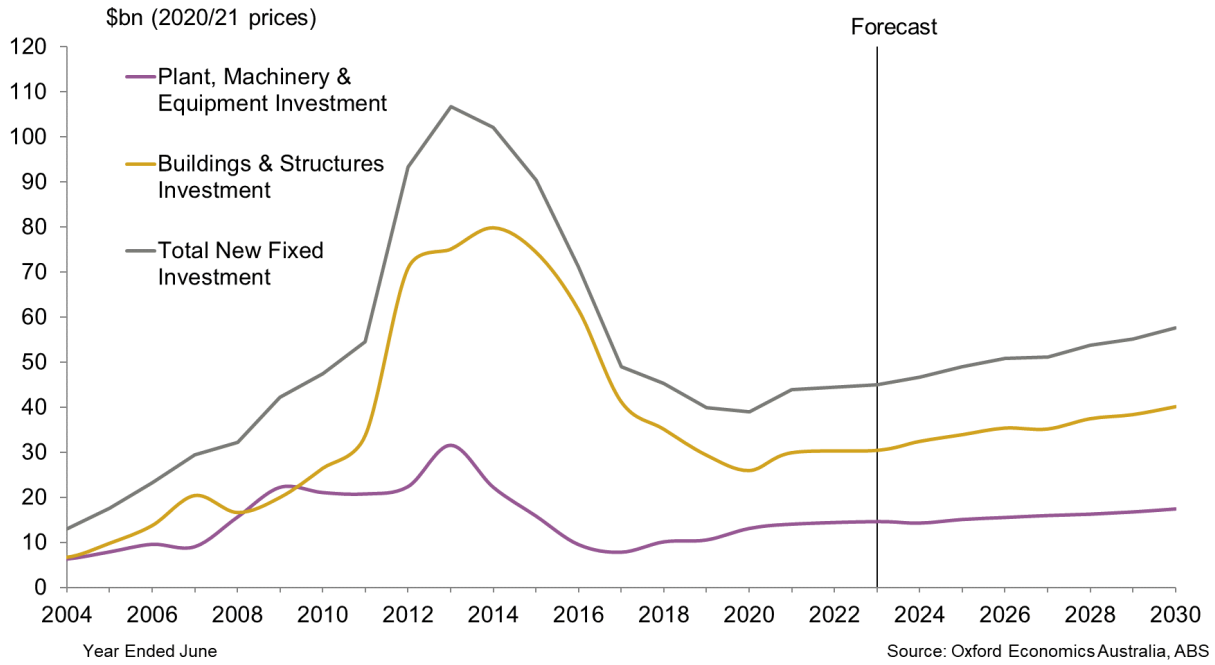
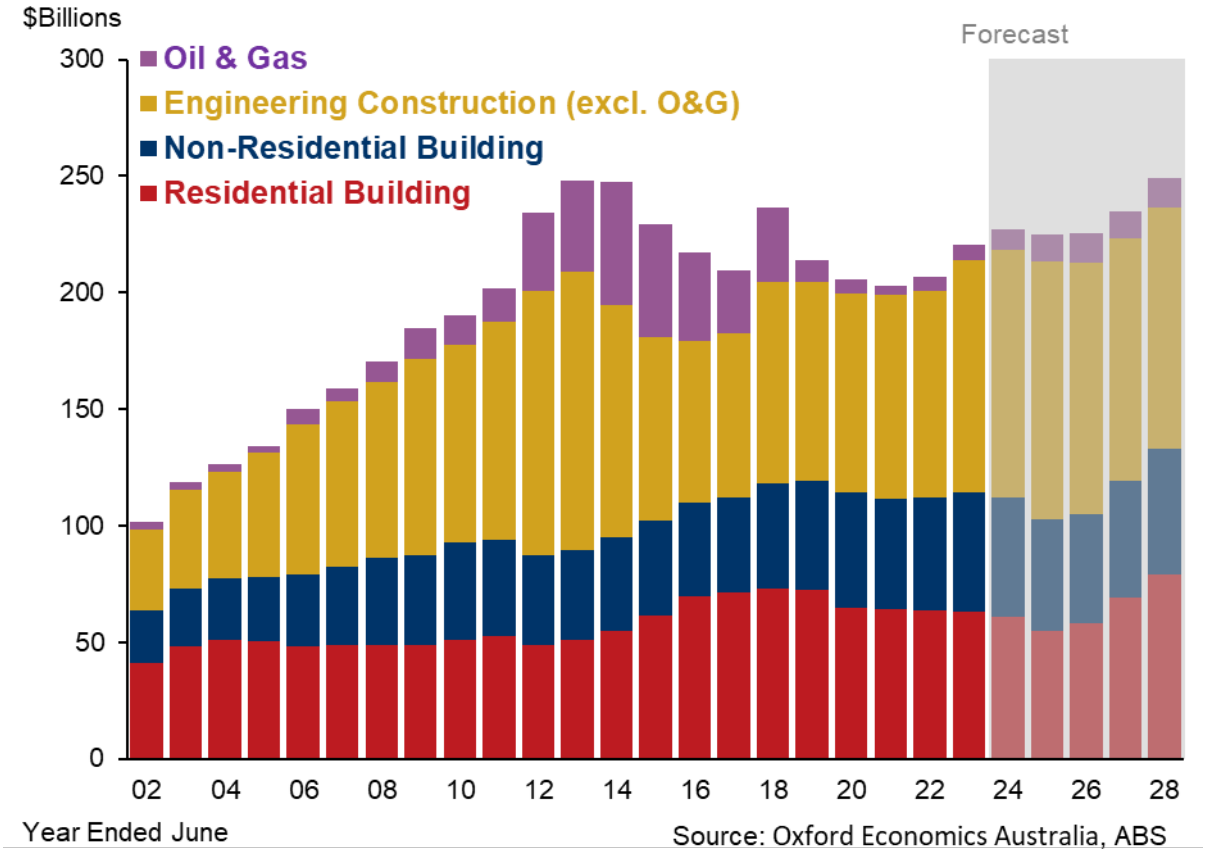


Figure 5.4 Australia – Construction Activity (real work done)



With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 7 years (and beyond), with electricity-related engineering construction projected to be 29% higher in FY30 compared to FY23 levels, following the 42% increase over the past two years (see chart 5.6). 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.

Employers are already reporting an increasing shortage of technicians and trade workers, and employees with STEM skills. These are essential workers in the utilities sector. A key problem is that the TAFE (technical and further education) systems across the country have simply not been training enough workers. OEA research shows this is compounded by new graduates in the trades stream, in particular, not increasing fast enough to replace retiring workers, with new graduate numbers in some trades actually falling (see figure 5.5). 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. Added to this is that skilled immigration only fully returned in the first half of 2022, after being suspended since early 2020. Although now resumed, the backlog of skilled labour shortages will be slow to fill, meaning that the skill shortages will persist for at least the next 2 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 2023/24 to 2025/26 period.

Figure 5.5 Australia, number of completions, VET, 2003-2021

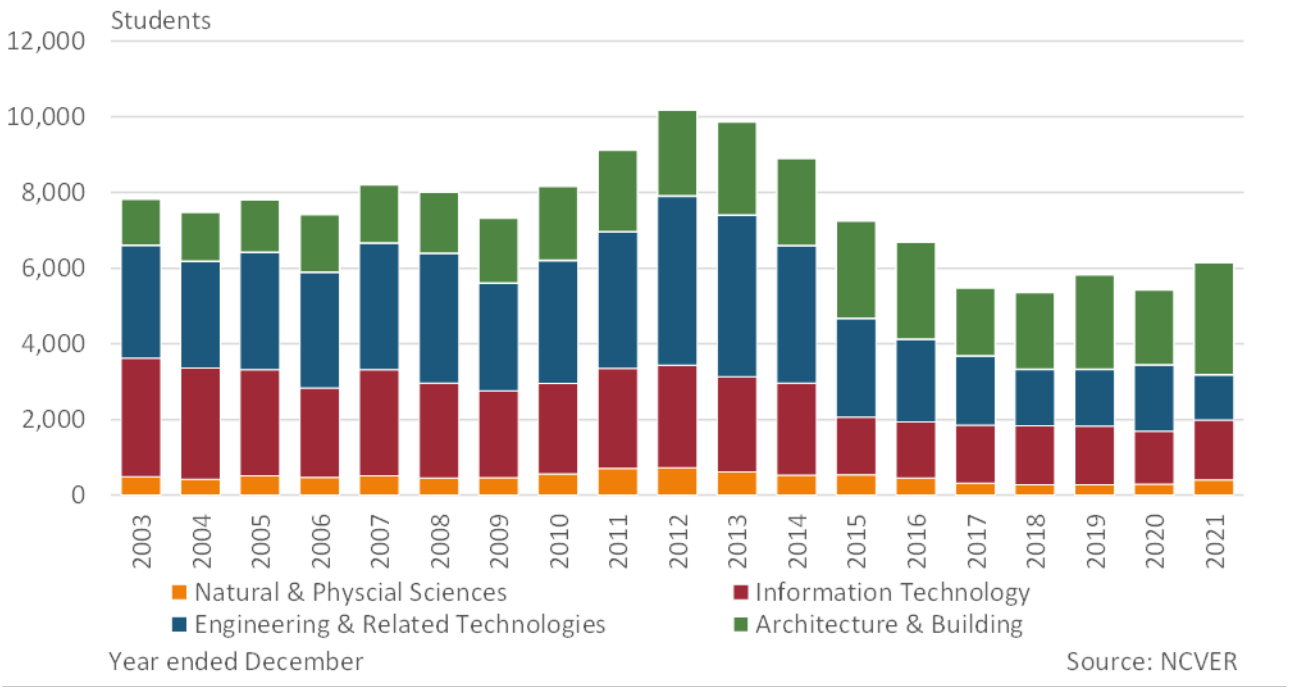


Figure 5.6 Australia – Utilities Employment, Output, Investment & Productivity

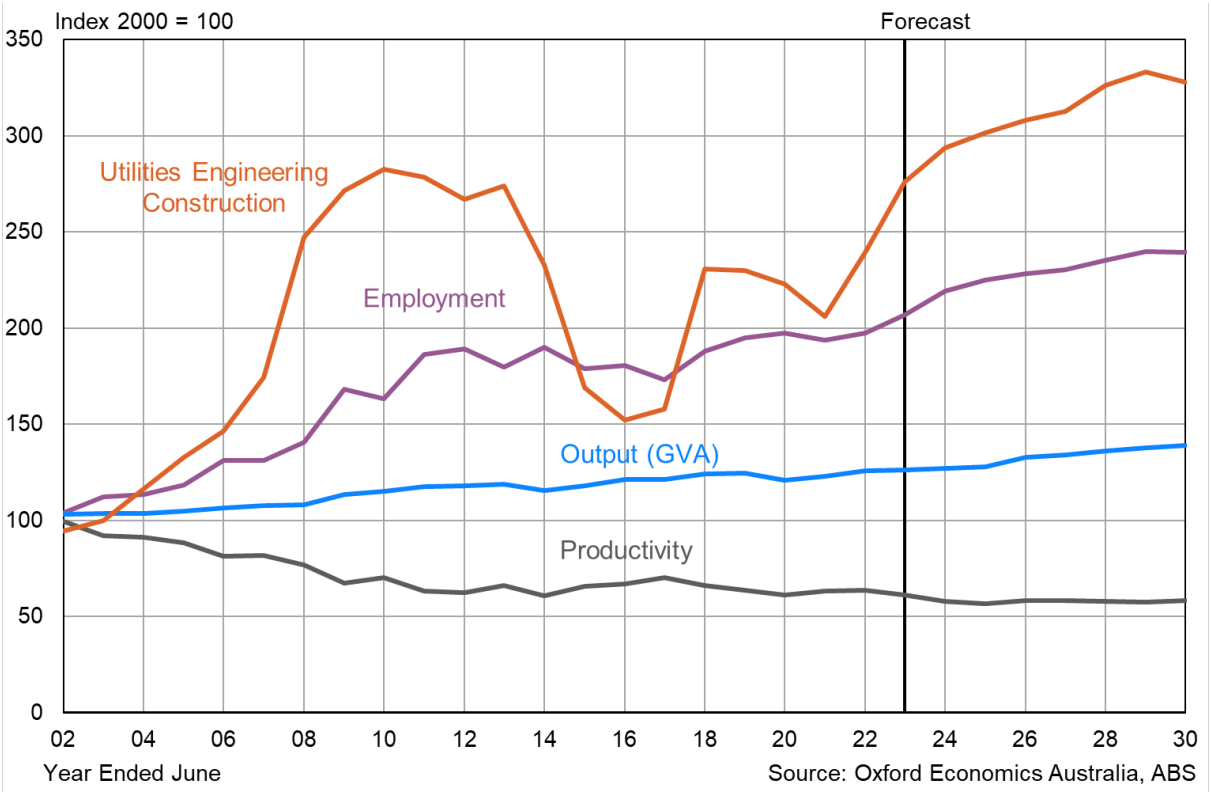


Figure 5.7 South Australia – Utilities Employment, Output, Investment & Productivity

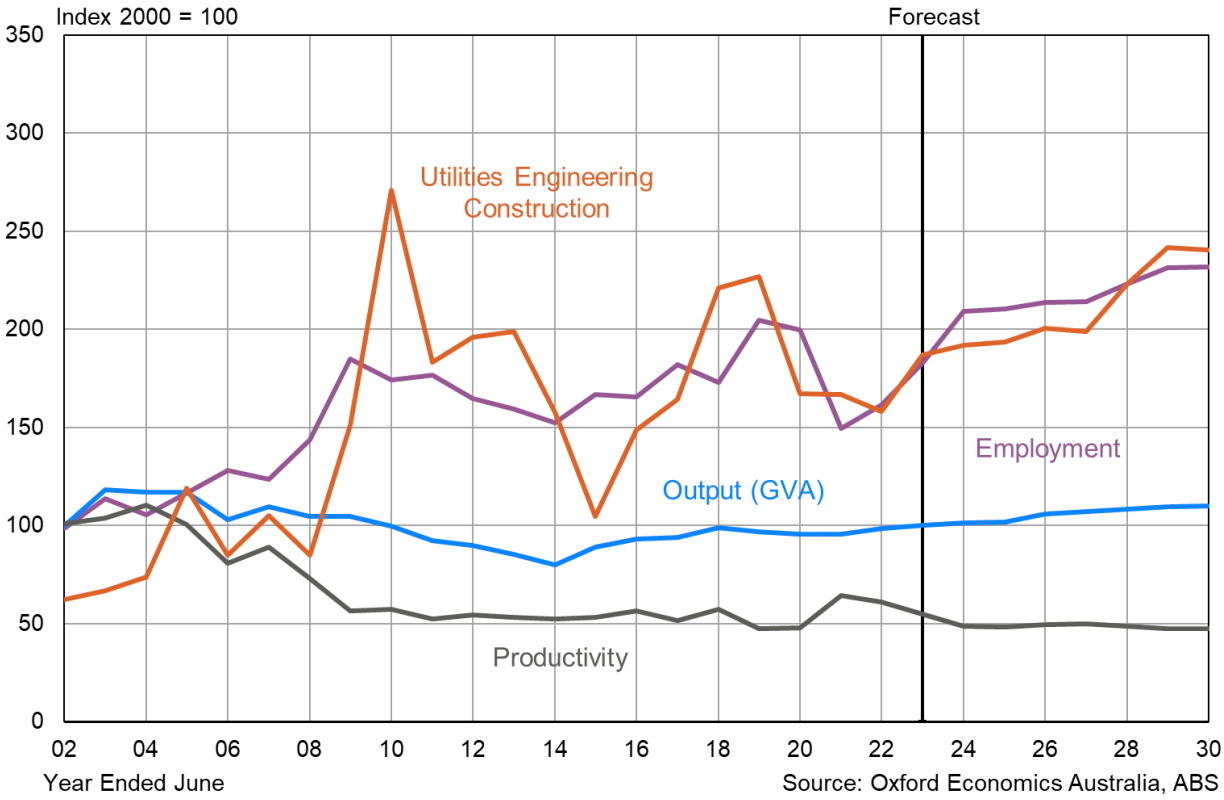
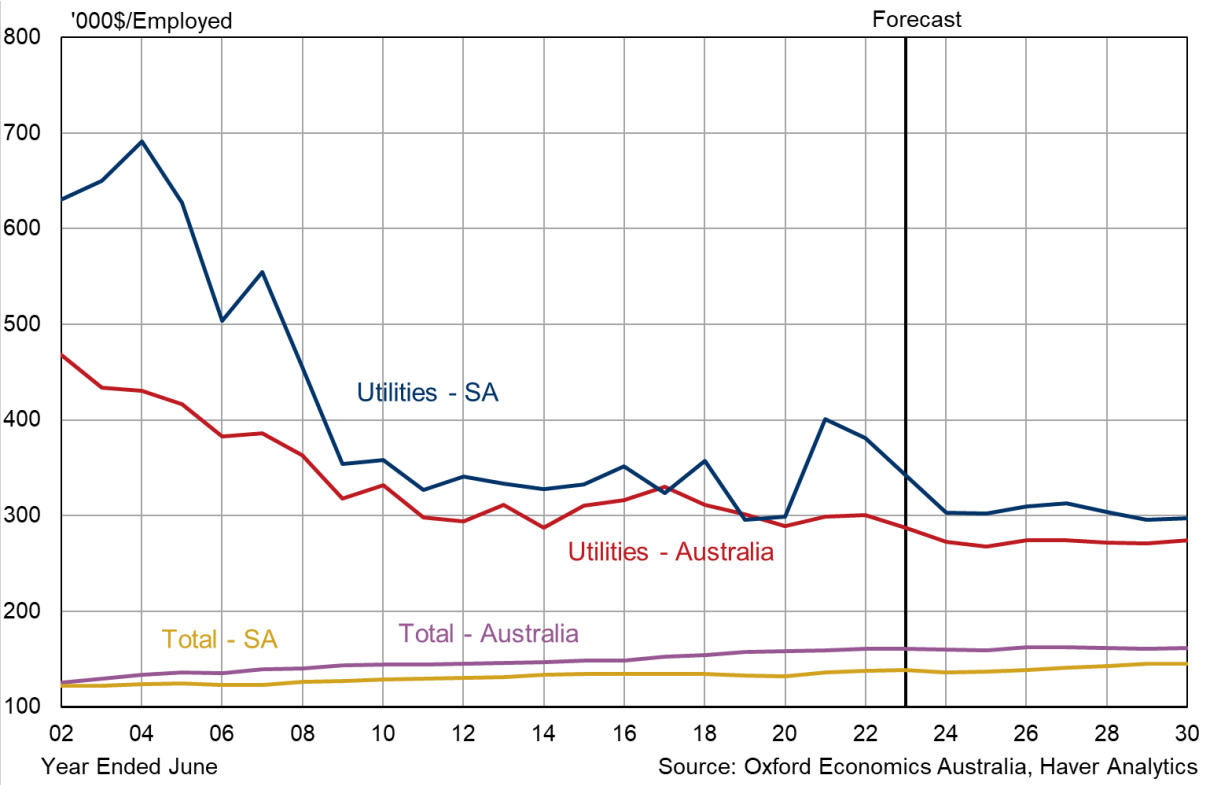


Figure 5.8 Utilities Productivity in Australia and South Australia



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

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

However, over the past 18 years, 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, both in Australia and South Australia (see figure 5.5 and 5.6). 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 due to the need to maintain a skilled workforce to ensure reliability and undertake capital works to cater for population and economic growth and for capital replacement.

5.2.1 Outlook for Utilities Wages Growth in South Australia

The ABS does not provide WPI data for the Utilities sector in South Australia, providing state utilities data only for NSW, Victoria and Queensland (the latter since early 2019). These three states collectively account for around 77% of total Australian utilities employment, with South Australia accounting for 8% (and Western Australia 14%). Historical data and forecasts of WPI for the EGWWS sector in South Australia is therefore based on national EGWWS WPI forecasts, as well as movements in the 'unknown residual' for the utilities wage price index and differences in outcomes in collective bargaining in South Australia compared to the national average for the utilities sector.

South Australian EGWWS WPI growth is estimated to have declined sharply over FY21 and FY22 to 1.7% and 1.4% respectively (in nominal terms), from an estimated 2.6% in FY20, due to the impact of the COVID-19 outbreak on wages. South Australian EGWWS WPI growth is estimated to have lifted to 3.7% in FY23 and is forecast to rise further to 4.2% in FY24. The state utilities wage growth is expected to be close to the Australian utilities WPI over the next few years, with recent SA EGWWS negotiated outcomes having been higher than the national average. However, over most of the forecast period, relative weaker utilities construction and weaker labour markets in South Australia will tend to mute the increases in the individual arrangements sector, offsetting the strength of the EBAs. South Australian EGWWS WPI growth is forecast to average 3.6% per annum in nominal terms over the five years to FY30 – or 1.1% p.a. in real (inflation-adjusted) terms (see Table 1.1). This WPI forecast includes the SG Increase impacts of -0.04% in each of the years from FY23 to FY26.

A key element of the ongoing strength in the South Australian economy is the large amounts of defence-related expenditure in South Australia over the forecast period (and beyond), including the manufacture of naval ships, army vehicles and other structures. This will also increase the demand for skilled labour and see the defence manufacturing sector also compete with the utilities sector for similarly skilled workers, many of which will have transferable skills across the utilities, construction, mining and manufacturing sectors. With strong competition for similarly skilled labour from the mining, construction and defence manufacturing industries, firms in the utilities sector will need to raise wages to attract and retain workers. This is expected to be accompanied by increases in utilities-related construction in the state, mining-related investment and construction activity generally, particularly over FY24 to FY26. The overall strengthening in the labour market, and particularly in the Construction and Mining sectors – which are key competitors to the utilities sector in terms of 'similarly' skilled workers - is expected to result in utilities WPI growth accelerating over the 2024 to 2025 period, and subsequently remain elevated over the following five years to FY30.

5.3 CONSTRUCTION WAGES

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy SAPN's external labour cost escalation by wages growth (as measured by the WPI) in the South Australian construction industry. Our research has shown that construction activity (ie work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year. Hence, our wage forecasts are based on BIS Oxford Economics 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.

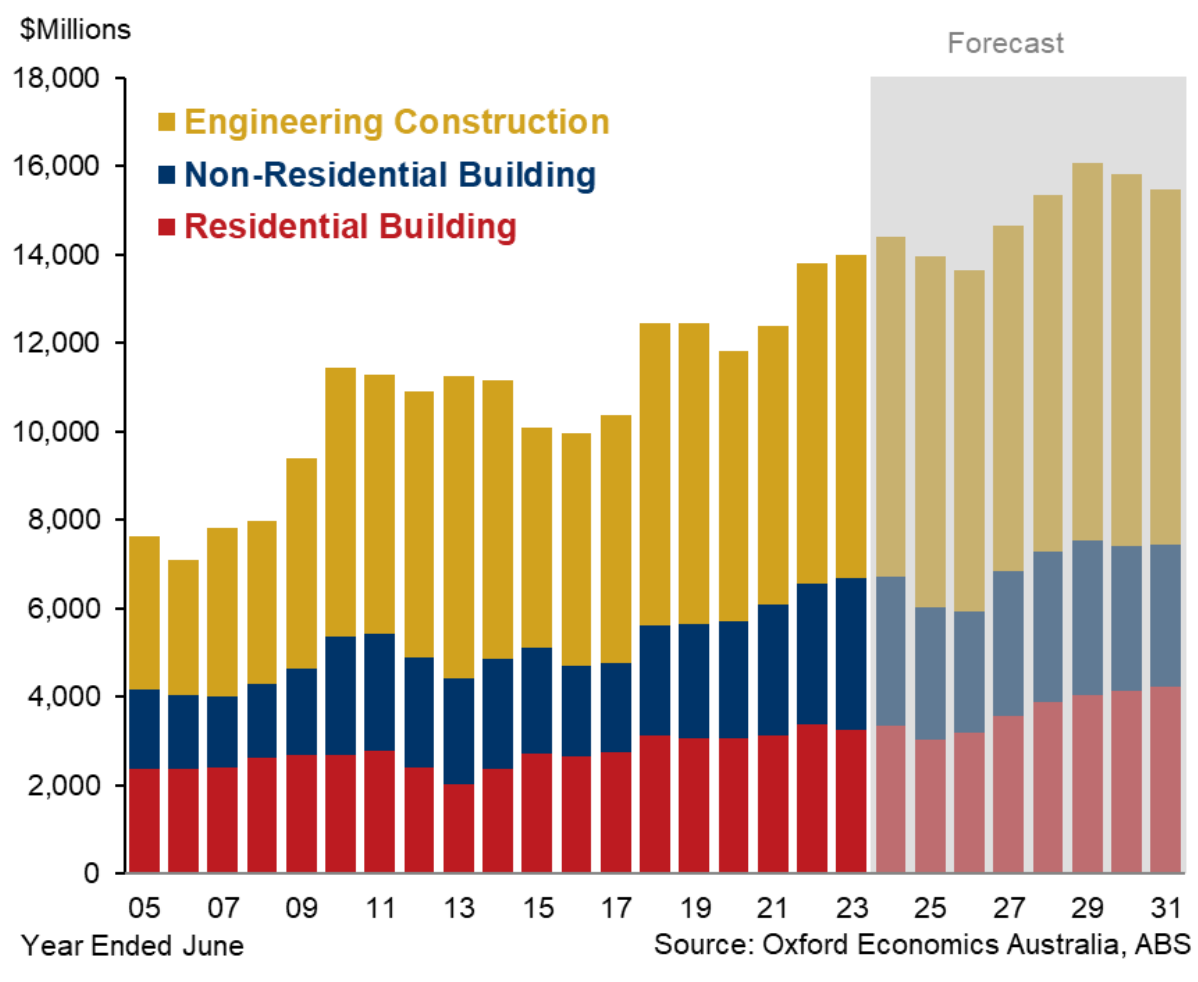
Our forecast is for the Australian Construction WPI to average around 3.7% p.a. over the five-year period to FY30. While this is a marked improvement on the past five years, it is still well down on the 4.3% annual national average (nominal terms) of the decade to 2011/12. Note that these wage forecasts for the Construction WPI include the impacts of the SG increase. In the construction industry sector, we estimate the impacts will be -0.07% for each year of the SG increase. With regard to

SAPN's next regulatory period, South Australian Construction wages are forecast to average 3.6% (or 1% in real terms) over that five-year period (see table 1.1)

Construction wages at the national and South Australian level have weakened dramatically since 2011/12 and are well below the robust increases during the construction boom. While collective agreements in the sector have maintained their relative high increases over the past 5 years – between 3% and 5% – wages growth in the individual agreements segment have been very weak. Construction employees in the individual agreements segment account for around 61% of construction employees, dominating the method of pay-setting within the sector.

The Australian Construction WPI growth recovered over FY22 to 2.6% and further to 3.7% in FY23 (in year average terms) from 1.3% in FY21. Meanwhile, the South Australian Construction WPI increased from 1.3% to 2% in FY22 and 2.3% in FY23, lagging the improvement in the Australian WPI despite similar EBA outcomes and stronger growth in construction activity. Construction wages are forecast to keep improving over FY24 and FY25 as construction activity increases and activity levels surpass the previous highs of FY18 and FY13 (in 2024 - see figure 5.4) and serious skills shortages manifest, underpinning higher wages due to strong labour demand. Construction wages growth then eases over FY26 to FY28 as activity drops back, but then picks up again from FY29 as activity again surpasses the FY24 peak. Higher levels of residential and non-residential building will be key drivers, while Engineering construction will be driven by higher electricity and mining investment and a plethora of publicly funded transport infrastructure projects (particularly in the eastern states of the nation).

Figure 5.9 Construction Activity in South Australia (work done, 2020/21 prices)



In South Australia, the levels of state construction activity surpassed the previous 2018 peak in FY22 (see chart 5.9) and are forecast to again set a new peak in FY24. Total activity then falls back in FY25 and then slowly increases and surpasses the FY24 peak in FY27, rising to a new peak in FY29. The stronger outlook for SA construction activity is expected to result in SA construction wages growth effectively catch up to national construction wages growth later in the decade.

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 BIS Oxford Economics 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 BIS Oxford Economics 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.

BIS Oxford Economics Wage Growth Model

BIS Oxford Economics' 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 38% of all employees; 64.5% 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, BIS Oxford Economics 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 48% of employees (or 33.9% 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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