OXFORD ECONOMICS AUSTRALIA

ELECTRICITY-RELATED LABOUR & MATERIALS ESCALATION COSTS: FORECASTS TO FY32

PREPARED BY OXFORD ECONOMICS AUSTRALIA FOR MARINUS LINK PTY LTD

MAY 2025 – FINAL REPORT

Oxford Economics Australia

Effective March 1 2017, UK-headquartered **Oxford Economics** acquired a controlling stake in **BIS Shrapnel** which had been in continuous operation since July 1, 1964 as a completely independent Australian owned firm providing industry research, analysis and forecasting services. The new organisation is now known as **Oxford Economics Australia**.

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May 2025

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

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

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1. EXECUTIVE SUMMARY

Oxford Economics Australia (OEA) was engaged by Marinus Link to prepare forecasts of a discrete set of labour and material escalation price indices, relevant to electricity transmission networks and undersea cabling from 2024/25 to 2031/32 (FY25 to FY32). We understand these forecasts will be used by Marinus Link to develop their operating and capital expenditure forecasts.

Wages

For **electricity network related labour**, Oxford Economics Australia forecasts that total wage costs for the Victorian and Tasmanian Electricity, Gas, Water and Waste Services (EGWWS or 'Utilities') sector — expressed in Wage Price Index (WPI) terms — will average 3.7% per annum over the eight-year period from FY25 to FY32 inclusive, just below the Australian EGWWS WPI average of 3.8% over the same period. In real (inflation-adjusted) terms, the two state EGWWS WPIs are forecast to average 1.1% p.a. over the eight years to FY32 (see Table 1.1 below).

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

Over the forecast period, the Australian, Victorian and Tasmanian EGWWS WPI growth is expected to push above and remain higher than the national All Industries WPI average, which is forecast to average 3.4% over the eight years to FY32. This means that the Australian EGWWS WPI is expected to be 0.4% higher than the All Industries average, in line with the 0.4% historical difference of the decade to FY21.

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

- the electricity, gas and water sector is a largely capital intensive industry whose employees have higher skill, productivity and commensurately higher wage levels than most other sectors
- strong union presence in the utilities sector will ensure outcomes for collective agreements, which cover 62% of the workforce, remain above the wage increases for the national 'all industry' average. In addition, with the higher proportion of employees on EBAs compared to the national average (35%), and EBAs wage rises normally higher than individual agreements, this means higher overall wage rises in the EGWWS sector.
- increases in individual agreements (or non-EBA wages) are expected to strengthen as the labour market remains tight, with the unemployment rate now around 4% and expected to remain around 4-4.4% over the next two years, before again tightening over the FY28 to FY30 period as the unemployment rate again falls below 4%.
- demand for skilled labour will remain high and strengthen with the high levels of utilities investment from FY25 to FY32 (and beyond), which are well above the levels of the past two decades. Oxford Economics Australia is forecasting electricity-related engineering construction to be 30% higher in FY32 compared to FY24 levels. This will also be a key driver of utilities 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.

Although OEA's economic growth (GDP) forecasts are for further weak growth over FY25 and FY26, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate only drifting up slowly from 4% now to 4.3% by late-2025 where it will remain until late 2026. Job ads are still very high – well above pre-Covid levels, suggesting further jobs growth, although slowing from here. Furthermore, we expect that the rise in the unemployment rate will be kept in check by falls in the participation rate from current record levels, as employment growth slows. This is likely to occur amongst those currently in the workforce with a 'loose attachment' to the workforce, such as older workers who stayed in the workforce due to strong labour demand. As demand eases, a significant proportion of workers are likely to drop out of the workforce (and hence the labour force statistics) and possibly retire.

Skill shortages, which have already emerged, are expected to remain acute in many parts of the economy, although there has been recent evidence of shortages of unskilled labour beginning to ease. The tight labour market will see wage pressures remain elevated.

The Australian All Industries WPI rose 4.1% in FY24 and is forecast to remain at an elevated 3.4% over the next two years. As the economy cools and the unemployment rate rises, All Industry wages are expected to soften over FY27 and FY28. However, from FY29 the WPI is expected to re-accelerate as the economy strengthens, the unemployment rate declines, the labour market tightens (particularly for skilled labour) and CPI inflation begins to pick up. The All Industries WPI is forecast to rise and peak at 3.7% in FY30, before easing as the economy slows. The All Industries WPI will average 3.4% over the eight years to FY32, which will be much higher than the decade to FY22, due to the fact that labour market conditions will be tighter and inflation higher compared to this pre-covid period.

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 continue to increase over the six-year period to FY30, before easing. With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 8 years (and beyond), with electricity-related engineering construction projected to be 30% higher in FY32 compared to FY24 levels, following the 59% increase over the past three 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.

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 rise further and peak in FY25 at 4.6%. From FY25, we 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.

Table 1.1a Summary – Labour Cost Escalation Forecasts: Victoria, Tasmania & Australia; Sweden & Germany

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

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Average 2025-32 (g)
					Actuals	Forecasts								
Nominal Index Values														
% ch														
Electricity, Gas, Water and Waste Services WPI - Victoria (a)	3.3	2.1	1.6	2.7	2.7	3.9	3.7	3.6	3.5	3.6	3.8	3.8	3.7	3.7
Electricity, Gas, Water and Waste Services WPI - Tasmania (a)	2.7	2.1	2.0	3.7	3.8	4.5	3.8	3.6	3.5	3.6	3.8	3.7	3.4	3.7
Electricity, Gas, Water and Waste Services WPI - Australia (b)	2.7	1.8	1.5	3.5	4.1	4.6	3.9	3.7	3.5	3.7	3.9	3.8	3.7	3.8
Construction WPI - Victoria (c)	2.2	1.0	3.2	3.5	4.1	3.6	3.5	3.4	3.5	3.7	3.9	3.6	3.4	3.6
Construction WPI - Tasmania (c)	1.5	1.4	2.4	3.5	4.0	3.5	3.5	3.4	3.4	3.6	3.8	3.5	3.3	3.5
Construction WPI - Australia (b)	1.5	1.3	2.6	3.7	4.1	3.6	3.6	3.5	3.6	3.8	4.0	3.7	3.5	3.6
All Industries WPI - Victoria (d)	2.4	1.4	2.4	3.4	3.6	3.3	3.2	3.2	3.4	3.6	3.7	3.6	3.3	3.4
All Industries WPI - Tasmania (d)	2.4	1.9	2.9	3.7	4.7	3.7	3.5	3.4	3.3	3.4	3.6	3.4	3.2	3.4
Labour Cost Index Australia: Private All Industries WPI, incl Bonuses (h)	2.2	1.5	2.8	3.9	4.2	3.6	3.5	3.4	3.5	3.8	4.0	3.8	3.5	3.6
All Industries WPI - Australia (d)	2.1	1.5	2.4	3.5	4.1	3.4	3.4	3.3	3.3	3.5	3.7	3.6	3.3	3.4
Labour Cost Index Germany: IC&S (i)	2.9	1.4	4.2	5.1	5.0	2.6	2.2	3.3	4.0	4.0	3.8	3.6	3.4	3.4
Labour Cost Index Sweden: IC&S (i)	1.5	3.9	2.5	3.5	4.2	3.4	2.8	2.7	2.8	2.9	2.9	3.0	3.0	2.9
Harmonised Index of Consumer Prices - Germany (j)	1.1	0.8	5.8	8.9	3.5	2.3	1.8	1.9	2.5	2.6	2.5	2.3	2.2	2.3
Consumer Price Index (headline) (e)	1.3	1.6	4.4	7.0	4.2	2.4	3.3	2.7	2.5	2.5	2.5	2.5	2.5	2.6
Real Wage Changes (f)														
Electricity, Gas, Water and Waste Services WPI - Victoria (a)	1.9	0.5	-2.8	-4.4	-1.5	1.5	0.4	0.9	0.9	1.1	1.3	1.3	1.2	1.1
Electricity, Gas, Water and Waste Services WPI - Tasmania (a)	1.4	0.5	-2.4	-3.3	-0.4	2.0	0.5	0.8	0.9	1.1	1.3	1.2	0.9	1.1
Electricity, Gas, Water and Waste Services WPI - Australia (b)	1.3	0.2	-2.9	-3.5	-0.1	2.1	0.6	0.9	1.0	1.2	1.4	1.3	1.2	1.2
Construction WPI - Victoria (c)	0.9	-0.7	-1.2	-3.6	-0.1	1.2	0.2	0.7	0.9	1.2	1.4	1.1	0.9	0.9
Construction WPI - Tasmania (c)	0.2	-0.2	-2.0	-3.5	-0.2	1.0	0.2	0.7	0.9	1.1	1.3	1.0	0.8	0.9
Construction WPI - Australia (b)	0.2	-0.3	-1.8	-3.3	-0.2	1.1	0.3	0.8	1.0	1.3	1.5	1.2	1.0	1.0
All Industries WPI - Victoria (d)	1.1	-0.2	-2.1	-3.7	-0.6	0.8	0.0	0.5	0.8	1.1	1.2	1.1	0.8	0.8
All Industries WPI - Tasmania (d)	1.1	0.2	-1.6	-3.3	0.5	1.2	0.2	0.7	0.7	0.9	1.1	0.9	0.7	0.8
Labour Cost Index Australia: Private All Industries WPI, incl Bonuses (h)	0.8	-0.2	-1.6	-3.1	0.0	1.2	0.2	0.6	0.9	1.3	1.5	1.3	1.0	1.0
All Industries WPI - Australia (d)	0.8	-0.1	-2.1	-3.6	-0.1	1.0	0.1	0.6	0.8	1.0	1.2	1.1	0.8	0.8
Labour Cost Index Germany: IC&S (i)	1.6	-0.2	-0.3	-2.0	0.8	0.1	-1.0	0.6	1.5	1.5	1.3	1.1	0.9	0.8
Labour Cost Index Sweden: IC&S (i)	0.1	2.3	-1.9	-3.5	0.0	1.0	-0.5	0.0	0.3	0.4	0.4	0.5	0.5	0.3
Harmonised Index of Consumer Prices - Germany (j)	-0.2	-0.8	1.4	1.9	-0.7	-0.1	-1.5	-0.8	-0.1	0.1	0.0	-0.2	-0.3	-0.4

Source: ABS, RBA, Oxford Economics Australia, Eurostat, Destatis

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for Vic and Tas
(b) Australian sector wage forecasts provided for comparison
(c) Construction Sector Wage Price Index (WPI) for Vic and Tas
(d) Australian, Vic and Tas 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) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(g) Average Annual Growth Rate for 2024/25 to 2030/32 inclusive
(h) Private All Industries - Ordinary Time Hourly Rates of Pay, including Bonuses. Historical figures come from table 7b of ABS release 6345, Wage Price Index
(i) Historical figures come from Eurostat
(j) Historical figures from Destatis

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy Marinus Link's **external labour cost escalation** by wages growth (as measured by the WPI) in the Victorian and Tasmanian construction sectors. Our research has shown that construction activity (ie work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year. Hence, our wage forecasts are based on Oxford Economics Australia forecasts of construction activity by state (which includes residential and non-residential building, plus engineering construction) as well as predicted movements in the construction wages at the national level.

Table 1.1b Summary – Labour Cost Escalation Forecasts: Victoria, Tasmania & Australia; Sweden & Germany

(per cent change, year-on-year, June quarter)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Average 2025-32 (g)
					Actuals	Forecasts								
Nominal Index Values														
% ch														
Electricity, Gas, Water and Waste Services WPI - Victoria (a)	2.9	1.8	1.8	3.0	3.0	3.8	3.7	3.6	3.5	3.7	3.8	3.8	3.7	3.7
Electricity, Gas, Water and Waste Services WPI - Tasmania (a)	2.6	2.1	2.5	3.7	4.0	4.3	3.8	3.5	3.5	3.7	3.8	3.6	3.4	3.7
Electricity, Gas, Water and Waste Services WPI - Australia (b)	2.5	1.3	2.2	3.9	4.3	4.5	3.7	3.6	3.5	3.7	3.9	3.8	3.6	3.8
Construction WPI - Victoria (c)	1.1	1.1	4.4	3.8	3.3	4.2	3.5	3.5	3.6	3.8	3.7	3.5	3.4	3.6
Construction WPI - Tasmania (c)	1.5	2.0	2.9	3.6	3.6	3.6	3.4	3.4	3.5	3.7	3.6	3.4	3.3	3.5
Construction WPI - Australia (b)	0.7	2.2	3.2	3.8	3.9	3.6	3.6	3.5	3.6	3.9	4.0	3.5	3.4	3.6
All Industries WPI - Victoria (d)	1.7	1.8	2.5	3.6	3.4	3.5	3.2	3.3	3.5	3.6	3.7	3.5	3.3	3.4
All Industries WPI - Tasmania (d)	2.5	2.2	2.9	3.8	5.1	3.3	3.5	3.3	3.2	3.4	3.6	3.4	3.2	3.4
Labour Cost Index Australia: Ordinary Time Hourly Rates of Pay inc Bonuses (Private All Industries) (h)	1.5	2.0	3.4	3.8	4.0	3.8	3.3	3.5	3.6	4.0	3.9	3.7	3.3	3.6
All Industries WPI - Australia (d)	1.7	1.8	2.6	3.6	4.1	3.5	3.4	3.3	3.3	3.5	3.7	3.5	3.3	3.4
Labour Cost Index Germany: IC&S (i)	2.1	-0.2	7.3	3.7	6.2	1.3	2.4	3.8	4.1	3.9	3.8	3.6	3.4	3.3
Labour Cost Index Sweden: IC&S (i)	-2.7	7.8	2.9	4.6	3.4	3.1	2.7	2.7	2.8	2.9	3.0	3.0	3.0	2.9
Harmonised Index of Consumer Prices - Germany (j)	0.7	2.2	8.3	6.9	2.6	2.0	1.8	2.1	2.5	2.6	2.4	2.2	2.1	2.2
Consumer Price Index (headline) (e)	-0.3	3.8	6.1	6.0	3.8	2.2	3.2	2.6	2.5	2.5	2.5	2.5	2.5	2.6
Real Wage Changes (f)														
Electricity, Gas, Water and Waste Services WPI - Victoria (a)	3.2	-2.1	-4.3	-3.0	-0.8	1.7	0.5	0.9	1.0	1.2	1.3	1.3	1.2	1.1
Electricity, Gas, Water and Waste Services WPI - Tasmania (a)	2.9	-1.7	-3.6	-2.3	0.2	2.1	0.6	0.9	1.0	1.2	1.3	1.1	0.9	1.1
Electricity, Gas, Water and Waste Services WPI - Australia (b)	2.8	-2.6	-3.9	-2.1	0.5	2.3	0.6	1.0	1.0	1.2	1.4	1.3	1.1	1.2
Construction WPI - Victoria (c)	1.4	-2.7	-1.8	-2.2	-0.5	2.0	0.3	0.8	1.1	1.3	1.2	1.0	0.9	1.1
Construction WPI - Tasmania (c)	1.9	-1.8	-3.3	-2.4	-0.2	1.4	0.2	0.8	1.0	1.2	1.1	0.9	0.8	0.9
Construction WPI - Australia (b)	1.0	-1.6	-3.0	-2.2	0.1	1.5	0.4	0.8	1.1	1.4	1.5	1.0	0.9	1.1
All Industries WPI - Victoria (d)	2.1	-2.0	-3.7	-2.4	-0.4	1.3	0.0	0.6	1.0	1.1	1.2	1.0	0.8	0.9
All Industries WPI - Tasmania (d)	2.8	-1.6	-3.3	-2.2	1.3	1.2	0.3	0.7	0.7	0.9	1.1	0.9	0.7	0.8
Labour Cost Index Australia: Ordinary Time Hourly Rates of Pay inc Bonuses (Private All Industries) (h)	1.9	-1.8	-2.8	-2.2	0.1	1.7	0.2	0.9	1.1	1.5	1.4	1.2	0.8	1.1
All Industries WPI - Australia (d)	2.1	-2.1	-3.6	-2.4	0.3	1.4	0.2	0.6	0.8	1.0	1.2	1.0	0.8	0.9
Labour Cost Index Germany: IC&S (i)	2.4	-4.0	1.1	-2.4	2.4	-0.9	-0.8	1.2	1.5	1.4	1.3	1.1	0.9	0.7
Labour Cost Index Sweden: IC&S (i)	-2.4	4.0	-3.2	-1.4	-0.4	1.0	-0.5	0.1	0.3	0.4	0.5	0.5	0.5	0.4
Harmonised Index of Consumer Prices - Germany (j)	1.0	-1.7	2.1	0.9	-1.2	-0.1	-1.4	-0.5	0.0	0.1	-0.1	-0.3	-0.4	-0.3

Source: ABS, RBA, Oxford Economics Australia, Eurostat, Destatis

(a) Electricity, Gas, Water and Waste Services (EGWWS) Wage Price Index (WPI) for Vic and Tas
(b) Australian sector wage forecasts provided for comparison
(c) Construction Sector Wage Price Index (WPI) for Vic and Tas
(d) Australian, Vic and Tas 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) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(g) Average Annual Growth Rate for 2024/25 to 2030/32 inclusive
(h) Historical figures come from table 7b of ABS release 6345, Wage Price Index
(i) Historical figures come from Eurostat
(j) Historical figures from Destatis

Our forecast is for the Australian Construction WPI to average 3.6% over the seven years from FY25 to FY32 inclusive – or 1% per annum on average in real (inflation adjusted) terms. Both Victorian and Tasmanian Construction wages are forecast to average 3.6% and 3.5% respectively. Australian Construction WPI growth recovered over FY22 to 2.6% followed by 3.7% in FY23 and 4.1% in FY24 (in year average terms). Construction wages are estimated to remain elevated in FY25 (3.6%) as construction activity increases and serious skills shortages worsen, underpinning higher wages due to strong labour demand. It is important to note that in FY23 and FY24, overall construction activity levels surpassed the previous highs of FY13 and FY18. Given the falling VET completions and increasing retirements, this means that there is likely a serious undersupply of skilled labour to cater for increasing construction levels. Construction wages growth stabilises at around 3.6% over FY26 to FY28 as activity cools somewhat, but then picks up again from FY29 as activity again steps up a notch. Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher utilities and mining investment and sustained high (but easing) levels of publicly funded transport infrastructure activity (particularly in the eastern states of the nation).

Commodity and Materials Prices

Materials and commodity prices in Australia and globally saw large increases over the early 2020's, due to a combination of factors – including supply chain disruptions (mainly due to COVID-19), war in

Ukraine, high shipping costs, and strong demand for construction materials as low interest rates and government incentives and programmes drove strong construction activity. Prices for some commodities have since fallen back (e.g. iron ore and brent oil). However, higher wage growth as a result of a lagged response to inflation and tight labour markets across the west have helped to offset falls in commodity prices.

In Australia, the levels of overall construction activity has pushed above previous peaks, but with little addition to materials production capacity, demand came up against constrained supply. The strong growth in prices has now peaked with some prices have actually fallen across a number of commodities and materials. However, prices are not expected to fall back to pre-Covid levels.

Looking forward, the near term will see a general easing or softening in price growth. International commodity prices expected to continue easing, whilst an appreciating Australian Doller will help to dampen import prices. Furthermore, softer growth in global economic activity stemming from higher interest rates and the level of uncertainty among trade relations will contribute to weak growth in the demand for goods over the next year or so.

From around 2027, strong demand pressure from domestic construction is will put renewed pressure on the supply of some materials and commodities, which will underpin higher prices. Domestic demand pressure will also be aided by a recovery in global economic activity. Materials and commodities related to the construction and maintenance of electricity infrastructure will come under particular pressure. Both in Australia and globally, energy systems are transitioning to renewable energy and associated applications (such as electric vehicles). The urgency to manufacture and construct the infrastructure will see strong demand for key materials such as copper and aluminium, while electricity and energy prices will also add to the overall costs of producing such materials. Added to this is rising mining and refining costs for aluminium and copper, as the easier-to-access mega deposits are exhausted and replaced by higher cost mine, while some of the high-polluting smelters and refineries will shut down, exacerbating supply problems.

Over the forecast revenue determination period from FY25 to FY32, we expect a divergence of price movements. The commodities/materials with the highest projected increases are Tasmanian concrete/ cement prices and copper prices, while overall electricity construction costs will also see above average price increases. All of these items are expected to experience positive real price growth over the period. On the other hand, prices for some materials are projected to actually fall over the FY25-32 period, including oil (and marine diesel) and lead. Growth in steel prices are expected to be subdued. Meanwhile, most of the items related to high voltage direct current (HVDC) cables are expected to see modest price increases. Inputs costs in the US are expected to rise faster than in Italy, particularly for wage costs. The forecasts are presented below in table 1.2.

Table 1.2 Materials and Commodity Price Forecasts (year average, year-ended June)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Average 2025-32 (j)
					Actuals	Forecasts								
Nominal Commodity & Marine Diesel Prices														
Copper (A$/tonne)	8,446	10,664	13,288	12,307	13,235	14,468	15,140	15,108	15,115	14,680	14,902	15,943	16,707	15258
Copper (US$/tonne) (a)	5,669	7,969	9,645	8,288	8,680	9,325	9,582	9,890	10,250	10,643	11,028	11,319	11,528	10446
Aluminium (A$/tonne)	2,496	2,715	3,983	3,464	3,455	3,947	4,086	4,010	3,951	3,837	3,841	4,005	4,164	3980
Aluminium (US$/tonne) (a)	1,675	2,029	2,891	2,333	2,266	2,544	2,586	2,625	2,679	2,782	2,843	2,843	2,873	2722
Oil (A$/barrel)	77	72	126	129	129	114	107	104	102	98	97	100	102	102.9
Oil (US$/barrel) (a)	52	54	91	87	85	73	68	68	69	71	71	71	70	70.2
Marine diesel (A$/tonne) (Y/Y)	961	748	1,271	1,561	1,387	1,290	1,217	1,205	1,215	1,199	1,186	1,226	1,244	1223
Marine diesel (US$/tonne) (b) (Y/Y)	645	559	923	1,051	909	832	770	789	824	869	878	870	858	836
Lead (LME) (A$/tonne) (k)	2,827	2,650	3,170	3,092	3,253	3,099	3,171	3,110	3,045	2,887	2,868	3,031	3,162	3047
Lead (LME) (US$/tonne) (k)	1,898	1,980	2,301	2,082	2,134	1,997	2,007	2,036	2,065	2,093	2,122	2,152	2,182	2082
Lead (LME) (EU€/tonne) (k)	1,717	1,661	2,045	1,988	1,966	1,854	1,825	1,851	1,877	1,903	1,925	1,934	1,944	1889
% ch														
Copper (A$/tonne)	-1.8	26.3	24.6	-7.4	7.5	9.3	4.6	-0.2	0.0	-2.9	1.5	7.0	4.8	3.0
Aluminium (A$/tonne)	-7.0	8.8	46.7	-13.0	-0.2	14.2	3.5	-1.9	-1.5	-2.9	0.1	4.3	4.0	2.5
Oil (A$/barrel)	-19.9	-5.8	73.4	2.5	0.4	-12.1	-5.5	-3.1	-2.0	-3.5	-1.8	3.3	1.8	-2.9
Marine diesel (A$/tonne) (Y/Y)	-10.6	-22.2	70.0	22.8	-11.2	-7.0	-5.7	-1.0	0.9	-1.4	-1.0	3.3	1.5	-1.3
Lead (LME) (A$/tonne)	1.3	-6.3	19.6	-2.4	5.2	-4.7	2.3	-1.9	-2.1	-5.2	-0.7	5.7	4.3	-0.3
Exchange rate ($USD/$AUD) (c)	0.67	0.75	0.73	0.67	0.66	0.64	0.63	0.65	0.68	0.73	0.74	0.71	0.69	0.68
Exchange rate (Euro/$AUD) (c)	0.61	0.63	0.64	0.64	0.61	0.60	0.55	0.57	0.58	0.61	0.62	0.59	0.58	0.59
Exchange rate (Kronor/$AUD) (c)	6.47	6.40	6.64	7.11	6.97	6.73	6.07	6.03	5.91	6.08	6.15	5.93	5.75	6.08
Exchange rate ($USD/Euro) (c)	1.11	1.19	1.13	1.05	1.09	1.08	1.10	1.10	1.10	1.10	1.10	1.11	1.12	1.10
Nominal Material Producer Price Indices (PPI)														
Steel Beams and Sections PPI (Australia) (d)	112.9	118.7	155.2	162.7	139.5	133.8	132.9	133.3	136.2	141.2	145.7	149.4	151.3	140.5
Concrete, Cement & Sand PPI (Vic) (d)	109.1	109.7	111.6	132.8	140.2	143.8	146.6	149.3	154.0	159.9	164.7	168.2	170.5	157.1
Concrete, Cement & Sand PPI (Tas) (d)	120.4	117.8	125.8	136.5	138.5	142.6	148.7	156.7	163.5	169.7	175.6	180.6	185.8	165.4
Electrical Equipment Manufacturing PPI (d)	105.7	109.0	114.9	129.9	136.5	138.8	142.3	144.9	147.9	151.8	155.6	159.1	162.4	150.4
Paper (Insulation Components) Index (l)	115.2	116.4	132.8	152.3	150.7	149.4	150.8	151.5	152.5	154.7	157.4	160.3	163.0	154.9
Hot Steel Index (l)	123.0	160.5	259.2	212.4	187.3	171.8	166.0	164.7	172.0	185.5	197.0	201.5	197.7	182.0
Grain Oriented Steel - Super High Grade Index (l)	99.3	99.4	152.6	214.9	178.2	162.2	156.2	157.0	167.7	180.5	189.8	190.8	185.1	173.7
Bentonite (m)	182.2	184.3	193.8	222.5	230.5	237.0	241.0	245.3	250.9	257.4	264.3	271.5	278.8	255.8
Plastic Water pipe (n)	183.1	214.7	385.9	436.4	403.2	381.9	385.2	381.1	388.8	401.2	414.9	431.7	447.5	404.0
Fibre Optic cable (A$ index)	119.3	104.1	113.5	143.6	135.8									
Fibre Optic cable (US$ index) (e)	80.1	77.8	82.4	96.7	89.1									
% ch														
Steel Beams and Sections PPI (Australia) (d)	0.2	5.1	30.8	4.8	-14.3	-4.1	-0.6	0.3	2.2	3.7	3.2	2.6	1.3	1.0
Concrete, Cement & Sand PPI (Vic) (d)	0.8	0.6	1.7	19.0	5.6	2.6	1.9	1.9	3.1	3.8	3.0	2.1	1.3	2.5
Concrete, Cement & Sand PPI (Tas) (d)	2.6	-2.1	6.7	8.5	1.5	2.9	4.3	5.3	4.4	3.8	3.5	2.9	2.9	3.7
Electrical Equipment Manufacturing PPI (d)	-1.4	3.1	5.5	13.1	5.1	1.7	2.5	1.8	2.0	2.7	2.5	2.3	2.1	2.2
Paper (Insulation Components) Index (l)	0.5	1.0	14.2	14.6	-1.1	-0.9	1.0	0.4	0.7	1.4	1.8	1.8	1.7	1.0
Hot Steel Index (l)	-4.0	30.5	61.6	-18.1	-11.8	-8.3	-3.4	-0.8	4.5	7.8	6.2	2.3	-1.9	0.8
Grain Oriented Steel - Super High Grade Index (l)	-0.4	0.2	53.5	40.8	-17.1	-9.0	-3.7	0.5	6.9	7.6	5.2	0.5	-3.0	0.6
Bentonite (m)	2.9	1.1	5.2	14.8	3.6	2.8	1.7	1.8	2.3	2.6	2.7	2.7	2.7	2.4
Plastic Water pipe (n)	-2.6	17.2	79.8	13.1	-7.6	-5.3	0.9	-1.1	2.0	3.2	3.4	4.1	3.7	1.4
Fibre Optic cable (A$ index)	5.1	-12.7	9.0	26.5	-5.4									
Nominal Broad Construction Price Indice														
Non-hydro Electricity Engineering Construction IPD (f	118.2	120.5	127.9	136.7	140.9	144.5	148.6	152.8	157.4	163.0	168.3	173.2	178.2	160.7
% ch														
Non-hydro Electricity Engineering Construction IPD (f	2.6	1.9	6.2	6.9	3.1	2.5	2.9	2.8	3.0	3.5	3.3	2.9	2.9	3.0
HVDC Indicators (nominal %ch) (g)														
US HVDC - overall indicative escalation														
Aluminium (US$/tonne)	-12.7	21.1	42.5	-19.3	-2.9	12.3	1.7	1.5	2.1	3.8	2.2	0.0	1.0	3.1
Steel - hot rolled coil (US$/tonne)	-28.3	82.3	56.0	-43.5	-1.6	-8.2	16.4	-7.4	2.1	2.0	2.0	2.0	2.0	1.4
Manufacturing wages - USA	7.3	1.7	3.0	5.4	4.8	3.3	5.7	3.3	2.5	2.0	2.1	2.2	2.3	2.9
Electricity costs - USA	-12.8	6.9	51.0	5.6	-20.9	-6.0	7.0	-1.6	2.9	2.6	2.1	2.5	1.9	1.4
Transport costs - USA	1.8	-1.2	16.0	9.1	-0.9	3.0	2.1	1.9	2.1	1.9	2.0	1.9	1.9	2.1
Other cable maunufacturing costs - USA														
European HVDC - overall indicative escalation														
Aluminium (Euro/tonne)	-10.0	12.2	50.9	-13.1	-6.0	12.4	-4.3	0.6	0.9	1.9	1.5	0.5	0.8	1.8
Steel - hot rolled coil (Euro/tonne)	-5.0	-14.8	56.0	56.8	-31.4	-10.3	-10.7	-1.4	2.0	2.1	2.0	2.0	2.0	-1.5
Manufacturing wages - Italy	4.7	0.8	-2.1	4.4	6.1	4.2	2.3	1.8	1.7	1.8	1.9	1.7	1.6	2.1
Electricity costs - Italy	-4.3	-3.2	65.2	27.6	-23.3	-1.1	-1.6	-5.8	1.1	0.3	0.1	0.0	-0.4	-0.9
Transport costs - Italy	1.3	2.3	1.3	4.6	5.9	2.7	2.4	2.0	1.6	1.8	2.0	2.1	2.3	2.1
Other cable maunufacturing costs - Italy														

Consumer Price Index - headline (h)	1.3	1.6	4.4	7.0	4.2	2.4	3.3	2.7	2.5	2.5	2.5	2.5	2.5	2.6
Real Commodity Price Changes (i)														
Copper (A$/tonne)	-3.1	24.6	20.2	-14.4	3.3	6.9	1.4	-2.9	-2.5	-5.4	-1.0	4.5	2.3	0.4
Aluminium (A$/tonne)	-8.3	7.2	42.3	-20.1	-4.5	11.8	0.3	-4.6	-4.0	-5.4	-2.4	1.8	1.5	-0.1
Oil (A$/barrel)	-21.3	-7.4	68.9	-4.5	-3.9	-14.6	-8.8	-5.8	-4.5	-6.0	-4.3	0.8	-0.7	-5.5
Marine diesel (A$/tonne) (Y/Y)	-11.9	-23.8	65.5	15.8	-15.4	-9.4	-8.9	-3.8	-1.6	-3.9	-3.5	0.8	-1.0	-3.9
Lead (LME) (A$/tonne)	0.0	-7.9	15.2	-9.5	1.0	-7.2	-0.9	-4.7	-4.7	-7.7	-3.2	3.2	1.8	-2.9
Real Material Producer Price Indices (PPI) (i)														
Steel Beams and Sections PPI (Australia) (d)	-1.2	3.5	26.4	-2.2	-18.5	-6.6	-3.9	-2.5	-0.4	1.2	0.7	0.1	-1.2	-1.6
Concrete, Cement & Sand PPI (Vic) (d)	-0.5	-1.1	-2.7	12.0	1.4	0.2	-1.4	-0.8	0.6	1.3	0.5	-0.4	-1.2	-0.1
Concrete, Cement & Sand PPI (Tas) (d)	1.3	-3.7	2.3	1.5	-2.7	0.5	1.1	2.6	1.8	1.3	1.0	0.4	0.4	1.1
Electrical Equipment Manufacturing PPI (d)	-2.7	1.4	1.0	6.0	0.9	-0.7	-0.8	-0.9	-0.5	0.2	0.0	-0.2	-0.4	-0.4
Paper (Insulation Components) Index (l)	-0.9	-0.6	9.7	7.6	-5.3	-3.3	-2.3	-2.3	-1.9	-1.1	-0.7	-0.7	-0.8	-1.6
Hot Steel Index (l)	-5.3	28.9	57.1	-25.1	-16.0	-10.7	-6.7	-3.5	1.9	5.3	3.7	-0.2	-4.4	-1.8
Grain Oriented Steel - Super High Grade Index (l)	-1.8	-1.5	49.0	33.8	-21.3	-11.4	-7.0	-2.2	4.3	5.1	2.7	-2.0	-5.5	-2.0
Bentonite (m)	1.6	-0.5	0.7	7.8	-0.6	0.4	-1.6	-1.0	-0.3	0.1	0.2	0.2	0.2	-0.2
Plastic Water pipe (n)	-4.0	15.6	75.3	6.1	-11.8	-7.7	-2.4	-3.8	-0.5	0.7	0.9	1.6	1.2	-1.3
Fibre Optic cable (A$ index)	3.7	-14.3	4.6	19.5	-9.6									
Real Broad Construction Price Indice														
Non-hydro Electricity Engineering Construction IPD (f	1.3	0.3	1.7	-0.2	-1.1	0.1	-0.4	0.1	0.5	1.0	0.8	0.4	0.4	0.4
Real HVDC Indicators %ch														
US HVDC - overall indicative escalation														
Aluminium (US$/tonne)	-14.1	19.5	38.0	-26.4	-7.1	9.8	-1.6	-1.2	-0.5	1.3	-0.3	-2.5	-1.5	0.4
Steel (US$/tonne)	-29.6	80.7	51.6	-50.5	-5.8	-10.7	13.2	-10.1	-0.4	-0.5	-0.5	-0.5	-0.5	-1.2
Manufacturing wages - USA	5.9	0.1	-1.4	-1.6	0.6	0.9	2.5	0.5	0.0	-0.5	-0.4	-0.3	-0.2	0.3
Electricity costs - USA	-14.2	5.3	46.5	-1.4	-25.1	-8.4	3.7	-4.3	0.3	0.1	-0.4	0.0	-0.6	-1.2
Transport costs - USA	0.5	-2.8	11.5	2.1	-5.1	0.6	-1.1	-0.9	-0.5	-0.6	-0.5	-0.6	-0.6	-0.5
Other cable maunufacturing costs - USA														
European HVDC - overall indicative escalation														
Aluminium (Euro/tonne)	-11.3	10.6	46.5	-20.2	-10.2	10.0	-7.6	-2.1	-1.7	-0.6	-1.0	-2.0	-1.7	-0.8
Steel (Euro/tonne)	-6.3	-16.4	51.5	49.8	-35.6	-12.7	-14.0	-4.1	-0.5	-0.4	-0.5	-0.5	-0.5	-4.1
Manufacturing wages - Italy	3.3	-0.8	-6.5	-2.6	1.9	1.8	-1.0	-0.9	-0.8	-0.7	-0.6	-0.8	-0.9	-0.5
Electricity costs - Italy	-5.6	-4.9	60.7	20.6	-27.5	-3.6	-4.8	-8.5	-1.4	-2.2	-2.4	-2.5	-2.9	-3.6
Transport costs - Italy	0.0	0.7	-3.2	-2.4	1.7	0.3	-0.9	-0.7	-1.0	-0.7	-0.5	-0.4	-0.2	-0.5
Other cable maunufacturing costs - Italy														

Source: ABS, RBA, Oxford Economics Australia

(a) Average of OEA and DISR forecasts. Copper and aluminium price figures use London Metal Exchange price as the benchmark price. Sourced from DISR
(b) Historical figures come from Ship and Bunker's 'Asia Pacific Marine Gas Oil Price'.
(c) OEA forecasts of exchange rate
(d) Historical figures come from tables 12, 13 and 18 of ABS release 6427, Producer Price Indices.
(e) Fibre Optic data from US Federal Reserve Economic Data: producer Price Indices
(f) Historical figures come from the ABS Engineering Construction Service series, provided as an unpublished 'Special Run' series.
(g) Data from Oxford Economics databases in US andEurope. Commodity price forecasts based on OEA/DISR forecasts.
All other US and European/Italian forecasts of materials sourced from OE global database.
(h) 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%).
(i) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(j) Average annual values and growth rates for 2024/25 to 2030/32.
(k) Historical Figures come from IMF, World Lead Price
(l) Historical figures come from T&D Europe
(m) Historical figures come from U.S. Bureau of Labour Statisitcs (US BLS), Producer Price Index by Commodity, WPU13990214C
(n) Historical figures come from U.S. Bureau of Labour Statisitcs (US BLS), Producer Price Index by Industry, PCU32612232612213

2. INTRODUCTION, DATA & LAYOUT

Oxford Economics Australia was engaged was engaged by Marinus Link to provide price forecasts of labour, commodity and materials that are relevant to the Victorian and Tasmanian electricity transmission and distribution industry for the period 2024/25 to 2031/32 (FY25 to FY32). Forecasts for wage and material cost escalation will be used by Marinus Link to develop their operating and capital expenditure forecasts. The forecasts in this report were finalised in late April 2025.

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 late April 2025, including the March quarter 2025 releases of the Consumer Price Index (CPI), and the December quarter 2024 Producer Price Index (PPI), Wage Price Index (WPI) and the National Accounts, plus the Reserve Bank of Australia (RBA) forecasts for the CPI and WPI contained in the RBA February 2025 'Statement of Monetary Policy'. Other inflation and interest rate data were sourced from the Reserve Bank of Australia.

Forecasts of the economic variables in this report were mostly sourced from Oxford Economics Australia reports, including the *Australian Macro Service*, *Long Term Forecasts: 2025 – 2039, Engineering Construction in Australia 2025-2039* and *Building in Australia 2025-2039*, along with other unpublished forecasts and from Oxford Economics Australia internal research and modelling.

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

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

Section 4 discusses Oxford Economics Australia' 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 wage price index (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, Victoria and Tasmania, as measured by the WPI. This section also includes forecasts and rationale for the Private sector All Industries WPI, including bonuses, plus the wage and inflation forecasts for Sweden and Germany

Section 6 provides the forecasts and the rationale for the commodity price and materials price projections.

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

3. MACROECONOMIC AND CONSTRUCTION OUTLOOK

3.1 AUSTRALIA MACROECONOMIC FORECASTS

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

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

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

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

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

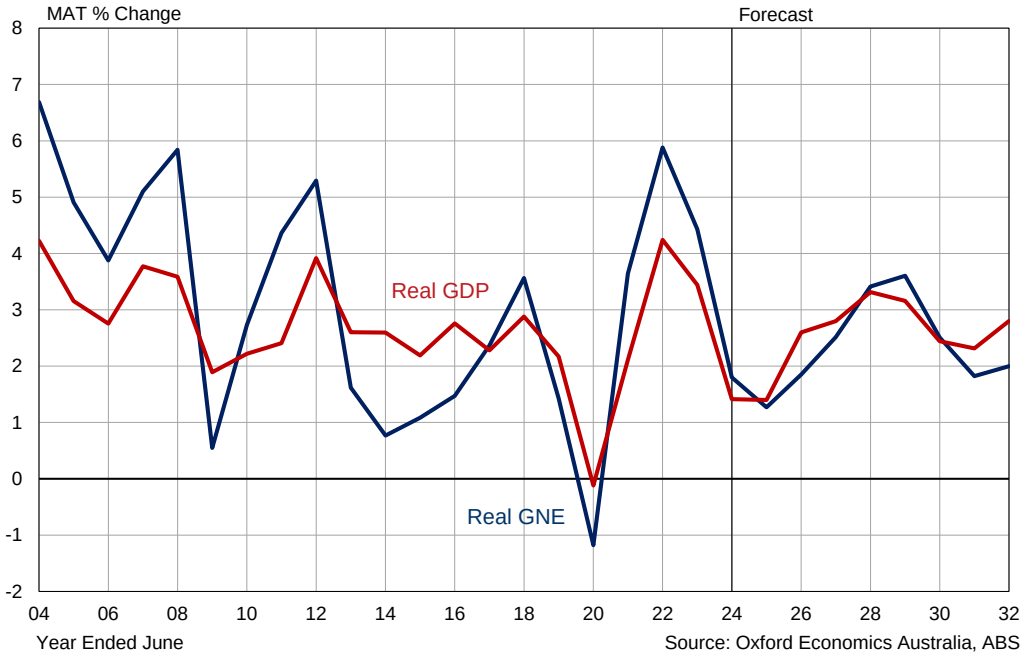
The near-term investment outlook is modest. Investment contributed steadily to Q4 growth, with publicly funded transport projects remaining a key driver, though activity in this segment has likely peaked. A large pipeline of infrastructure projects, accelerated during the COVID-19 response, will keep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

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

intangibles. Business investment growth is expected to ease through FY27 but strengthen again by FY30, helping to expand the economy's long-term productive capacity.

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

Figure 3.1 Australia – Basic Economic Indicators



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

Inflation is already easing sharply. Headline CPI fell from 7% in FY23 to 4.2% in FY24, helped by temporary government relief measures, falling fuel prices, and weaker demand. Inflation is expected to drop further to 2.5% in FY25 and remain relatively contained through FY28 before gradually picking up again into the early 2030s.

After rate hikes at 10 consecutive meetings, the RBA finally paused its hiking cycle in April 2023, but then added another 0.25% increase in May, June and November. The official cash rate then remained at 4.35% for five quarters. In response to the faster-than-expected decline in underlying inflation, the RBA cut rates to 4.1% in February 2025. More rate cuts are likely over 2025, with the timing (and number of cuts) dependent on a further easing in inflationary pressures and the RBA perceptions of the likely economic impacts from the trade war.

'Liberation Day' tariff hikes are a headwind but won't derail the Australian Economy. The new US 'Liberation Day' tariffs, announced by President Trump in April, pose a headwind but are unlikely to derail Australia's economy. Australia will face a 10% tariff despite minimal barriers to US imports,

and efforts to win exemptions appear unlikely. However, direct exposure is limited—less than 4% of Australian goods exports go to the US—with meat and pharmaceuticals most affected (though many pharmaceutical exports are temporarily exempt). Australia's competitiveness has improved relative to economies facing higher tariffs but will weaken against US domestic producers. Impacts on nominal indicators like terms of trade and equity prices are expected to be more significant than on export volumes or jobs. Key exports like beef and aluminium are likely to be minimally affected (as US beef production is at multi-year lows and only 5% of aluminium exports are destined for the US market), while steel could see a larger hit given the US market accounts for a third of Australia's steel exports.

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

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

Increased uncertainty for the global economic outlook as trade war looms. The global economic outlook has weakened, with growth forecast to ease from 2.8% in 2024 to 2.3% in 2025 and 2026. Uncertainty is rising sharply due to the volatile US tariff policy under President Trump. Frequent tariff announcements and reversals are heightening global instability, dampening investment, and raising the risk of a US recession. The US economy faces four major shocks—rising uncertainty, real income declines, supply chain disruptions, and falling stock markets impacting financial wealth—with spillovers causing a broader global demand shock. Despite these risks, the US is still forecast to avoid a deep recession, with US GDP growth slowing from 2.8% in 2024 to 1.2% in 2025 before pickup to 1.6% in 2026, before rebounding modestly over 2027 and 2028.

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

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

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

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

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

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

Interest rate cuts are expected through 2025 and FY26, helping inflation return to the RBA's 2–3% target range. Lower rates will trigger a strong rebound in dwelling construction, addressing pent-up housing demand. As consumers and businesses adjust to a new normal of higher, but manageable, interest rates, investment and consumption are expected to return to trend growth. GDP growth is forecast to strengthen to 3.3% by FY28 before easing slightly thereafter. However, the forecast strengthening of the economy and the tightening of the labour market late this decade is expected to see the RBA and government tighten policy settings, which will see growth slow over FY30 to FY32.

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 and the contribution from natural increase 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 VICTORIAN ECONOMY

After outperforming the national economy in 6 years to 2019 inclusive, Victoria experienced a larger-than-average fall in output through the coronavirus downturn. FY22 and FY23 saw a strong rebound in GSP before FY24 growth of just 1.5% as tight monetary policy impacted household demand and business investment. The state's unemployment rate has also pushed above the national average over the past two years, and this is likely to persist in the near term.

GSP growth is expected to remain weak over FY25 and FY26, due to weaker dwelling, business and public investment, and continued slow growth in household spending. GSP growth is forecast to begin improving from FY27 due to a moderate but sustained upturn in construction, with Victoria subsequently showing solid growth to the end of the decade, supported by Victoria's population growth which is expected to outpace the national average by around 0.2% p.a. Employment growth is expected to remain buoyant over the forecast period, but the state's unemployment rate is projected to remain above the national average.

The Victorian construction market is relatively more weighted towards building construction compared to the engineering sector. Weakness in the residential building and engineering sector has led total construction across the state to plateaued in FY24 at $73bn. Construction growth in the state is expected to remain weak in the near term, again floundering in FY25. A short burst of engineering construction activity is expected in FY25, underpinned by a pipeline of publicly funded transport infrastructure. However, this will be largely neutralised by a 4.5% decline in building construction, with non-residential buildings (-12.3%) hit particularly hard by elevated cost pressures and reduced

business investment. State budgetary pressures are also expected to weigh on engineering projects in FY26, resulting in total construction declining 5.5% that year to reach $69bn.

A rebound in construction activity is anticipated over the remainder of the outlook, with growth averaging 3.1% from FY27-FY29 to reach $75bn by FY29. This will likely be driven by a strong recovery in the residential building construction market (averaging +8.9% growth between FY27-FY29) as the state makes headway in addressing pent-up dwelling demand. Some additional support is also expected from the non-residential sector at the end of the decade.

Table 3.1 Victoria – Key Economic Indicators, Financial Years

							Forecast							
Year Ended June	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Victoria														
Total Construction Activity(*)	4.4	1.8	-4.4	4.2	5.1	0.2	0.0	-5.7	3.4	1.3	1.8	0.2	-0.4	-2.0
State Final Demand	3.4	-0.7	0.9	7.2	3.9	1.9	1.5	1.3	2.9	3.4	3.3	2.5	2.1	2.1
Gross State Product (GSP)	**3.0**	**-0.3**	**-0.2**	**6.7**	**3.4**	**1.5**	**1.3**	**2.0**	**2.8**	**3.4**	**3.0**	**2.3**	**2.2**	**2.3**
Employment Growth (Year Avg)	3.0	0.9	-1.9	3.9	4.3	3.4	2.8	1.3	1.4	2.0	2.4	1.9	1.1	1.1
Australia														
Total Construction Activity(*)	-8.9	-3.8	-0.5	1.7	6.3	5.7	3.2	2.2	2.9	1.9	3.2	1.5	0.1	-1.4
Australian Domestic Demand	1.6	-0.8	2.9	5.5	4.3	2.4	2.0	2.2	2.6	3.3	3.5	2.6	1.9	2.0
Gross Domestic Product (GDP)	2.2	-0.1	2.1	4.2	3.4	1.4	1.4	2.8	2.7	3.3	3.2	2.4	2.3	2.8
Employment Growth (Year Avg)	2.4	0.3	0.4	3.3	4.5	2.7	2.4	1.4	1.0	1.8	2.3	1.8	1.1	1.2

Source: Oxford Economics Australia and ABS

* Total construction work done in constant 2021/22 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.

In the long run we still expect the state to again outperform the national average, but by less than was evident pre-COVID - Victoria's economy had been partially driven by rapid expansions in higher education and tourism, but these two areas will now offer lower growth opportunities. Offsetting this will be the return of relatively stronger population growth, with Victoria's population growth expected to again outpace the national average from FY23 by around 0.2% p.a. This will provide an added boost to consumer, housing and infrastructure demand over the medium-to-long run.

3.3 OUTLOOK FOR TASMANIAN ECONOMY

Tasmania's State Final Demand (SFD) and Gross State Product (GSP) slowed sharply over FY23 and FY24 from the very strong growth of FY21 and FY22. Slower growth household spending and falling dwelling investment also acted as drags on SFD growth in FY23 and FY24, with these drags to continue over the next two years.

Overall exports of goods and services expected to be boosted over the next 1-2 years by a strengthening of international and interstate tourism, providing an important boost to overall output (GSP) in the state. Also boosting growth will be stronger business investment, particularly electricity, mining and heavy industry engineering construction activity, aided by a strong recovery in non-dwelling building. Public investment will also show renewed strength, led by harbours, water and electricity infrastructure construction. The strengthening in construction and investment will see a pick-up in SFD and GSP over FY26 and FY27.

Growth is subsequently forecast to ease over FY28 and FY29, as some large private and public projects finish, although this will be somewhat offset by a strong upturn in dwelling investment – with a worsening undersupply of housing and lower interest rates from 2025 initiating the next dwelling construction boom. The improvement in the state economy will also see another round of business investment over the latter part of the decade, which will also contribute to economic and employment growth.

Table 3.2 Tasmania – Key Economic Indicators, Financial Years

							Forecast							
Year Ended June	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Tasmania														
Total Construction Activity(*)	15.5	0.3	1.4	5.2	0.9	0.4	2.1	14.2	8.2	-5.2	3.7	-4.4	-4.5	-1.8
State Final Demand	4.6	-0.5	5.5	5.5	1.4	1.9	1.9	2.9	3.3	2.1	2.7	1.6	1.1	1.5
Gross State Product (GSP)	**3.8**	**0.3**	**4.4**	**4.5**	**1.9**	**1.4**	**2.0**	**2.7**	**2.9**	**2.1**	**2.2**	**1.6**	**1.3**	**1.7**
Employment Growth (Year Avg)	1.2	2.0	2.9	4.0	2.5	-0.5	-1.0	1.1	1.0	1.2	1.6	1.1	0.4	0.8
Australia														
Total Construction Activity(*)	-8.9	-3.8	-0.5	1.7	6.3	5.7	3.2	2.2	2.9	1.9	3.2	1.5	0.1	-1.4
Australian Domestic Demand	1.6	-0.8	2.9	5.5	4.3	2.4	2.0	2.2	2.6	3.3	3.5	2.6	1.9	2.0
Gross Domestic Product (GDP)	2.2	-0.1	2.1	4.2	3.4	1.4	1.4	2.8	2.7	3.3	3.2	2.4	2.3	2.8
Employment Growth (Year Avg)	2.4	0.3	0.4	3.3	4.5	2.7	2.3	1.2	1.1	1.9	2.3	1.8	1.1	1.2

Source: Oxford Economics Australia and ABS

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

Employment has declined over FY24 and FY25, but the state unemployment rate has been kept in check by a fall in the participation rate. Tasmania's participation rate is structurally lower than the rest of the country (by around 5-6% lower) due to the relatively older population. We expect low unemployment rates of around 4%-4.2% (on average) to be maintained over the next 1-2 years, due to modest growth in employment matched by modest population growth. The strength of employment will underpin moderate household spending and overall SFD and GSP.

Lower population growth over the next few years will act to constrain household demand and longer term demand for infrastructure and housing. Population growth was very strong over FY17 to FY20, averaging 2.2% p.a. – 0.6% above the national average, which was quite contrary to historical 'norms' of Tasmanian population growth lagging the national average. Population growth is now picking up from the lows of the past two years and is expected to average 0.5% in FY25, and then 0.7% to 0.8% over FY2 to FY32 – with Tasmania's population growth projected to lag the national average by around -0.5% FY27 to FY32.

4. WAGES AND INFLATION OUTLOOK - AUSTRALIA

4.1 CPI OUTLOOK

Price inflation eases back to RBA target as supply pressures ease

Consumer price inflation was subdued for the five years to the March quarter 2020, with annual (through-the-year or y/y) headline CPI inflation ranging between 1.0% and 2.2%; averaging 1.7%. Meanwhile, underlying (or core) inflation fell below the Reserve Bank's target 2-3% band in March 2016 and stayed there. Despite considerable volatility in prices due to COVID-19, the CPI remained under 2% over FY20 and FY21. However, over 2021 and 2022 a series of factors resulted in CPI inflation climbing, with headline CPI peaking at 7.8% and core inflation (trimmed mean) peaking at 6.8% in the December quarter 2022. These factors included severe supply chain shortages and delays, the zero-Covid policy pursued by China, the outbreak of war in Ukraine (and associated sanctions), floods in eastern Australia leading to substantial rises in some food prices; and the decline in the Australian dollar over 2022 and into 2023, further pushing up imported prices. Added to this was evidence of rising demand inflation via widening profit margins, as local businesses took advantage of stronger economic conditions.

Another important component of procyclical inflation since mid-2021 was the cost of constructing a new dwelling (which constitutes 8.5% of the CPI 'basket'). Cost inflation in the construction sector had been escalating since late 2020, due to both the surge in construction work generated by the HomeBuilder subsidy, and materials and labour shortages caused by this additional demand and exacerbated by supply bottlenecks and workplace restrictions. The house purchase component increased 20.7% y/y over the year to September 2022, before easing over the past two years to 4.8% y/y in the September quarter 2024 and then to 1.4% in the March 2025 quarter.

Overall, headline CPI inflation averaged 7% in FY23 and 4.2% in FY24. In July 2024, the government enacted a number of measures, including temporary electricity bill relief and rental subsidies, plus a sharp fall in fuel prices. This resulted in a low September and December quarter CPI outcomes of just 0.2% in each quarter, pushing the annual (through-the-year or y/y) growth from 3.8% in the June 2024 quarter to 2.4% in the December quarter. The March 2025 quarter outcome of 0.9% q/q saw the headline rate remain at 2.4%, but more importantly, saw the core inflation rate fall to 2.9% - the first time the core rate has been back in the RBA target band since December 2021.

With most of the above supply-side pressures to ease further and oil and other commodity prices to weaken over FY25, we expect their absence will help subdue headline inflation materially over the coming year. Demand-driven inflation has also appeared to have weakened, largely due to higher interest rates. Nevertheless, the tight labour market - with the unemployment rate currently around 4% and expected to stay around 4.1-4.4% for the next year - will continue to contribute to wage pressures, although overall wages have now peaked.

However, some structural factors will add to inflation over the short-to-medium term, such as household energy costs, rising higher rental and elevated food inflation. Rents constitute around 6% of the CPI, electricity and gas 2.9%, while food accounts for over 10% of CPI basket (or over 17% if you include meals out and takeaway food). Rental price growth rose to 4% (y/y) in the December quarter 2022 and lifted to 7.6% in the September quarter 2023 and has only slowly subsided to 5.5% in the March quarter 2025. Given the extreme tightness in rental markets currently, the CPI measure

of rents is expected to remain quite high over the next 2-3 years as existing rental contracts roll over to new, much higher rents and new supply fails to keep with strong housing demand. Another factor driving inflation over the next 1-2 years will be further above-average increases in electricity and gas prices. It is worth noting that both rent and energy price rises in the September and December quarters were constrained by temporary government subsidies, which will then see headline CPI inflation jump in the September quarter 2025 and March quarter 2026, when these temporary measures finish.

Food inflation had averaged around 2.8% p.a. over the 25 years to 2014 but were very weak over the five years to FY19 (averaging only 1.1% p.a.), which was a key factor which muted prices over those years. This was due to intense competition between the major supermarkets and falling or weak global agricultural prices. The supermarkets cannot keep cutting prices (and either their own margins or suppliers' margins), while world agricultural prices will remain elevated over the medium term, now the previous global oversupply has dissipated. So while food inflation has fallen back from the 10% rises of 2022 to 3.2% y/y in the latest quarter, food prices are unlikely to track back to the sub-2% of the 2015-2019 period.

Underlying and headline CPI inflation are expected to remain somewhat elevated over FY25 to FY26 as the supply and demand pressures slowly abate, the labour market remains tight, and wage growth remains relatively high. Although global inflationary pressures will ease further over the next year, they will remain elevated, contributing to higher manufacturing costs and prices over the near term. The sharp decline in the exchange rate from around US$0.72 in the first half of 2022 to US$0.63 recently will also add to inflationary pressures in the near term. Conversely, we expect the A$ to appreciate toward US69 cents over the medium-term, which will provide some offsetting pressures.

Overall, OEA forecasts the national headline CPI inflation to be 2.4% in FY25 and 3.2% in FY26. The softer growth in the economy over FY24 to FY27 will see price and wage pressures weaken, with the CPI to ease back to around 2.8% in FY27 and 2.5% in FY28, before picking up from FY29 and averaging 2.8% over the latter years of the 2020s, before easing back over FY31 and FY32 as the economy slows. Our forecasts, on average, are similar to the February 2025 RBA forecasts over FY25 to FY27 (see section 4.1.1 below).

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

Headline CPI inflation is expected to sit in the upper half close of the RBA's 2-3% target band in the long run based on the following:

- Tradeables inflation, which currently constitutes around one-third of the CPI basket, is forecast to increase by an average of around 1.5% to 2% per annum contributing around 0.6% to annual inflation. Limited movements in the A$, steady (but subdued) increases in global manufacturing costs and some commodity price increases underpin this projection.

- Non-tradeables inflation comprises the remaining two-thirds of the basket, but this proportion is increasing due to the move toward services and higher price inflation (than tradeables). It is assumed to increase by around 2.5-3% per annum, contributing around 2.1% to headline inflation. This is weaker than the 3.7% average increases achieved from 2001 to 2015 when relatively high wage inflation, lower than average productivity growth to 2009 and also large rises in utilities prices pushed non-tradeables inflation to well outside of the RBA's 2 to 3% target range. We expect higher wages growth in the longer term and lower long-term productivity will also contribute to the maintenance of relatively high non-tradeables inflation.

4.1.1 RBA CPI Forecasts are Used to Calculate Real Wages

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

The RBA's February 2025 'Statement on Monetary Policy' forecast the headline CPI rate to be 2.4% (y/y) in the June quarter 2025, but the lower-than-expected March actual result is likely to see a lower outcome In the June quarter - giving a year average of 2.4% for FY25. With the energy and rental subsidies expected to finish in mid-2025, the RBA forecast the headline inflation jumps to back up to well above 3% in the December quarter 2025, before easing to 3.2% in the June quarter 2026 – giving a year average CPI rate of 3.3% for FY26. The RBA's CPI forecast for December 2026 is 2.8% and 2.7% for the June quarter 2027, then the year average CPI for FY27 of 2.7%. Beyond the RBA's forecast from the SoMP, we assume the CPI averages 2.5% over the medium-to-long term.

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 will remain elevated as labour market remains tight

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

A key element adding to wage pressures over FY22 to FY24 was the rapid tightening in the national labour market. Employment growth has been very strong over the past three years, with the unemployment rate averaging 3.6% in FY23 and 3.9% in FY24 and labour force participation rates at record levels. A key to the outcomes over FY22 was little growth in the pool of available labour. The cessation of international migration to Australia from March 2020 saw population growth plummet to just 0.2% in the year to June 2021. Growth in the labour force over recent years has been facilitated

[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".

Figure 4.1 Australia: Wages and Prices

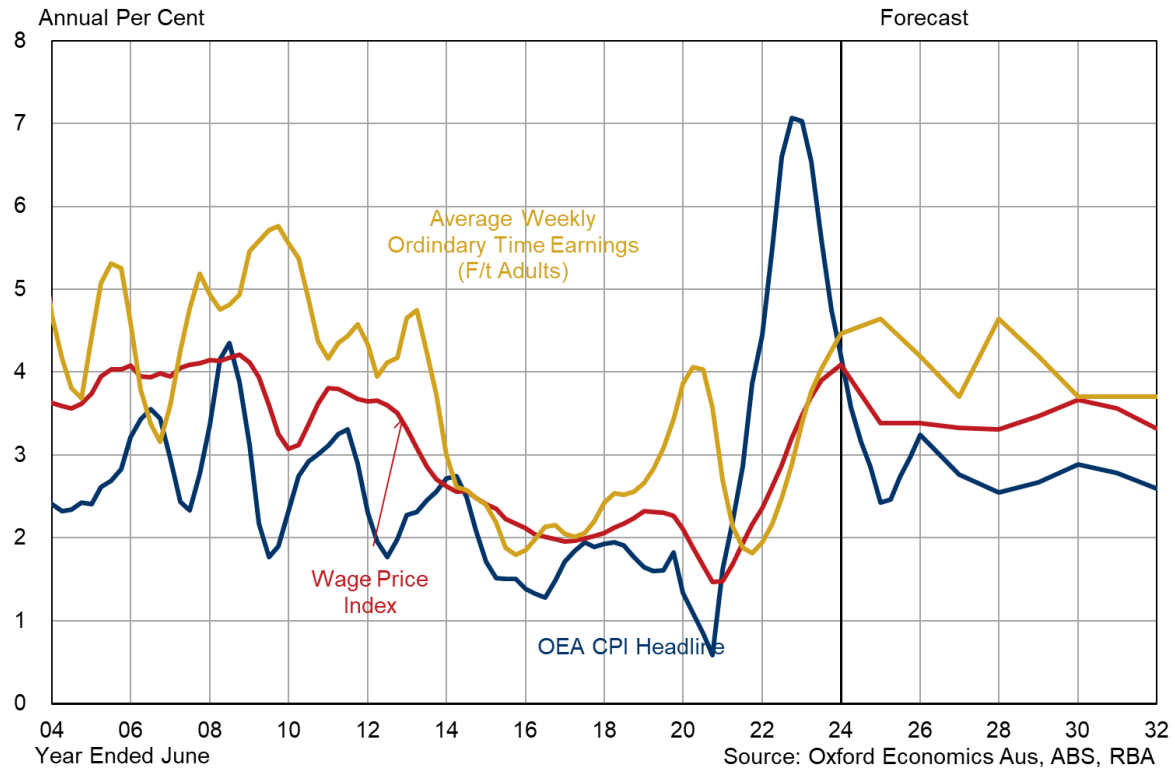
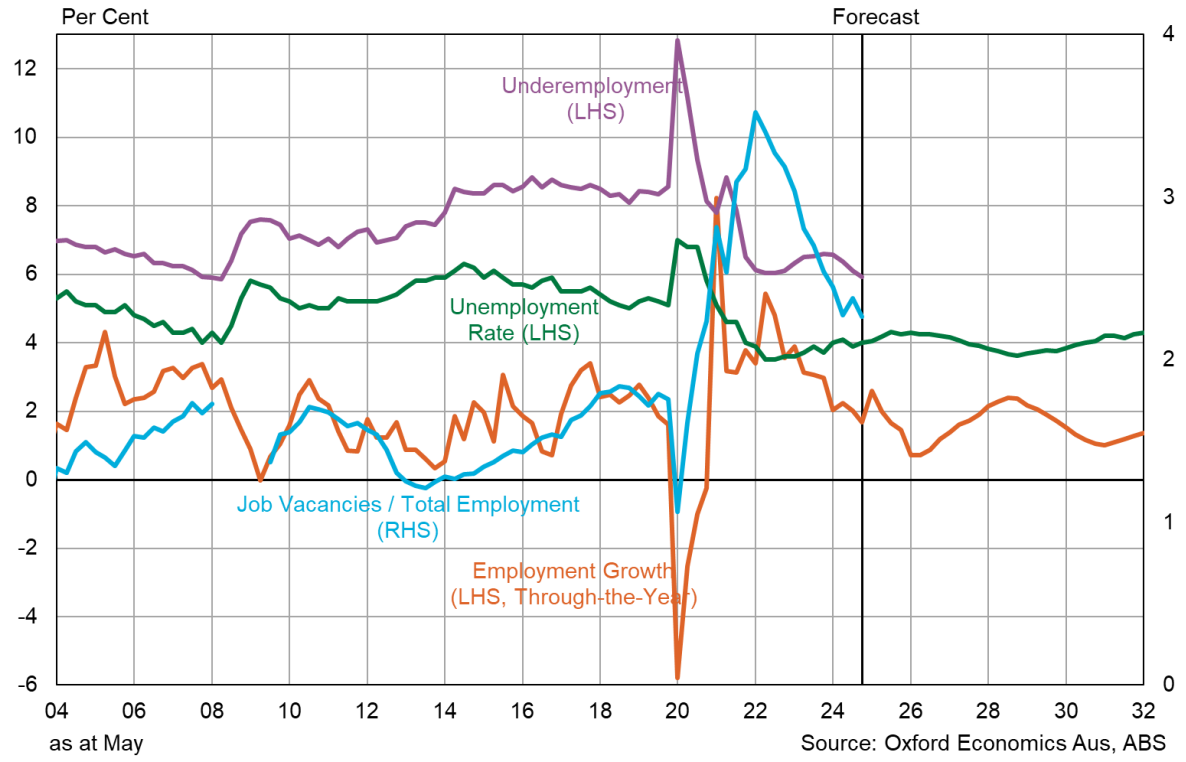


Figure 4.2 Australia: Employment and Unemployment



by a marked increase in the labour force participation rate to record levels, with the return of high immigration adding to employment growth. However, immigration and the growth in the working population will slow markedly from here, as the government acts to stem the high numbers of arrivals. Furthermore, there is now little scope to raise the participation rate further and, with the underemployment rate near historical lows and job vacancies still well above pre-COVID levels, wage pressures will remain elevated in the near-term participation rate to record levels. However, there is now little scope to raise the participation rate further and, with the underemployment rate at historical lows and job vacancies well above pre-COVID levels, wage pressures will remain elevated.

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

Although OEA's economic growth (GDP) forecasts are for further weak growth over FY25 and FY26, we still expect the labour market to remain tight, with labour demand still relatively strong and the unemployment rate only drifting up slowly from 4% now to 4.3% by late-2025 where it will remain until late 2026. Job ads are still very high – well above pre-Covid levels, suggesting further jobs growth, although slowing from here. Furthermore, we expect that the rise in the unemployment rate will be kept in check by falls in the participation rate from current record levels, as employment growth slows. This is likely to occur amongst those currently in the workforce with a 'loose attachment' to the workforce, such as older workers who stayed in the workforce due to strong labour demand. As demand eases, a significant proportion of workers are likely to drop out of the workforce (and hence the labour force statistics) and possibly retire.

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

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

In the short-term, our wage forecasting methodology involves an analysis of the expected future wage movements in the three main methods of setting pay – for those reliant on awards (13% of the full-time workforce), collective agreements (35% of the workforce) and those who have their pay set by individual arrangements (52%). In terms of those workers on awards who have their pay determined by the Fair Work Commission (FWC) in the annual National Minimum Wage (NMW) case, the increase given in June 2022 for the 2022/23 financial year was much higher than previous years – with the FWC awarding a 5.2% increase to workers on the minimum wage, although workers on award rates only received a 4.6% increase (minimum $40/week increase for award rates below $870/week). A key element of this decision was the very high CPI inflation rate of 5.1% in the March quarter 2022 (which was then the latest available quarter).

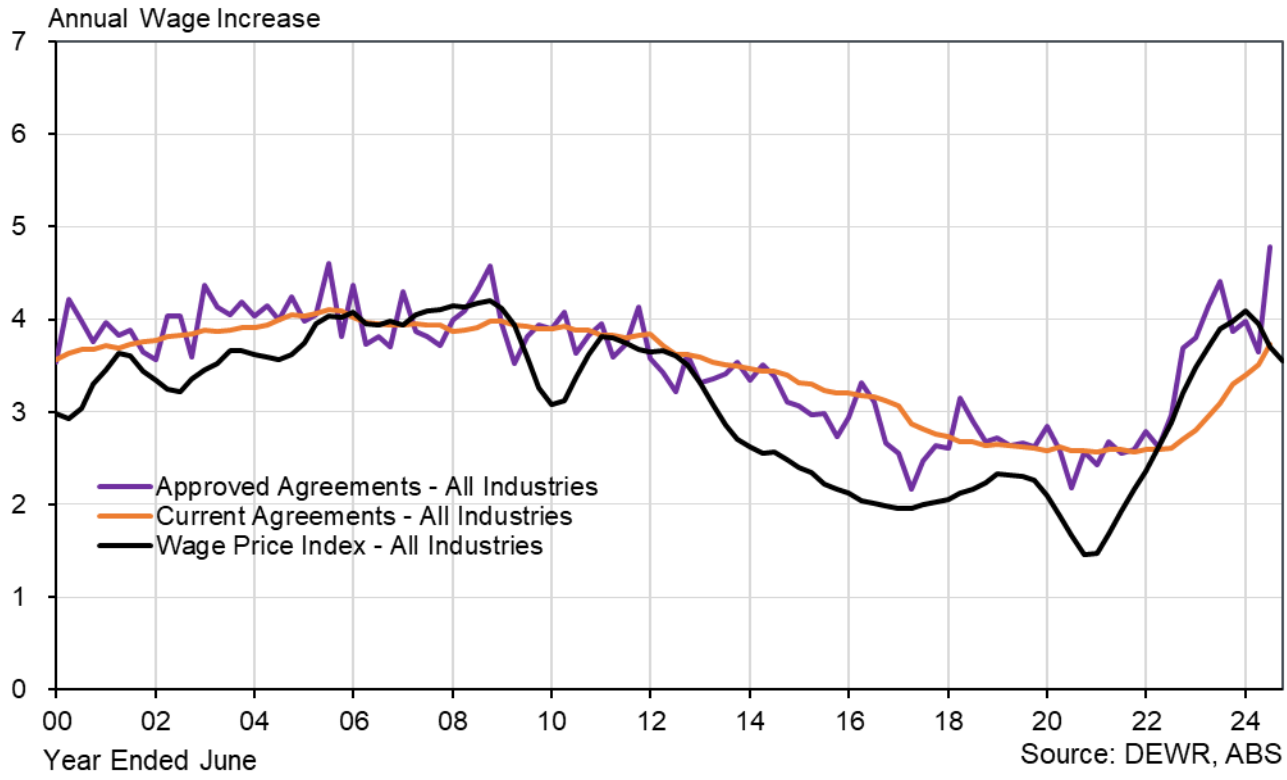
The June 2023 NMW decision (for the 2023/24 financial year) was even higher, driven by CPI inflation of 7% in the March quarter 2023. The Commission awarded an 8.6% in the minimum wage and an increase of 5.75% for workers on awards. This underpinned the lift in wages growth in FY24. The most recent 2024 NMW decision, for the 2024/25 financial year, will see the minimum wage increase by 3.75%, another strong result given CPI will be trending below 3.0%. It is likely that the minimum and award increases provided by the FWC will remain high again in FY26 given elevated CPI inflation and particularly given the support for higher wages from the current Federal Labor government (which the previous government did not support).

Although only 13% of full-time workers (a much higher proportion for part-time workers) rely on the annual increase in the minimum and award wage as their primary wage-payment mechanism, a significant proportion of workers are also indirectly influenced by the NMW increase, as it usually

flows onto industry awards, with the Fair Work Commission estimating its decisions will affect more than 2.7 million workers (around 20% of the workforce). Accordingly, these FWC decisions will also influence the strength of wage increases given to those who receive their wages via 'individual arrangements' pay setting arrangements, as a significant proportion of wage increases given under individual arrangements are based on awards. Recent inflation outcomes, inflationary expectations and the tightness of the labour market are also key influences in the setting of wage increases under individual arrangements.

It is important to note that wage growth usually lags changes in the labour market, inflation and economic conditions, because of the inherent lags in wage setting mechanisms. Although wage increases related to the NMW and relevant awards are set each July, many of the enterprise agreements – covering 35% of the full-time workforce – run for an average of 2-3 years. These agreements averaged 2.6% over the five years to December 2021, having been set in an environment of low inflation and a much less tight labour market. However, as these previous (low wage increases) agreements expire, the next round of agreements have been materially higher, due to ongoing high CPI inflation and because of widespread skilled labour shortages (with the unemployment rate expected to be below 4%). The latest DEWR (Department of Employment and Workplace Relations) data shows that agreements recently approved have lifted from 2.6% (average annualised wage increases – AAWI) in the September 2022 quarter to a very high 4.8% in the latest quarter for which data is available (December 2024), with an average of 4% over the past two years (September 2023 – December 2024). We expect continued high agreements to be negotiated over coming quarters.

Figure 4.3 EBAs – Approved vs Current Agreements – All industries, Australia



Of the other 52% of workers on individual agreements, those of who are on awards will receive an annual pay increase via the FWC increase, while others may receive an annual salary increase, but there are a significant proportion on fixed contracts running over a few years. The bottom line is that

the recent and current rounds of wage rises negotiated by workers will 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 rose 4.1% in FY24 and is forecast to remain at an elevated 3.4% over the next two years. As the economy cools and the unemployment rate rises, All Industry wages are expected to soften over FY27 and FY28. However, from FY29 the WPI is expected to re-accelerate as the economy strengthens, the unemployment rate declines, the labour market tightens (particularly for skilled labour) and CPI inflation begins to pick up. The All Industries WPI is forecast to rise and peak at 3.7% in FY30, before easing as the economy slows. Although easing over the next 4 years, All Industries wage growth will still sit well above the 2.2% averaged over the back half of the 2010's. This will be due to the fact that labour market conditions will be tighter and inflation higher compared to this pre-covid period.

Overall, using RBA CPI forecasts, real (inflation-adjusted) WPI growth for the Australian All Industries WPI is forecast to show positive growth in real wages from FY25 to FY32, with WPI growth remaining relatively high and CPI inflation lower than the FY22-FY24 period. Over the eight-year period from FY25 to FY32, the real rate of increase is forecast to average 0.8% p.a., which will be above the 0.6% average of the decade to FY20 inclusive.

The Victorian and Tasmanian All Industries WPI are expected to largely track the national All Industries WPI over the forecast period, with minor year-by-year differences related to the relative strength of the respective state economic growth and labour markets.

5. INDUSTRY WAGES - UTILITIES & CONSTRUCTION: AUSTRALIA, VICTORIA & TASMANIA; SWEDEN & GERMANY

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 Victoria and Tasmania is used as a proxy for all of Marinus Link'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 Marinus Link's opex and capex 'network' labour and escalating it with the WPI for the state utilities sector will be consistent with the AER's framework.

OEA chose to use the Wage Price Index (WPI) as the key measure of growth in Marinus Link'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 applies to **FY24, FY25 and FY26**. This is in line with advice from Deloitte Access Economics (DAE) to the AER in their Superannuation Guarantee paper, that "…taking into account the uncertainty regarding how individual NSPs will respond to changes in the minimum superannuation guarantee, it is recommended that the full 0.5 percentage point annual increase to the superannuation guarantee be added to forecast WPI growth" (page 5 of DAE impact of *Changes to the Superannuation Guarantee on Forecast Labour Price Growth,* July 2020).

5.2 NATIONAL, VICTORIAN & TASMANIAN 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 8-year period from FY25 to FY32 inclusive the Australian EGWWS WPI is forecast to average 3.8%, which will be 0.4% above the All Industries average. In real terms, the Australian EGWWS WPI is forecast to average 1.2% p.a. over the eight years to FY32. The overall real average of 1.2% is a above the 0.9% p.a. averaged over decade to FY21, but below the 1.5% average of the decade to FY11. In terms of the historical difference vis-à-vis the All Industries WPI average, the difference is the same as 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
2024	1 895	4.5	0.3	2,217	5.1	0.9	149.5	4.1	-0.1	156.3	4.1	-0.1
Forecasts												
2025	1 983	4.6	2.2	2,351	6.0	3.6	154.6	3.4	0.9	163.5	4.6	2.2
2026	2 067	4.2	0.9	2 458	4.5	1.3	159.8	3.4	0.1	169.9	3.9	0.7
2027	2 143	3.7	1.0	2 553	3.9	1.2	165.1	3.3	0.6	176.2	3.7	0.9
2028	2 214	3.3	0.7	2 644	3.5	1.0	170.6	3.3	0.8	182.4	3.5	1.0
2029	2 300	3.9	1.4	2 749	4.0	1.5	176.5	3.5	1.0	189.1	3.7	1.2
2030	2 401	4.4	1.9	2 875	4.6	2.1	183.0	3.7	1.2	196.4	3.9	1.4
2031	2 509	4.5	2.0	3 007	4.6	2.1	189.5	3.6	1.1	204.0	3.9	1.4
2032	2 612	4.1	1.6	3 144	4.6	2.1	195.8	3.3	0.8	211.9	3.9	1.4
Compound Annual Growth Rates (3)												
2001-2011	4.8		1.9	4.8		2.0	3.7		0.9	4.4		1.5
2011-2021	3.0		1.1	2.7		0.9	2.4		0.5	2.8		0.9
2024-2032	4.1		1.5	4.5		1.8	3.4		0.8	3.9		1.3

Source: BIS Oxford Economics, ABS

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

(2) Wage Price Index, excluding overtime and bonuses

(3) CAGR (Compound Annual Growth Rates) for 2024-2031 is the average annual growth for 2024/25 to 2030/32 inclusive

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

During the COVID-19 crisis, the EGWWS sector fared much better than just about all other sectors, along with the Education, Health & Social Assistance and Finance and Insurance sectors, in terms of wage increases over FY20 and FY21. However, in FY22, annual growth in the EGWWS WPI (1.5%) slipped below the All Industries average (2.4%) for only the second time in the past two decades. However, this proved to be a short-lived aberration, with the EGWWS WPI rebounding strongly over FY23 to match the national average of 3.5%. In FY24 the EGWWS WPI matched the All Industries WPI of 4.1%, but the All Industries average was boosted by some large one-off 'catch-ups' in wages for some low paid sectors such aged-care and child care. From FY25, we again expect the EGWWS WPI to outpace the All Industries WPI over the forecast period. Driving this will be much higher EBAs negotiated in an environment of relatively high inflation and a very tight labour market, particularly for the types of skilled labour that dominate in the sector.

To a large extent, higher relative wages growth has been underpinned by strong capital works program in the utilities sector over the past two decades (and particularly up to 2013 - resulting in robust employment growth over the same period), strong competition from the mining and construction workers for similarly skilled labour and the powerful influence of unions in the utilities sector. This is set to continue over the next decade (also see figures 5.5, 5.6 and 5.7).

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

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

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

As at May 2023, 61.6% of full-time non-managerial employees in the EGWWS industry have their wages set by collective agreements, considerably higher than the national average of 35%. Over the 10 years to 2016, previous BIS Shrapnel research found that a higher proportion of workers on collective agreements was associated with higher wage growth, with a correlation coefficient of +0.6. 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 3.9%.

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

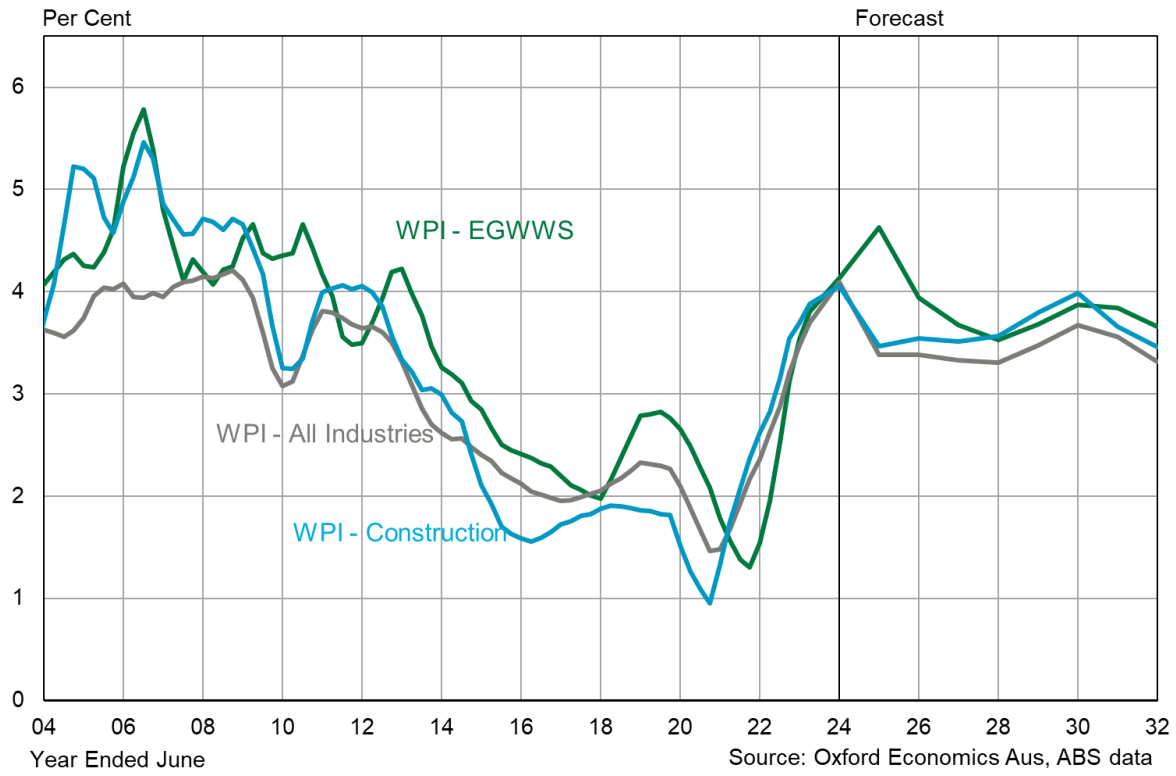
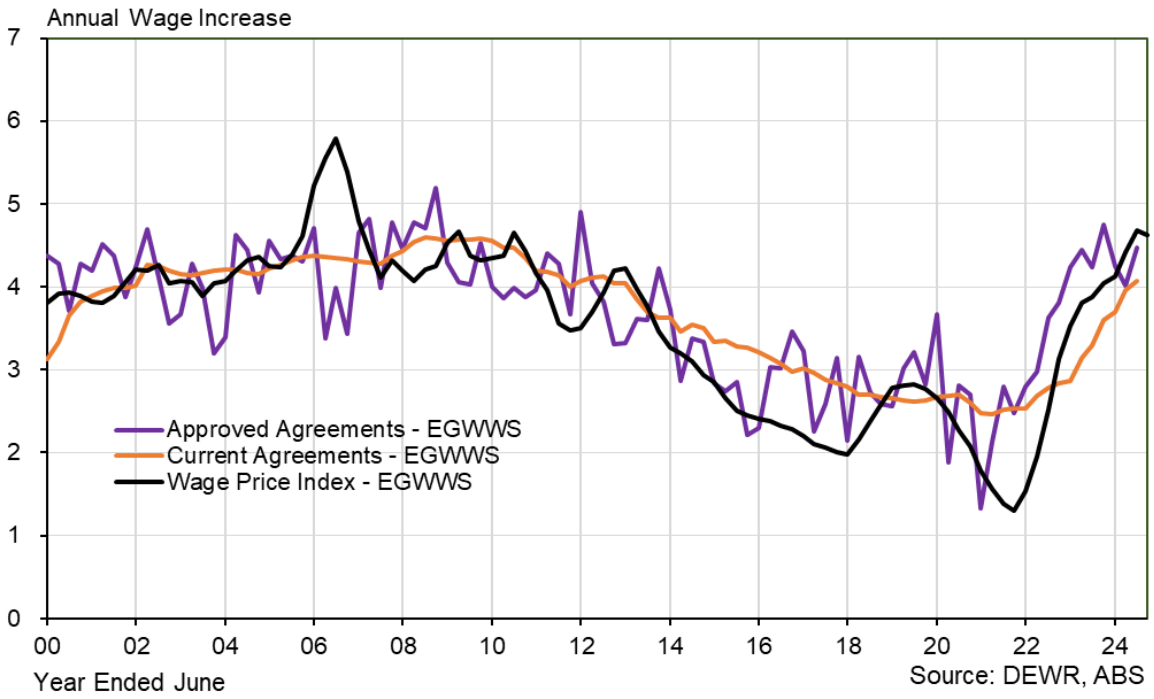


Figure 5.2 EBAs – Approved vs Current Agreements – Electricity, Gas, Water & Waste Services Sector, Australia



Oxford Economics Australia analysis shows collective agreements in the EGWWS sector were on average around 1.5% higher than CPI inflation over the 15 years to FY2014 (excluding the effects of GST introduction in 2000/01). In the six years to FY20, collective agreements were on average 1.4% above the CPI. Given the strength of unions in the sector and a still strong demand for skilled labour, collective agreements are forecast to average around 1.4% above the 'official' CPI over FY25-32, similar to previous periods.

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

EBA outcomes were relatively weak over FY21 and remained subdued in FY22 (averaging 2.5%), compared to the 5 years to FY20, when EBAs averaged around 2.9%. However, EBAs have picked up appreciably over the past two years, with approved EBAs averaging 4.4% (AAWI terms) in calendar 2024 – an outcome not seen in over 15 years. We expect the next rounds of EBAs negotiated in the sector to remain elevated around current levels of 4-4.5%, due to several factors:

- CPI inflation will remain high (averaging 7% in FY23, 4.2% in FY24, 2.4% in FY25, 3.3% in FY26),
- the demand for skilled labour remains strong, and
- the recent very high enterprise agreement outcomes in the construction sector will influence negotiations in the EGWWS sector, as some skills can be transferable.

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

Increases in individual agreements (or non-EBA wages) are primarily influenced by the strength of the labour market (especially the demand-supply balance of skilled labour), inflationary expectations, the recent profitability of relevant enterprises (which influences bonuses and incentives, etc.), current business conditions and the short-term economic outlook. Demand for labour (and hence wages) in the utilities sector are also significantly influenced by investment in the sector, particularly engineering construction, which has been the key driver of employment growth in the sector over the past two decades. Figures 5.6, 5.7 and 5.8 illustrate this relationship, and shows employment has a much stronger relationship with utilities engineering construction rather than utilities output.

The overall labour market is expected remain tight over the next 2 years, with the unemployment rate to remain around 4%, despite a slowing in employment growth from 4.5% in FY23 and 2.7% in FY24 to 2.4% in FY25 and 1.4% in FY26. We expect population and labour force growth to largely match employment growth, with small declines in the participation rate keeping the unemployment rate low, as workers with a 'loose attachment' to the workforce drop out as labour demand eases (some to fully retire). Hence, we expect to see the continuation of critical skilled labour shortages and competition for scarce labour - particularly from the mining and construction sectors - which will push up wage demands in the utilities sector. Mining investment is now picking up and is forecast to see steady increases over the next 6 years to the end of the decade (see figure 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 surpassed the 2018 levels – excluding oil and gas,

where a significant proportion of the 'work done' measure is large imported components assembled on-site (see figure 5.4).

Figure 5.3 Australia – Mining Investment

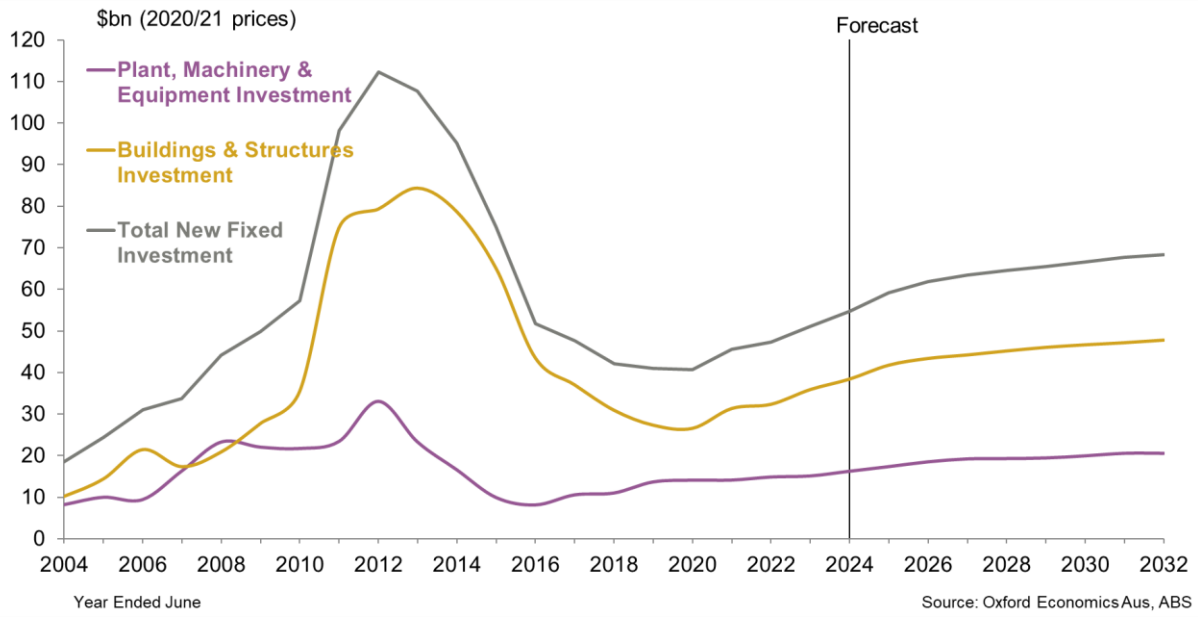
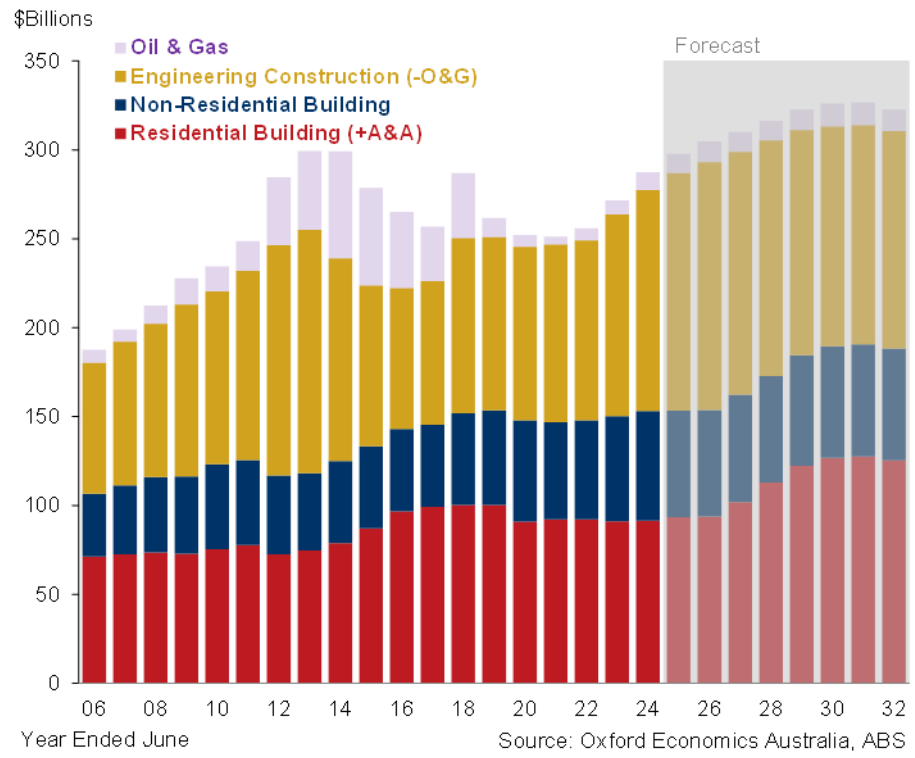


Figure 5.4 Australia – Construction Activity (real work done)



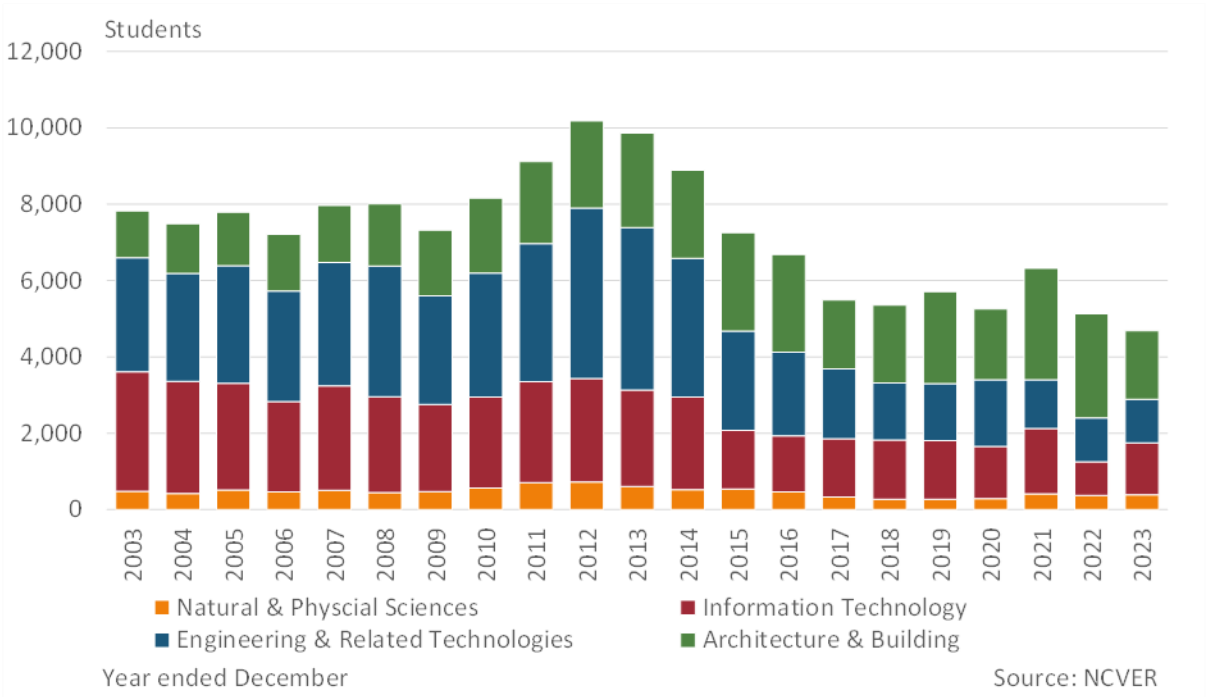
With regard to utilities investment, Oxford Economics Australia is forecasting steady increases over the next 8 years (and beyond), with electricity-related engineering construction projected to be 30%

higher in FY32 compared to FY24 levels, following the 59% increase over the past three 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 the next few years.

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

Figure 5.5 Australia, number of completions, VET, 2003-2023



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 all the states (see figure 5.9). High productivity levels and commensurate skill levels are the key reasons why wage levels are much higher in the utilities sector than most other industries (in terms of average weekly earnings measures – see table 5.1).

However, over the past two decades, the growth in productivity in the sector has not been a driver of higher wages growth in the utilities sector. Productivity suffered a steep decline over 2001 to 2014 due to a combination of strong employment growth (mainly due to rising investment, as previously discussed) and weak growth in GVA, in Australia and across all states (see figures 5.6, 5.7 and 5.8). Meanwhile, utilities wages growth was relatively strong over this same period. In effect, there is no clear relationship between wages growth and the traditional productivity measures (i.e. GVA/Employment) in the utilities sector. Low productivity growth 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 or enhancement.

5.2.1 Outlook for Utilities Wages Growth in Victoria & Tasmania

Wages in the Victorian and Tasmanian utilities sectors are expected to move in line with the national utilities sector average over the 8 years from FY25 (see table 1.1). In the near-term, the **Victorian EGWWS WPI** is expected to remain somewhat lower than the national EGWWS WPI, as in FY23 and FY24. This was due to a combination of weaker EBAs than the national average and much weaker utilities construction over the past three years. Very strong wage increases in Queensland have also boosted the national average. Slightly weaker EBAs in Victoria than the national EBA average recently are also expected to see Victorian utilities wages track below the national WPI outcomes over FY25 to FY27. Subsequently, strong increases in utilities engineering construction in Victoria (see figure 5.7) will see Victorian utilities WPI growth keep pace with the national EGWWS average over the following five years to FY32.

The ABS does not provide WPI data for the Utilities sector in **Tasmania**, providing state utilities data only for NSW, Victoria and Queensland (the latter since early 2019). These three states collectively account for around 75% of total Australian utilities employment, with South Australia accounting for 8% and Western Australia 12%. Tasmania only accounts for around 3% of total Australian utilities employment. Historical data and forecasts of WPI for the EGWWS sector in Tasmania are therefore based on national EGWWS WPI forecasts, as well as movements in the 'unknown residual' for the utilities WPI and differences in outcomes in collective bargaining in Tasmania compared to the national average for the utilities sector.

Wages in the Tasmanian utilities sector are expected to move in line with the national utilities sector average over the forecast period (see table 1.1). We estimate that utilities WPI growth in Tasmania outpaced the national average in FY23 and was quite strong in FY24 and FY25, largely due to strong growth in enterprise bargaining agreements outcomes. However, with the recent narrowing of this differential of Tasmania vis-à-vis the national average in terms of 'approved' agreements, we expect the 'current agreements' differential to also narrow and for the Tasmanian utilities WPI to track just below the national average over the next 8 years.

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

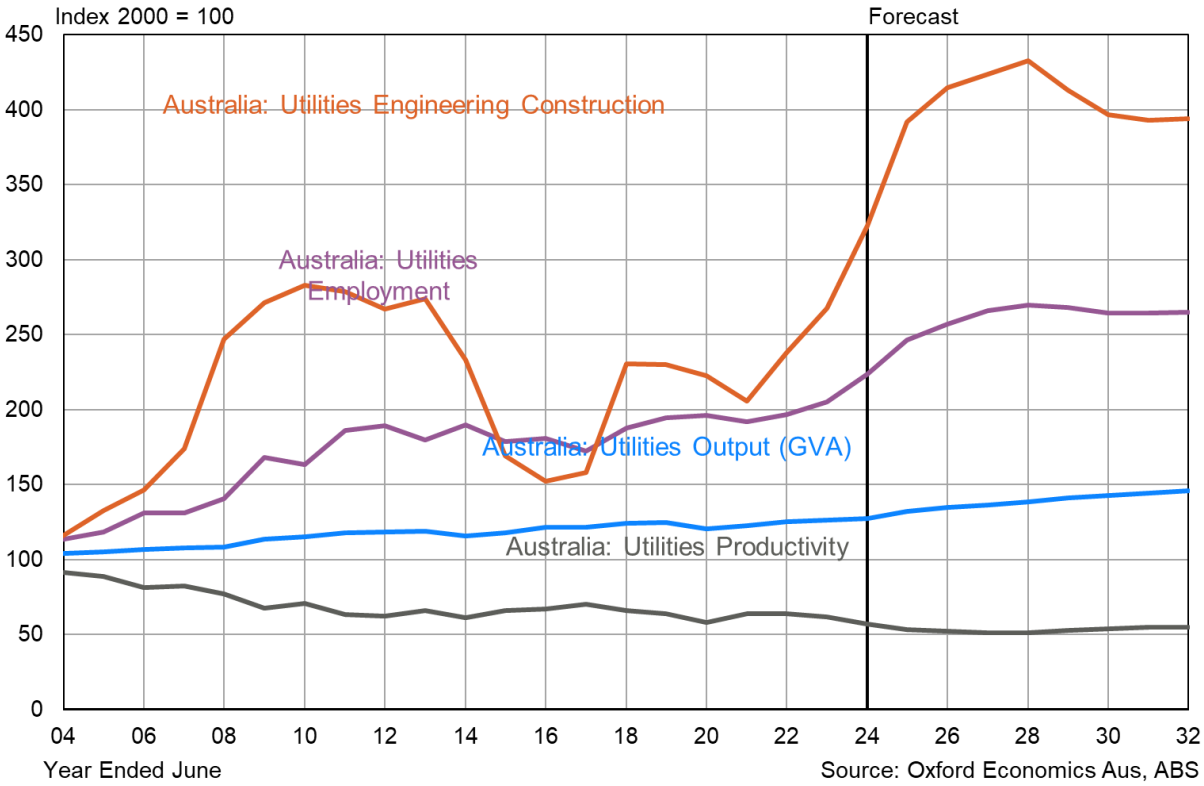


Figure 5.7 Victoria – Utilities Employment, Output, Investment & Productivity

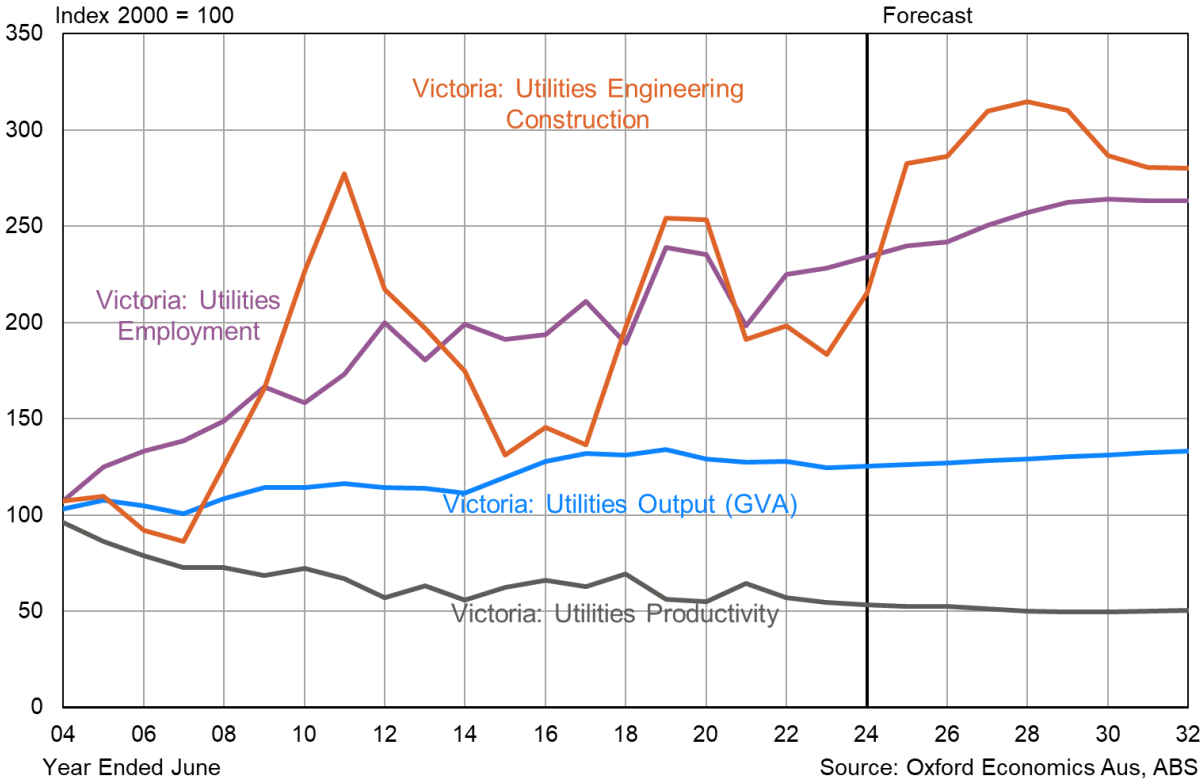


Figure 5.8 Tasmania – Utilities Employment, Output, Investment & Productivity

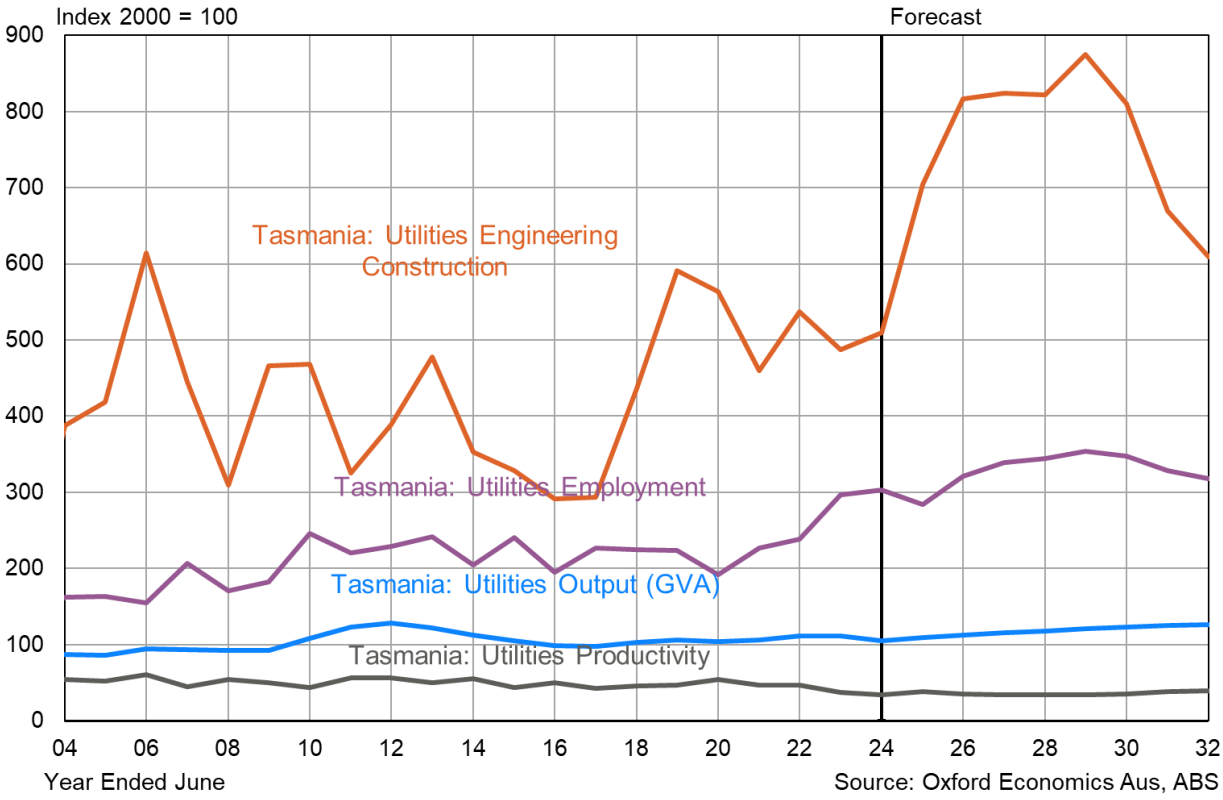
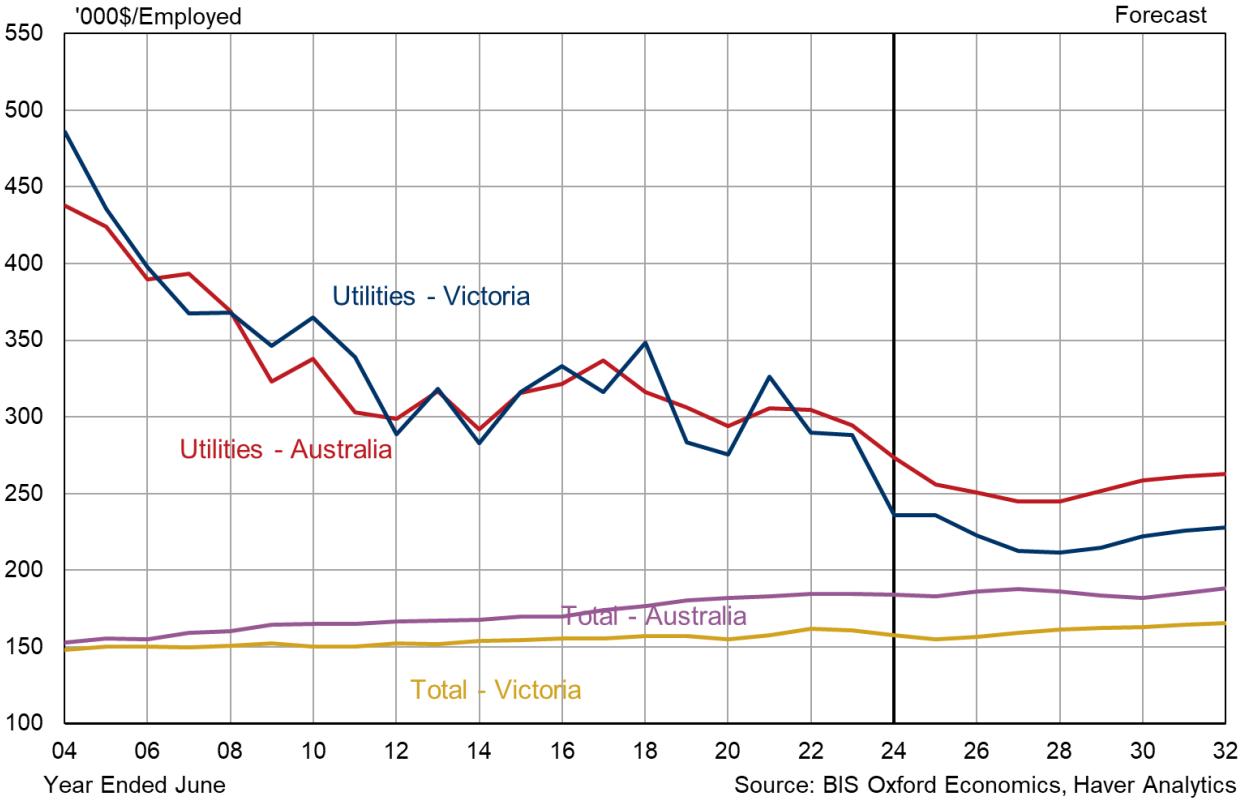


Figure 5.9 Utilities Productivity in Australia and Victoria



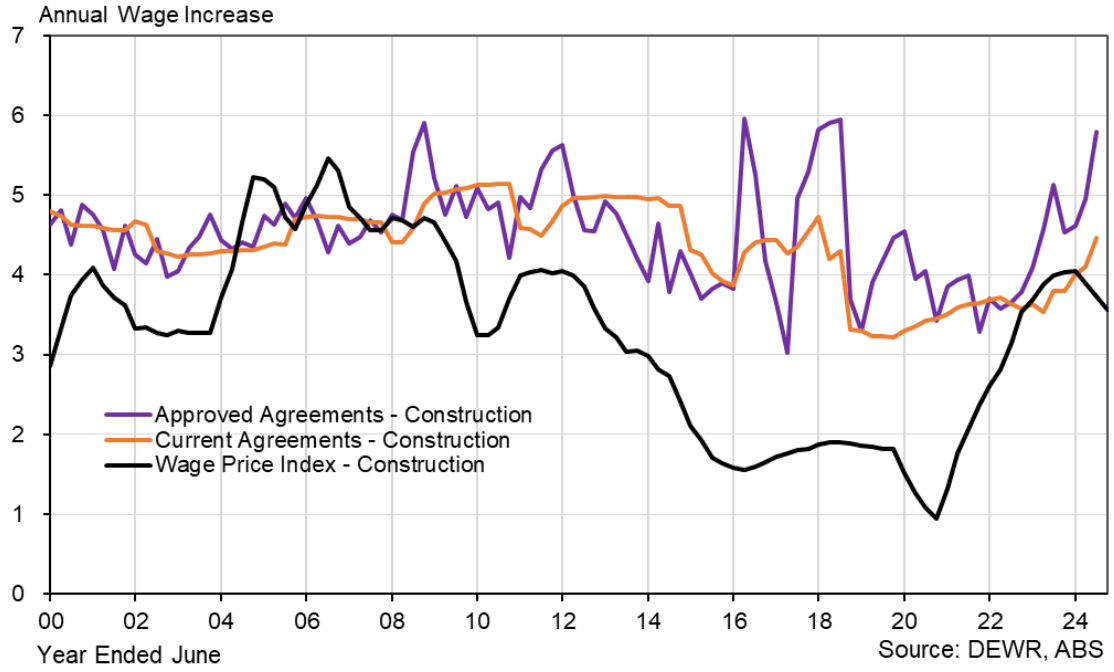
5.3 CONSTRUCTION WAGES

Given service providers outsourced labour is mostly supplied by firms in the construction industry, we proxy Marinus Link's external labour cost escalation by wages growth (as measured by the WPI) in the Victorian and Tasmanian construction sectors. Our research has shown that construction activity (ie work done in the sector) normally has a strong influence on construction wages, although changes in wages tend to lag construction (in work done terms) by around one year. Hence, our wage forecasts are based on Oxford Economics Australia forecasts of construction activity by state (which includes residential and non-residential building, plus engineering construction) as well as predicted movements in the construction wages at the national level.

Our forecast is for the Australian Construction WPI to average 3.6% over the eight years from FY25 to FY32 inclusive – or 1.0% per annum on average in real (inflation adjusted) terms. Victorian and Tasmanian Construction wages are forecast to average 3.6% and 3.5% respectively, or 0.9% in real terms (see Table 1.1). While this is a marked improvement on the decade to FY22, it is still well down on the 4.3% annual national average (nominal terms) of the decade to 2011/12.

The Australian Construction WPI growth recovered over FY22 to 2.6% followed by 3.7% in FY23 and 4.1% in FY24 (in year average terms). This compares to the meagre 1.6% annual average over FY16 to FY21. Construction wages are estimated to remain elevated in FY25 (3.6%) as construction activity increases and serious skills shortages worsen, underpinning higher wages due to strong labour demand. It is important to note that in FY23 and FY24, overall construction activity levels surpassed the previous highs of FY13 and FY18 (see figure 5.4). Given the falling VET completions and increasing retirements, this means that there is likely a serious undersupply of skilled labour to cater for increasing construction levels. Construction wages growth stabilises at around 3.6% over FY26 to FY28 as activity cools somewhat, but then picks up again from FY29 as activity again steps up a notch. Higher levels of residential and non-residential building will be key drivers, while engineering construction will be driven by higher utilities and mining investment and sustained high (but easing) levels of publicly funded transport infrastructure activity (particularly in the eastern states of the nation).

Figure 5.10 EBAs – Approved vs Current Agreements – Construction Sector, Australia



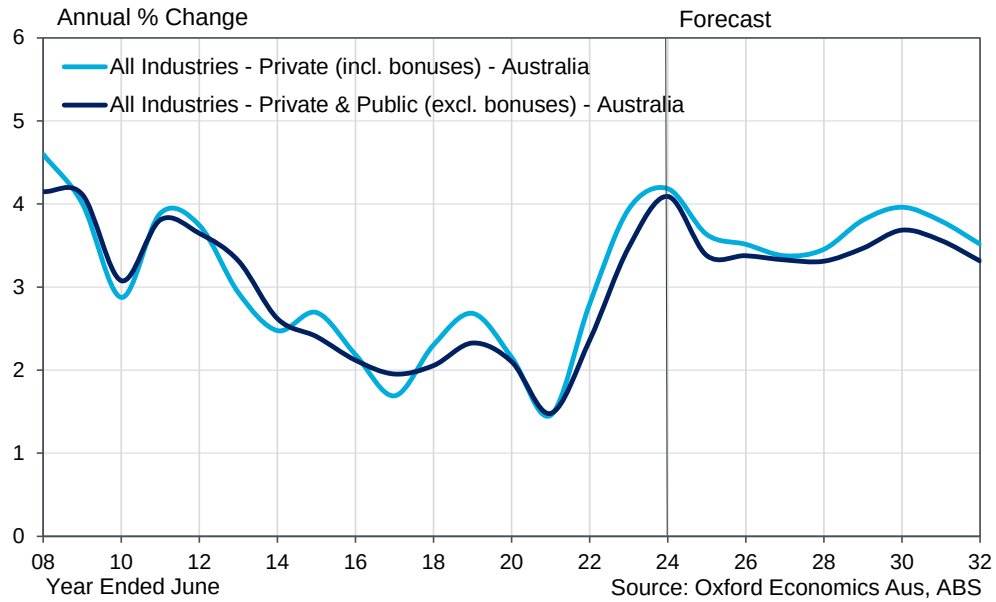
Victorian Construction WPI growth was well above the national average in FY22, at 3.2%, 0.6% higher than the national average. Higher construction sector EBAs in the state (compared to the national average) helped drive this result. Victorian construction WPI growth lagged the national average in FY23 (despite higher EBAs) but then matched the 4.1% national average in FY24. Given that the growth in construction activity in the state will lag the national average over most of the period (see Table 3.1), we are forecasting Victoria's construction WPI growth will slightly lag the national average over Y26 to FY32.

Tasmania's Construction WPI growth is estimated to have tracked 0.1% to 0.2% below the national average over the past three years, largely due to mostly weaker EBAs and slower growth in construction activity in the state. However, wages growth in the other segments is expected hold up well, due to further growth in Tasmanian construction activity over the next 2-3 years, pushing well above recent record levels. Total activity then eases back over FY28 as a number of major projects are finished and dwelling building activity weakens (see Table 3.2), which sees Tasmanian construction wages growth track 0.2% below the national average from FY28 to FY32.

5.4 LABOUR COST INDEX AUSTRALIA: ORDINARY TIME HOURLY RATES OF PAY (PRIVATE ALL INDUSTRIES)

All Industries private sector wage growth has outperformed the All Industries average (private + public) over the past three years. With a lower rate of collective bargaining, which typically locks in wage growth over a three-year period, wage setting in the private sector has been more responsive to the combined effect of record low unemployment and high inflation, which favoured labour bargaining power. In addition, labour shortages and the need to attract and retain labour also saw extra bonuses paid in the private sector. Overall, the All Industries private sector wage growth averaged +0.33 percentage points higher over both FY22, FY23 and FY24, and hit 4.2% growth in FY24.

Figure 5.11 Australia Labour Cost Index: Ordinary Time Hourly Rates of Pay, including bonuses (Private All Industries)



Private sector wages growth is forecast to gradually decelerate over FY25 (3.7%) through to FY28 (3.5%) as inflation eases and pressures in the labour market begins to normalise. However, with the unemployment rate expected to remain at a low level, private sector wage growth will remain above

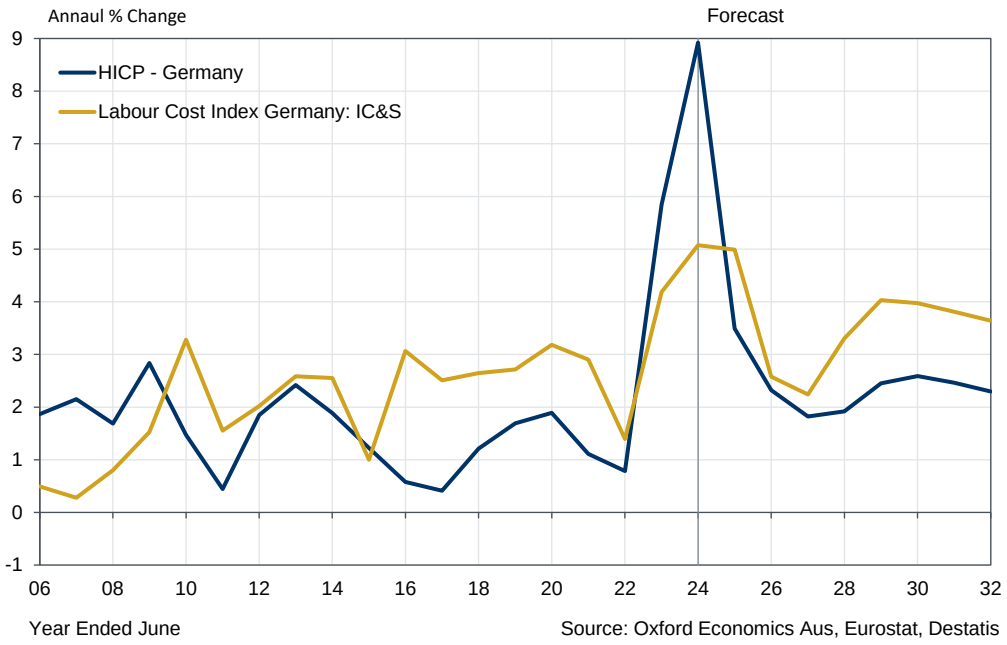
levels seen over the 10 years to FY22. Towards the end of the decade, rising private sector investment will see higher wages in the construction sector, which is expected to place upward pressure on wages as demand for labour strengthens, pushing the private sector All Industries WPI, including bonuses, to 4% in FY30, before subsequently easing. This WPI measure is forecast to average 3.6% over the eight years years to FY32.

5.5 LABOUR COST INDEX GERMANY: INDUSTRY, CONSTRUCTION, AND SERVICES

The German labour cost index across industry, construction, and services has seen several years of elevated growth, having averaged 4.7% annually over the past three years. Driving such strong wage growth outcomes has been the combination of higher inflation at a time where workers have been in a strong position to negotiate wages.

A slight weakening in the German labour market has since transpired, with wage growth expected to ease to 2.6% in FY25. Supressed wage growth is expected over FY26 as the sluggish European and global economic growth lowers demand for German exports and therefore labour demand. Rising wage growth is expected from FY28 onwards as global economic activity picks up. Over the forecast period, German labour costs are forecast to average 3.4% annually. This is above the 2.5% average over the 10-years to 20219. Higher wage growth will be driven by both higher levels of inflation (relative to pre-2021 levels) and an aging workforce which will help to tighten labour supply.

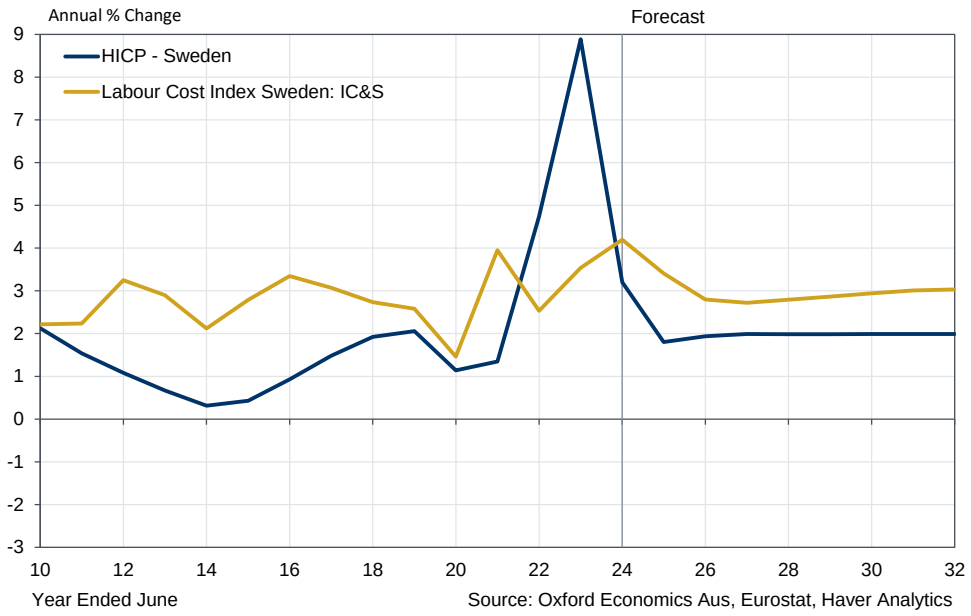
Figure 5.12 German Labour Cost Index: Industry, Construction and Services



5.6 LABOUR COST INDEX SWEDEN: INDUSTRY, CONSTRUCTION, AND SERVICES

The Swedish labour cost index across industry, construction and services grew at an above average pace over FY23 and FY24 (3.9% annually) in line with higher levels of inflation. Wage growth is forecast to average 2.9% over the FY25 to FY32 period, tracking in line with inflation.

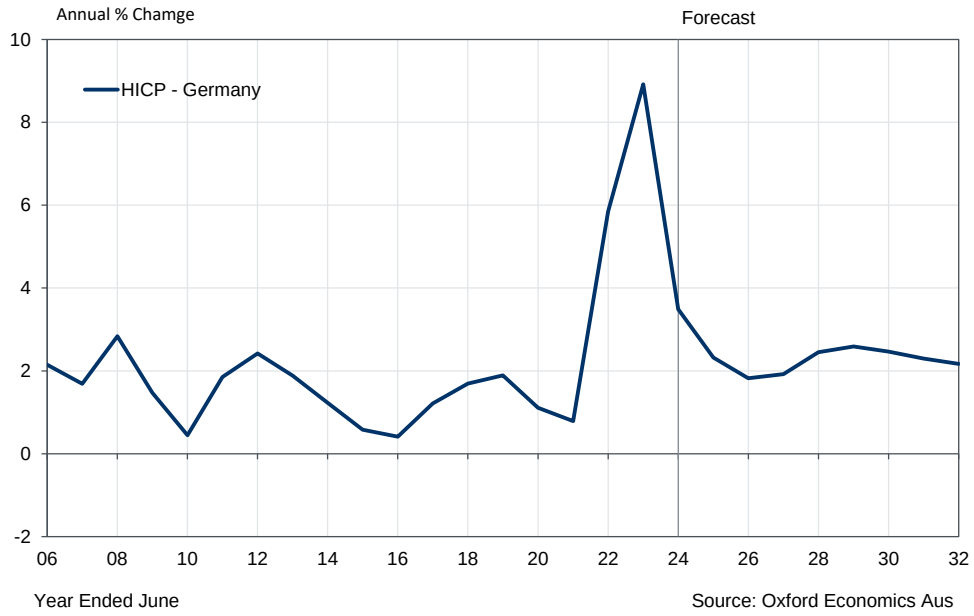
Figure 5.13 Swedish Labour Cost Index: Industry, Construction and Services



5.7 HARMONISED INDEX OF CONSUMER PRICES – GERMANY

Growth in the German Harmonised Index of Consumer Prices (HICP) peaked in FY23 at 8.9% following years of growth below the European Central Banks (ECB) target of 2%. This historic high was driven by supply chain constraints on the back of the strong rebound in household spending post the Covid-induced lockdowns, alongside the European energy-crisis triggered by Russia's invasion of Ukraine. Ongoing energy market uncertainty and a resilient labour market then left Germany's HICP elevated over FY24 at 3.5%.

Figure 5.14 German Harmonised Index of Consumer Prices



Growth in the German HICP is expected to end FY25 close to the ECB's target range, at 2.3%. With the impact of high interest rates, falling oil prices and a weakening of global economic activity, the German HICP is forecast to average just 1.9% annually over FY26 and FY27. Growth will then begin to recover in FY28 as real income growth returns and flows through to services inflation, with growth in the index of 2.4% over the remainder of the forecast period.

6. COMMODITY PRICE AND MATERIAL COST ESCALATOR FORECASTS

6.1 COMMODITY PRICE FORECASTS & MARINE DIESEL

The AER has shown a preference for accepting a range of forecasts from different forecasters, and then taking an average. For this report, commodity price forecasts are derived by taking an average between Oxford Economics Australia's and the Department of Industry, Science and Resources' (DISR) latest global commodity price forecasts. The DISR forecasts are sourced from the March 2025 *Resource and energy quarterly* report, which contains the Office of the Chief Economist's quarterly commodity price forecasts in US$ terms out to December 2030. The average quarterly growth trend of the DISR's 2030 forecast is then applied to the remainder of the DISR forecast series (to June 2032).

These US$ forecasts were converted into A$ terms using Oxford Economics inhouse exchange rate forecasts. The Australian dollar is heavily influenced by movements in Australia's basket of commodity prices and particularly by interest rate relativities between Australian and overseas interest rates (especially US interest rates). The A$ averaged US$0.75 in FY21 and has seen four years of depreciation (sinking to an estimated US$0.63 in FY25) as higher interest rates in the US relative to Australia increased demand for US Dollars relative to Australian Dollars, with capital chasing higher returns in the US. As interest rates globally begin to ease over the near term, the Australian Dollar is expected to appreciate relative to the US Dollar and trends back up towards the US$0.70 mark.

Overall, the four commodities presented here – aluminium, copper, oil and lead – have all experienced significant recoveries from the Covid-induced lows of 2020 and are currently trading near 10-year highs (see table 6.1). Although they are expected to retreat from these highs over the near term, the average prices in the seven years to FY32 (the upcoming revenue period) will be higher than the pre-Covid levels, indicating higher cost pressures on operators of electricity distribution networks in the coming period.

Aluminium prices fell to an average of US$1675/tonne in FY20 due to Covid-related demand concerns, but subsequently rebounded and experienced robust growth of 21% in FY21 to US$2029/t (+8.8% in A$ terms, to A$2715/t). Aluminium production was hampered over 2021 and into 2022 by power shortages in China, with many energy-intensive smelters shutting down. With production constrained and demand recovering, stock levels on the London Metal Exchange (LME) fell, leading on-warrant inventories to reach 14-year lows and aluminium surpassing the US$3,500/t mark in March 2022, the highest level since June 2008. FY23 then saw Chinese production improve as smelters came back online, with improved supplies and an easing of global supply chain pressures contributing to a -19% decline in aluminium prices – to average US$2,333/t for the year. Aluminium prices ease further still over FY24 as weakening global demand as higher interest rates dampened economic growth, particular within the construction sector, which is a significant consumer of aluminium. Prices have since risen over FY25 (at an estimated 12%) as global demand has strengthened.

Over the near term, strong demand from the automotive sector (EV manufactures are increasingly substituting steel components for lighter aluminium ones to reduce vehicle weight and so improve driving distance), along with a rebounding construction sector as interest rates ease globally, will see global demand for aluminium step up. On the supply side, global aluminium output is also set to increase, with an outlook for increasing primary bauxite ore production from key countries (e.g. Guinea and Australia), and new refineries coming online in China and Indonesia.

Table 6.1 Materials and Commodity Price Forecasts (year average, year-ended June)

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Average 2025-32 (j)
					Actuals	Forecasts								
Nominal Commodity & Marine Diesel Prices														
Copper (A$/tonne)	8,446	10,664	13,288	12,307	13,235	14,468	15,140	15,108	15,115	14,680	14,902	15,943	16,707	15258
Copper (US$/tonne) (a)	5,669	7,969	9,645	8,288	8,680	9,325	9,582	9,890	10,250	10,643	11,028	11,319	11,528	10446
Aluminium (A$/tonne)	2,496	2,715	3,983	3,464	3,455	3,947	4,086	4,010	3,951	3,837	3,841	4,005	4,164	3980
Aluminium (US$/tonne) (a)	1,675	2,029	2,891	2,333	2,266	2,544	2,586	2,625	2,679	2,782	2,843	2,843	2,873	2722
Oil (A$/barrel)	77	72	126	129	129	114	107	104	102	98	97	100	102	102.9
Oil (US$/barrel) (a)	52	54	91	87	85	73	68	68	69	71	71	71	70	70.2
Marine diesel (A$/tonne) (Y/Y)	961	748	1,271	1,561	1,387	1,290	1,217	1,205	1,215	1,199	1,186	1,226	1,244	1223
Marine diesel (US$/tonne) (b) (Y/Y)	645	559	923	1,051	909	832	770	789	824	869	878	870	858	836
Lead (LME) (A$/tonne) (k)	2,827	2,650	3,170	3,092	3,253	3,099	3,171	3,110	3,045	2,887	2,868	3,031	3,162	3047
Lead (LME) (US$/tonne) (k)	1,898	1,980	2,301	2,082	2,134	1,997	2,007	2,036	2,065	2,093	2,122	2,152	2,182	2082
Lead (LME) (EU€/tonne) (k)	1,717	1,661	2,045	1,988	1,966	1,854	1,825	1,851	1,877	1,903	1,925	1,934	1,944	1889
% ch														
Copper (A$/tonne)	-1.8	26.3	24.6	-7.4	7.5	9.3	4.6	-0.2	0.0	-2.9	1.5	7.0	4.8	3.0
Aluminium (A$/tonne)	-7.0	8.8	46.7	-13.0	-0.2	14.2	3.5	-1.9	-1.5	-2.9	0.1	4.3	4.0	2.5
Oil (A$/barrel)	-19.9	-5.8	73.4	2.5	0.4	-12.1	-5.5	-3.1	-2.0	-3.5	-1.8	3.3	1.8	-2.9
Marine diesel (A$/tonne) (Y/Y)	-10.6	-22.2	70.0	22.8	-11.2	-7.0	-5.7	-1.0	0.9	-1.4	-1.0	3.3	1.5	-1.3
Lead (LME) (A$/tonne)	1.3	-6.3	19.6	-2.4	5.2	-4.7	2.3	-1.9	-2.1	-5.2	-0.7	5.7	4.3	-0.3
Exchange rate ($USD/$AUD) (c)	0.67	0.75	0.73	0.67	0.66	0.64	0.63	0.65	0.68	0.73	0.74	0.71	0.69	0.68
Exchange rate (Euro/$AUD) (c)	0.61	0.63	0.64	0.64	0.61	0.60	0.55	0.57	0.58	0.61	0.62	0.59	0.58	0.59
Exchange rate (Kronor/$AUD) (c)	6.47	6.40	6.64	7.11	6.97	6.73	6.07	6.03	5.91	6.08	6.15	5.93	5.75	6.08
Exchange rate ($USD/Euro) (c)	1.11	1.19	1.13	1.05	1.09	1.08	1.10	1.10	1.10	1.10	1.10	1.11	1.12	1.10
Nominal Material Producer Price Indices (PPI)														
Steel Beams and Sections PPI (Australia) (d)	112.9	118.7	155.2	162.7	139.5	133.8	132.9	133.3	136.2	141.2	145.7	149.4	151.3	140.5
Concrete, Cement & Sand PPI (Vic) (d)	109.1	109.7	111.6	132.8	140.2	143.8	146.6	149.3	154.0	159.9	164.7	168.2	170.5	157.1
Concrete, Cement & Sand PPI (Tas) (d)	120.4	117.8	125.8	136.5	138.5	142.6	148.7	156.7	163.5	169.7	175.6	180.6	185.8	165.4
Electrical Equipment Manufacturing PPI (d)	105.7	109.0	114.9	129.9	136.5	138.8	142.3	144.9	147.9	151.8	155.6	159.1	162.4	150.4
Paper (Insulation Components) Index (l)	115.2	116.4	132.8	152.3	150.7	149.4	150.8	151.5	152.5	154.7	157.4	160.3	163.0	154.9
Hot Steel Index (l)	123.0	160.5	259.2	212.4	187.3	171.8	166.0	164.7	172.0	185.5	197.0	201.5	197.7	182.0
Grain Oriented Steel - Super High Grade Index (l)	99.3	99.4	152.6	214.9	178.2	162.2	156.2	157.0	167.7	180.5	189.8	190.8	185.1	173.7
Bentonite (m)	182.2	184.3	193.8	222.5	230.5	237.0	241.0	245.3	250.9	257.4	264.3	271.5	278.8	255.8
Plastic Water pipe (n)	183.1	214.7	385.9	436.4	403.2	381.9	385.2	381.1	388.8	401.2	414.9	431.7	447.5	404.0
Fibre Optic cable (A$ index)	119.3	104.1	113.5	143.6	135.8									
Fibre Optic cable (US$ index) (e)	80.1	77.8	82.4	96.7	89.1									
% ch														
Steel Beams and Sections PPI (Australia) (d)	0.2	5.1	30.8	4.8	-14.3	-4.1	-0.6	0.3	2.2	3.7	3.2	2.6	1.3	1.0
Concrete, Cement & Sand PPI (Vic) (d)	0.8	0.6	1.7	19.0	5.6	2.6	1.9	1.9	3.1	3.8	3.0	2.1	1.3	2.5
Concrete, Cement & Sand PPI (Tas) (d)	2.6	-2.1	6.7	8.5	1.5	2.9	4.3	5.3	4.4	3.8	3.5	2.9	2.9	3.7
Electrical Equipment Manufacturing PPI (d)	-1.4	3.1	5.5	13.1	5.1	1.7	2.5	1.8	2.0	2.7	2.5	2.3	2.1	2.2
Paper (Insulation Components) Index (l)	0.5	1.0	14.2	14.6	-1.1	-0.9	1.0	0.4	0.7	1.4	1.8	1.8	1.7	1.0
Hot Steel Index (l)	-4.0	30.5	61.6	-18.1	-11.8	-8.3	-3.4	-0.8	4.5	7.8	6.2	2.3	-1.9	0.8
Grain Oriented Steel - Super High Grade Index (l)	-0.4	0.2	53.5	40.8	-17.1	-9.0	-3.7	0.5	6.9	7.6	5.2	0.5	-3.0	0.6
Bentonite (m)	2.9	1.1	5.2	14.8	3.6	2.8	1.7	1.8	2.3	2.6	2.7	2.7	2.7	2.4
Plastic Water pipe (n)	-2.6	17.2	79.8	13.1	-7.6	-5.3	0.9	-1.1	2.0	3.2	3.4	4.1	3.7	1.4
Fibre Optic cable (A$ index)	5.1	-12.7	9.0	26.5	-5.4									
Nominal Broad Construction Price Indice														
Non-hydro Electricity Engineering Construction IPD (l	118.2	120.5	127.9	136.7	140.9	144.5	148.6	152.8	157.4	163.0	168.3	173.2	178.2	160.7
% ch														
Non-hydro Electricity Engineering Construction IPD (l	2.6	1.9	6.2	6.9	3.1	2.5	2.9	2.8	3.0	3.5	3.3	2.9	2.9	3.0
HVDC Indicators (nominal %ch) (g)														
US HVDC - overall indicative escalation														
Aluminium (US$/tonne)	-12.7	21.1	42.5	-19.3	-2.9	12.3	1.7	1.5	2.1	3.8	2.2	0.0	1.0	3.1
Steel - hot rolled coil (US$/tonne)	-28.3	82.3	56.0	-43.5	-1.6	-8.2	16.4	-7.4	2.1	2.0	2.0	2.0	2.0	1.4
Manufacturing wages - USA	7.3	1.7	3.0	5.4	4.8	3.3	5.7	3.3	2.5	2.0	2.1	2.2	2.3	2.9
Electricity costs - USA	-12.8	6.9	51.0	5.6	-20.9	-6.0	7.0	-1.6	2.9	2.6	2.1	2.5	1.9	1.4
Transport costs - USA	1.8	-1.2	16.0	9.1	-0.9	3.0	2.1	1.9	2.1	1.9	2.0	1.9	1.9	2.1
Other cable maunufacturing costs - USA														
European HVDC - overall indicative escalation														
Aluminium (Euro/tonne)	-10.0	12.2	50.9	-13.1	-6.0	12.4	-4.3	0.6	0.9	1.9	1.5	0.5	0.8	1.8
Steel - hot rolled coil (Euro/tonne)	-5.0	-14.8	56.0	56.8	-31.4	-10.3	-10.7	-1.4	2.0	2.1	2.0	2.0	2.0	-1.5
Manufacturing wages - Italy	4.7	0.8	-2.1	4.4	6.1	4.2	2.3	1.8	1.7	1.8	1.9	1.7	1.6	2.1
Electricity costs - Italy	-4.3	-3.2	65.2	27.6	-23.3	-1.1	-1.6	-5.8	1.1	0.3	0.1	0.0	-0.4	-0.9
Transport costs - Italy	1.3	2.3	1.3	4.6	5.9	2.7	2.4	2.0	1.6	1.8	2.0	2.1	2.3	2.1
Other cable maunufacturing costs - Italy														

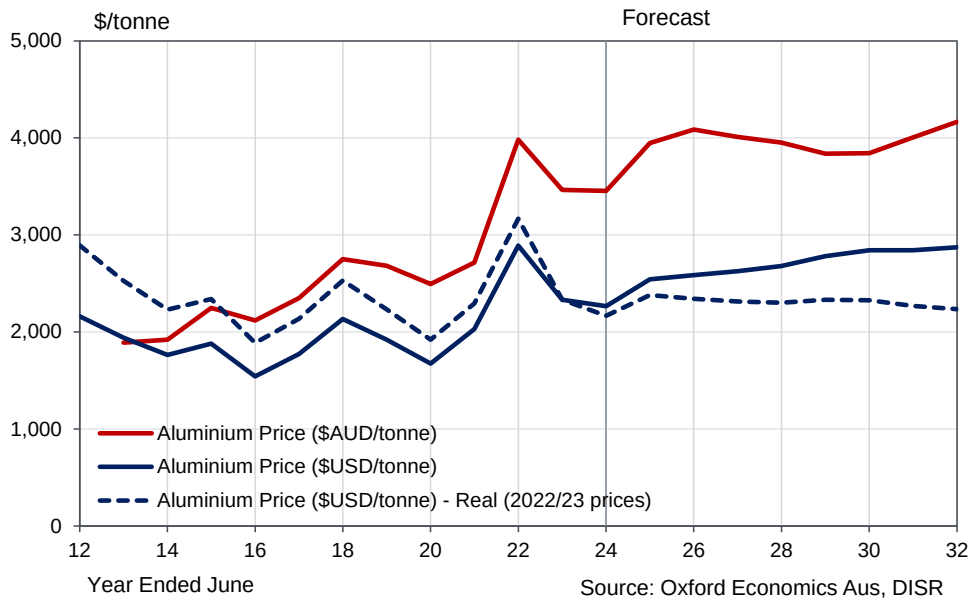
Consumer Price Index - headline (h)	1.3	1.6	4.4	7.0	4.2	2.4	3.3	2.7	2.5	2.5	2.5	2.5	2.5	2.6
Real Commodity Price Changes (i)														
Copper (A$/tonne)	-3.1	24.6	20.2	-14.4	3.3	6.9	1.4	-2.9	-2.5	-5.4	-1.0	4.5	2.3	0.4
Aluminium (A$/tonne)	-8.3	7.2	42.3	-20.1	-4.5	11.8	0.3	-4.6	-4.0	-5.4	-2.4	1.8	1.5	-0.1
Oil (A$/barrel)	-21.3	-7.4	68.9	-4.5	-3.9	-14.6	-8.8	-5.8	-4.5	-6.0	-4.3	0.8	-0.7	-5.5
Marine diesel (A$/tonne) (Y/Y)	-11.9	-23.8	65.5	15.8	-15.4	-9.4	-8.9	-3.8	-1.6	-3.9	-3.5	0.8	-1.0	-3.9
Lead (LME) (A$/tonne)	0.0	-7.9	15.2	-9.5	1.0	-7.2	-0.9	-4.7	-4.7	-7.7	-3.2	3.2	1.8	-2.9
Real Material Producer Price Indices (PPI) (i)														
Steel Beams and Sections PPI (Australia) (d)	-1.2	3.5	26.4	-2.2	-18.5	-6.6	-3.9	-2.5	-0.4	1.2	0.7	0.1	-1.2	-1.6
Concrete, Cement & Sand PPI (Vic) (d)	-0.5	-1.1	-2.7	12.0	1.4	0.2	-1.4	-0.8	0.6	1.3	0.5	-0.4	-1.2	-0.1
Concrete, Cement & Sand PPI (Tas) (d)	1.3	-3.7	2.3	1.5	-2.7	0.5	1.1	2.6	1.8	1.3	1.0	0.4	0.4	1.1
Electrical Equipment Manufacturing PPI (d)	-2.7	1.4	1.0	6.0	0.9	-0.7	-0.8	-0.9	-0.5	0.2	0.0	-0.2	-0.4	-0.4
Paper (Insulation Components) Index (l)	-0.9	-0.6	9.7	7.6	-5.3	-3.3	-2.3	-2.3	-1.9	-1.1	-0.7	-0.7	-0.8	-1.6
Hot Steel Index (l)	-5.3	28.9	57.1	-25.1	-16.0	-10.7	-6.7	-3.5	1.9	5.3	3.7	-0.2	-4.4	-1.8
Grain Oriented Steel - Super High Grade Index (l)	-1.8	-1.5	49.0	33.8	-21.3	-11.4	-7.0	-2.2	4.3	5.1	2.7	-2.0	-5.5	-2.0
Bentonite (m)	1.6	-0.5	0.7	7.8	-0.6	0.4	-1.6	-1.0	-0.3	0.1	0.2	0.2	0.2	-0.2
Plastic Water pipe (n)	-4.0	15.6	75.3	6.1	-11.8	-7.7	-2.4	-3.8	-0.5	0.7	0.9	1.6	1.2	-1.3
Fibre Optic cable (A$ index)	3.7	-14.3	4.6	19.5	-9.6									
Real Broad Construction Price Indice														
Non-hydro Electricity Engineering Construction IPD (f	1.3	0.3	1.7	-0.2	-1.1	0.1	-0.4	0.1	0.5	1.0	0.8	0.4	0.4	0.4
Real HVDC Indicators %ch														
US HVDC - overall indicative escalation														
Aluminium (US$/tonne)	-14.1	19.5	38.0	-26.4	-7.1	9.8	-1.6	-1.2	-0.5	1.3	-0.3	-2.5	-1.5	0.4
Steel (US$/tonne)	-29.6	80.7	51.6	-50.5	-5.8	-10.7	13.2	-10.1	-0.4	-0.5	-0.5	-0.5	-0.5	-1.2
Manufacturing wages - USA	5.9	0.1	-1.4	-1.6	0.6	0.9	2.5	0.5	0.0	-0.5	-0.4	-0.3	-0.2	0.3
Electricity costs - USA	-14.2	5.3	46.5	-1.4	-25.1	-8.4	3.7	-4.3	0.3	0.1	-0.4	0.0	-0.6	-1.2
Transport costs - USA	0.5	-2.8	11.5	2.1	-5.1	0.6	-1.1	-0.9	-0.5	-0.6	-0.5	-0.6	-0.6	-0.5
Other cable maunufacturing costs - USA														
European HVDC - overall indicative escalation														
Aluminium (Euro/tonne)	-11.3	10.6	46.5	-20.2	-10.2	10.0	-7.6	-2.1	-1.7	-0.6	-1.0	-2.0	-1.7	-0.8
Steel (Euro/tonne)	-6.3	-16.4	51.5	49.8	-35.6	-12.7	-14.0	-4.1	-0.5	-0.4	-0.5	-0.5	-0.5	-4.1
Manufacturing wages - Italy	3.3	-0.8	-6.5	-2.6	1.9	1.8	-1.0	-0.9	-0.8	-0.7	-0.6	-0.8	-0.9	-0.5
Electricity costs - Italy	-5.6	-4.9	60.7	20.6	-27.5	-3.6	-4.8	-8.5	-1.4	-2.2	-2.4	-2.5	-2.9	-3.6
Transport costs - Italy	0.0	0.7	-3.2	-2.4	1.7	0.3	-0.9	-0.7	-1.0	-0.7	-0.5	-0.4	-0.2	-0.5
Other cable maunufacturing costs - Italy														

Source: ABS, RBA, Oxford Economics Australia

(a) Average of OEA and DISR forecasts. Copper and aluminium price figures use London Metal Exchange price as the benchmark price. Sourced from DISR
(b) Historical figures come from Ship and Bunker's 'Asia Pacific Marine Gas Oil Price'.
(c) OEA forecasts of exchange rate
(d) Historical figures come from tables 12, 13 and 18 of ABS release 6427, Producer Price Indices.
(e) Fibre Optic data from US Federal Reserve Economic Data: producer Price Indices
(f) Historical figures come from the ABS Engineering Construction Service series, provided as an unpublished 'Special Run' series.
(g) Data from Oxford Economics databases in US andEurope. Commodity price forecasts based on OEA/DISR forecasts.
All other US and European/Italian forecasts of materials sourced from OE global database.
(h) 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%).
(i) Real price changes are calculated by deducting the inflation rate from nominal price changes.
(j) Average annual values and growth rates for 2024/25 to 2030/32.
(k) Historical Figures come from IMF, World Lead Price
(l) Historical figures come from T&D Europe
(m) Historical figures come from U.S. Bureau of Labour Statisitcs (US BLS), Producer Price Index by Commodity, WPU13990214C
(n) Historical figures come from U.S. Bureau of Labour Statisitcs (US BLS), Producer Price Index by Industry, PCU32612232612213

Overall, demand is expected to outpace supply, leading to modest upward price pressure. Aluminium prices are forecast to average 3.1% growth over the seven years to FY32, to average US$2,722/t annually. A key factor sustaining price growth over this period is the accelerating electrification of the power grid and vehicles, which will see increasing demand for aluminium over the 2030's. Adding to this will be increased production costs, with the transition to renewable energy likely to see higher electricity prices (aluminium refining requires significant amounts of electricity) to help finance new infrastructure investment, along with the decommissioning of cheaper but more polluting aluminium smelters.

Figure 6.1 Aluminium Price Forecast



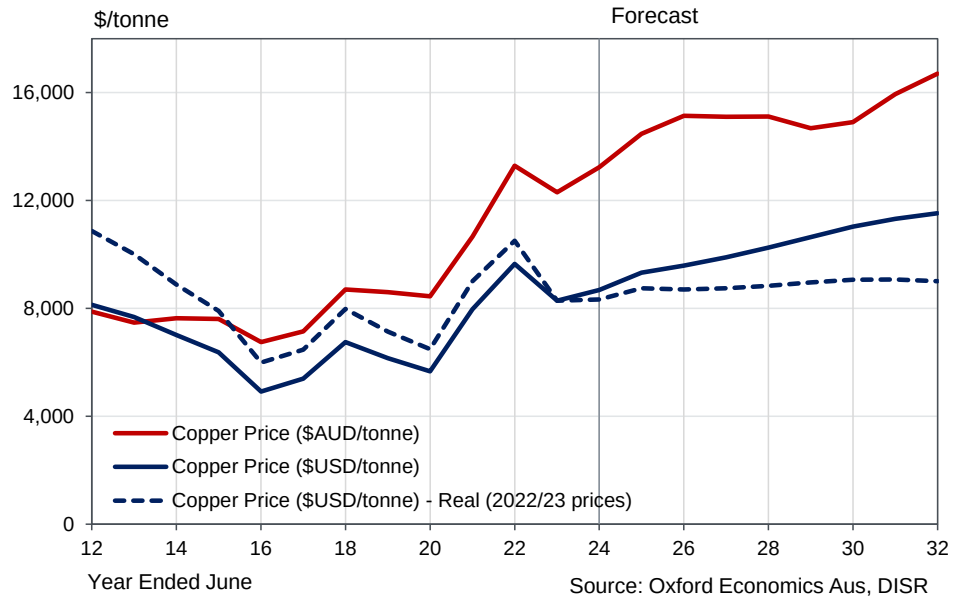
Source: Oxford Economics Aus, DISR

Copper is an industrial metal and its usage is seen as a barometer of global industrial activity and economic growth. Copper prices fell -7.8% in FY20 to an annual average below US$5,700/t pandemic measures slowed down the global economy. The subsequent acute production and supply chain disruptions following the initial covid lockdowns, and the surge in goods demand (as demand for services was substituted away from) saw prices surge 70% over FY21 and FY22 despite signs of increased supply. FY23 then saw a correction in prices (falling -14.1% to US$8,296/t) as global supply and demand dynamics rebalanced following normalising economic conditions post covid. Price growth has since returned over FY24 (+5%) and FY25 (+7%) as demand from the construction sector (namely from electricity related infrastructure) has risen.

The back half of the 2020's will see accelerating efforts by governments and individual consumers to transition both their energy and transport needs to renewable sources of power, with the International Energy Agency expecting copper demand renewable energy generation alone to double from 2020 to 2030, and account for 36% of total demand. On the supply side, growth in mined copper output is expected to slow. As outlined in the DISR's *Resource and energy quarterly* report "Challenges facing mine operators include declining ore grades, higher production costs, aging facilities and increased environmental and social scrutiny. Declines in the quality of deposits will also mean that most new projects in the development pipeline lack the scale and cost advantages of existing mega projects".

With copper demand for electrical applications rising over the long term, and with cheaper sources of copper resources becoming scarcer, higher copper prices are seen as highly likely. Furthermore, given copper consumption for electrical purposes currently accounts for over 60% of overall demand, it will be challenging for copper supply relief via substitution from other functional uses (e.g. structural, corrosive resistance and heat transfer) given the small size of these markets. Over the seven years to FY32, copper prices are expected to see sustained upward price pressures as supply struggles to keep up with increasing demand. Copper prices are forecast to average 3.6% annual average growth over FY25 to FY32, rising from US$9,325/t to US$11,528 /t.

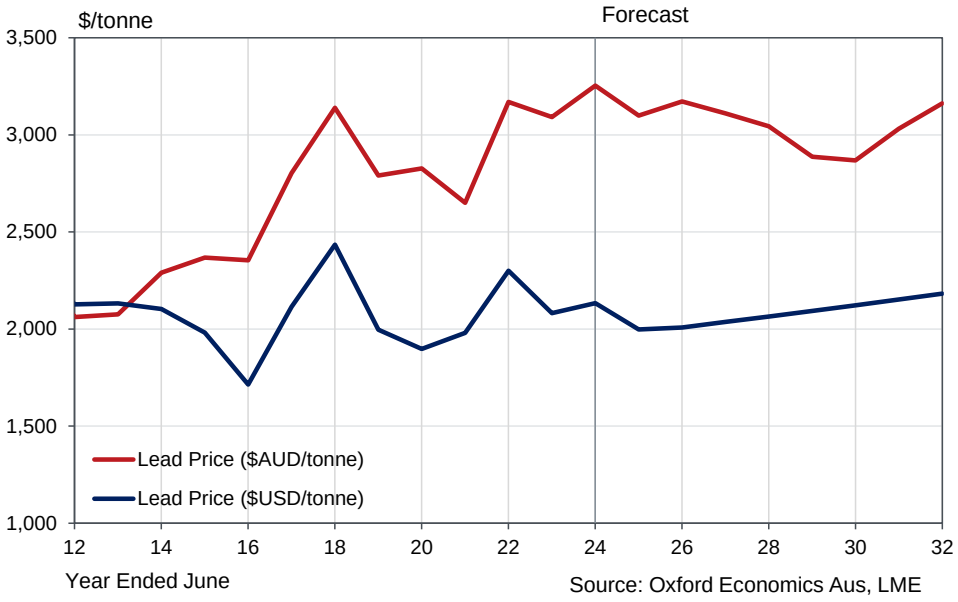
Figure 6.2 Copper Price Forecast



Global **lead** prices have continued to ease following their FY21 surge of 27% (US$2,300/t). Prices are expected to end FY25 averaging around US$2,000/t. The market for lead is currently considered in surplus supply as demand (80% of which comes from car batteries) has softened in line with softening global economic activity. Prices are forecast to plateau in FY26 as growth in global demand remains weak.

As global economies begin to recover over the back half of the 2020's, upward pressure on lead prices is expected to ensue. However, the rise of new EV batteries which use different chemistries is expected to take place, providing a structural headwind to future lead demand. Overall, lead prices are forecast to average 1.4% annual growth over the long run (in USD terms). In Australian Dollars, the appreciation of the AUD will see lead prices fall over the next 5 years, with an annual average growth rate of -0.3% over the FY25 to FY32 period.

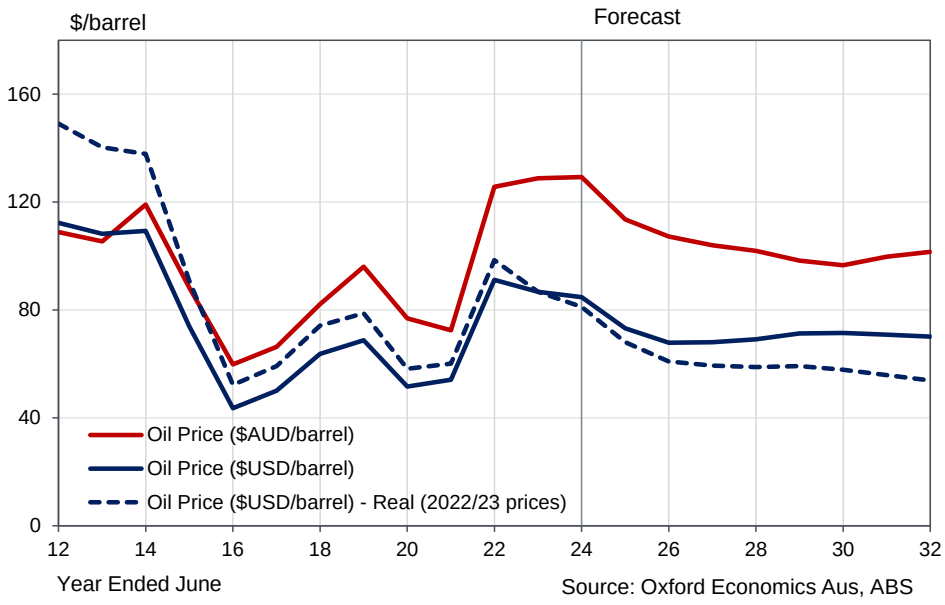
Figure 6.3 Lead Price Forecast



Brent Oil prices averaged US$91/barrel in FY22, with the A$ price surging 73% to A$126/brl - a record high in nominal terms. The rebound in global demand post covid and associated strong price rises over 2021 was exacerbated by a supply shock mainly due to the Russian invasion of Ukraine in early 2022 and subsequent trade restrictions and supply disruptions. Global oil supplies improved over 2023, while oil demand weaken in response to high prices and the global economic slowdown in response to higher interest rates – leading to easing oil prices, which fell -4.9% in FY23 (averaging US$87/brl). FY24 then saw oil prices ease somewhat (-2%), with softening in global demand offset by supply cuts by OPEC+. Falling global demand has since forced down prices by an estimated -14% in FY25, with a further -7% decline forecast for FY26.

Over the 2030's, demand will begin to soften as economies transition away from fossil fuels, although increasing demand from expanding and developing economies will offset some of the decline from developed countries. The near-term outlook for supply is expected to strengthen due to increased production from non-OPEC producers, particularly from the Americas. Over the longer term, it is likely the accelerating momentum away from fossil fuels will discourage investment in the capital-intensive oil sector, whilst the depletion of cheaper and easier to access oil (especially in the US) will constrain supply. Overall, the net effect will see brent oil prices to average around $US70/barrel ($A103) over the FY25 to FY32 period. An appreciating Australian Dollar will contribute to an annual average decline in AUD prices of -2.9% over the forecast period.

Figure 6.4 Brent Oil Price Forecast

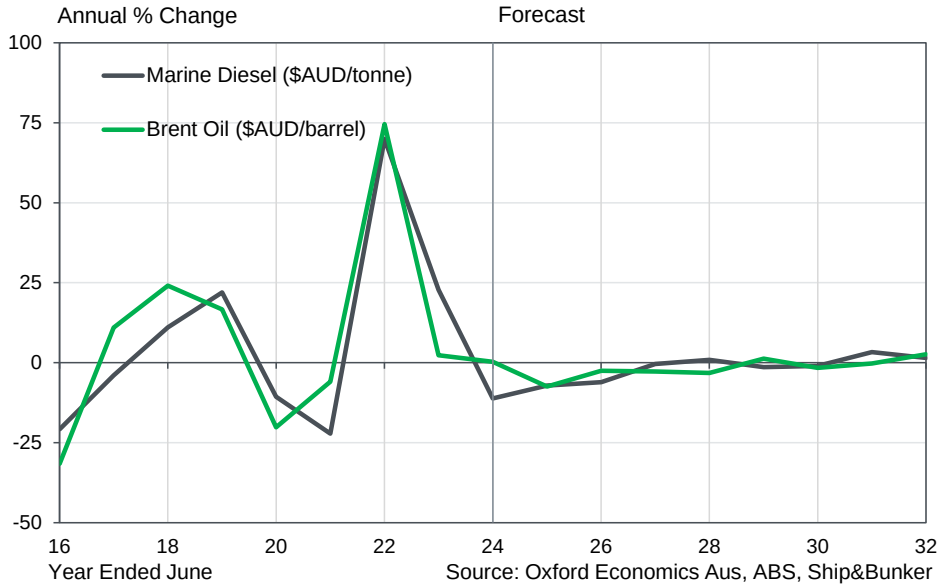


Movements in **Marine Diesel** (Marine Gas Oil) prices generally track global oil prices, but with less amplitude. This difference between marine diesel and global oil price movements are usually the result of refiner margins, transport costs or competition within the region. The oil price shock in the first half of 2020 gave way to a corresponding dip in marine diesel prices, which fell back 22% (in AUD terms) to A$961/tonne. With the onset of the war in Ukraine and the subsequent energy crisis, oil prices shot up in early 2022. Brent crude oil prices jumped 73%, which was followed by a 70% rise in marine diesel prices in FY22.

FY23 and FY24 saw a disconnect between oil and marine diesel price movements, with marine diesel seeing a further 23% increase in price (to A$1561/tonne) while oil prices stabilised. The disconnect is likely due to refineries clawing back margins lost over FY20 and FY21, with prices not correcting until FY24 (-11%). Moving forward, marine diesel prices are forecast to ease in line with oil prices, falling -

7% in FY25 and -6% in FY26. Over the forecast period, marine diesel prices are forecast average -1.3% annual declines.

Figure 6.5 Marine Diesel Price Drivers



6.2 STEEL PRICES

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

Iron ore and coking coal prices

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

Historically, iron ore prices have been highly correlated with the Chinese residential construction market, driven by the demand for steel in high density dwelling construction activity. Looking forward, the Chinese real estate sector will likely remain under pressure with risks tilted to the downside, and steel production is likely to be subdued in the longer term as China aims to meet its carbon emissions targets. Iron ore supplies are anticipated to continue increasing over the forecast period as new mines in Australia and Brazil raise production and as China increases refining capacity. Additionally, the giant Simandou mine in Guinea will start production soon and will account for some 5% of global supply when fully operational in 2027, keeping the market well supplied and weighing on prices over the next 2-3 years. Nevertheless, with an expected steady increase in demand, prices are expected to see moderately upward pressure towards the end of the decade.

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

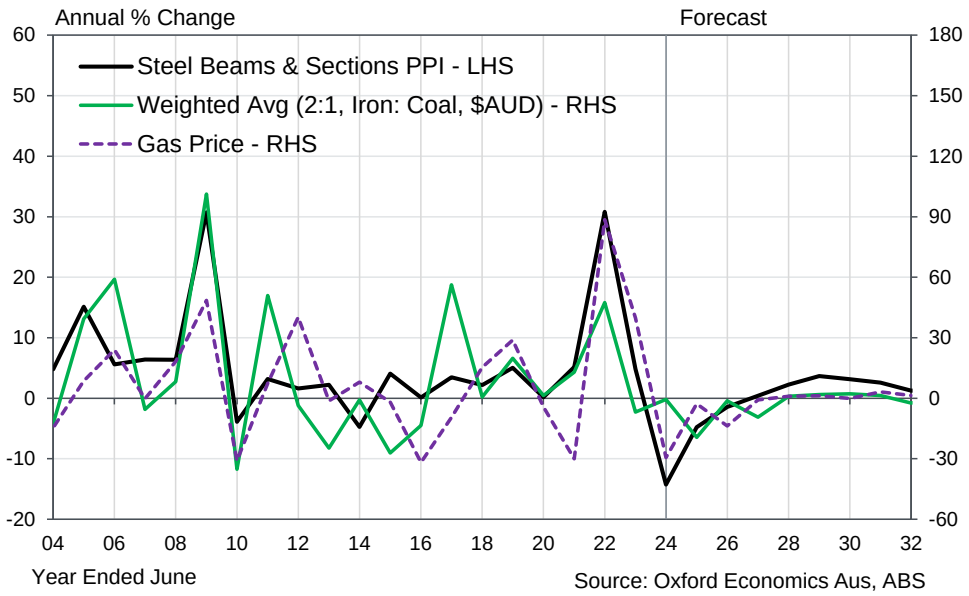
Steel Beams and sections prices - Australia

The price of structural steel (Steel Beams & Sections PPI) has consistently had a tight relationship with the primary input prices – i.e. the prices for iron ore and metallurgical coking coal. This was particularly apparent in 2021, where the soaring iron ore prices in earlier in the year, followed by coking coal prices in 2022 coincided with a 31% rise in the structural steel prices in FY22.

Despite the collapse in iron ore prices and falling international steel prices over FY23, higher prices over the second half of 2022 meant domestic steel prices overall sat 4.8% higher in FY23. This was supported by various factors including heightened energy costs (LNG prices, as measured by Japanese import prices, rose 40% in FY23) and heightening domestic demand for steel (from rising construction activity) which has allowed local markets to maintain higher price levels in combination with lowered Chinese imports due to continued pandemic related industrial production and supply chain disruptions.

FY24 then saw commodity price corrections feed through to steel price declines. As a result, the PPI fell by 14.3% in FY24 but remain 17.6% above the prices recorded in FY21 (prior to recent period of abnormal price growth). Easing iron and coal prices, alongside a reduction in energy costs, is expected to drag on price growth over FY25 and FY26 (-4.1% and -0.6%, respectively). As domestic steel demand strengthens over the back half of the 2020's (from rising construction investment), and iron ore and coking coal prices normalise, upward pressure on steel prices is expected to resume. Prices growth is forecast to sit around 3.4% annually over FY29 and FY30 as the next peak in construction peak in construction activity is reached. Overall, structural steel prices are forecast to average 1.0% growth annually over the FY25 to FY32 period.

Figure 6.6 Steel Beams & Sections PPI Drivers

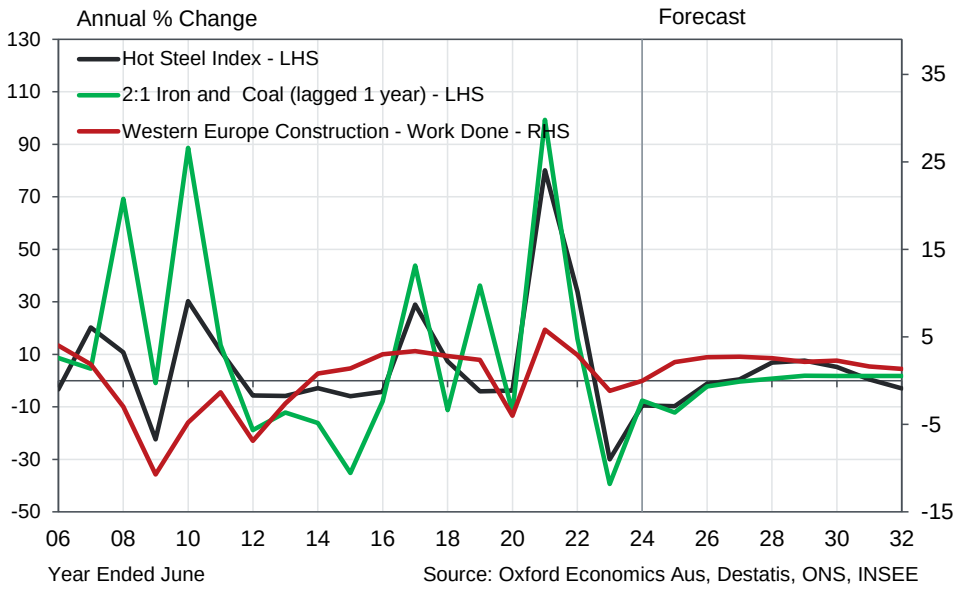


Hot Steel

Given the tight relationship between coking coal and iron ore prices, and the European Hot Steel index doubled over FY21 and FY22 (+111%) in line with soaring commodity prices. Falling commodity prices has since seen the index record a -28% correction in prices but they still remain well above pre-covid levels.

Ongoing commodity price corrections and falling energy costs will drive a continued fall in the index with growth to average -4.2% annually over FY25 to FY27. Falling prices, at least over the near term, will be helped along by subdued levels of construction activity given the tighter monetary environment across the eurozone. Growth in prices is forecast to return from FY28 as demand rebounds from rising European construction activity. The net impacted of will see hot steel prices average 0.8% annual growth over the FY25 to FY32 period.

Figure 6.7 Hot Steel Index



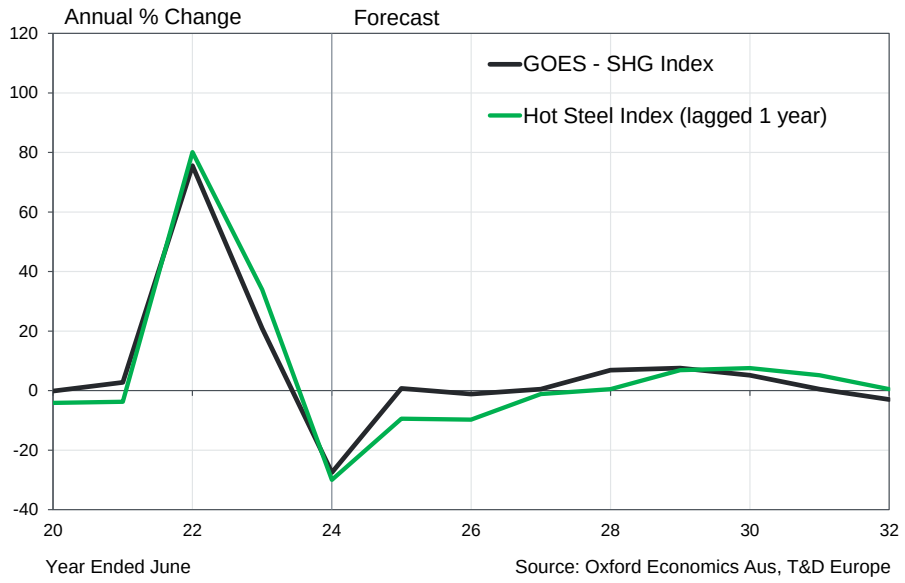
Grain Oriented Electrical Steel – Super High Grade

The European Grain Oriented Electrical Steel ('GOES') index is based on a limited data series which commenced in 2017 – this indicates that the first quarterly percentage change data is from September 2017 and the first annual percentage change data is in March quarter 2019. The limited data series does not allow for enough historical variability to accurately forecast the key drivers of GOES prices – if forecasting in annual terms (which is preferred as it removes the underlying volatility) then there is six datapoints (June 2019 to June 2023). Complicating the forecasting of this series is that it saw low volatility in price growth in FY19, FY20 and FY21 (-0.2%, -0.3% and 0.8%) which then rose to +55.7% and +39% in FY22 and FY23. The index has since declined -17% in FY24, in line with other steel price measures.

Based on the recent price movements in GOES prices and our understanding of the manufacturing process, we would suggest that movements in the index are tied into similar key drivers as broader steel manufacturing. However, statistical regression forecasting is not fit-for-purpose to provide long-term forecasts of this series given the aforementioned lack of historic volatility in the index. Through modelling, we have found that GOES prices are correlated with similar key drivers as broader steel manufacturing – i.e., energy costs, iron ore and coking coal. To provide a forecast of the series, we have modelled the near-term price cycle and then set the long-term forecasts equal to the forecasts

for hot steel. GOES prices are estimated to have eased a further -9% in FY25 and set for another -3.7% in FY26. Beyond this, GOES prices are forecast to average 2.9% annual growth over FY27 to FY32.

Figure 6.8 Grain Oriented Electrical Steel (Super High Grade) Index



6.3 CONCRETE, CEMENT & SAND PRICES – TASMANIA & VICTORIA

Research performed by Oxford Economics Australia has found that the Concrete, Cement & Sand PPI is heavily driven by the level of construction activity in the economy.

The **Hobart Concrete, Cement and Sand PPI** (used as a proxy for state prices) saw two years of above average growth over FY22 and FY23 (6.7% and 8.5%) as input costs increased and demand from the construction sector rose. Growth in prices then eased over FY24 (+1.5%) as pressure from the residential construction sector weakened (activity having fallen back 25% from FY22 to FY24). Rising demand from engineering has since added to upward price pressure, with concrete prices expected to rise 2.9% in FY25. The medium to longer term outlook for concrete prices will be driven by strong demand from the residential and non-residential building sectors from FY26. Price growth is forecast to average 4.3% annual growth over the FY26 to FY30 period, before moderating to 2.9% p.a.

The **Melbourne Concrete, Cement and Sand PPI** saw significant growth over FY23 (+19%) owing to both the higher input cost environment, strong demand from the construction sector, and an acute shortage of quarry materials (which is used as aggrege in concrete). Price growth eased in FY24, but still remained high.

Looking ahead, declining construction activity in FY25 and FY26 will play through to softer Victorian price growth over the near term, with 2.1% annual average growth forecast over FY25 to FY27. A demand from rise in building construction over the back half of the decade will add to price pressure, although falling demand from the engineering sector will help relieve some pressure. Overall, Victorian concrete prices are forecast to average 2.5% annually over the FY25 to FY32 period. For Tasmania, prices are forecast to average 3.7% over the same period, with the higher escalation rates owing to the much stronger outlook for construction.

Figure 6.9 Concrete, Cement & Sand PPI Drivers – Victoria

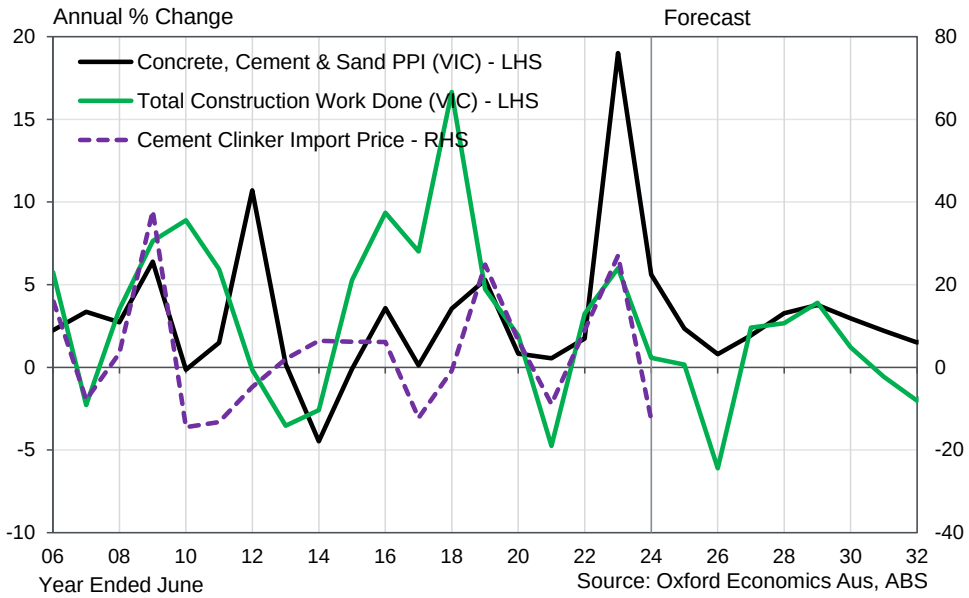
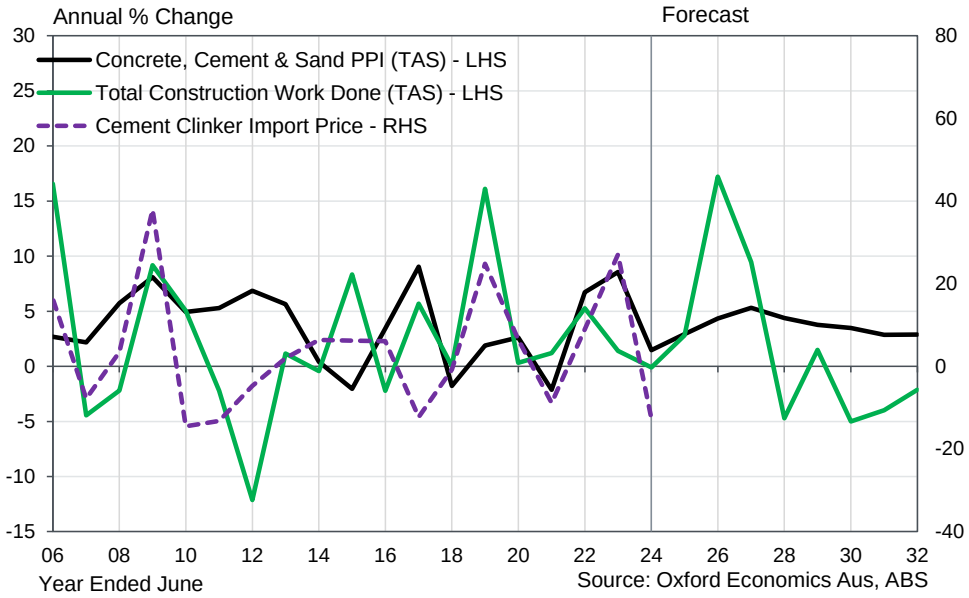


Figure 6.10 Concrete, Cement & Sand PPI Drivers – Tasmania



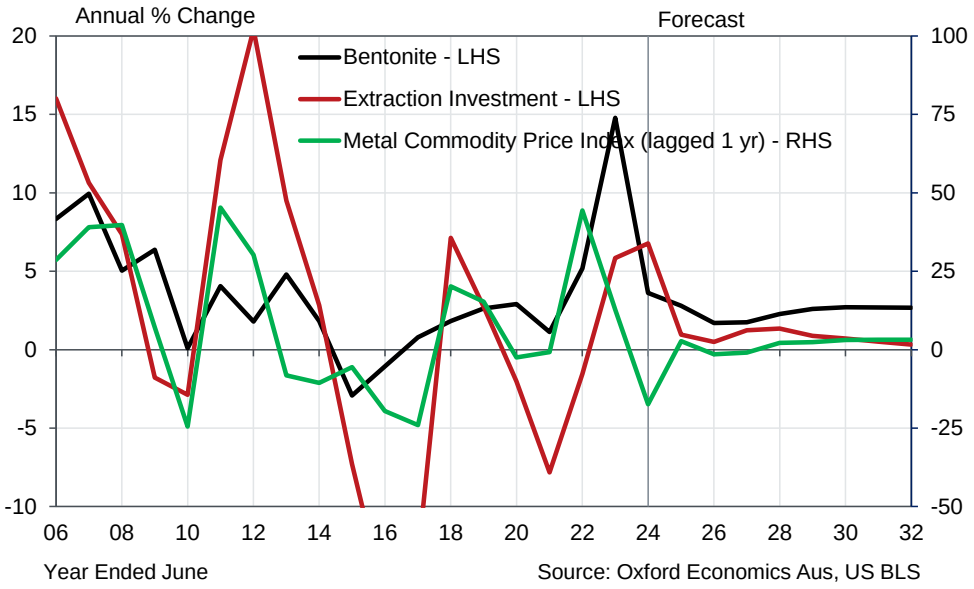
6.4 BENTONITE

Bentonite is a clay mineral used predominantly for drilling. As such, bentonite prices are strongly correlated with mining and exploration investment, which in turn is influenced by fluctuation in energy and metal commodity prices. Periods of rising mineral extraction investment (2006, 2012 and 2018) saw bentonite price average above inflation increases. However, the most recent price surge over FY22 and FY23 was primarily the consequence of pandemic related capacity constraints and higher operating costs, with bentonite prices increasing a cumulative 23% over the two years. Growth in bentonite price then eased in FY24 (+3.6%) as broader inflationary pressures cooled.

Price growth is estimated to ease again in FY25 to 2.8% as weak growth in commodity prices has dampened demand from the mining sector. This trend is expected to continue over FY26 (1.7%) and

FY27 (1.8%) as slowing global demand for commodities impacts extraction investment. Over the longer run, bentonite prices are expected to maintain solid growth, average 2.4% annually over the forecast period. Driving this will be the sustained increases in exploration and mining activity required to supply both ongoing economic growth and the large material demands of the global decarbonisation efforts.

Figure 6.11 Bentonite Index

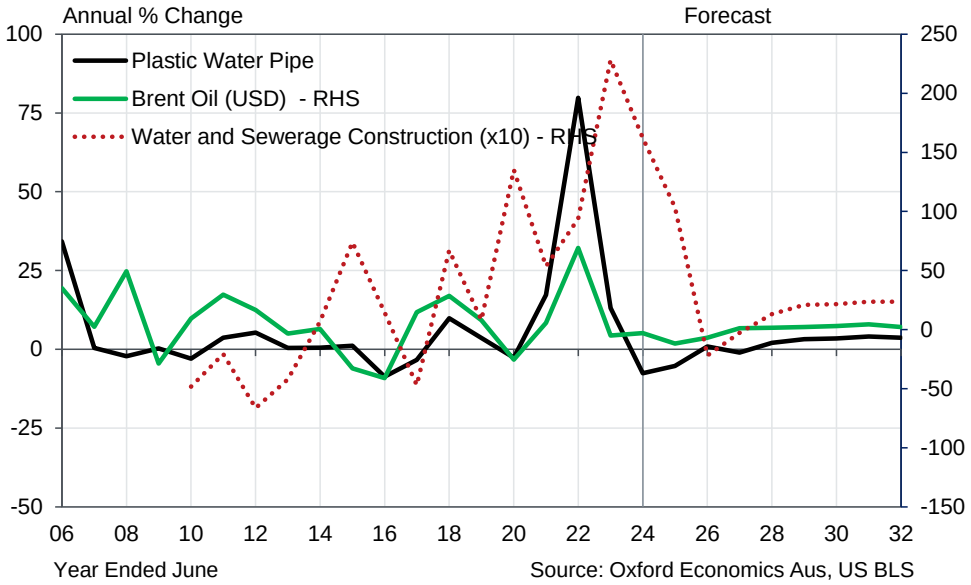


6.5 PLASTIC WATER PIPES

The key drivers of plastic water pipe prices are the costs of the primary input material, oil, and demand from water infrastructure construction. Water pipe price skyrocketed over FY22 (+80%), and remaining high in FY23 (+13%). This was a result of both sharp increases in oil prices and general manufacturing costs, which was then compounded when record levels of water and sewerage related construction activity across the USA placed significant strain on supply. With oil prices having rose around 80%, and construction activity 30% over the two years to FY22. Prices have since eased back somewhat over FY24 (-8%), but still remain over double their pre-covid levels as demand from the construction sector has held firm. Prices are forecast to ease a further -5.3% over FY25 as oil prices continue their downward trajectory.

Moving forward, we do not anticipate any significant price decreases in water pipe given the forecast for continued record levels of water related construction activity in the US. However, given the already significant surge in prices over the past several years, there's likely little room for supplies to continue hiking up prices. Coupled with easing or plateauing oil prices, water pipe prices are forecast to average 1.4% annual growth over the FY25 to FY32 period.

Figure 6.12 Plastic Water Pipe Index

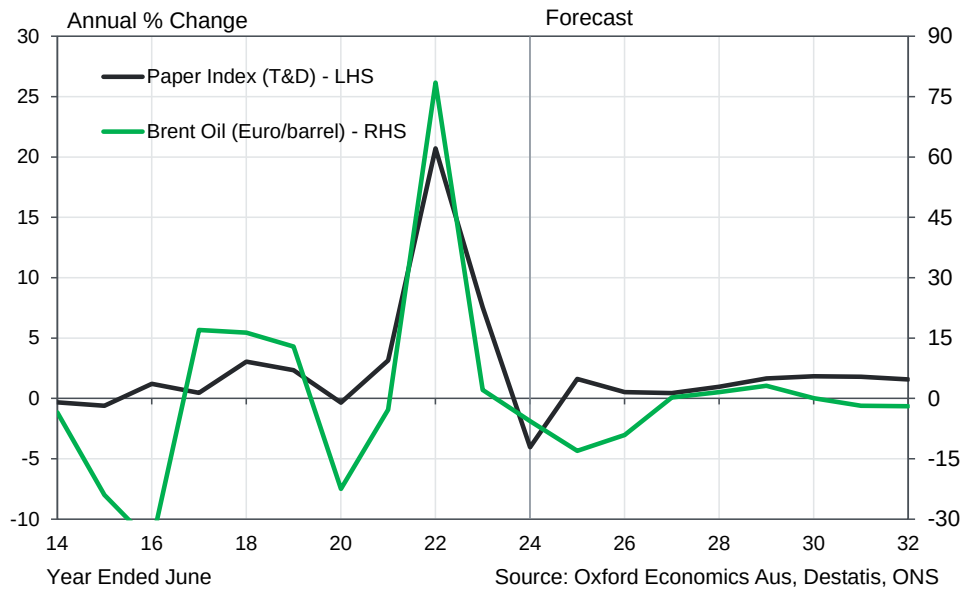


6.6 PAPER (INSULATION COMPONENTS

Growth for the European insulating paper index peaked far above historic norms over FY22 and FY23 in line with the sharp rise in energy costs and the rebound of global demand for paper products. This demand was driven by the return of consumer spending with paper-based packaging seeing significant growth on the back of the pandemic era e-commerce boom. Prices then eased slightly in FY24 (-1.1%) as energy costs came down. FY25 is expected to see another minor decline in prices at -0.9% following further energy cost easing.

Any notable revision back to pre-2022 prices is expected as producers are forced to adapt to a new normal of elevated energy costs across Europe. over the longer run, paper prices are forecast to sit around their historic average, at around 1.0% annually.

Figure 6.13 Insulating Paper Index

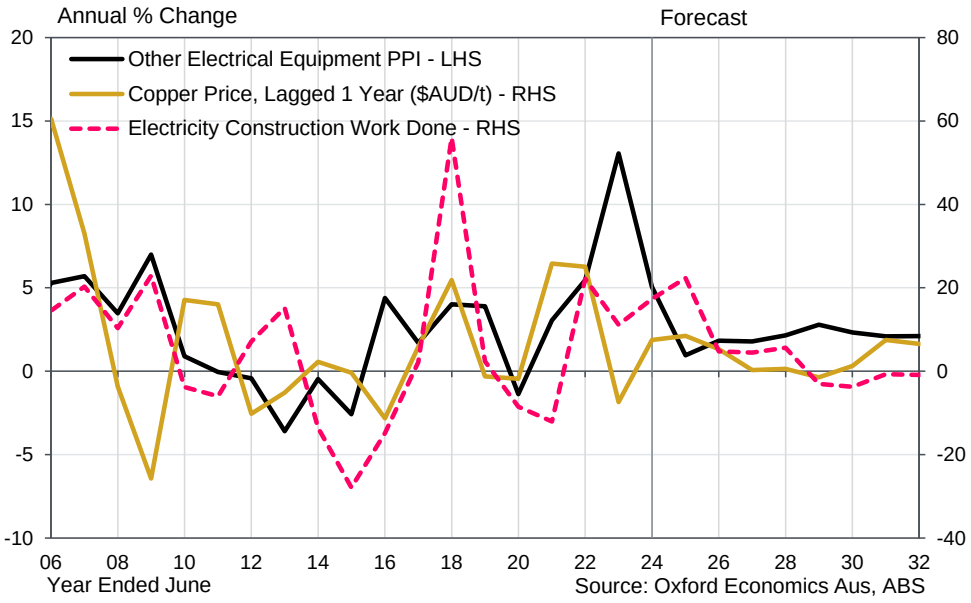


6.7 TRANSFORMERS – AUSTRALIA

The '**Other Electrical Equipment Manufacturing PPI**' has been selected as the most suitable proxy for transformer prices. The Other Electrical Equipment Manufacturing PPI tracks the price of manufacturing electrical equipment other than lighting equipment, and includes transformers, switchgear, electric motors, electricity transmission and distribution equipment, and power generating equipment, etc. Copper is a key input into Other Electrical Equipment and therefore influences movements in the index over time, with manufacturing wages and investment in electricity infrastructure also key influences.

FY22 saw Other Electrical Equipment prices grow at their fastest rate since 2009, at 5.5%, on the back of two years of significant growth in copper prices, as well as a spike in electricity engineering construction work done. Strong global demand and the producer's inability to supply lead to a further 13% rise in FY23, which then moderated back to 5.1% in FY24. With record level price growth maintained over the past 3 years and the balance between supply and demand appearing to have settled, FY25 is expected to record much softer growth in prices at 1.7% (helped along by easing copper prices). We expect this trend to continue, although with copper prices forecast to rise, higher input costs will mean upward pressure on transformer prices. Over the forecast period, growth in transformer prices are forecast to average 2.2% annually.

Figure 6.14 Transformer Price Drivers



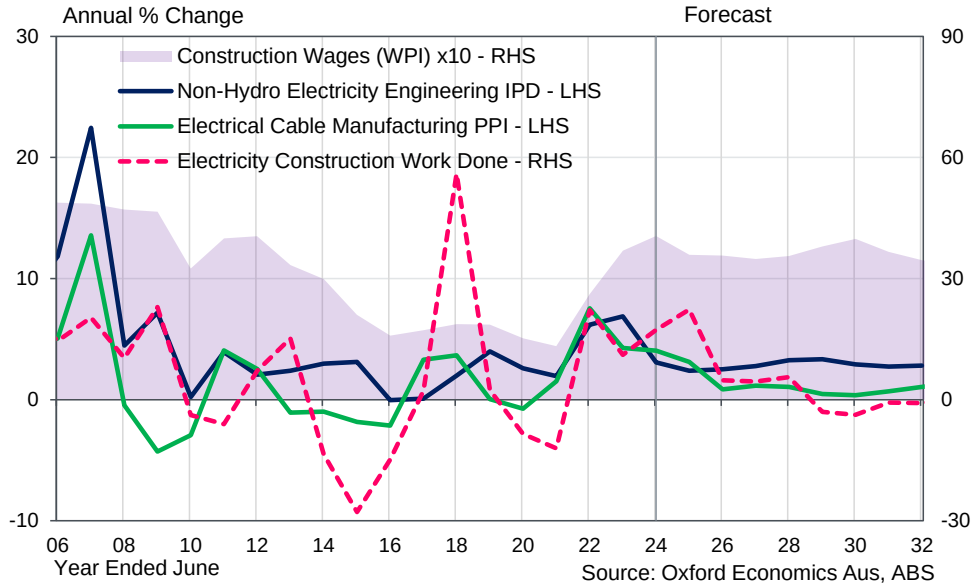
6.8 NON-HYDRO ELECTRICAL ENGINEERING CONSTRUCTION IPD – AUSTRALIA

Price movements in overall electricity infrastructure construction costs is captured by the Non-hydro Electricity Engineering Construction IPD, which is an aggregate measure of the change in cost of construction within the electricity construction sector (including the change in margins). We build the forecast for the index from the price changes of the relevant individual construction input (e.g. wages, steel, copper), which are given a weighting based on our statistical estimate of their relative impact on the average project construction cost. Given use of similar materials and labour inputs, costs for electrical engineering construction are linked to broader cost trends in the building and construction industry – albeit, with key differences over time due to shifts in market tightness and varying importance of certain inputs specific to electrical engineering (e.g., copper, and other electrical components).

Following a period of relatively stable, moderate growth over the 2010s, material costs drove the IPD strong growth in recent years. Namely, growth in the price of copper and construction wages, played through to a strong growth of 6.2% in FY22, and a further 6.9% in FY23. Easing copper prices over FY23 slowed the growth of the IPD across the recent financial year but strong wage growth and a large pipeline of electricity projects beginning to move into delivery placed a floor under the cooling in the IPD. As a result, the IPD grew by a more moderate 3.1% in FY24. FY25 is expected to see costs rise 2.5%, with the easing growth in the price of several key inputs (fuel, concrete, steel) helping to moderate overall project escalation rates.

The transition to renewable energy generation will be taking a step up in coming years, with the announcement and commencement of major solar and wind projects picking up pace. Combined with the significant expansion and enhancement of transmission networks, demand for electricity engineering inputs will intensify. Despite the easing of certain input costs, a level of price growth in overall construction costs is still expected as engineering construction contractors will likely not pass on price falls/weakness, as they try to recoup the rise in input prices experienced over the FY21 and FY22 and look to maintain existing margins. With rising electrical construction activity, and engineering activity more broadly, contractors will be in a strong position to negotiate prices in their favour. Over the forecast period, elevated wage growth and copper prices will be the key drivers of heightened construction costs. Growth in costs is expected to pick-up in FY26 (+2.9%) and trend to a peak of 3.5% in FY29, before moderating again. Overall, electricity infrastructure construction costs are forecast to average 3.0% annual growth over the FY25 to FY32 period.

Figure 6.15 Non-Hydro Electricity Engineering Construction Drivers



6.9 HIGH-VOLTAGE DIRECT CURRENT CABLE

High-voltage direct current (HVDC) cable is used for long distance electricity transmission and will make up the largest single material component of the Marinus Link infrastructure. The key price drivers for the type of HVDC cable chosen for this project will consist of aluminium (the conductor), steel (for encasing the cable), manufacturing costs (manufacturing wages and industrial electricity prices) and transportation costs given the HVDC cable will be manufactured overseas and shipper to Australia. Two potential manufacturing countries have been identified as the likely origin for the cable, Italy, and the US. As no publicly available data is available on HVDC cable, and Marinus Link was

unable to provide OEA with the weighting of each individual component listed above, we have here only provided forecasts of individual components, rather an overall weighted index. For the steel component, hot rolled coil has been chosen as a suitable proxy for the steel wire encasement.

ITALY

Aluminium prices, in Euro's, will follow a similar trend over the forecast period as outlined in section 6.1. However, an appreciating Euro against the US Dollar over the near term will result in lower price growth over FY26 to FY29.

European Hot rolled coil (HRC) prices are tightly linked the prices of iron ore and coking coal**.** With significant global supply disruptions for both commodities over FY22 and FY23. Falling commodity prices and weaker demand then flowed through to a -31% decline in steel prices over FY24. This trend has continued over FY25, with a -10% decline in prices expected. An appreciating Euro over the near term will help further bring down input costs, with a further -11% decline in prices in FY26. As interest rates begin reverting back toward pre-covid levels over 2025 and 2026, demand for steel from both the European construction sector and manufacturing will pick up, placing upward pressure on prices over the back half of the 2020's. European HRC prices are forecast to average 2.0% average growth over FY28 to FY32.

Italian manufacturing wages saw strong growth over FY23 and FY24 (4.4% and 6.1%, respectively) as employee bargained for wage growth on compensation for high inflationary over recent years in an environment favourable of their position (i.e. low unemployment). Wage growth is expected to remain high in FY25 (4.2%) as the labour market remains tight, although increases have begun to moderate. As inflation eases and the unemployment rate increases over the near term, growth in manufacturing wages is expected to ease. Over the long run, Italy's persistently high unemployment rate will help see subdued wage growth, which is forecast to average 2.1% annually over the FY25 to FY32 period.

Italian industrial electricity costs skyrocketed over FY22 and FY23 the Russian-Ukraine conflict and the resulting supply shortages of gas and coal into the European market. Prices have since corrected, falling -23% in FY24, However, the price level is expected to remain high, and not return to pre FY22 levels. Over the long run, electricity prices are forecast to ease as gas and coal prices fall back and renewable energy capacity increases (-0.9% annual average growth over FY25 to FY32).

Movements in **Italian Transport** costs are primarily driven fluctuations in global oil prices, which flow through to fuel costs, and wages. Transport costs rose 5.1% in FY23 as oil prices skyrocketed over FY22, and a further 5.9% in FY24 as high oil prices (in Euro terms) continued to pass through. Subdued growth in fuel prices coupled with growth in labour costs is expected to result in 2.1% annual average growth over the forecast period.

USA

Aluminium prices – see section 6.1.

For the most part, **American Hot rolled coil (HRC)** prices are driven in a similar nature to European HRC prices, with large price movements driven by commodity prices. Local demand pressures from the construction sector has also contributed to stronger price growth over the recent years as activity has been on a strong upward trajectory since the early 2010's. Over the near term, the impacts of tariffs are expected the outweigh the easing price pressures from falling commodity prices. Resultingly, US HRC prices are forecast to jump 16% in FY26, followed by a -7% correcting in FY27.

American manufacturing wages have historically seen solid annual growth, averaging 3.4% over the past 10 years. Strong wage growth is forecast for the near term, driven by the USA's tight labour market and the push by both the government and private industry to 'reshore' certain manufacturing

jobs (thus increasing the demand for labour). Over the FY25 to FY32 period, manufacturing wages are forecast to rise by an average of 2.9% annually.

American industrial electricity prices are more insulated from swings in international energy commodity prices due to high levels of local gas and coal production, and as such, price growth over FY22 and FY23 were less pronounced compared to Europe's. Over the forecast period, America electricity prices are expected to see modest growth as some of the significant investment required to transition the US energy grid to renewable sources is passed through to consumers. Overall, industrial electricity prices are forecast to average 1.4% annually over the FY25 to FY32 period.

American Transport costs, like European costs, fluctuate in line with oil prices although American transport costs price movements tend to be more volatile. Price growth is expected to stabilise around local inflation over the forecast period.

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

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

The main wage measures are:

- Average Weekly Ordinary Time Earnings (AWOTE) — earnings gained from working the standard number of hours per week. It includes agreed base rates of pay, over-award payments, penalty rates and other allowances, commissions and retainers; bonuses and incentive payments (including profit share schemes), leave pay and salary payments made to directors. AWOTE excludes overtime payments, termination payments and other payments not related to the reference period. The AWOTE measures used in this report refer to full-time adult AWOTE and are sourced from the Australian Bureau of Statistics (ABS) catalogue number 6302.0, with Oxford Economics Australia forecasts.

- Average Weekly Earnings (AWE) — represents average total gross earnings (before tax) of all employees (including full-time and part-time workers). They include weekly ordinary time earnings plus over-time payments.

- The Wage Price Index (WPI) — a CPI-style measure of changes in wage and salary costs based on a weighted combination of a surveyed 'basket' of jobs. The WPI used in this report excludes bonuses. The WPI also excludes the effect of changes in the quality or quantity of work performed and most importantly, the compositional effects of shifts within the labour market, such as shifts between sectors and within firms. The WPI figures quoted in this report are sourced from ABS catalogue number 6345.0, with Oxford Economics Australia forecasts.

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

The wage price index was specifically designed to get around these compositional problems. It uses a weighted average of wage inflation across a range of closely specified jobs. As it measures the collective variations in wage rates made to the current occupants of the same set of specified jobs, the WPI reflects pure price changes, and does not measure variations in quality or quantity of work performed. However, like the CPI (Consumer Price Index), the weights are fixed in a base year, so

that the further away from that base and the more the composition of the labour market changes over time, the more 'out of date' the measure becomes.

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

Oxford Economics Australia Wage Growth Model

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

• Employees under awards have their pay determined by Fair Work Australia in the annual National Wage case. When determining pay increases, Fair Work Australia aim to maintain the standard of living of those employed on awards by providing a safety net of fair minimum wages. Hence, they focus on the overall performance of the domestic economy, taking into account productivity, business competitiveness, inflation and employment growth. This means that increases in the Federal Minimum Wage are usually based on recent CPI growth along with Fair Work Australia's view on short term future conditions for the Australian economy. From 1 July 2022, the minimum wage was increased by 5.2%. This followed rises of 2.5%, 1.3%, 3.5% and 3.5% respectively in previous years. At the All Industries level, 13% of all non-managerial full-time employees (data excludes those in agriculture, forestry and fishing) have their pay rises determined by this method, but only 1.5% of Electricity, Gas, Water & Waste Services' (EGWWS) employees.

• For employees under collective agreements (representing 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, Oxford Economics Australia use the most recent agreements formalised in recent quarters as a basis for our near-term forecasts. Beyond that, collective agreements are based on our expectations of economic conditions.

• The remaining 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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